

This is <sup>™</sup>



# NUTRITIONAL HUMILITY

**Frugality. Authenticity. Individuality. Resilience.**

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TEXT & VISUALS BY AW<sup>™</sup> / [ANDREWWIGUNA.COM](http://ANDREWWIGUNA.COM) /  
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“MAN IS AN ANIMAL THAT MAKES  
BARGAINS: NO OTHER ANIMAL  
DOES THIS - NO DOG EXCHANGES  
BONES WITH ANOTHER.”

*Adam Smith*

*“An Inquiry Into The Nature And Causes  
Of The Wealth Of Nations”*

(1776), Vol.1, Ch. 2



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Subject to progressive revisions; This Book is a reflectional, non-fiction Questions-Meet-Answers textual resource to promote contemplative consolation and provide decentralised education towards individuals in need of support at forming self-informed decisions of health and wellness. Within contexts of Structural Violence / Impositions and arguably in many extents - physiological health and/or medical concerns. **This Book** aims to foresees itself as a **"coach"**, yet never an objectively prescriptive **"prescription"**. Nor does it proclaim itself as **"treatment"** akin to scientific **"panacea"**; for any existing pathological disorders. **DISCLAIMER: This Author (AW™) holds no medical responsibilities for any adverse metabolic or physiological outcomes; as This Book may not ever be considered Gospel towards all metabolic variabilities nor does it constitute any confident "advices" over any existing medical supervisions. This Author** assumes you (The Reader) agree to shoulder any potential unforeseen risk/s be it physiological or metabolic incompatibility/s or turbulences be from however long-term nutritive and/or sociological re-transitioning. Every dietary/nutritional principles expressed in This Book assumes you are already of well and capable physiology within the range of conventional standards; at self-compensating any turbulences or effects should such interventions pose difficulties unto you. And that you are presumed to already have subscribed to a predominantly non-sedentary lifestyle. All Readers are encouraged to pursue further outside research in addition to **This Book's** included study references and citations. Readers are hereby agree to proceed at the ownership of sole responsibility. Please note that all costing/s and figures / prices as proposed and listed are subject to seasonal, market, inflationary and geographical (Australian States) variation. Note: To improve and maintain readability **This Author** reserves the right to write / and update further amendments without prior notice.

This Book overlaps its themes inbetween that of Nutritional Science and Philosophy, hence a terminology disclosure here is kindly suggested as follows. Generally, **"This Book"** refers to this PDF, this parent manuscript This Is™ Nutritional Humility (formerly as Humility Through Frugality). **"This Author"** or **"This Author (AW™)"** refers to the sole author Andrew Wiguna / AW™ / andrewwiguna.com. **Readers are also to be advised that the styling perspective/s of This Book are written in two (2) distinct formatting.** Everything except the end (Prologue) is written in third (3rd) viewing perspective. This shall be made prominent through opening statements as : **"This Book"**, **"This Author"**, **"This Author (AW™)"**, or elaboratively as **"This Author's opinion"**, **"This Author's Suggestion"**, **"This Author (AW™) speculates / hypothesizes"**, to illustrate as few examples. These statements are to indicate Andrew Wiguna / AW™ / as the Author addressing each and every train-of-thought/s.

This Is™ is a concept branding initiative by Andrew W. / AW™ / andrewwiguna.com; bearing no institutional allegiance nor affiliations. This Book however; is entirely non-fictional in both its account/s and entirety of actualised hypothesis, thoughts and implorations straight from personal true-to-life inquiries. Every seemingly real and factual events as accounted throughout This Book is holistically derived to that of solely the Author's auto-biographical experiences and sentiments. For a continuing list of disclaimers please go to **page 290**.

Professional and indemnity limitation disclosures as end-consumer member of public is openly detailed on **page 290**.

# Happiness is inflationary. Income governs Outcome.

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"99% OF WHO YOU ARE IS INVISIBLE  
AND UNTOUCHABLE."

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RICHARD "BUCKY" FULLER  
(1895-1983)



# THE WORLD'S PROBLEMS

WHO, (OR WHAT) ARE WE REALLY?

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<sup>1</sup> **WHAT IS THIS BOOK?**

Greetings. Let us begin with one embarrassing confession. For however many years of **This Book's** constant revision, **This Author** (AW™) still fails at writing more succinct, or quick one-liner encompassing everything **This Book** offers. At least, it attempts to raise more Questions; than it pretends to claim Answers. One that we can start off is: **“Are we living towards our own selves? Or away from it?”**

Readers are free to answer that in however ways imaginable; so long as they willingly contain whatever answers awaiting them, privately within their own-“selves”. Nevertheless, this inevitably requires piecing together various contemplations amidst overlapping themes of Economics, Philosophy

and Nutritional Science. Confusing? Absolutely. "Success" is truth be told a mosaic of all-sorts - of expressions. Art imitates Life, and vice versa.

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**This Book helps redirect your interpretation of yourself away from others' influence or dictation. "You" as your-own "self" as subject self-concern. All this depends on your readiness at coordinating what "is you" & what is not you - through Self-Enquiry. A scrutiny of challenges amidst two episodes of Economics - Scarcity and Abundance.**

Granted, **This Book** is never about comfort. It promotes both indulgence and discipline; in a cyclical manner both planned and experimental. It does not promise you riches. Rags may even remain with you long after reading this. You certainly will not find any diet "**hacks**" or weight loss supplement "**shortcuts**", guilt-free "**Recipes**", Discount Vouchers or listing of motivational "**Top 10 LinkedIN®Fluencers**" or Insta-glammers to



follow and **“like”**. Happiness in numbers sure looks gratifying, but quickly becomes inflationary. What matters is Authenticity, towards one thing only. To reclaim what **“enough”** means.

Alas, we have to get controversial. Because "everything in moderation" is not only mediocrity, but imposingly one at that, daringly as one may say – Scientific Communism. We'll have to dismantle the warm or fuzzy notions of current pedestrian definition of **“Humility”**. Spoiler Alert: it is anything but charitable.

## <sup>2</sup> **WHAT'S WRONG WITH CHARITY?**

**This Book** does not criticize any or all whose lives' revolves around noble benevolences. Yet unbeknownst to them - Charity always assumes that morality is infinitely compensative. Suppose we live in an age whereby everyone is simply expected to **“comply”** towards only one (1) ideal logistic towards Humility through **“Charity”**, or of volunteerism. What really constitutes behind this **“ism”**? That'd be very likely some form of overriding force of collective impositions. After all, Charity concerns and expects only one thing: Harmony **“at-all-costs”**. Indeed, as alluringly divine or selfless as these may sound; yet they remain only fantasized, as an outcome.

Giving up away **“things”** for **“free”** sure is greatly encouraged, yet were any of those things one acquired for, was ever “free” in the first place? Something must have been compensated.

Is **“Charity”** therefore – infinite, renewable Resource (for another) to harvest and recycle? Well, **“Robots”** and **“Automation”** technically speaking are perfect, coordinated beings to marry! All that’s needed is a 24/7 electricity to exploit Artificial Intelligence, Open-Source software to their full capacity. Better yet, given human’s desire at **“creativity”** as return-on-investments - why not program it further. One day perhaps it may even evolve to upgrade its own firmware overtime, with lesser organic intervention. Oh dear, even “us” humans are expendable.

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**So what is left then, after much of our agencies and authenticity are increasingly left structured first by (fellow) humans, and then by machines? There is only one thing left. Our own nutritional “selves” to improve at partitioning what “enough” means.**

If Automation is the greatest (or the “**last**” final) human invention, **This Book** wagers the only thing left of our own civilisation - is to reconcile what “**sufficiency**” means. By embracing back our primal and genuine - metabolic + physiological “**burdens**”. To Authenticate by Self-Enquiring. From one day onwards, we’ll establish ourselves to be succinctly Content with less(er) Resources. Contentment with less(er) confusions. Irrespective whether we “like” it or not; this involves a willingly self-enquiry for Scientific Liberty, through various Controversy(s).

<sup>3</sup> **BUT THAT IS NOT HUMILITY!**

Surprise: **This Book** defies all expectations of “humble” lexicons. Humility is defined by individualism, not collectivism. To answer this existential question, “Who or what we really?” “We” - are composed of individual/s who happen to live amidst our own “selves”. “Likes” or “Similarities” are just simply that - coincidences. We “live” to reproduce based on desire. Ironically, that too, requires much investment towards all the more selfishness, first and foremost. The logistics of these go beyond hormones and political semantics. Sufficient calories, macro and micro nutrients. But “who” governs that “sufficiency”?

It may seem surprising the majority of **This Book** revolves less around suggesting canned beans, TVP, rice or instant noodles and then "call it a day." (**page 72**). Otherwise, that leaves us little to discuss then is it? What else then **This Book** challenges? Everything about dogmatism. Including our present common-sense definition of "humility". Perhaps common-sense is communal"ised" - or governed - by imposed consensus?

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**Unless of course, if readers are actually happy subsisting (/persisting) on canned beans, and instant noodles then This Book wholeheartedly grants them permission to proceed. Until whatever repercussions await them.**

Until fitness meritocracies are called into question. Be it to "look and feel good" aspirations. Or until metabolic, physiological and nutrient deficiencies - are called into question. Until questions rise on how to get around the monotonous taste of canned beans, TVP (**page 84**). And...wait for it - until one remains locked (either voluntarily or involuntarily) into this

Quantified Paternalism of "more must equals more" stoicism; at the expense of something else. What "else" then - are you willing to "sacrifice" for "Humility", all without complaining?

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**Black-pill Nihilism is an option, but an imploding one at best (page 38). But there is always an option ~ Self-Enquiry. Against pedestrian majority. Including our present moral collectivism and scientific authoritarianism.**

The best "answer" to all of these? Keep Questioning inbetween all virtue-signalling lines. That social media feeds, motivation quotation posters on objectivist "never-give-up" or "Look to the silver lining in every cloud" is as useless as leaving someone a Lifeline number. **This Book** enforces you to explore scientific Anarchy for no other lives other than your own. What "enough" means may only be dictated by you. Nobody else.

Of course, all this is "guilt". Guilt requires privacy. But privacy is privilege; because privacy isn't "free". Hence, a leverage for motive or gain for that something "else". Should readers already disagree - they're hereby permitted go back to subservient "charity". Until time or waves of change corner them to the more confusion and exhaustion; that one have had "enough" - go back to this page. Revise. Reflect. Repeat.

<sup>4</sup> **BUT WHY ARE YOU WASTING TIME DOING ALL THIS, THEN - MR. DOLE BLUDGER?**

To prove **This Author** is not "lazy". Once again, Via exhibiting proof of "burden". What that "burden" is - is simply resilience at addressing subjectivity behind all objectivity. Scientific curiosity served on silver plate. Feel free to skip this chapter and randomly leaf elsewhere. **This Author** wagers thousands of books similar to this, rarely connects all the dots missing amidst genres of Nutritional Science or survivorship-biased Health & Fitness. What about Money? Philosophy? Economics? **This Book** dares combining them all. Whilst appealing to the thickest of frame glasses, given its density of research alongside its 300+ cited references.

5 **BUT THERE ARE WORSE THINGS TO WORRY ABOUT. SICK & DYING CHILDREN, TERRORISM, <INSERT VICTIMHOOD>.**

**This Author** (AW™) has had many years of "hands-on experience" with depressions, prolonged starvation, all without stable incomes...oh wait, Misery loves Company. Misery loves comparisons. Enter "**image comparison mode**". Meanwhile, the Sun, Moon, and the Earth revolve onwards as usual. As we speak, anywhere between 1 to 9 million birds; many which are endangered, gets killed by windpower farms in the name of "**green**" moral virtuosity. So go ahead, pick any one of these "**victims**" and glamorise them to nihilistic pity. You'll be left with more anger.

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**The winner in all this frivolous comparisons? Whoever already at rest six feet under as eternal gift of silence. Now, is that "worse" enough for you to thus feel "better"?**

Perhaps legislate a law before everyone is granted Validation, or income - he/she must be criteria-wise, Acknowledged as **“worse enough”** beforehand. Vitamin D deficiency or depression? How trivial. Add wheelchair (but amputate him beforehand) then he’d visually satisfy your criteria. Voila, amputate everyone then under this Golden rule for **“Acknowledgement”**! Does this make everyone happy? No. In spite the fact they all look **“evenly equal”** without limb/s, they’d still be resentful from having their biology limited.

<sup>6</sup> **BUT HUMILITY IS MODESTY!**

If one considers him or herself to be modest; **“unassuming”** in his or her **“abilities”**, would that mean they’d allow absorbing all reciprocal exploitations? Continuous **“test”** subject? Someone to “humiliate”?

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**...Well, Society says “Yes!”. Paternalism then it seems, is failing us all.**



Granted, we do need exemplary displays of others as proxies towards our own trajectory of desired, Authentic potential/s. **"Vanity"** it and of itself, is not to blame. What is important however is ownership of envy as it guides you to find something else more conducive and productive use/s of your own **"time"**. Hint: work on your **"self"** towards contentment, in the meantime; without raising contempt.

So, perhaps now more than ever - is likely that **"time"** as good as any - to initiate our own Self-Enquiring. By scrutinising all that we receive and perceive. **This Book** implores that all funnels down to how qualitatively (and quantitatively) we consume and interpret - Resources.

# THE ROAD TO NUTRITIONAL HUMILITY

**"YOU ARE WHAT YOU SAVE FROM WHAT YOU EAT."**

JEFF. S VOLEK.

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## <sup>7</sup> **SO WHAT'S IN IT FOR ME?**

Self-reclamation beyond money. Before we proceed, we must reconcile the what, how or why - everything - flora and fauna - are manifested as they are.

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## **RATION-TO-RATIONALE**

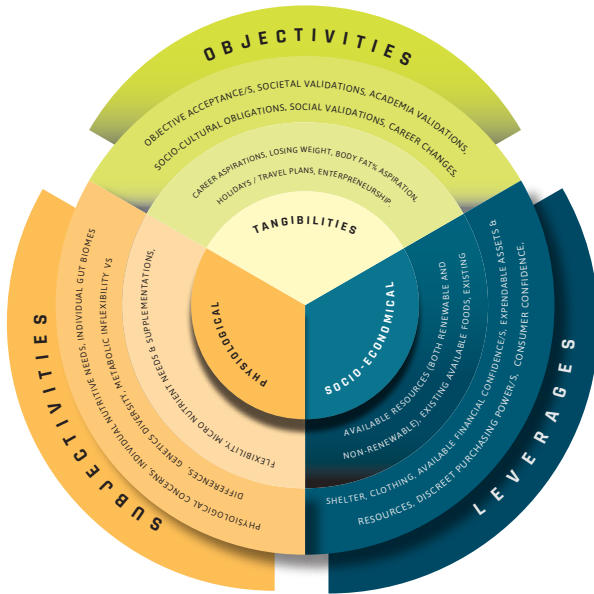
Maslow's Hierarchy of Needs assume shelter, clothing and food are enough for human civility. **This Book** however asserts "**Food**" should be ranked first and foremost. If food does not exist, neither does Life. House & Clothing likewise are meaningless if there is no Life able at sensing or interpreting them as

such. Nutrition thus, is “**ration**”, the means to “**reason**” allowing all physiological to then sociological **Interpretations** to fruition. All Interpretations lead to sentient development of “**Life**”. The trajectories of such a life are governed through Objectivities, Subjectivities and Economics.

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**We can first identify “Life” by their materialised form/s because they already are established through their State/s of Objectivity. Aka.”The What”. We interpret them as such through our senses - Sight, Touch, Hear & Taste/Feel.**

**Objectivities (Merits) hence** marks this Context high at the top. But every **Objectivities** are subject to surrounding physiological interpretations (**Subjectivities**). These are biological factors suggesting the various “**Why’s**”; in that anything we uphold or subscribe may (or may not) be interpreted congruently across all contexts.



Lastly, if not most important, the above two (Objectivities and Subjectivities) inevitably are governed by the degree of resources accessibility (**Economics/Leverages**). This is the “**How**”. Economics dictates whether there is “**enough**” or not “**enough**” confidence/s at supporting Life’s current Objectivist manifestation, and their Physiological interpretations at any given time, moment or circumstance.

8      **WHAT IS A RESOURCE?**

A “**Resource**” is either a physical or meta-physical means of “**exchange**” for advancing or preserving an existing interpretation towards an objectivist “**use**”, or purported-use (short for “**purpose**”). Beyond “**capital**”, “**income**”, “**Food**” or “**Rations**”, mineral reserves, muscle and/or liver “**glycogens**” **This Book** laterally defines it further as Judgments, Opinion, Dogma, Thesis or an Ideology. All of which potentially transcends to instrumental means of exchange. An analogy for this “**Exchange**” is the law of thermodynamics. “**Energy**” is neither created or destroyed. Replace the word Energy with “**Resources**” thus makes both indistinguishable. As either are continuously remanifesting or exchanging itself for the preservation of something else.

9      **WHAT IS AN INTERPRETATION?**

An **Interpretation** is a resulting manifested outcome or sentiment - out of an individual’s interactions with any given or incoming Resource/s or Rations. Through digestion, ingestion, surveying and assessing. **This Book** extends such definition that

all Interpretations also elicits biological repercussions. From any or all consumption beyond questionable “**foods**”, but also sociological or philosophical - prescriptions.

<sup>10</sup> **SO WHAT / HOW DO YOU GO ABOUT THESE “THINGS”?**

You will conduct a Self-Enquiry journey on the accounting and experiencing of two opposing themes of Economics. Planned, strategically & pragmatically by you yourselves alone - as you Scrutinise, Assess and/or Limiting any - Resources you receive from two “**Ecosystems**”. First of which, is your “**Abilities (fitness, physiology, metabolism)**” and then “**Liabilities (structural obligations, networks)**” - Ecosystems. Revise, Reflect Repeat - as frequently to the **limits** of your existing “**pragmatism**”. Revise this not simply as an "occasion". But a way of life.

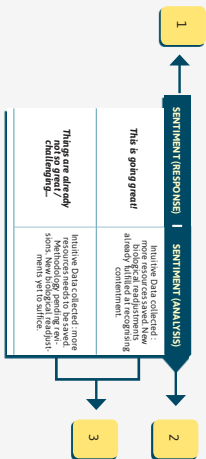
Pragmatism however, may not ever be “**universally**” taught nor defined the same way for “**all**”. Because it is uniquely pre-determined / set variably by numerous autonomous contingencies (metabolic / physiological adaptations). Such a “**limit**” or threshold of this Pragmatism as Readers may expect - varies numerously on biological confounders. Hence, the later chapter(s) of **This Book** aims at providing varying perspective/s

of decentralised Nutritional Science. Guiding you as strategies and food for thoughts; should you decidedly resort to the more stringent methodology / way of life - for succinct contentment.

Overleaf is representative “**timeline**” sample of Self-Enquiry at addressing each turbulence. This potentiates as either conducive or frivolous sentiment(s) for us to ascertain their relevance to our livelihood. Mediated through how well we scrutinise all that we receive and perceive; beyond "food", glucose levels, metabolic markers, budget expenditures, calories etc. But also incoming competitive ideologues, and binary dogma(s). Ultimately, all momentary friction(s) imposes two eventual experience(s). As Contextual Sufficiency or Insufficiency. Confront and scrutinise these turbulence(s), be it however ways you can muster; by intermittently embracing between exercised - Scarcity & Abundance. Whilst questioning our existing dogmatic correctness linearity, until these four thematic outcomes shall manifest holistically :

- 1 **F**rugality, **A**uthenticity, **I**ndividuality, **R**esilience. *FAIR.*
- 2 **P**rivacy, **A**gency, **I**dentify, **R**esolve. *PAIR.*
- 3 **S**entience, **E**xposition, **L**iberty, **F**ortitude. *SELF.*
- 4 **M**inimalism, **I**nterpretation, **N**utrition, **E**mbodiment. *MINE.*

# INTERPRETING THIS SAMPLE TIMELINE



**1 SENTIMENT (Response).** A Sentiment is a sample reaction outcomes from having witnessed any or all moment of changes.

**2 SENTIMENT (Analysis).** A Quantified self-enquiry of each sentiment. Analysed by instrumental / quantifiable means such as "Intuitive Data". For example - calorie tracking, budgeting limits, existing resource inventory by the grammage, trackable metabolic markers such as glucose levels, or any other quantified means of assessing overall consumption.

**3 INTERPRETATIONS.** The biological self-enquiry of each sentiment, in either one of two states: "Contextual Sufficiency", Or "Contextual Insufficiency". Contextual Sufficiency: biological and individual conviction of contentment. Individual Authenticity acquired, yet only for the time being and specific in this circumstance. Contextual Insufficiency: Improvements or revision of sustenance methodology in progress. Accumulative and overlapping challenges yet to be overcome or addressed. Physiological / metabolic adjustments yet to occur.

## CURIOSITY

## REALISATION/S

SENTIMENT (RESPONSE) | SENTIMENT (ANALYSIS)

**What and why do I have to do this?**

Early discovery and rationale of an implicit goal

**Looking at my own history, I must admit there is something needs to be looked at.**

Hint over a sight of a goal establishment. Early discovery of an unknown, incentive.

**Yep! I want to be fit! I no longer want to be sedentary! I want to change myself! This or that outcome really appeals to me!**

Early recognition of Primal Admissions - Volume, Symmetry, Vanity.

**This seems like a long time for me to do / wait / save up. But at least, I shall give it a "try".**

Early discovery of challenges and pre-requisites of implicit goal establishment

**Why is this not as I previously thought or imagined?**

Enquiry of Biological / Abilities Ecosystems.

**I thought this facts says otherwise...now they say the opposite.**

Enquiry of Biological / Abilities Ecosystems.

**I do not think I can eat this sustainably.**

Scrutiny / Assesment of Abilities (continued).

**I realise I shall need more time detaching myself away from "labels".**

Enquiry of Sociological / Liabilities Ecosystems.

**I am beginning to find more leftovers of food, waiting to be consumed.**

Intuitive Data collected : more resources saved.

**It has already been 16 hours fasting, and yet it's due for a meal, but I think I can stretch it.**

Scrutiny / Assesment of Abilities (continued).

**This is still difficult! And how come time goes by so slow?**

Scrutiny / of Abilities (continued).

**This is going great, but I still am having things tough.**

Scrutiny / Assesment of Abilities (continued).

**Why are things / people act so different to where / how I was?**

Enquiry of Sociological / Liabilities Ecosystems.

**Another day of fasting gone by, I believe I can do something more meaningful to fulfill my time without food.**

Scrutiny / Assesment of Abilities (continued).

**Thanks to caloric tracking; I know exactly when and in what amounts - specific foods needs to be replenished and when they're fully consumed.**

Reflection of current consumption.

**I still have six+ hours of fasting window, what can I do? What can't I do?**

Reflection / Revision of inner Abilities (continued).



## REVISION/S

## ACCEPTANCE

### AWARENESS

*That's interesting, I thought I knew this & that before...*

Facts comparisons (preliminary)

*I'm going to see / explore deeper of this scientific paradox. Only for myself not for other people.*

Affirmation / Conviction to revise prior to proceeding.

*Wait, why is this saying this is damaging and this is not?*

Next subsequent discovery/ acquisition of comparative / conflict of belief system/s

*I believe I have gained everything I need to get started. Time to do this.*

Affirmation / conviction to proceed.

*I'll think some ways / workaround it. Try somethings different foods / workout/s.*

Scrutiny / Assessment of Abilities (continued).

*Very well, I think I may be happy with this, just need time. I'm going to see this for myself.*

Affirmation / conviction to proceed.

*Ok, I've used this and that inspiration/s, it's ok for now but still not good. I shall keep revising it.*

Scrutiny / Assessment of Abilities (continued).

*Ok, this may not be for me, but maybe perhaps let's try a different route*

Revised Scrutiny of Abilities (continued).

### PERSISTENCE

*I am finding certain food items or ingredients suspect me to get more hungry than usual. Is it the fibre intake? Is it the additive?*

Scrutiny / Assessment of Abilities (continued).

*I am happy thus far for that I am NOT FALLIBLE to externalised influences.*

Affirmation / conviction to proceed.

*Results so far doesn't seem right.*

Scrutiny / Assessment of Abilities (continued).

*I will have to accept the fact that this nutrition, workout paradigm is not doing well for me*

Revision of inner Abilities (continued).

### NUTRITIONAL HUMILITY

*I feel I have done a lot more than previously imagined. I am feeling more happy now that I can live with contentment. I have saved more food and contingencies than previously thought possible.*

Affirmation / conviction to proceed / continue.

THUS FAR - I AM CONTENT WITH HOW I HAVE SUSTAINED MY OWN SUCCINCT CONTENTMENT FOR WHAT IS ME - FOR ME.

SUBSIST BUT REMAIN OPEN TO ANY NEW POSSIBILITIES

*This way of life/nutrition may not be for me but I learned many interesting things; inspite being frowned upon. I'll keep learning as I save money and saving food resources; along the way. Even if this way of life isn't for me, I'll make it work for other things besides from just saving money.*

An incentive hint for yet another series of Scrutiny/s

THUS FAR - I HAVE NOT YET SUSTAINED MY CONTENTMENT, WHAT ELSE IS THERE THAT I CAN DO?.

REVISE, REFLECT AND REPEAT. LET THE CYCLE BEGINS ONCE AGAIN.

**11      WHAT IS SCARCITY? AND HOW IS THIS NEEDED?**


Be it however controversial, **This Book** interprets “**Scarcity**” as opportunity to attest resilience, amidst perceived lacking of Resources be it food/glycogen and instrument of exchange-able leverage. In order for Scarcity to “**occur**” it must be imposed by either individual conviction (Voluntary) or that of Structural (Involuntary) at various challenging thresholds of individual’s existing limits of autonomous compensations; as aforementioned - money or food. State(s) of Scarcity are presented as “**fasting state**”, “**hunger**” or individually scrutinising and re-prioritising akin to personal austerity measures.

**12      AND WHAT IS ABUNDANCE? AND HOW IS THIS NEEDED?**

“Abundance” is an individualised (by individual) planned event(s) of resource consumption, before another episode of Scarcity is yet to embrace once again as an anticipated cycle. Abundance is simply an opportunity for one to attest individual’s own capacity at partitioning what enough means to facilitate survival by replenishing all nutrient needs, so the next episode of Scarcity shall pass again and again.

**"Glamourising"** is a sensational-appeasing headline. **This Book** on the other hand foresees it as simply that of an opportunity for self-reclamation by self-instilling changes to be content or to be **"enough"** without raising contempt. This requires different train of thought from existing notions of mass-prescriptions of Normalcy. Eg. "epidemiology" **"common-sense"** or **"everything-in-moderation"**. Indeed we've followed this good/bad dichotomy, yet results speak their dubious outcomes in undiscussed volumes. How one ultimately and qualitatively altogether defines what **"Enough"** means may only be - directed by his/her "own" - willingly re-sensitisation at partitioning incoming resources. Whether we "like it" or not - this requires scientific Anarchy.

Is prolonged starvation **"ideal"**? Of course not. Starvation, like fasting - is made to be broken by the individual once he/she has reached pragmatic limits of Abilities Ecosystems. Granted, **This Book** never proclaims itself as scientific **"panacea"** or divine **"clairvoyance"**. Supplements and Contingencies cannot ever be ignored. One thing for sure, **This Book** proclaims that nobody should ever be **"normalised"**. By whomever (hint: plural) overriding such a definition or state - beyond his/her own free will.



"THERE IS A PERVASIVE AND TRAGIC MYTH IN  
OUR SOCIETY. THE FIRST PART OF THIS MYTH  
APPEARS TO BE THAT THINGS SHOULD BE  
EASY AND REQUIRE LITTLE EFFORT AT ALL  
TIMES."

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**DR. PETER ATTIA**  
**EATINGACADEMY.COM**

# PEDESTRIAN NORMALCY

**AKA. COLLECTIVIST TUG OF WAR .**

"BUT LIFE IS SIMPLE! USE COMMON SENSE!" - (NORMAL PEOPLE)

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<sup>14</sup> **F\*%&) ALL THESE. I DON'T HAVE TIME. I HAVE  
ENOUGH PROBLEMS AS IT IS.**

At least you've had (some) biological admission you have your plates "**full**". Yet still being "**consumed**" by something so ubiquitously overwhelming. Imposing you to no longer be aware of any effects of such consumption has on you; moment by moment. Why not take this curiosity to the next step. Examine / question your current ecosystem(s) of subscriptions. Is your subscription of whatever led your current consumptive influence of "**Normalcy**", actually returns back to you as **Qualitatively Conducive or Quantitatively Frivolous?**

Think about it. How do ~~we~~ you know what "enough" means? Is that a Collectivist questioning? Or an Individual questioning?

Question your **Abilities ecosystem**. All "**Abilities**" are purely biological and physiological origins, first and foremost. Hence the Questioning of "**Abilities**" requires a self-inquisitive awareness of your own metabolism. That is - to develop mindfulness on how you receive and partition "**Rations**" to objectivities. We shall do this by first self-enquiring our own metabolic markers. So, what should we track? "**Calories**", "**Glucose**" levels and ritual timing of our meal consumptions. Paying \$70 for a blood test, with no guarantee for honouring patient enquiry remains arguably inefficient. "**Science-neutral-ground**" GPs these days are far and few. Hence, a portable glucometer, despite limited just as glucose assessment; is vital nonetheless as it eliminates much middlemen. This glucose assessment tells us in proximal accuracy how well we are partitioning incoming Resources (food / glycogen) conductively into everyday-life's functions.

So, what do we know about "**normal**" glucose levels? this is at best, very subjective depending on how it is institutionally interpreted, obviously individual's dietary approaches, lifestyles, patterns of consumptions and any pre-existing unaccounted conditions / or nutrigenomics factors well outside **This Book's**

capacity. A general rule seems to fixate that “5.0” to as high as “6.7” MMOL (90-120 MG/DL) are of acceptable range whenever a person is deemed fasted for at least seven hours. These certainly of course are open to debate. As these metrics concerns only within the assumed context conventional dietary guidelines. Hence for the simplicity’s sake of **This Book** readers are to remain aware that these classical guidelines are nevertheless the only reference range to refer to; collectively. Indeed, monitoring glucose levels alone is not enough of an assessment tool. Tracking Calories level, and Nutritional Journalling both will prove mandatory as advised on **page 48**.

So far that’s just in the realm of interpreting “**food**”. This same concept remains arguably applicable also on how one readily filters - “**politics**”, opinions, and competitive ideologies. Now, then the next Questioning may take place - **The Liabilities / Obligatory Ecosystem**. Again, Scrutinise and Assess your existing realm of networks and allegiances. Question their relevances to your needs. Not just how they portray semblances of meritocratic interests, but also how well can they stand - on their own two hands and feet on their own accord without having to rely on you. So much so; one day you may inadvertently

becomes both an obligation and liability subject to that person's predicaments. That person will overtime **turn increasingly insensitive; at exerting more expectations out of you. Beware of such signs and Question it all out.**

<sup>16</sup> **YOU'RE SUGGESTING US ALL TO BE ANTI-SOCIAL, THEN?**

Cut off all **frivolous** obligations. Your interpretation of what "**Frivolous**" means shall be **imposed** in due course. This is a matter of when, not if. **Martin Heidegger**, renowned for his philosophical writing "**Das-Sein**" (German for "**being**"); stated for one to achieve Self-Authenticity you must follow and live for "**your's**"-selves. Rather than accordingly to "**they-selves**". This was hypothesized way back in the 19th century. Such rat-race has now evolved to "**Social Media**". Do we get anything in return for all that "**likes**"? Ironically, very few, if anything returns to you.

On the flipside, this stubbornness at keeping everything to the "**self**" is where ownership of Envy is being attested & peacefully contained. If one felt biologically convinced in that both Liabilities Ecosystems are met with fewer resources without ever feeling jealousy for "**more**" by raising contempt, then what else matters? Chances are, you wish to become that ideal



image; somewhere hinted by those around you. So, what do you do? **“Own”** up to it. Self-enquire through resilience & dissertation. **This Book** is beyond **“frugality”** but also imploring at transcending affirmation (philosophy) into action (physiology).

<sup>17</sup> ***I AM NOT A MODEL OR A BODYBUILDER! WHY IS EVERYTHING SO FIXATED FOR THESE PEOPLE!! WHAT ABOUT THE REST OF US!!!??***

You are currently not reconciling any connection between you and them as biological similarities. Two arms, two legs, and a brain. Some (competitors) don't even have arms or legs. Chances of witnessing them at a local gym, or at the next IFBB® and Mr Olympia® - are slim. Unless if Readers are **“happy”** to remain bonded with Normalcy criterion of relying constantly on **“quick fixes”** then very well, we'll leave it **“quickly”** at that.

Go back reading this paragraph years later; once you have had **“enough”** of interpreting your (prior) normalcy as **“frivolous”**. Chances are sooner or later you'll want to become **“special”**. Perhaps not **“for others”** but at least for **“you”**. But it ain't quaint.

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**To begin this enquiry, requires a (somewhat) painful admission. There is**

**no language more powerful than body language. We must remain receptive towards anything appealing to our Primal Admissions; expanded as Vanity, Volume and Symmetry.**

After all, what draws you in to that lingerie or that sharp tailored suit? **Symmetry** is what you sought. **Volume**; is how it feels on you. Then **Vanity** - is that last icing on the cake - your own peace of mind. Every holiday "**destination**" or "**looks**" sure seems alluring. But the next comes painful realisation. Can you own up the chaotic processes, metabolic stresses, the journey of rocky roads leading towards such destination? All this depends on your willingness to Self-Enquire, first and foremost.

18 **YOU ARE TOO SHALLOW! HOW IS THAT A MARKER OF "HUMILITY"?**

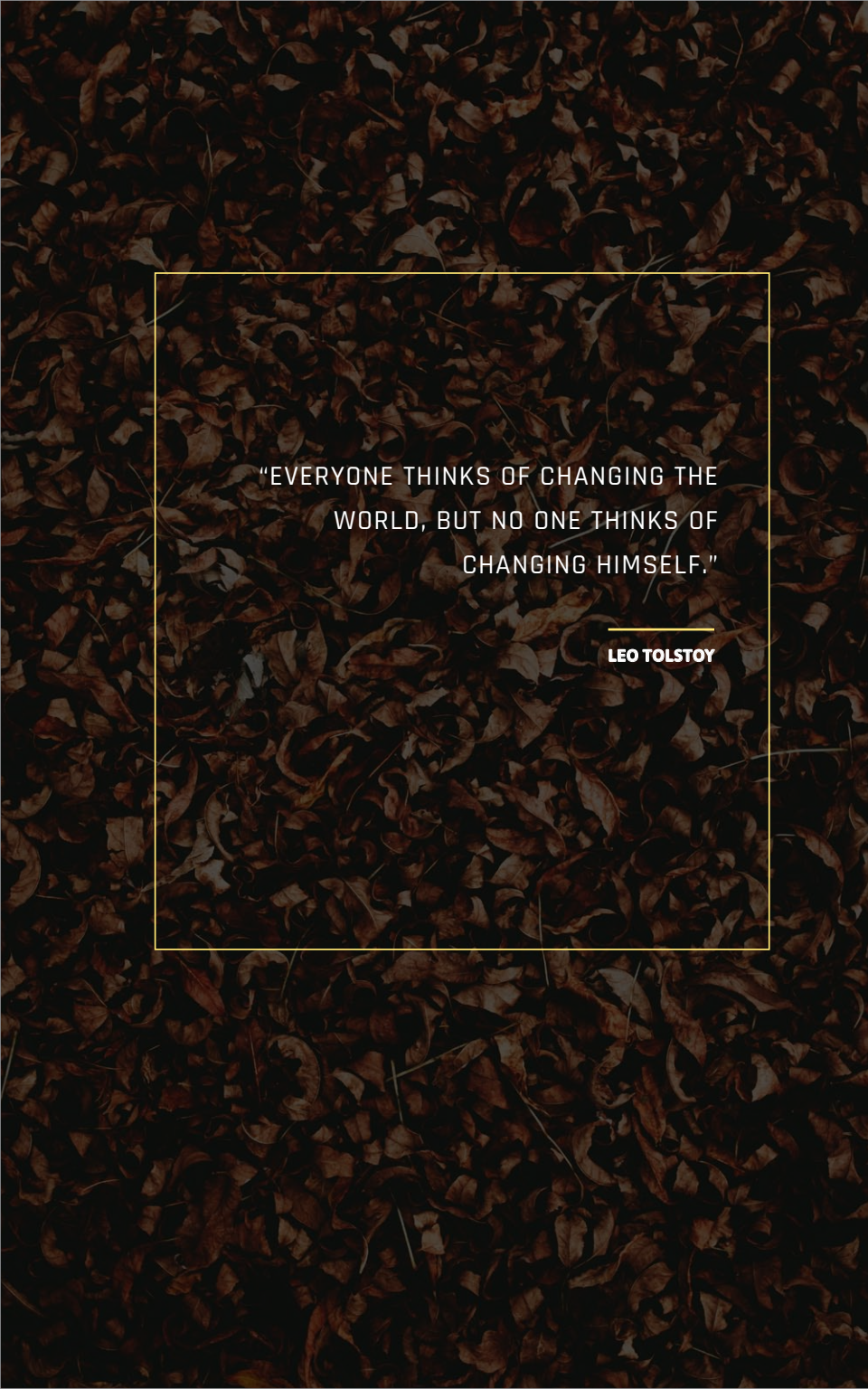
"**Humility**" is once again less about perpetuating modesty. Rather, privatised respecting of individual contrasts. If anything, "**shallow**" is actually a very confident conviction of a "**choice**". As it turns out, everybody is shallow as their per chosen career, or of "**passion**" or specific choice of mating partner - can attest.

Whether we “**like**” it or not, nothing is “**equal**”. It is up to us, our own “**selves**” to privatise our contentment; as far away from others’ collectivist tug-of-wars. **This Book** hence hypothesizes that “**Privacy**” is the unaddressed, silent criteria towards any concerns of “**Equality**”. If any needs or wants are met through consenting exchange - then so what? So “**be**” it. It is neither up to **This Author** or Reader for judgment over what “**enough**” means on “**lives**” other than their own “**selves**”.

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**Every virtue spares a vice, and vice versa.  
One privatises the need for another.  
Without contempt. Without violence. Now  
that - is Humility.**

If however one still remains “**unhappy**” it is only hopeful such contempt is redirected elsewhere but one’s own void. That is, for as long as he/she is not fantasizing the next “**equality-for-all**” megaphone/manifesto in their head. It’d be wise to remain wary of such signs; before anxiety envelops to wishful genocide.



"EVERYONE THINKS OF CHANGING THE  
WORLD, BUT NO ONE THINKS OF  
CHANGING HIMSELF."

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**LEO TOLSTOY**

In theory and as objective **"outcome"**, absolutely. If somewhat subjectively Utopianist and not to mention the (likely required) violent methodologies for such an outcome. Be it martial law, coercions and propaganda. If **"Everything-in-moderation"** works - the question that remains is - Moderation by **"who"**, one wonders?

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**Are we so inclined to believe that "equality" out of current gynocentric feminism for instance, is one "peaceful" agenda? No. This sadly, is "1984" big sister.**

**"Equality"** both dictates and expects all must be objectively **"equal"** under only one (1) Figure against all subjective differences. Equality under Feminism hence expects all genders other than women, must succumb under the ruling of all but (1) **"one"** objective gender. **"Women"**. In theory, this seems sound. Women are **"weak"**. Medias indeed portray them as **"weak"**.

Yet are they, really? Do they “**want**” to be weak? How many calories does it take to pull a trigger of a loaded gun? (Hint: a child is more than capable). How difficult is it to twist every claims to win a divorce court case? As it turns out, anything seems malleable by the “**fairer**” subject. Sociological side effects meanwhile, persists. Impotence, MGTOW / Men’s Rights movements, and male suicides; to name a few. Chastity is likely not a viable option; as prostrate cancer risk raises whenever ejaculation frequencies reduces (*Rider, R, J. et al 2016*).

<sup>20</sup> **I DON’T NEED TO BE “ATTRACTIVE”, THEN. THANK YOU.**

Interesting (if somewhat morbid) voluntary “**decision**”. What alternative means to sustain “**life**” without reproduction? The further one submits to oblivious belief that “**sexuality**” no longer plays a role in their biological functioning hints that one no longer feels any primal incentive to feel for a living, at all. That, is a worrying thought.

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**If “Sex” both validates and precursors to life Creation, Identity, and Justification**

**for one's Existence then "Suicide" seems an incredibly well warranted destination if one omits (voluntarily or involuntarily) from all three.**

Consider that skin is the biggest organ receptive to all that it receives. A study on human "**touch**" suggests such confounds greatly against cardiovascular diseases. Less touch correlates to higher impairment on cardiac survivability (*Lynch, J.J. 2000*).

**This Book** wagers that for any life to be meaningful without vagueness it must be instilled with biological conviction to form purpose. Nothing is "**vague**" should one is presented with an episode of Scarcity, famine, or "**hunger**". Or if one is structurally coerced to questionable heights of frugality (as **This Author** can attest). Other than to reclaim what "**enough**" means through however lesser resources than what one previously amassed. In other words - by proving to the self that one is indeed Hungry is opportunity itself at pooling together every fibre of Abilities Ecosystem (gluconeogenesis / ketosis) to surpass these Hunger episodes - with lesser inputs. Meanwhile,

one also likely then must re-coordinate Liabilities Ecosystems - so that he/she becomes resilient and not easily succumbed by frivolous tug-of-war and collectivist - **Pedestrian Normalcy**.

<sup>21</sup> **WHAT DOES ALL OF THIS HAVE TO DO WITH NUTRITION?**

**"Nutrition"** is a symbiotic filtering of what one receives (digest) then re-manifests as expression (interpretation). In order for Rationale to exist, it needs to be fed with - Rations. Anything we receive inevitably exerts both physiologic and psychological responses. Alas, idealism tug-of-wars persists today as "hope" to collectively override what is right and what is wrong. Inevitably, enough is **"enough"**. But epidemiology today still asserts "everything-in-moderation". How confusing is that?

<sup>22</sup> **I DON'T GET IT. SO WHAT'S YOUR POINT?**

We will recite all that's necessary here to recap. Firstly, **Question your Abilities Ecosystems**. All Abilities are biological. But we all have limited capacity at understanding the fate/s of each of our own Abilities beyond fitness or sociological meritocracies.



Pragmatic way/s to do so is that of willingly assess, abstain / cycle / limit our incoming Rations; based on however current **Intuitive Data** suggest as repercussions from receiving all realms of consumption. Beyond “**Food**” and calorie counting, but also glucose readings to budget expenditures. These determines how productive you are at partitioning all that you consume.

**Next - Question your Liabilities Ecosystem.** Remain **tactful** in all Qualitative relations; if networks are important to you. Can you willingly “**filter**” whoever these people are amongst your list of Instagram®, Youtube® or Facebook® subscribers?


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**But what if you have nothing? Then own up to “envy”. But channel your jealousy to something else more conducive to “you”. And your’s own time only. Nobody else’s.**

“**Envy**” is good; for as long as one ingests as inspiration conductively to other motions of life. “**Jealousy**” however is a destructive result from misusing envy.

Remind yourself there are always relative human weaknesses behind every **"vanity"**. Whoever decidedly resorting to botox, facelifts, nose/lipo/boob jobs, thermogenics, IGF-1, HGH, Dianabols & Clenbuterols for **"health"** or **"fitness"** meritocracies are just as weak as you are without access nor financial leverage to all those **"privileges"**. Next time you see a 90-year old **"pensioner"** at a physique contest, think twice before unleashing your social media #hashtags disgusts. Those standing on catwalks/judgment pose platforms - aren't in the **"business"** of selling drugs; but merely an expression of their own authentic selves & potentialities.

Finally, treat all binary thinking from all institutions; with a grain of salt. We must not let others do the thinking for us. Institutions & politicians have intervened much on behalf of our biology. Coercing us to remain subservient not to evolve ourselves. But to remain AWAY from evolving ourselves. As long as we willingly attests our own-true-selves; away from the Pedestrian traffic lights, or **"The Chatter"** as Martin Heidegger puts it then, we can inch ourselves closer to that Self-Aware and Authentic Individual **"home" beneath our chest. Uninhibited, yet self-contained. Curious, yet free from violent jealousy.**

A person's silhouette is visible on the right side of the frame, looking towards the left. The background is a warm, golden sunset over a landscape with mountains. A bright lightning bolt strikes a mountain peak in the distance. The entire scene is framed by a thin yellow border.

"TO KNOW WHAT A PERSON HAS DONE AND TO  
KNOW WHO A PERSON IS, ARE VERY DIFFERENT  
THINGS."

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**HANNAH KENT**

"THE HIGHER YOU ASCEND, THE SMALLER YOU  
APPEAR TO THE EYE OF ENVY. BUT MOST OF ALL  
THEY HATE THOSE WHO FLY."

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**FRIEDRICH NIETZSCHE**

# HOW AND WHERE DO ~~WE~~ YOU START?

**"I CAN'T HELP YOU, IF YOU WON'T HELP YOURSELF."**

~ AMY JADE WINEHOUSE (1983-2011)

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This Chapter is reserved only as **"starting"** hub for all Readers to acquaint themselves with what to expect; before philosophical discussion/s continue on **page 95**. Below is a "bird's-eye" view of **This Book's** diverse contemplations:

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***Before you even consider "food"- consider the water you are drinking from hour to hour.***

*If the human body; with its blood, and everything that it encapsulates within ourselves are composed of simply water - then it makes sense to at least put this first as your **initial monetary investment**. Whilst it is not necessary in purchasing total household-permanent fluoride removal solution (such as Reverse Osmosis); a portable water fluoride filter can easily found online via various sellers on Ebay®; an Annual investment of \$90 suffice this.*



**Begin tracking your overall current TDEE / Maintenance nutritional intakes detailed on page 67.**

Readers are to be well advised there are two (2) ways of calculating their maintenance calorie intake (TDEE). One is via calculative / speculatively mathematical means (as **page 67**). Or simply by continuous tracking all existing inputs on-the-fly and calculates based on daily, then cumulatively to a weekly-totals.

Next, reserve adequate time for Budgeting, Nutritional Journalling and Exercise Journalling. Historical accounts of consumptive habits will prove useful as **Intuitive Data. Early on** - It is highly advisable for Readers retaining their existing dietary regime; and begin collecting data AS IS for at least a few month/s BEFORE undertaking major nutritional intervention changes.



**Embark individual research. Beyond widely preached guidelines of "safe" singularity. Learn and acquaint nutritional principles available (page 132).**

**This Book** offer contemplative food for individual imploration of Nutritional Science. As such its philosophy branding Nutritional Humility™ serves both as learning tool and philosophical awareness at highlighting subjectivity behind all totalitarian objectivity of all Rations received be it ideologies, nutritional principles or any scientific opinion/s.

A separate chapter dedicated towards understanding nuanced subjects of Starvation, Hunger and Satiety is provided in **page 106**. Unfortunately, this Chapter is likely received as insufficient to satisfy the most discerning of all readers. This is because current scientific reception and understanding of Hunger and Satiety often overlaps inbetween other realm/s and discipline/s of Gut microbiome, Biochemistry, Psychology and Neuroscience.

The three (3) Nutritional principles presented on **page 132** are to the best of **This Author's** scope of awareness, the most exhaustively complete at addressing the majority of contextual needs of Nutri-

tion. However bear in mind that nothing in all reaches of **This Book** may however be appropriate to override any existing institutional or terminal supervisions advised by external accreditations; eg. specialised diet for chemotherapy or for specific terminal condition/s (eg. Leukemia, or cancer specific cases).

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**Beyond a widely preached strategy for weight loss; consider Intermittent Fasting to further reinforce resource-preservation; as detailed on page 193.**

**Fasting is a learned survival mechanism. We must inevitably consider Intermittent Fasting to resiliently attest how much further we can all sustain with lesser resources.** Whilst these regiments require prior disciplines in resources calorie tracking and to some degrees - Nutritional Ketosis, Intermittent Fasting inevitably should be at some stage an inevitability in any one's stage of life..

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**In light of our escalating concerns of COVID19, please consider reading "Immune Health & Nutrition" on page 239.**

*This sub section proposes various contemplative food for thoughts; as well as alternative pragmatic strategies. However please observe the disclaimer on the beginning paragraphs before moving forward.*

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**Consider further discretionary supplementations (page 219).**

*Even the very best of dietary regiment is never immune from any or all nuanced insufficiencies. Living under Living under prolonged austerity likewise, inevitably warrant further needs of supplementing. Consider also reading the subsection Micronutrient interactions page 222.*



**Visit ([nutritional-humility.me](http://nutritional-humility.me)) as well as its Google+ Page for more possible future Book updates, Methods, Insights and Thought/s.**

**This Book** is only one part of a definitive; overall journey of constant discoveries and realisations towards holistic self-improvement through science, nutrition and philosophy. **This Author** (Andrew Wiguna / AW™ / [andrewwiguna.com](http://andrewwiguna.com)) would be humbled for prospective Readers witnessing its accompanying blog ([nutritional-humility.me/blog](http://nutritional-humility.me/blog)).

# SELF-ENQUIRY & PUTTING IT ALL TOGETHER

**SCRUTINISE AND EXPERIENCE. REVISE, REFLECT, REPEAT.**

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## WHAT IS SELF-ENQUIRING?

"Self-Enquiry" is a concept of scientific journalling. Accounting both for and from - individual exploration amidst decentralised nutritional science. It allows stored contemplations of various self-intervention explorations be it supplementation or differing sustenances far from presently paternalistic / institutionalised conventions. Beyond any or all personal account of "frugality" but also journal with numerical input facilities. Such as weight readings, glucose / metabolic markers, and or any other metrics deemed of great importance.



All initiates are encouraged to download the **Self Enquiry Journalling Tool (public beta version)** by visiting the corresponding blog. For years prior, **This Author** (AW™) have long suggested readers to pursue whatever methods deemed pragmatic and accessible to them, that most likely bearing in a form of word processing or similar. However overtime, the need for numerical inputs, such as metabolic markers for example - as well as the need for maintaining structure and formatting of the overall Self-Enquiring process becomes cumulative; hence prompting **This Author** (AW™) to invest further time developing the above Self Journalling Tool; for public evaluation and sharing.

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**The overall methodology remains however open to the discerning reader's extent of Self-Enquiry. The more detail given ~ the more insightfully concrete with such journalling, as time passes.**

The "structure" of the Self-Enquiry Journalling is as follows:



## 1/4 WELCOME SHEET

The first sheet is general reminder on the instructions, intended usage and pragmatic goals of Self-Enquiry. Please consider the terms and conditions written down the page.

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## 2/4 ABBREVIATIONS SHEET

This is a collection of all abbreviated short-hand referencing of all supplements the individual is currently using. PLEASE NOTE: that this is not dynamically linked to any function hence serving only for own manual referencing purposes. However, please use the Find+Replace command to manage any changes overtime.

Month/Period:		10	
Monday, September 28, 2020 to Sunday, October 18, 2020		Monday, September 28, 2020 to Sunday, October 18, 2020	
Oct 1	Wk # Monday, September 28, 2020 to Sunday, October 4, 2020 <small>Your entry here...Week 1 Oct 1</small>	Oct 2	Wk # Monday, October 5, 2020 to Sunday, October 11, 2020 <small>Your entry here...Week 2 Oct 2</small>
	Average pre-training weight reading 4.0 KG		Average pre-training weight reading 4.0 KG
	Average fasting glucose readings 4.0 MMOL		Average fasting glucose readings 4.0 MMOL
	Average fasting Ketone readings (if strips are available) 4.0 MMOL (Ketones)		Average fasting Ketone readings (if strips are available) 4.0 MMOL (Ketones)
	- Average 7-day Value of - Custom Heading Summary Entry (Optional feature - edit this on Oct 1 on cell B161 and the rest of sheet will update) 4.00		- Average 7-day Value of - Custom Heading Summary Entry (Optional feature - edit this on Oct 1 on cell B161 and the rest of sheet will update) 4.00
Oct 3	Wk # Monday, October 12, 2020 to Sunday, October 18, 2020 <small>Your entry here...Week 3 Oct 3</small>	Oct 4	Wk # Monday, October 12, 2020 to Sunday, October 18, 2020 <small>Your entry here...Week 4 Oct 4</small>
	Average pre-training weight reading 4.0 KG		Average pre-training weight reading 4.0 KG
	Average fasting glucose readings 4.0 MMOL		Average fasting glucose readings 4.0 MMOL
	Average fasting Ketone readings (if strips are available) 4.0 MMOL (Ketones)		Average fasting Ketone readings (if strips are available) 4.0 MMOL (Ketones)
	- Average 7-day Value of - Custom Heading Summary Entry (Optional feature - edit this on Oct 1 on cell B161 and the rest of sheet will update) 4.00		- Average 7-day Value of - Custom Heading Summary Entry (Optional feature - edit this on Oct 1 on cell B161 and the rest of sheet will update) 4.00

### 3/4 SUMMARY SHEET

The "SUMMARY" Sheet provides readers a birds eye view of each "End of Week" notes as entered from each Weekly sheet.

### 4/4 THE WEEKLY SHEET

The main essence of Self-Enquiry. Each Weekly Sheet # provides entries categorised under the time periods of the day (Mornings, Afternoons, Evenings), basic metabolic markers (Fasting Glucose / Fasting ketones - if the finances allow

for regular purchasing of ketone strips) as well as allowing Custom Heading with its own trackable data as accordingly to the reader's specific needs.

24 **WHAT OR HOW DO I WRITE SUCH A JOURNAL?**

First and foremost, **This Author** (AW™) stresses he does not impose any "specific" manner, 'regiment', or "method" of Self-Enquiring. Since nobody but the reader is open to his/her own self-judgment. The following is only a general not exhaustively **"definitive"** rule - over what to write and to expect - amidst the journalling processes:

- 1 *Self-enquiry may seem first and foremost - nothing more than yet another form of nutritional diary. However, it encourages supplementary thoughts in conjunction to concrete calorimetric data as best handled separately (such as Chronometer® or Myfitnesspal®). Readers are advised to take notes on key psychological and/or physiological fluctuations amidst any period of scientific scrutiny. Be it supplement cycling, macros & micro nutrient emphasis cycling, etc.*
- 2 *A case example of use would be an accounting of periodisations between "none", "low" and "high" amount of consumption levels - upon any suspecting isolated intake of - "food / food group", "strategy", "thought", "intervention", "supplement" or "philosophy". A tracking of (basic) metabolic metrics. Cycle inbetween different such varying intake amounts and reassess. Revise, Reflect, Repeat.*

- 3 Another case example would be to track overall subjective feelings / experiences amidst digestion and meal ingestion episodes. Take notes on what supplements / digestive aids are taken and in what timing - is it "before", "middle of meal" or "afterwards"? Take notes on the meal ingestion overall comfort - is there anything that jumps or felt significantly out of the ordinary? Revise, Reflect, Repeat.
- 4 Whenever one is practising intermittent fasting (**page 145**), take notes on any physiological or psychological events that seem out of ordinary. During fasting - what beverages are sought? Any specific mineral intakes added? Potassium bitartrate / cream of tartar? potassium chloride? etc. Cycle inbetween different fasting-safe beverages and/or mineral supplementations. Revise, Reflect, Repeat.
- 5 Nutritional journaling ideally also should include some sort of metabolic markers tracking and pre-exercise / fasted weight readings. Further, fasting glucose levels and/or fasting ketone levels; should discerning readers are able to afford them, are desirable.

The above are only heavily summarised speculative guide on **“what to do”**. Please keep in mind that these are to be treated as **“Individual”** and therefore - **“Personal”** property. Whilst this Journaling Tool certainly potentiates valuable insight were one to consult with an emphatic naturopath or Science-Neutral nutritionist / dietitian - absolutely no **“one”** individual may journal their insights the same exact manner to another individual. As individual needs to such Self-Enquiry varies wildly.

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**The “how” and “why” ~ remains up to the Reader to initiate such an enquiry for both scientific curiosity. As they cycle and experience in and out of ~ multiple interventions towards self-resilience and overall ~ self-authenticity.**

It is noteworthy that whilst nutritional journalling inadvertently imposes one to such a duty long term (years+) - it all remains a cumulative dutiful privacy for the self. A private ritual nevertheless at that - no overriding acts of institutionalisation may ever replicate nor match thus devotion of scientific embracing, not a crusading of "N=1".



## BUDGETTING

Similar to Self Journalling Tool, **This Author** (AW™) have offered to the public Budgetting Tool which are immediately downloadable and shareable for public evaluation and use. Please visit the dedicated blog for details.

### 25 **SO WHAT IS "COUNTABLE" IN A WEEK'S BUDGET?**

**This Book** assures absolute necessities; which are not counted in any week's budget. Coffees/Teas, Aspirin, sodium bicarbonate, cream of tartar, salts (himalayan/iodised), and Apple Cider Vinegar. Beyond anti-inflammatory ([Zhang, Y. et](#)

*al 2007*), Aspirin remains plausible Cortisol & Prolactin (Estrogenic) inhibitors within contexts of fitness training (*Di Luigi L, et al. 2001*). Himalayan salt & ACV are essential for those on Ketogenic interventions. Baking soda, cream of tartar and/or potassium chloride should suffice for carbonate & potassium rich supplementations in minute dosages. Anything outside of food such as everyday amenities are excluded. Consumer-grade fluoride water filtration, Quarterly-annual (frequency subject to individual needs) protein supplementations & micronutrients are also exempt. However, such is not a permission for impulsive purchasing brand-labels. An exercise on thrift thinking on acquiring all Resources - must remain practised.

**SAMPLE #1 \$50 PER WEEK (STANDARD HCLF)**

1	7x 110g Sardines In Springwater(65c each)	\$4.55
2	2x 900g oats	\$2.8
3	500g peanut butter	\$2
4	1x 600g eggs	\$3.5
5	150 - 200g champagne leg ham	\$2.50
6	1kg chicken breast	\$8
7	250ML Extra Virgin Olive / Cooking Spray	\$2.5
8	flat wholemeal bread (7 per pk)	\$1.3
9	3L Dairy Milk	\$3.60
10	1kg Greek Yoghurt	\$3.50
11	3kg rice / 3kg pastas / 4kg potatoes	\$5



- 12 (Various) Short dated green produces \_\_\_\_\_ \$3  
 13 Additional herbs / garlic powders / sauces / condiments \_\_\_\_\_ \$3  
 14 short dated Fruits of choice / additional condiments \_\_\_\_\_ \$2

**Total: \$50.25** (for what's left over freeze/store and recycle)

**SAMPLE #2 \$40 PER WEEK (STANDARD HCLF)**

- 1 7x 110g Sardines In Springwater(65c each) \_\_\_\_\_ \$4.55  
 2 1x 900g oats \_\_\_\_\_ \$1.4  
 3 3L Dairy Milk \_\_\_\_\_ \$3.60  
 4 additional condiments / sauce of choices \_\_\_\_\_ \$3  
 5 500g peanut butter \_\_\_\_\_ \$2  
 6 1x 600g eggs \_\_\_\_\_ \$3.5  
 7 1kg chicken breast + 1500g beef mince \_\_\_\_\_ \$8  
 8 500ML Extra Virgin Olive Oil \_\_\_\_\_ \$4  
 9 1kg Greek Yoghurt \_\_\_\_\_ \$3.50  
 10 3kg rice / 3kg pastas / 4kg potatoes \_\_\_\_\_ \$4  
 11 (Various) Short dated vegetables/fruit produces \_\_\_\_\_ \$3

**TOTAL: \$39.40** (for what's left over freeze/store and recycle)

**SAMPLE #3 \$30 PER WEEK (STANDARD HCLF)**

- 1 4x 110g Sardines In Springwater(65c each) \_\_\_\_\_ \$2.6  
 2 900g oats \_\_\_\_\_ \$1.6  
 3 2L Dairy milk \_\_\_\_\_ \$2  
 4 1x 600g eggs \_\_\_\_\_ \$3.5  
 5 Further condiments / sauces \_\_\_\_\_ \$2.5  
 6 1kg Greek Yoghurt \_\_\_\_\_ \$3.50  
 7 1.5kg mixed chicken pieces / 500g to 750g of organ meats \_\_\_\_\_ \$6  
 8 250ML Extra Virgin Olive Oil / Cooking spray \_\_\_\_\_ \$2.5  
 9 2kg rice / 2kg pastas / 4kg potatoes \_\_\_\_\_ \$2.8  
 10 (Various) Short dated vegetables/fruit produces \_\_\_\_\_ \$3

**TOTAL: \$30** (for what's left over freeze/store and recycle)

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**\$50 PER WEEK / KETOGENIC / HFLC**

1	3x 600g eggs _____	\$10
2	10 sheet nori or 100G BRAZIL Nuts _____	\$3
3	500ml Extra Virgin Olive Oil _____	\$5
1	6x 110g Sardines In Springwater(65c each) _____	\$3.90
2	750g Beef economy mince / mixed poultry cuts _____	\$4
3	500g chicken livers / additional meats of choice _____	\$4
4	150 to 200g of Champagne Leg Ham _____	\$2.50
5	1x 300g sour cream _____	\$1.40
6	500g flax linseed meal _____	\$2.5
7	1kg greek yoghurt _____	\$3.50
8	(Various) Short dated green produces _____	\$3
9	Additional herbs / garlic powders / sauces / condiments _____	\$8

**TOTAL: \$50** (for what's left over freeze/store and recycle)

**\$40 PER WEEK / KETOGENIC / HFLC**

1	3x 600g eggs _____	\$10
2	5x 110g Sardines In Springwater(65c each) _____	\$3.25
3	2kg chicken drumsticks shortdated + short-dated 500g chicken / beef livers _____	\$9.75
4	(Various) Short dated green produces _____	\$3
5	1x 300g Pure Cream _____	\$1.40
6	500ml Extra Virgin Olive Oil _____	\$4
7	Additional herbs / garlic powders / sauces / condiments _____	\$3.50
8	500g Linseed Meal _____	\$2.5

**TOTAL: \$39.3** (for what's left over freeze/store and recycle)

### **\$30 PER WEEK / KETOGENIC / INTERMITTENT FASTING**

1	3x 600g eggs _____	\$10
2	3x 110g Sardines In Springwater(65c each) _____	\$1.95
3	250g to 300g champagne leg ham _____	\$3
4	(Various) Short dated green produces _____	\$3
5	Condiments / Chicken / Beef Stock _____	\$3.50
6	1x 300g Pure Cream / 250ML EVOO / 440g mayonnaise _____	\$3
7	500g beef mince economy shortdated _____	\$3.5
8	Mackerel (canned) _____	\$2.50

**Total: \$30** (for what's left over freeze/store and recycle)

26

### **WHAT ABOUT SOMETHING FOR VEGETARIANS?**

#### **\$40 PER WEEK / KETO-VEGAN**

1	(Up to) 1 kg of Pea protein Isolates _____	\$8-10
2	500g Californian Walnuts or 400g Brazil Nuts _____	\$9
3	1kg tofu / Soya Wadi / TVP _____	\$6.90
4	500ml Extra Virgin Olive Oil _____	\$4
5	(Various) Short dated green produces _____	\$3
6	Condiments / soy sauces / Vegetable Stock _____	\$3
7	1kg Greek yoghurt or 500g linseed meal _____	\$3.5

**TOTAL: \$39.90** (for what's left over freeze/store and recycle)

#### **\$35 PER WEEK / KETO-VEGAN**

1	(Up to) 1 kg of Pea protein Isolates _____	\$8-10
2	250g Californian Walnuts _____	\$5.50
3	500g Tofu / Soya Wadi / TVP _____	\$3.45
4	500ml Extra Virgin Olive Oil _____	\$4
5	(Various) Short dated green produces _____	\$3

6	Condiments / soy sauces / Vegetable Stock _____	\$3
7	1kg Greek yoghurt or 500g linseed meal _____	\$3.5
8	50g Nori / Seaweed _____	\$3

**TOTAL: \$35** (for what's left over keep and recycle).

27 **HOW DO I DETERMINE MY LONGEVITY ANALYSIS?**

Longevity Analysis is a forecasting assessment on how current resources are being consumed.

To conduct, firstly invest at least two month(s); analysing existing habitual intakes of all resources via tracking caloric footprint (**page 80**), then in addition to the Reader's separate nutrition and exercise journalling. Overtime, "**Intuitive Data**" is collected as Readers slowly begin to gain conscious assessment on how much Resources satiates their regular day-to-day motions. Reconcile these **Intuitive Data** over their frequency and qualitative impacts of living. Then start reducing acquisitions to attest overall resilience. Given enough practise amidst these 2 months (or more), one can ascertain self-confidence to develop less wasteful sustenance that much more intuitively, overtime.

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**This ritual encourages resilience and consumption mindfulness without excess spoilages; and also potentiating a surplus of resources. Which is an opportunity at lowering overall budget expenditure in the next consequent week/s (page 79).**

28 **<\$30 A WEEK? THAT LOW IS POSSIBLE?**

In the opinion of **This Author**; it is physiologically unsustainable for one to subsist in <\$30 weekly budgets consistently, especially when fitness / resistance training meritocracies are concerned. Readers are strongly encouraged to consider Intermittent Fasting outlined on **(page 193) to deepen their survival resilience further.** In more dire structural impositions, it is likely mandatory for one to willingly consider short-dated goods and produces. Strategies on procuring them is detailed in the Question **page 74.**

**SAMPLE \$25 PER WEEK / KETO INTERMITTENT FASTING**

- |   |   |        |
|---|---|--------|
| 1 | 2x eggs 600g cartons _____                                | \$7    |
| 2 | 500g choice of organ meats (livers/hearts/gizzards) _____ | \$7    |
| 3 | 4x 110g Sardines In Springwater(65c each) _____           | \$2.60 |

4	Olive oil 500ML or mayonnaise or choice of condiment/s _____	\$4
5	Additional condiments or additional short dated produce _____	\$1.50
6	(Various) Short dated green produces _____	\$3

**TOTAL: \$25.10** (for what's left over keep as Buffering Funds and recycle)

#### **SAMPLE \$25 PER WEEK / HCLF / INTERMITTENT FASTING**

1	500g choice of organ meats (livers/hearts/gizzards) _____	\$7
2	1x 900g oats _____	\$1.40
3	4kg bulk washed potatoes / 2kg rice _____	\$2.80
4	1x 500g pasta _____	\$0.90
5	500g tomato paste _____	\$1.25
6	250ML light olive oil spray _____	\$2
7	1x 600g eggs or additional condiments _____	\$3.5
8	2x 110g Sardines In Springwater(65c each) _____	\$1.3
9	(Various) Short dated green and fruit produces _____	\$2.50
10	2L Dairy Milk _____	\$2.40

**TOTAL: \$25.05** (for what's left over keep as Buffering Funds and recycle)

#### 29 **WHAT ABOUT FOOD QUALITY?**

It is inevitable that short-dated goods need to be sought as leverages run dry. Freezing these goods thus imperatively requires one to first and foremost acquire adequate refrigeration. **This Book** firmly believes however that any such “**Economic foods**” must be carefully addressed via the contingencies below:

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#### **EXPIRED FOODS / PRELIMINARY GUIDE**

Understandably, expired foods may not be palatable to many's prior-accustomed luxuries. However, subsisting on budgets less than \$25 per week inevitably imposes the need to both surpass and anticipates this realisation. The following insights are therefore will prove noteworthy overtime:

- 1 Dairy products including fat sources such as creams are generally safe to consume up to several days (no more than six days depending on variety and type) beyond their expiry dates. However many "thickened creams" (creams that are mixed with additives and thickeners) are not recommended due to their risk for intolerances towards many individuals, **This Author** included. Furthermore, according to **This Author's** experience FULL cream milk appears to last longer than LIGHT fat milk.
- 2 Fruits deservedly warrant further caution. Individuals who rely on restricted specific carbohydrate intervention such as FODMAPs or SCD (page 132) are wise to avoid or minimise intake of various suspecting expiring fruits. Whilst the majority of population may or may not (depending on immunological resilience) react adversely to over-ripened fruits - please note that some hints of ethanol or alcohol tastes are to be expected, likely due to added industrial artificial ethanol pre-additive/s (Maduwanthi TS & Marapana JR. 2019). Interestingly however, a study claims that some ripened fruits (particularly mangoes) appears to have an increased Vitamin C content by 7-8 mg more (Majagi, NJ & Jabannavar BV. 2018).
- 3 For all short-dated meat produces and bread products, always assess by colouration. As general rule - beef or chicken that portrays browning already has begun oxidising unfavourably alongside bacteria. Practise vigilance with condiments+meat combination short dated

goods - If condiments themselves contain any amount of sugars, such as BBQ or sweet-based condiments it'd be already accelerating its adverse bacterial spoilage.

- 4 Dried goods with little to no oil content, such as white plain flours are still safe to consume month/s or even a year passed their expiry date. Whilst **This Author** anecdotally have consumed and survived on two and half year expired wholemeal flours - no guarantees however are warranted across individual variable sensitivities.
- 5 Prior to freezing meats, be sure to mix in anti-oxidant spices such as garlic, turmeric and addition to salt and pepper to minimise spoilage. Lemon juice as marinade may also assist in reducing AGEs / Advanced Glycation End Products should Readers wish to cook these on high temperatures.
- 6 Some starches and short dated vegetables are generally safe to consume beyond minor signs of degradations mainly from natural water leakage overtime. However, the more these water leakage is noted- particularly from potatoes, pumpkins, kales and swiss chards - may not be recommended to be consumed because these water losses may either constitute loss of mineral profiling and/or foul odours.

*DISCLAIMER - By no means that the above general sharing of guidelines and experiences are to be treated OR expected linearly as an irrefutable panacea.* Individual gut physiology, resilience and immunology all remains as inevitably that - individual subjective experiences. Handling and consuming expired products



largely revolves around the current biological resilience and any existing available supplementary contingencies in place below; all which **This Author** continues practising for many years:

- 1 **Consider maintaining appropriate and resilient stomach acidity.** *Contrary to pedestrian and/or widely institutionalised sentiments, suppressing stomach acidity leads to numerous pathology developments, from impairing digestion health, bacterial resilience and all the way to immunology (see page 252). Betaine HCL + Pepsin supplementations are warranted for individuals who also are considering or practising prolonged Intermittent Fasting. Occasional intakes of Apple Cider Vinegars, and/or dietary incorporations of fermented sauerkrauts, various spices such as white/black peppers (Damanhoury ZA & Ahmad A. 2014) all assist in not only digestion but also ensuring safety of neutralising pathogens within foods but also to ensure efficacious partitioning of various macros and micronutrients.*
- 2 **Maintain pre and probiotic rich foods.** *Yoghurts, sauerkrauts needs to be regularly maintained. Alongside spices such as gingers or garlic must be considered in all feature solid meals.*
- 3 **Should resources allow, consider alternating between high (>1 gram per pound + of total weight) and maintenance (to general / habitual satiety)- dietary protein intakes.** *An entire chapter on protein intake and their relevance to gut and immune health is discussed "The Primer on protein" on page 78.*
- 4 **Consider key minerals.** *Vitamins C, D, Magnesium, and Zinc have all been highlighted for their importance towards gut resilience and functions. Please consider reading page 219 and "Immune Health & Nutrition" on page 239.*

Nevertheless, if in rare instances digestive malaise result; soon after consuming suspected any food - prepare a very hot (not boiling) concoction starting with water, squeeze of lime/lemon, two tablespoons of Apple Cider Vinegar, and pinches of himalayan salt and powdered ginger. This drink should only be sipped slowly and never be consumed in a hurry.

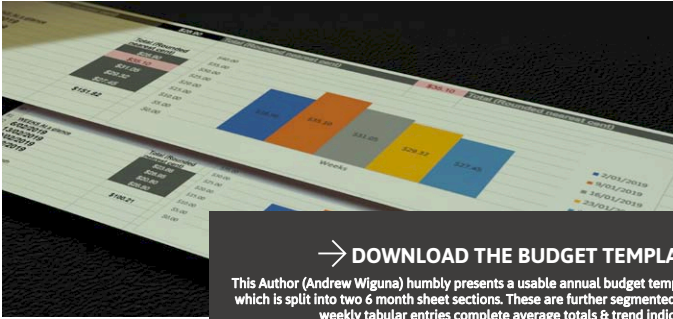
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### **ORGANIC** VS CONVENTIONAL, ADDITIVES/PRESERVATIVES

Living amidst frugality also inevitably structures one's liberty to no longer able affording Organic products. One study suggests dubious differences organic versus non-organic vegetable produces (Brandt, M. 2012). Nevertheless a pragmatic recommendation is to practise washing+soak all vegetables in water salted with small teaspoons worth of baking soda for at least half hour before storage / cooking. It is thought that pesticides are easily broken down in alkaline pH levels environment (Tianxi Y. et al 2017) in which Sodium bicarbonate is capable at inducing.

# TIPS BUDGET+NUTRITIONAL+TRAINING JOURNALS

Set yourself aside three (3) accounts. One as a Budget expenditure spreadsheet, another as Nutrition, and another as Exercise / Training journal.




## → DOWNLOAD THE BUDGET TEMPLATE

This Author (Andrew Wiguna) humbly presents a usable annual budget template which is split into two 6 month sheet sections. These are further segmented into weekly tabular entries complete average totals & trend indicator.

- 1 BUDGET SHEET:** A budget spreadsheet allows you to quickly enter and see at a glance your history of all expenditures and consumption. It inevitably allows you to gather data towards Longevity Analysis; out of each resource consumed (explained overleaf). **This Author** provides a free basic two-six (6) month template for anyone to **use by clicking [here](#)**. However be aware that this has been created out of Excel® Online, and hence visual charts may not appear in other spreadsheet editing software.
  - » Set limit for the month (black text box). Any weekly totals recorded exceeding this will be styled as a red text.
  - » Modify / change the starting week's Cyclical Day of budget expenditure (currently set as Wednesday) of each month. **IMPORTANT:** Depending on this chosen day, one month may not always consist of four (4) consistent weeks of expenditures. Hence at January, May or June = these may need five (5) weeks of expenditure instead of four. **This Author** recommends choosing either Monday, Tuesday, Wednesday or Thursdays, to ensure all dates follow on logically. **You must make every effort at maintaining this chosen day throughout the journaling to practise some regularity discipline.**
  - » Enter item values and pricing (on the next column = \$ numbers will automatically highlighted in green). Your totals are shown (highlighted in grey) your weeks totals are tallied up under the "weeks at a glance" heading.
- 2 NUTRITIONAL JOURNALING;** This journal entirely tracks all your interpretive notes, any effects you may experience (both detrimental and positive) within any dietary interventions. Please note - ALL CALORIE TRACKING is NOT inputted here; as that is best handled by establishing an online calorie tracking account (Fitday®, MyfitnessPal® or FatSecret® Australia). Besides nutritional effects, and/or any blood glucose meter readings when required:
  - » Amongst those practitioners of Intermittent Fasting; note down the timing of all feeding windows. This allows you to gauge trends of feeding window hours as best to your existing structural objectivist obligations.
- 3 TRAINING JOURNAL;** This journal entirely tracks all your Fitness Training performances overtime. Write down as honestly as you can over which exercises you can either memorise (in hand writing form) or typed digitally as separate document. **NOTE:** if you already sought the services of a Personal Trainer; then ask for his/her assistance to track your performance overtime as best accordingly to their methods. Otherwise, for all individuals here you should write down, in one (1) text file or document:
  - » All exercises, including warm up sessions and cardio vascular exercises, in addition to your solo resistance training regiment.
  - » How do you exactly feel from each and every training day. Are you improving? Or declining? or are you at least able at maintaining previous records?

The inline table below lists the common, though not certainly exhaustive - **Additives and possibly Allergenic Preservatives** which may pose concerns amongst discerning individuals.

 <b>ADDITIVES &amp; PRESERVATIVES</b>	
<b>GENERALALY SAFE</b>	<p><b>Xanthan Gum</b> E415. Potent Thickening agent and stabiliser. Whilst it poses flu-like symptoms if inhaled directly, Xanthan Gum proves quite safe and even beneficial at promoting favourable blood glucose control amongst diabetics. If used for premature infant foods however, may prove detrimental. (<a href="#">Wikipedia</a>).</p> <p><b>Natural derived colours</b> (150A-150D CARAMEL, 162 BEET RED, 140-141 chlorophyll. These are derivatives out of plant sources; so far to this Author's awareness and publishing of this Book no known adverse effects seem documented.</p> <p><b>Guar Gum</b> E412. Similar safety profile to Xanthan Gum. Thickening agent and stabiliser. A type of soluble water fibre, that also elicits favourable blood glucose control amongst diabetics. However, some individuals may be predisposed to soy allergy like symptoms. (<a href="#">Wikipedia</a>).</p> <p><b>Acidity regulators</b> (500 / baking soda / sodium bicarbonate) Citric Acids (330) Malic Acid (296). To date, this Author is not aware of any adverse effects documented from moderately consuming these ingredients. Sodium bicarbonate / baking soda however may potentiate upsetting of acidity balance of the stomach if taken large bolus at once (10g+).</p>
<b>QUESTIONABLY SAFE</b>	<p><b>MSG / Glutamate Salts 621, 622, 623, 624, 625. (NOTE: L-Leucine as 641 may perhaps remain an acceptable exception)</b> Glutamate is nevertheless an important amino acid responsible for neurological connectivity. Although conflicting sentiments appear within today's medical literature. (CONT NEXT COL)</p> <p>One study on male human subjects found MSG's insulin sensitizing benefits (<a href="#">Di Sebastiano KM, et al 2013</a>). This positive sentiment seemingly apply also to another rats &amp; in-vitro study (<a href="#">Bertrand G, 1995</a>). What cannot be ignored however is Glutamate's mixed effects on neurotoxicity, genotoxic, and over-consumption tendencies (specifically which <b>This Author</b> can adversely attests from experience). All of which remains open for debate out of a recent meta-analysis (<a href="#">Kazmi, Z. et al 2016</a>).</p>

## TIPS CALCULATING YOUR TDEE / MAINTENANCE CALORIES

TDEE are your baseline calorie needs to sustain your current weight (in kilograms) ; including BOTH Exercise and non-Exercise energy expenditure every 24 hours. **PLEASE NOTE: the Activity Level Method below is only a heavily summarised method and are by no means therapeutically accurate.**

GENDER (MALE / FEMALE)		AGE	Equations for predicting RMR or BMR in Kilo-joules. (note "W" as weight = in kg)	
STEP 1/3 DETERMINE BMR / RMR	Male	10-18	$(74 \times W) + 2574 = \text{RMR In KJ}$	
		18-30	$(63 \times W) + 2896 = \text{RMR In KJ}$	
		30-60	$(48 \times W) + 3653 = \text{RMR In KJ}$	
		Over 60	$(49 \times W) + 2459 = \text{RMR In KJ}$	
	Females	10-18	$(56 \times W) + 2898 = \text{RMR In KJ}$	
		18-30	$(62 \times W) + 2036 = \text{RMR In KJ}$	
		30-60	$(34 \times W) + 3538 = \text{RMR In KJ}$	
		Over 60	$(38 \times W) + 2755 = \text{RMR In KJ}$	
STEP 2/3 MULTIPLY WITH ACTIVITY LEVEL	ACTIVITY LEVEL	ACTIVITY MULTIPLIER		
	Sedentary	1.15	(little daily movement/s / disability / immobility)	
	Lightly active	1.3	(general daily movement/s with training regiment)	
	Moderately Active	1.6	(daily movement/s + multiple training regiments per wk)	
	Very Active	1.7	(very demanding labour + multiple training regiments per wk)	
	Extremely Active	2.0	(more than strenuous prolonged labour + training regiments per wk)	
STEP 3/3 ADD 10% TEF	THERMIC EFFECT OF FOOD	CARBS % RANGE	PROTEIN % RANGE	FATS % RANGE
	(use 10% as average TEF value across all macros)	15% - 20%	20%-25%	3%

- 1 DETERMINE YOUR RMR / BASAL RATE.** Find your age range and refer to the formulae/equations on the right. All mammals subsist on basal rate of caloric energy rating to support the most basic needs of Life - from heartbeats, blood flow, gut transit, enzymatic processes, nerve-communication. Memory recall; to name a few. This is your Resting Metabolic Rate.
- 2 TIMES YOUR RMR WITH ACTIVITY LEVEL MULTIPLIER THEN DIVIDE BY 4.2.** Take your RMR value as previously calculated above and times this with the activity level. Divide by 4.2 to convert into calories (Kcals). Please note that whilst this is entirely subjective; you are free to use incremental decimals (eg. 1.4, 1.35, etc) should your activity levels falls inbetween each tier. One way to determine your tier eligibility is to assess your existing training and fitness regularity, intensity and overall non-exercise expenditures. On gross average, an individual with occasional periods of walks and stands throughout daylight COMBINED with a three-or four day per week resistance training regiment should use tiers anywhere between at least 1.3 to 1.6 (McDonald, L. 1998). Higher genuine stress (limited rest periods) during training are eligible towards higher increments (+0.15). For labour intensive employments requiring prolonged standing and lifting; higher tiers between 1.65 upwards are permitted.
- 3 FINALLY ADD APPROXIMATE AVERAGE TEF.** Different macronutrient possess different thermic effect upon ingestion; as determined by SDA (Specific Dynamic Action) (McDonald, L. 1998). As a general rule, use 10% as an average value and add this on top of the [RMR x Activity Level].
- 4 To illustrate as an example of a 65 Kilogram, 30 year old male with reasonable training regiment (twice per week, perceived intensity towards 65% of training failure).**  $48 \times 65\text{kg} = 3120$ ,  $3120 + 3653 = 6773$ . Therefore RMR is 6773/4.2 = 1612 kcals. Then with Activity Multiplier =  $1612 \times 1.3 = 2095$  kcals. Then finally with 10% of TEF added = thus gives out a TDEE maintenance of 2304.5 kcals.



## ADDITIVES & PRESERVATIVES

	<p><b>Nitrate salts 250, 251.</b> Arguably, nitrates are a commonly shared trait amongst both leafy plants (Kale, spinach), cured animal meats and even drinking water. Wide speculation today persists such that plants have counter compounds that may prevent the harmful conversions of the nitrites to N-nitrosamines (<a href="https://www.researchgate.net">researchgate.net</a>).</p> <p>However, less-known counter studies suggest conflicting messages. Several Toxicological Studies (on high concentrated) amounts of Sodium Nitrates (and Nitrites) on animal models showed inconclusive carcinogenic results (<a href="#">Maekawa Et al 1982</a>). Further, a study of direct Nitrite INFUSION into human subjects during EXERCISE paradoxically decreased systemic vascular resistance; perhaps owing to Nitrite's precursor to the vasodilating molecule Nitric Oxide (<a href="#">Hon YY et al 2016</a>).</p>	<p>One in-VIVO study pragmatically suggests regular antioxidant intakes helps inhibit excess Nitrosamines, from intakes such as Vitamin C, garlic, berries or at the very least - blacks / green &amp; white teas (<a href="#">Zhan, QM et al 2012</a>).</p> <p>Likewise direct infusion study of Sodium Nitrite; though on mice subjects, led to protective effect on tissue damages after heart attacks and organ transplantations (<a href="#">Duranski MR, et al. 2005</a>). The best <b>This Book</b> may ever pragmatically suggests is to periodise between none, low and moderate intakes.</p>
(CONT)	<p><b>Sulphites 220-225, 228.</b> Preservative found on various juice concentrates (Lemon/Lime, others) and various canned vegetables. Can be both synthetic or natural derived. Potential asthmatic provoking alongside symptoms of IBS (irritably bowel syndrome) may occur in susceptible individuals and existing asthmatics; particularly amongst casual wine &amp; beer drinkers.</p>	<p>A pragmatic advise would be to abstain consumption; especially amongst young children (<a href="https://fedup.com.au">fedup.com.au</a>).</p> <p><b>Potassium Sorbate 202.</b> Commonly seen on soy sauce products as anti microbial and mould/yeast preventor. Generally regarded as safe. However, pragmatic natural alternative (without sorbates) are recommended.</p>
(POTENTIALLY UNSAFE)	<p><b>Carageenan E407.</b> Also known as Agar Agar; both derived from the same plant species Red Seaweed. Thickening agent and stabiliser. A famed reported substitute amongst vegan / plant based mock meats, milks and yoghurts. <b>This Author</b> anecdotally confirmed notable gut discomfort, irritation &amp; feelings of inflammations. Certain individuals may need prolonged caution. (<a href="https://en.wikipedia.org">Wikipedia</a>). (CONT NEXT COL)</p>	<p>Many in-vitro (both using animal and human cell/s) studies suggest Carageenan's potent pro-inflammatory effects as well as adversely impairing glucose metabolism through insulin resistance (<a href="#">Bhattacharyya S, et al. 2012</a>). It is also noteworthy that Carageenan itself is indeed the agent used in thousands of medical studies to induce experimental inflammation (<a href="#">Borthakur, A. et al. 2012</a>).</p>
	<p><b>Bromide Salts (Magnesium, Calcium, Potassium - Bromides).</b> Bromide is an oxidising agent; widely used in bread and bakery products (CONT NEXT) to ensure final products "rise" to give consistent appearance of volume. It may also be remanifested as an emulsifier. A media journal analysis (<a href="#">Snopes.com, 2013</a>) curated various case studies concerning suspected effects of bromates within soda drinks Mountain Dew®, Gatorade® to name a few.</p>	<p>Several studies amongst (various) animals remain mixed in sentiments of bromide's endocrine disrupting and kidneys carcinogenic potential (<a href="https://www.inchem.org">inchem.org</a>). Human case studies on bromide toxicity on the other hand seemed to induce kidney failures and deafness (<a href="#">Quick, et al. 1975</a>). Avoid or abstaining seems pragmatic in light of these findings.</p>

Nothing one expects is as "**Luxury**"; as implied by the title of **This Book**. Depending on the macro principle chosen (LCHF/HFLC) a typical meal consists of 1). A base be it carbohydrate or fat 2). Source of protein. 3). Micronutrients from greens. and 4). Condiments on top of basic salt. Essentially base, meats, greens and flavouring. Individuals are encouraged to realise that over-time, palatability changes amidst ketogenic intervention will likewise impose a need to reduce cutlery sizing to a smaller size. Condiments in particular may prove crucial amongst participants of Intermittent fasting, as digestive systems relaxes, so too in its capacity at handling bolus solid-foods if proceeded without key supporting ingredients. At the very least, garlic and or liquid sources of free form of glutamates such as soy sauce and/or fish sauce - are desirable to promote intestinal function towards a myriad of digestive tasks (*Tomé D. 2018*).

In short, if fervently debated with **This Author's** adverse anecdote, such perhaps are not the most optimal for long term consumption. Once again, it is up to the Readers to willingly be held accountable for whatever repercussions await them.

Instant noodles have long been concerned at due to their strong contribution for metabolic and cardiovascular risk factors (Shin, HJ et al 2014). However, MSG monosodium L-glutamate seemed to be glucose tolerance enhancing; at least shown within in-vitro study (Bertrand, G. 1995). Human study however suggests mixed effects on glucose tolerance (Chevassus, H. 2002). Nevertheless as alluded to earlier, if efficacious digestion is concerned, natural source of Glutamates (Tomé D. 2018) tends to remain more supportive in such a role, than negative as widely instilled amidst pedestrian normalcy.

Pulses (beans, lentils, legumes) have long been considered to be the backdrop of early nutritional sustenance as far back as 8,000 years (Yadav, SS et al 2007). In spite of its glow-



ing reception as “**Economic**” sources of protein sadly, its poor carbohydrate-to-protein ratio (as high as 2.5:1) remains much undiscussed.

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**One would theoretically have to consume 250% more quantity of beans and legumes; to match the nurturing density to that of animal based & seafood proteins.**

Anti-nutrients in pulses also pose legitimate concerns on long term consumption. A study amongst traditional sub-groups (Pima Indians & Chileans) found strong correlation between high legumes intake & incidence of gallstones (*Nervi, F. et al 1989*). Likewise, the predominant anti-nutrient Lectins concerns towards that of impairing insulin & leptin signalling (*Jönsson T, et al. 2005*). Lectins have been studied for its “leaky” potential into the vagus nerve; triggering pro-inflammatory condition towards Parkinson’s disease (*Zheng, J. et al 2016*).

For **This Book** to remain impartial nevertheless, counter studies do praise pulses' positive effects on metabolic markers (*Li, H. Et al 2017*). **This Author** however asserts that individual needs, response and sensitivity will greatly vary. Should vegetarian readers insist on beans as sole source of protein - canned beans are thought to be easily tolerated (*Tuck, C. et al 2018*) than those manually prepared. All things considered; including **This Author's** in spiteful adverse history on such economic or instant foods would pragmatically suggest all to keep a nutritional journaling; at accounting periodisations between none, low & high consumption of any suspecting foods.

32 **WHERE DO YOU BUY ALL YOUR GOODS / RESOURCES?**

The following in-line table guides the Readers upon the various retailers and merchants.



**WHERE TO BUY RESOURCE SELLERS**

**This Author** asserts that absolutely no financial endorsements were received by the following names, and legal entities.



## WHERE TO BUY RESOURCE SELLERS

ONLINE / BULK / SUPPLEMENTATION

### **Ebay®**

As obvious as this may sound, Ebay® sellers in Australia operate all their businesses seriously and legally no differently to that of any physically operated shops. **This Author** has experienced consistency from amongst these sellers when it comes to the quality of products and their pragmatic affordability of whey proteins and various sports supplements from Creatine, ALCAR, and BCAAs.

**2brothersfoods (whey protein powder), City Health Foods, HD Health, Pure Product Australia, and Sports Supplement Direct.** A pragmatic advice for flavouring would be to combine flavoured with an unflavoured source. Additional "safe" artificial sweeteners, such as at least of Sucralose or of Stevia origin/s are to be crushed (if in tablets) and mixed to the existing mixed supply batches. Beware however that overtime, Readers tolerance of "sweetness" may or maynot readjust to various intensities.

### **Kakulas Brothers / Sister (Wes Australia only)**

For bulk food powders as well as great pricing on pea protein powders, bulk linseed / flaxmeals and various flours; the wholefood grocer Kakulas Sisters / Brothers have multiple franchises located in city, north and south of the river.

### **Various Health Stores**

Whilst rare, and inconsistent, few health supplement stores carry discounted or short-dated products. Given **This Author's** limited experience it is mainly up to the risks the Reader willingly shoulder to determine the efficacy of these products at their own end.

### **iHerb® (Australian domain) au.iherb.com**

Offers products whose quality and pricing cannot be found elsewhere. Any specific type of vitamin or micronutrient, or any others commonly excluded on many local discounted chemist or pharmacy sales may be found here. Whilst the shipping fees may offset their discounted pricing, **This Author** advises to buy only when absolutely necessary.

### **Piping Rock®**

A less known competitor to iHerb®; piping rock stocks many hard to find micronutrients such as discounted Liquid Vitamin Ds, Vitamin K2 Mk4s & Mk7s, chromium GTFs, digestive enzymes to name a few. What is equally attractive are their bundled discounts which may not be found elsewhere. Regular whimsical / dubious purchasing however is not recommended.

SUPERMARKETS

### **Woolworths®**

One of the major grocers market here in Perth Western Australia; it is of **This Author's** anecdotal experience that many of their franchisees periodically offer good pricing and quality amongst budget economy meats and poultry. But poorly priced eggs and dairy fats particularly butter/s and full fat yoghurts. **Recommendations:** Consider visiting only during late hours (preferably within the hour before closing) as one may witness discounted bakery goods, dairy product/s and in some instances - meat produces. Be sure to store in freezer on all short-dated goods for later consumptions. Consider also visiting during weekends as rotation of short dated products vary on occasion.

### **Coles®**

Next to Woolworths' competitor; it is of this Author's subjective opinions and experience that Coles® do not offer subjectively superior pricing specials consistently across various range of goods. By no means that Readers are to exclude visiting, nevertheless. Like Woolworths® Coles® similarly offer too high of a pricing amongst eggs and dairy products. **Recommendations:** Short dated goods vary wildly from one store to the next. Some may not even publicly display any "Reduced To Clear" Trolley. On ones that do, **This Author** finds that weekend mornings, or approximately 30 to 45 minutes before closure (via public speakerphone announcement/s) - tend to be most enviable for one to consider scouting.



## WHERE TO BUY RESOURCE SELLERS

SUPERMARKETS / ALTERNATIVES

### ALDI®

Perhaps thus far- it is of this Author's subjective opinions and experience that ALDI offers the most superior quality of dairy goods and produces all at affordable pricing. Particularly greek yoghurts, cheese, milk products and should Readers budget allows - free range eggs and competitively priced health powders such as Cacao's and linseeds. Their franchise distances however may prove disadvantageous to those, like **This Author** who advocates saving of petrol. Recommendations: full fat yoghurts and cheeses within ALDI are highly coveted and praised. **This Author** recommends their range of Sardines (as they particularly contains much higher Omega-3 intakes compared to others despite similar pricing of 65 to 70 cents each).

### Spudshed / spudshed.com.au

Next to various alternative fruit & vegetable markets - this marks as a highly recommended visit for bulk food purchases particularly potatoes and starchy vegetables including pumpkins. Whilst inconsistent, their pricing on various meats and poultry are also strongly worthy for considering. Despite only a few franchises available, should petrol allowance is of no concern, Spudshed® would highly marks a next worthy visit. Recommendations: If the nearest Spudshed (only in Perth WA) requires some distance travelling; consider if any of periodical specials justify the added cost of petrol. Short dated goods are common amongst meats and vegetables but in **This Author's** opinion & insight- such occasions are witnessed less both in quantity and frequency overall compared to independent green grocers (see previous). Though other franchises may vary.

INDEPENDENT / OTHER

### Fruit & Vegetable / independent Grocers

This first and foremost marks as a highly recommended visiting and weekly surveying for ALL vegetables acquisition. It is of **This Author's** subjective opinion that short-dated vegetables and fruits sold by these independent merchants marks a far more superior value and overall purchasing outcome compared to greens produce out of the major supermarket names.

### IGA®

Out of all supermarkets, IGA® be it Supa® branded franchise or standalone IGAs throughout Perth suburbs impose the highest pricing of all goods and produces. Unfortunately, reduced to clear sections are not as consistently enviable compared to other supermarkets. Recommendations: Short dated goods are rarely visible from **This Author's** experiences. Although generally early mornings between eight to nine AM seems to be the most enviable scouting opportunity.

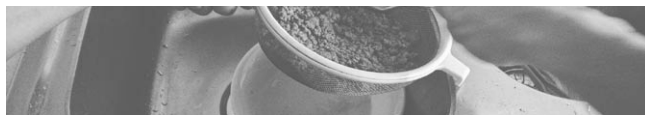
When it comes to acquiring short-dated goods, it may be wise to gently enquire to any store on when they usually stock these soon-to-expire goods. **This Author** (AW™) anecdotally have been advised of the "two-day rule"; such that many outlet brands sell these short-dated products approximately two days before their alleged expiry. Unfortunately there is no universal guarantee to this as nation wide policy as outlets differ. Hence readers are advised to enquire at their own end.

## TIPS FOOD PREPARATION & COOKING

- (STANDARD HCLF) FREEZING POTATOES.** To freeze potatoes, **This Author** recommends cooking them to a mashed like consistency in the microwave with only few tablespoons amount of water (no more than 6 minutes on high per 350g worth), let cool before transferring to tupperware prior to freezer storage. It is also prudent to inspect any undesired smells or visual characteristic upon defrosting; and frozen mashed potatoes are ideally consumed within a space of no more than two months.
- (KETO) USE SMALL PLATES. EAT USING SMALL TEASPOON.** Eating Ketogenic meals are drastically different than carb heavy diets. Readjustments is inevitable. Unlike carb heavy diets whereby it is common to chew one spoonful of food after another immediately in each succession, in Keto/HFLC - Readers are encouraged to eat at segmented pacing. That is, chew the equal amount of fats/protein substance first (for example - the egg) and allow the natural mastication and swallowing to complete before spooning another.
  - » A study on mastication speeds seem to suggest that slower eating is associated with lower risk of diabetes ([Yamazaki, T. et al 2013](#)).
  - » An overall relaxed, unimposing state of dining setting; be it psychological and environmental factors are crucial to ensure high stomach acidity. A study seem to suggest that a relaxed stomach is more readily able at digesting proteins fully ([Kelly, SG 1997](#)).
- (COOKING MEATS: GENERAL COOKING METHODOLOGY(S): MICROWAVE, OVEN OR STOVE TOP)** Generally speaking, **This Author** finds that both Microwave and/or stove top cooking are applicable and safe for everyday methods; for as long as some liquids or stocks, with antioxidative herbs and/or spices, are implemented. This is to ensure that excessive Dietary Glycation End Products formations are minimised during the high temperature cooking (please see separate manuscript / [Wiguna, A. 2019](#)).

**This Author** (AW™) previously recommended oven method cooking for boned meats. However having recently written publicised another accompanying manuscript (Dietary Glycation End Products, [Wiguna, A. 2019](#)); He may yet have to revise his stance by now preferring slightly towards the Microwaving due to noticeably shorter cooking turnaround and reduced electric consumption.

It is also noteworthy to consider that Vitamin E supplementation might be warranted for individuals (**This Author** included) who occasionally rely on both cooking or consuming affordable PUFA N6 margarines and/or tablespreads alike. Whilst DAILY mega dosing in the regions of 1000IU is marked as the Tolerable Upper Limit before possible harm may result ([Higdon, J. 2000](#)), **This Author** (AW™) recommends periodical dosaging between and none and up to 1000IU as every alternate day dosaging, taken with the largest meal; depending on frequency of PUFA N6 cooking reliance. This supplementation contingency is to ensure protective insurance against excess lipid peroxidation end product/s ([Princen HM, 1995](#)).



- » **FOR ECONOMY BEEF MINCE.** Allow sufficient defrost. Then cook without additional fats on a well pre-heated pan or gentle cooking with presence of some liquids (water) with few spices. Do not allow excessive browning. For as long as juice is withdrawn immediately turn off gas and strain the cooked meats through a colander. Prepare boiling water and strain once again.



- » **FOR CHICKEN DRUMSTICKS/MIXED PIECES.** Allow sufficient defrost. Then perform gentle cooking via stovetop or microwave eitherway - always with presence of liquids (water) with few spices.
  - » **FOR ECONOMY SAUSAGES.** Allow sufficient defrost. Then perform boiling via stovetop or microwave eitherway - always with presence of liquids (water) with few spices. If boiling via stovetop, the liquids can submerge the overall sausages.
- (STANDARD & KETO)** Consider investing in digestive enzymes containing Betaine HCL and Pepsin; or a blend of enzyme concentrates such as Papain, Bromelaine, Amylase and Protease. At some stage, higher protein intakes are inevitable, and thus digestive health will likely impose some great importance. Thankfully however, intake and reliance of these supplements are subject to intermittent dosages and individuals may find they rely less overtime for as long as other supporting micronutrients are accounted for. Among them Magnesium, and Zinc.

# THE PRIMER ON PROTEIN

FUNCTIONALITY FOR LIFE. BEYOND BODYBUILDING VANITY.

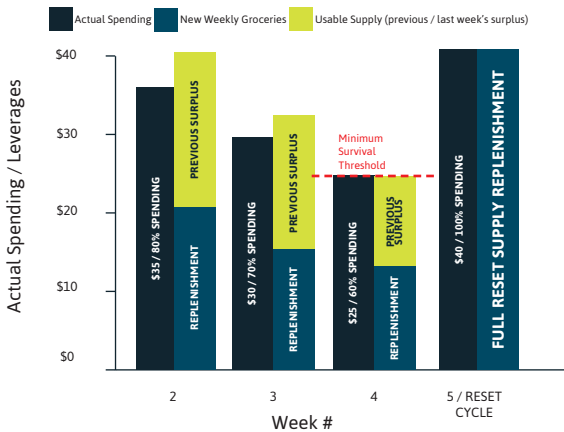
## 33 **WHY IS PROTEIN SO IMPORTANT? HOW MUCH SHOULD I BE CONSUMING?**

**“Protein”** is beyond amino-acids or **“Polypeptides”**. Its Greek origin of **“Proteos”** meaning **“first element”** and **“of prime importance”** remains ubiquitous throughout all subject matters of almost all enzymatic pathways. If there is one macronutrient elusively exchangeable throughout all realm of cellular life, it is simply Protein. Intake wise no singular **“advice”** or **“rule”** for optimal Protein intakes at present so far is empirically **“correct”**. What is important however; is examining both spectrum of studies- advocating **higher** as well as **lower** intakes.

**Let us first consider studies highlighting both BENEFITS OR NON-DETRIMENTAL findings of higher intakes.** Hyperparathyroidism prevention, alongside with bone health

## TIPS SURPLUS MAINTENANCE VIA CYCLICAL PURCHASING

Cyclical Purchasing is a cyclical purchasing strategy to help maintain creation of food/s surplus while at the same time incentivises you to lower your overall actual weekly budget spending. All this is possible by ensuring that you are consuming every available food resources from previously accumulative surpluses. **As soon as you have reached a Minimum Survival Threshold - this is a strong enough signal to expend back to full 100% spending amount.** This chart below uses an example of chosen \$40 as 100% spending cycle.



- 1 To start; have one week where you aim to spend 100% the amount of weekly spending (\$40). First step would be to certainly scout and locate the shopping locale of various merchants that offer regular specials or at the very least - offer regular pricing significantly less to that of major supermarkets. Focus on buying goods that you know that will last you at least more than a week's of consumption cycle. These are for example: **bulk potatoes (5kg/10kg potatoes on LFHC dietary plans), bulk vegetable purchases on specials, bulk flaxmeal / linseed meals, bulk meat purchases on specials, etc.**
- 2 Once you've approached Week #2- **reduce your actual weekly spending from \$40 to \$35. Buying only what you empirically need to survive (REPLENISHMENT / dark turquoise).** Whilst aiming to sustain yourself based from previous weekly supply (green).
- 3 Upon next week / Week 3 - reduce again your actual/principal spending down to \$30, **buy only what you need to survive (REPLENISHMENT / dark turquoise)** and **continue to live on and preserve the previous weekly surplus (green) to the next.** Repeat this and assess for however many weeks you feel necessary until you've reached the **Minimum Survival Threshold (red / dotted line)**.
- 4 Once you've reached a **Minimum Survival Threshold**, this is where you are fully exhausted at least 75% previous week's surplus then it's time to **reset / increase spend the full weekly sum back (\$40)** for the next week and commence the overall Cyclical Purchasing again if necessary.

## TIPS TRACKING CALORIE CONSUMPTION WITH MYFITNESSPAL® ACCOUNT.

**This Author** recommends Myfitnesspal (MFP) purely for the wider databases of food/s; both commercial and wholefood forms. In the opinion of **This Author** - premium plans are not justifiable to its cost. Individuals are free to also explore other macro calculators (Fatsecret® / Fitday® to name a few) should they prefer. The following tips generally apply towards MFP, but can certainly be incorporated to other tools.



- 1 FOR STARTERS / BEGINNERS. To "begin" all nutritional tracking - This Author encourages that BEFORE partaking any changes in macronutrient or nutritional regiments- Readers are well advised to remain / continue existing consumption of resources at current habitual patterns and circumstances AS IS. **Until daily nutritional tracking is constantly practised for at least a full calendar month- Readers then are free to explore and instigate appropriate caloric footprints to their metabolic and physiological needs.**
- 2 SET NUTRITIONAL MACROS. These are macro compositional rules one may follows(Low Fat, High Carbohydrate, Low Carbohydrate, etc) this is done by **going under "GOALS" beneath "MY HOME" and here Readers can edit Readers daily nutrition goals overall macros.**
- 3 TRACK DOWN EACH AND EVERY GRAMMAGE OF FOODS. This encourages consumption of resources only in their most untreated / holistic states. As opposed using them for "recipes"; which proves difficult overtime as further nutrients remains yet to be tracked and accounted for. This also incentivises awareness and inquisition upon knowing exactly what is being consumed. And that any suspecting ingredients can be readily highlighted by the ingredient's packaging or manufacturer's nutrition table.
- 4 CREATE/SAVE REGULAR LISTS AS MEALS AND RECIPES. As Readers build up a series of items for each Meal Header under MFP; these tend to be cumbersome to manage if these are indeed Readers regular unchanged meals. Hence - create a series of these "Meals" that Readers expect to consume regularly.
- 5 TRACK AND PLAN OUT READERS MEALS BEFORE READERS ACTUALLY EAT. Plan all Readers meal planning before consumption. This incentivises Readers to be more-proactively organised in committing to a set of calculated resource consumption plan rather than relying on loosely uninhibited, precarious planning.



### BEWARE OF DUPLICATE ENTRIES AND/OR INACCURACIES.

Myfitnesspal® food database is largely decentralised; which unfortunately are prone to inaccurate duplicate entries as submitted by members of various nutritional knowledge / acumen. You must exercise due diligence at confirming and distinguishing whether all nutritional characteristics are indeed genuine.



+strength+mineral density all seems dependent on higher intakes at least above RDA of 0.8g/total weight kg (Wallace, C T & Frankenfeld, L C. 2017).

Likewise a study examining hypocaloric regimens – intakes higher than 2g per kg of total weight amongst resistance trained athletes confers better psychological profiling of mood states (POMS), emotional wellbeing and overall perceived nutritional satisfaction (Helms, E. et al. 2015). Next - maintaining an equal ISOCALORIC macros ratio (40/30/30), but with protein intakes as high as 4.4 grams Per kilogram (4.4g/kg) of body weight across as long as eight (8) weeks - paradoxically did not produce adverse increases in fat mass accumulation (Antonio, J. et al 2014). The longest study so far recorded on high protein intakes is across three monitored years; and likewise returned no adverse effects on renal or liver health (Ellerbroek, A. et al 2017).

Irrespective, many studies explored (Soenen S, et al 2013), (Leidy J H et al 2015), (Tarnopolsky A M., et al, 1992) - all similarly suggest that men or women, either obese or non-obese higher intakes (between 1.2-1.8g per kilogram of total weight)

seemed to confer benefits towards preserving REE / Resting Energy Expenditure and overall metabolic syndrome markers; than all lower protein intakes in comparison (<0.8g per kg).

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**Individuals deemed at “risk” of insufficient intakes seems warranted within context/s of restricted overall calorie intake and/or those undertaking vegetarian regiments (*Lemon P W, 1996*).**

For maternal nutrition intakes higher than the RDA (currently at 0.88g/kg) seemed to lower risks from low foetus birth weight. Such is linked with risks of child’s CVD+metabolic turbulences in later life (*Stephens, V T et al 2015*). A study amongst very old adults (65+) finds that higher intakes suggests higher defense against Sarcopenia & confers overall improved quality of life (*Volpi, E. et al 2012*).

Higher intakes thus at this point; seems both pragmatically and convincingly conducive. However for **This Book** to remain fair and impartial, let us consider those highlighting

LOWER intakes. IGF-1 - a hormone so adversely reputed to multiple cancer proliferations; seemed to decrease on an all-lower intakes of protein (0.7 to 0.8g per kg) amongst younger population (<50 years), but paradoxically NOT older population (>60) (Levine E M, et al 2014). That study however is contextualised within high carbohydrate & moderate fat nutritional formatting (51C/33F/16P). Another study amongst elderly subjects found no objective fitness or strength marker improvements across lower protein (1.1g per kg) versus higher protein intakes (2.1g per kg) although, fat loss is more pronounced amongst the higher intakes (Maltais ML, et al. 2016).

In light of these findings; it may be easy to downright conclude by prescribing the old adage of “**1 gram per pound of bodyweight**”. However, such gospel may not confide favourably for all as individual adjustments, nutrigenomics or metabolic diversities which all remains as elusive confounders. However one thing is certain, our current sentiment on this much less discussed macronutrient is undeservedly stigmatised & demonised.

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**TVP / TEXTURED/TOTAL VEGETABLE PROTEIN / SOY PROTEIN ISOLATES**

**It is of This Author's opinion and experiences that TVP is not ideal for prolonged consumption.** Psychological and metabolic adversities to name a few, may persist as undesired effects. Beyond slow or impaired digestion, but also of psychological "**numbness**" immediately or upon accumulative ingestion. Should these effects occur to an individual - immediately document quantity & frequency of use. Abstain or periodise between low and high intakes and continue monitoring any side effects. Adversely, Soy Protein seems a somewhat ambivalent supplement of choice for resistance training purposes. One study noted very clearly and significantly impaired strength output/s amongst older populations (*Kraemer, et al. 2013*).

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**TVP appears in many repackaged or re-titled products such as Soya "Wadi", "Nuggets" or "Chunks"; all bearing very similar macronutrient profiling.**

Nevertheless, in order for **This Author** to remain impartial to all sides of nutritional advocacies - a dedicated blog article ([nutritional-humility.me/blog](http://nutritional-humility.me/blog)) was written for various reconstituting (preparation) guidelines for any or all select readers subscribed under plant-based regiment.

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### **WHEY** PROTEIN (WPC, WPI, HPI)

Whey protein is well received as additional source of proteins with various immunological roles ([Cruzat, et al. 2014](#)). Hydrosylates, concentrates, or isolates form all are perfectly usable forms. **This Author's** years of anecdotal experience suggests that humble Whey Protein Concentrates (WPC) suffices everything just as well and the more expensive variety (Hydrosylates and Isolates) are pragmatically unnecessary.

Beyond its superficial claims as "muscle-building" supplement, whey proteins importances extend at maintaining endogenous anti-oxidative health; as thoroughly documented in many studies ([Grey V. et al 2003](#)) & ([Ng, Tzi Bun, et al. 2015](#))

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## PEA PROTEIN (PPI) & BROWN RICE PROTEIN

Widely reputed as “**alkaline**” source, these makes a viable alternative to Whey proteins. As forewarned, Pea proteins are generally much more grainy in consistency, adding to their clay-like palate; may not dissolve readily in water than Whey. Their anti-inflammatory effect/s is notable (*Ndiaye, 2012.*). However, cost-per-gram wise; many are markedly more expensive than Whey in many market conditions.

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## MILK (FULL CREAM) PROTEIN & CASEINATES

Readers may also wish to consider casein as the “**slower**” digesting amino acids. Debates on which is worse or better “**muscle-builder**” between Whey VS (Micellar) Caseins remains elusive. But two studies shares one concern surrounding Whey’s trade off as faster stimulation of MPS (Muscle Protein Synthesis) BUT ALSO faster oxidation compared to Casein overtime (*Bilsborough S, N. 2006*) & (*Boirie Yves, et al. 1997*) .

As readers expect, alternatives are available in form of lactase-aided products. At the very least, should readers remain terminally convinced, it may be wise to consider ongoing lactase supplementations. **This Author** would first and foremost suggest that avoiding dairy products altogether is haphazardly inadvisable. Beyond the importance of calcium, many other key micronutrients reside exclusively within dairy that may not be found elsewhere (*Gast, G C 2009*). The ever-persistent debate on whether or not lactose intolerance exists or not exist – remains a matter of individual self-enquiry.

It is noteworthy to realise that dairy intolerance is only one of many other confounding intolerances. Laboratory testing indeed confides assurance of one (1) suspect only. But ultimately real life settings out of long-enough periods of self-enquiring – may yet be the more realistic and better marker of judgment because it allows a wide selection of scrutiny(s) of various foods in their complete forms. **This Author** (AW™) in particular has had for many years likewise suspected of dairy intolerance, given his ethnicity of strong association. However, throughout many years of N=1 self-enquiring through elimination and reintro-

ductions **via various strict Cyclical Ketogenic and IF regiments, in low, none and high intakes in various caloric settings - all led him conclusively that lactose are NOT to blame.** However many classical symptoms of malaise from discomforts to pains, bloatings and persistent flatulence - does appears as so in a dose-dependent pattern with fructose consumption and various beans/legumes products. That once again, was self-enquired through-and-through using the same above means of criterias.

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**Other symptoms of suspected intolerances can also arise with certain sensitivities to synthetic agents or additives in various food products.**

In particular, **This Author** is convinced not to consume any dairy substitutes or products with carageenan. This of course is only one "isolated" case of concern. However to find this out in a laboratory setting is frowned upon due to the coercively-institutionalised - medical paternalism in place today.



Beyond constricted fame as training ergogenic Creatine Monohydrate has proven a diverse enough use more than just a "supplement"; as there are now over 700+ scientific studies examining its applications towards human physiology (Patel, K. 2018). Particularly amongst those practicing veganism- additional Creatine supplementation seems necessary (Demant, TW. 1999). **For the majority - BCAAs, Creatine Monohydrates, Beta Alanine + any protein supplementary of choice, ALCAR and few nitric oxide agents all suffice.**

Especially if Intermittent Fasting is practised; **BCAAs (Branched Chain Amino Acids)** are thought to be essential at maintaining all training episode/s during fasting regiments (Berkhan, M. 2010). It is advisable however to not take it during late night-times; as BCAAs are known to interfere with the Serotonin & Tryptophan pathways (Choi, S. et al, 2013); thereby affecting sleep quality. Those on prolonged strictly Standard Ketogenic interventions (without fasting), further reading may be advised considering its current impact on nutritional Ketosis. Some are desirable (Evangelidou, A. 2010). Others not so much; as over consumption of L-Leucine seemingly **wastes** muscle proteins instead of augmenting the MPS system further (Choi, S.

et al 2013). These conflicting effects suggest periodical cycling in between high and low dosages. Thus necessitating individualised, Nutritional Journalling.

**L-Citruline** (or a version with added 'Malate'; as arguably better towards Creatine phosphate regeneration (Stoppani, J. 2015) remains an essential contributor to **Nitric Oxide** synthesis; as well as help persisting against prolonged cold exposures. A study on mice found that despite small results; Citruline does nevertheless attenuates stress induced cold hypersensitivity (Kobayashi, Y. et al 2014). Due to its strong, pungent sourness - only minute dosages (less than 4g per day) are to be used next to Creatine Monohydrates. Other preworkout ingredients, particularly. If despite an optional expense, "Beta Alanine" also seems a promising training ergogenic, and thus remain viable open to individual's experimentation in various dosages between 2 to 7 grams per day.

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**Living hypocalorically amidst frugal and structural impositions long term (at least**

## 1 year+) no doubt exerts significant psychological stress.

A noteworthy consideration to keep psychological profiling adaptive during episodes of low energy availability would be to supplement with **ALCAR (Acetyl-L-Carnitine)**. Advocated for no-tropic effects, neuroprotective, antioxidative, anti-hypertensive, anti-diabetic / insulin sensitizing (*Ruggeneti, P. 2009*) as well as cardioprotective (*Mingorance, C. et al 2011*). Individual absorption effects vary to the individual and how it is taken. **This Author** advocates taking on empty stomach; small dosage (<1g) in warm black coffees or teas. Or as ergogenic preworkout during resistance training. Thankfully, given only minute dosages are required ALCAR sold in 250g or up to 500g pouches suffices a long way with less than two (2) purchase transactions required per any given year.

**This Author** also asserts other essentials. Vitamins D, E (especially if dietary fat intakes are predominantly oxidative prone such as vegetable oils or Omega-6s "**PUFAs**" - see Question "What about the types of fats?" on page 153 for more

details), Vitamins K2 MK7 or MK4, Magnesium (amino chelated, Chloride as skin oil or Citrate bound), Zinc (at least an amino-chelated form, sulfate or Gluconate form), then Digestive enzymes (Betaine HCL with Pepsin), alongside periodising intakes of MSM / Milk thistle for Liver health / methylation, adaptogen and mobility health. Readers may also witness other discretionary essentials as later outlined on **page 216**.

<sup>37</sup> **WHY DO I HAVE TO SUPPLEMENT ALL OF THIS?**

It is insatiably easy to paint **This Book** contradictory due to the financial surrendering needed for “**supplementing**”. However such pursuit for “**Health**” sadly, is a persona so misguided it can no longer be encompassed through “**Food intakes**” alone.

As we later progress through philosophical (& scientific) debating of the failing “**Everything-In-Moderation**” dogma (**page 197**), it is hopeful that Readers agree all this is nothing but insidious Scientific coercion. One reason is that of our Systemic failure for not admitting individual interpretation that “**Healthy**” is ambiguously subjective in its Logistics. So much so that **This Book** readily interprets it as “**Solicited Youthfulness**”.

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**It is blind optimism to leave this discussion with assurance that our (global) food supply quality has evolved “for-the-better”. Arguably, “for-the-worse” is a much safer sentiment.**

Omitting these contingencies / supplementation/s as one persists through prolonged Frugality; is deadly ignorance. **This Book** once again is never a pro-claimant of Scientific “**Authority**”. Readers must remain pragmatically solicited with use of contingencies amidst this very challenging Self-Enquiring journey; towards each one and their own - Authentic potential(s).

"IT IS EASY TO GET  
A THOUSAND PRESCRIPTION.  
YET DIFFICULT TO  
GET A SINGLE REMEDY."

---

**CHINESE PROVERB**

"NO, THANK YOU.  
I HAD SOME IMITATION  
SCRAMBLED CHOLESTEROL."

---

**MUSTAPHA MOND**  
"BRAVE NEW WORLD" (+2:45:38)

# WHAT IS HEALTHY? WHAT IS NORMAL?

“HEALTHY” = AMBIGUOUS UTOPIA.  
“NORMAL” = STATISTICAL MEDIOCRITY.  
“YOU” = A FREE RADICAL.

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38 **CHALLENGE ME THAT THE FOOD PYRAMID IS WRONG.**

(*Standing ovation*) You’ve already won. You’d likely respond with epidemiological “**facts**” to back up your (ironically anecdotal) statement of opinion. Averages thus will always overwhelm minority because the “**medium**” is the message. Since dawn of time humans have always surrendered by “**looking up**”; one way or another for succumbing to someone else’s higher seat of assumed superiority.

All “**pyramid**” schemes expects some sort of harmonised, medium “**base**” to keep this power balance going. We have moral virtuosity of Charity and imposition of “**Debts**” for this. Social “**in**”clusivity believe it or not is coercively totalitarian,

because it is nothing more than an instilled expectation towards debt-driven collectivism. “**Ex**”clusivities? remains exponentially alienated. It is up to Readers to decide should they wish to remain as the statistical “**sheep**” amidst common medium.

<sup>39</sup> **BUT LOW FAT IS A NORMAL WAY OF EATING! IT'S WHAT NORMAL PEOPLE EAT AND THEREFORE YOU SHOULD DO WHAT NORMAL PEOPLE DO!**

Here is a trivial yet very difficult task: “**De**”-fine the word “**Normal**”. “**De**”-fine what “**dis**”- order is. Before there is even “**life**” does “**normality**” exist? What does it look like? Is it even remotely possible to describe “**Normality**” in perfectly universal interpretations? Indeed, anecdotes are uncontrolled and thus are poor marker of “**correctness**”. But to whose Authenticity of “Correctness” should we aspire to, then? Only “**Normal**” people? Only “**Good**” People? Only “**Correct**” people? Once again, appealing to governing Epidemiological “advice” is no different (metaphorically speaking) to Scientific Communism.

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**How ironic Society today preaches “Just be ‘Normal’ or “Just be Yourself” mantras.**



## Yet logistics/methods are governed elsewhere, outside off one's Authenticity?

Caloric deprivations and fasting are indeed objectively debilitating or “**catabolic**” (*Mcdonald, L. 1998*). Likewise **This Book** never suggests persisting such prolonged episodes especially surrounding contexts of fitness training simultaneously under already questionable low body fat percentages; these warrants regular planned refeedings. Yet the beneficial metabolic & longevity genes known as “**SIRTUIN #1**” seems universally increased as a result from intermittent starvations; as observed in both rats (*Sohal RS & Weindruch R, 1996*) and human (*Wegman PM, et al 2015*) studies.

<sup>40</sup> **LOL! WHY SHOULD I LISTEN TO A SCRAWNY / SKINNY / MUSCLE-LESS GRAPHIC DESIGNER!?! HE KNOWS NOTHING ABOUT NUTRITION!!**

To unashamedly re-admit, **This Author** neither carries any “**degrees**” in Biochemistry or Journalism. Yet independent thinking led him curiously on a path that few dare threading likewise. That is simply N=1 Self-Enquiring. Since when curiosity requires “academic-stamp” of approval?

The 4500+ hours (and counting) at revising **This Book** amount hopes one day that all this self-inquisition and/or “drive” coincides unto others whereby no “Degrees” or “Papers” seems that mandatory. Arrogance? No. Pragmatic Authenticity? Absolutely. Isn’t “Experience” in someways relative for being “Experimental”? What if one lacks Leverage (money) to even begin debating his or her own stance of Authenticity? Does that mean Correctness itself is determined by Leverage? It appears we have a structural barrier in place - Income leverages Outcome.

<sup>41</sup> **A CHEMIST IS A CHEMIST! A SURGEON IS A SURGEON! YOU ARE ARROGANT!**

“Arrogance” assumes totalitarian rule and ownership over another’s intellectual (and inevitably biological) agency + Authenticity. **This Book** indeed seems arrogant with its seemingly praise of Cyclical Ketogenic Principles with Intermittent Fasting (**page 176**). Yet remains impartial by disclosing both sides for and against (**page 196**). Recall that **This Book** is admittedly neither a Clairvoyant nor Psychic Medium claiming someone else’s (or numerous thereof) metabolisms or physiologies. Yet Readers expect everything spoon-fed to them on a silver plate. They alone remain solely as “subject” to everything else

challenging them. **This Book** wagers that beyond infinite bickering on what diet works – Economics – remains yet to be the elusive theme very few seem to contemplate; amidst saturated six-pack, selfie-survivorship vanity.

If humans have every infinite capacities to nitpick or criticize due to lack of perfection, there too must be infinite opportunities for **priorities. Now, go coordinate what is you for “you”.**

<sup>42</sup> **BUT YOU DON'T HAVE TO BE PERFECT!**

Harsh but truth-be-told, Yes. We inevitably do have to be “**perfect**”. Politics and hierarchy collectively pressures us all to be perfectly consistent in all of “**Selective Criteria**”. We can indeed be “**perfect**”, yet only myopically within one “**subject**”. We still need a car mechanic to solve car mechanics problems. Yet he might be so consumed in his own daily tasks and that of his “**career**”- he’d likely one day demand anything he receives outside of what he does for a “**living**”; to be perfectly “**simplified**” for him over others’ circumstances, comparatively.

Further, a “**job**” is only a title, a disconnect to everything else of systemically connected, concern. Someone could very well be an outstandingly accomplished psychologist. Yet a psychologist never studied how the gut biome (*Kelly RJ. et al 2015*) have immense implications to mental health.

43     **WHAT ABOUT FRUITS / FRUCTOSE AND VEGETABLES THEN? ARE THEY BAD FOR US TOO?**

Vegetables? Indeed, they are “**good**”. As long as micronutrients (somehow) arrives to the bloodstream. However long that may take; by their fibre content. Our normalcy advocates belief that “**constipation**” is due to a lack of fibre intake. A two-year study however, proves somewhat the opposite (*Kok Sun Ho, et al. 2012*). That study found reducing fibre intakes did reduce many adverse symptoms of constipation, “**bleeding**” (no further description needed) and various gut complications. Believe anything in “**excess**”, but try not to “**overstay**” your welcome. The same seemingly applies to fruits. A collective review study on overfeeding (*Leaf, A & Antonio, J. 2017*) found that high fructose intakes seemed to impair insulin sensitivity; alongside greater visceral fat deposition.

**BUT FRUIT SUGARS ARE NATURAL! THEY'VE BEEN WITH US FOR X THOUSANDS OF YEARS!**

Any “**wild**” or “**natural**” fruit would have been picked on/off by birds. Infested by maggots on the ground. Then get slightly mouldy...Day-night cycles with rain certainly make things worse to this already sad piece of fruit. Once prehistoric man found it miles beyond his settlement in the hunt for food; he'd scratch his head into not knowing which is worse - fast the hunger longer or risk food poisoning? A safer bet would foresee him stalking & hunting for that wild boar instead. Knowing he'll fetch for fresher prize. Then salt & dry the meats later for preservation.

Evidences now amount that fructose do contribute to inflammation & eating disorders. Not just increasing fat storage capacity (Marren R., 2014). Also losing your teeth (Bass S., 2004). Any self proclaimed fruitarians likely asserts “**peace of mind**” that fruits do not require insulin secretion in their metabolic pathways; thereby only requiring GLUT#2 & #5 transporters which are not insulin dependent. Are they correct? Indeed (Lustig R., 2013) & (Marren R., 2014). Ponder at this worrying coincidence however that many “**high carb fruitarians**” plunges on carbohydrate intakes averaging more than 600 grams every-single-day. just to reach Satiety. To them, It's “**normal**”.

Fructose also seem to adversely blunts a tissue's overall sensitivity response to Leptin. A somewhat underlooked hormone that naturally suppresses appetite response from the adipose tissue (its origin) and the brain (the hypothalamus). Insufficient Leptin secretion has been shown to lead towards compulsive over-eating behaviours (Teff KL, Elliott SS, Tschöp M, et al. 2004). **Nonetheless for This Book to remain impartial - Fruits are still "food"**. In light of all this we all have varying degrees on metabolising fructose (Latulippe ME and Skoog SM, 2011). **This Author** unbiasedly implores that all Food should be interpreted subjectively to the Individual's biological convictions. How they **"own"** such a repercussion as divine or demise is entirely up to them.

<sup>45</sup> **THIS AND THAT STUDIES SAY YOU WILL DIE EATING RED MEAT!!! MY FACTS ARE BETTER THAN YOUR FACTS!!**

(Slow clap) You're finally admitting the very irony behind your convictions. There are no facts, only Interpretations. You need not learn biochemistry, but looking at current Youtube® uploads **"why I'm no longer vegan/fruitarian"** videos on Accepting that **"Individuality"** triumphs over Hierarchy.

**“The Fruitlands Utopia”**; a scheme derived from one man’s myopic, totalitarian vision for veganism - failed for the same reason. To think that “Unity” is a peaceful dream for all, is an unthinkable irony as many such vision turned out (logistically) - a coercive, genocidal fantasy.

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**The moralist “vegetarian” is still an obligate “predator”. He or she must after all, pre-“date” their own existential reasoning. Alas, this requires “consumption”.**

Anything **“harvested”** or **“pulled”** out of the rotting soil is already an act of involuntary violence against that growing plant, or fruit, or tuber's - **“will”**. Try stopping a cow from eating that same grass. Imagine stopping a wolf bringing back home freshly caught fish to her hungry pups. Or the lion reaching out for his next prized liver from a deer, buffalo, chicken, or rabbit.

"RODENTS ADMINISTERED A HIGH-FRUCTOSE DIET DEVELOP MOST OF THE FEATURES OF METABOLIC SYNDROME, INCLUDING HYPERTRIGLYCERIDEMIA, IMPAIRED GLUCOSE TOLERANCE, HYPERINSULINEMIA, INSULIN RESISTANCE, HYPERURICEMIA, ENDOTHELIAL DYSFUNCTION, HIGH BLOOD PRESSURE, AND INCREASED BODY WEIGHT."

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**"POTENTIAL ROLE OF SUGAR (FRUCTOSE) IN THE EPIDEMIC OF HYPERTENSION, OBESITY AND THE METABOLIC SYNDROME, DIABETES, KIDNEY DISEASE, AND CARDIOVASCULAR DISEASE"**

**JOHNSON RJ, SEGAL MS, SAUTIN Y, NAKAGAWA T, FEIG DI, KANG DH, GERSCH MS, BENNER S, SÁNCHEZ-LOZADA LG**

**AM J CLIN NUTR. 2007 OCT; 86(4):899-906.**

"ACUTE FRUCTOSE INGESTION FAILS TO STIMULATE BOTH INSULIN AND LEPTIN SECRETION, AND ATTENUATES POSTPRANDIAL GHRELIN SUPPRESSION. THUS PROLONGED CONSUMPTION OF DIETS HIGH IN FRUCTOSE COULD LEAD TO INCREASED CALORIC INTAKE AND CONTRIBUTE TO WEIGHT GAIN AND OBESITY."

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**"DIETARY FRUCTOSE REDUCES CIRCULATING INSULIN AND LEPTIN, ATTENUATES POSTPRANDIAL SUPPRESSION OF GHRELIN, AND INCREASES TRIGLYCERIDES IN WOMEN."**

**TEFF KL, ELLIOTT SS, TSCHÖP M, KIEFFER TJ, RADER D, HEIMAN M, TOWNSEND RR, KEIM NL, D'ALESSIO D, HAVEL PJ**

**J CLIN ENDOCRINOL METAB. 2004 JUN; 89(6):2963-72.**

"I HAVE CAUTIONED ALL PROSPECTIVE ASPIRING FRUITARIANS TO AVOID THIS DANGEROUSLY DEFICIENT DIET, SINCE I HAD PROVEN IT ON LIVING CREATURES CLOSE ENOUGH TO MAN TO HAVE SOME RELATIVE VALIDITY."

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**DR. STANLEY BASS "FRUIT - FRIEND OR FOE - MY EXPERIENCES WITH FRUIT"**

**[HTTP://WWW.DRBASS.COM/ABOUTFRUIT.HTML](http://www.drbbass.com/aboutfruit.html)**

**OCT 2004**



Up to this point, it's reasonable for Readers to assume **This Author** is highly vested against veganism. Yet many inspired recipes remains visible in this concept initiative's Blog. Also **This Author** admitting that Veganism is indeed, a moral divinity. All permissions remain fully granted – for any or all Readers wishing to continue subscribing to any sustenance protocol they choose. As long as they willingly “**own**” up every repercussions. And as long as they remain peaceful and not raise correctness pitchforks over another “**living**” being – be it “**human**” or “**not human**”.

It is within best hope of **This Author** - there is no reason to “**war**” each other over “**Food**”. Better instead for one to reason - with one's own “**self**”. Readers may very well guess at this point – that Intermittent “**fasting**” is the only one intervention left to reconcile biological honesty amidst all realms of entropy. Perhaps best recall that as Economics at self-authenticating what enough means.

After all, Intermittent Fasting – imposes no prejudices irrespective if one is gay, lesbian, straight, white, black, left, right, communist, socialist, capitalist. Man, or Woman. If nutrition is ration. then fasting is the rationale, afterwards.

# STARVATION AND SATIETY

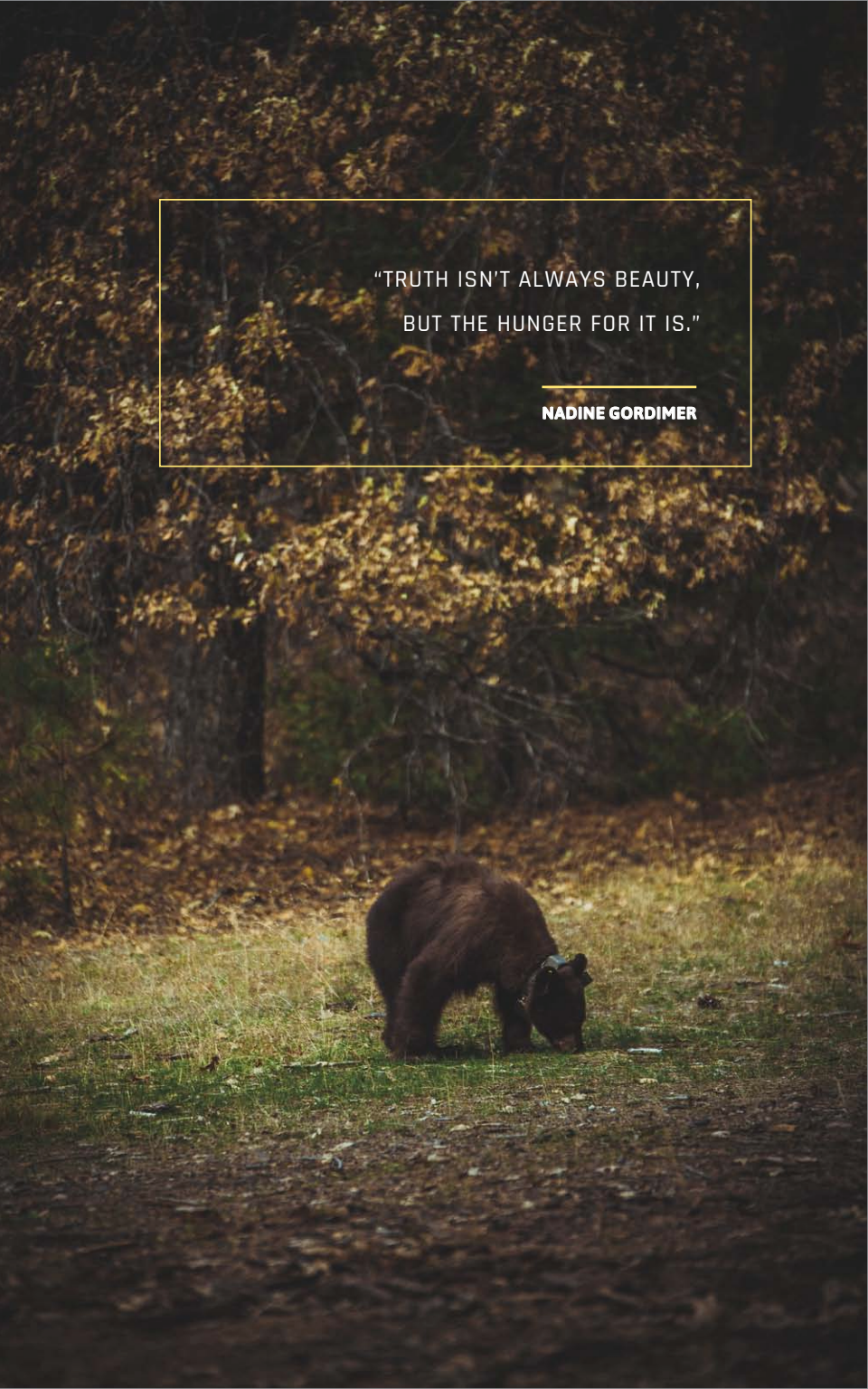
## WHAT DEFINES ENOUGH AS “ENOUGH”?

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**This Book**, despite likely judged as sub-elementary in Biochemistry and Nutritional Science, nevertheless provide readers only surface, pragmatic discussions to the above complex and nuanced question. It is likely that this chapter is under-described or perceived as inadequately written. Since **This Book’s** overarching concerns are for the lay yet end-enthusiast audience in mind; whose scientific curiosity, including **This Author** as example included – may yet never able to financially (nor academically capable) to acquaint Advanced Biochemistry, gut microbiome studies, and/or Neuroscience credentials.

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**This section is split into two sections. Understanding Starvation. Then Satiety.**

A photograph of a brown bear in a forest. The bear is in the lower center of the frame, facing right. The background is filled with trees and foliage in shades of yellow, orange, and brown, suggesting an autumn setting. The lighting is soft and natural. A white rectangular box is overlaid on the upper half of the image, containing text and a signature.

"TRUTH ISN'T ALWAYS BEAUTY,  
BUT THE HUNGER FOR IT IS."

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**NADINE GORDIMER**

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## 1/2 STARVATION

### 46 **WHAT IS STARVATION?**

One universally agreeable interpretation is that of prolonged outcome of Resource scarcity, but considered to be of terminal or of absolute metabolic compensations. Beyond visual signs of sub-optimal body fat percentages (universally defined to as <4% for men,<10% for women), but also gluconeogenesis, fatty acid oxidations / lipolysis, upregulation of inflammatory markers and/or sustained peak of catecholamines (group of stress hormones norepinephrine & adrenaline amongst others). A later section of **This Book** is dedicated at describing this cascading metabolic consequence widely proclaimed as “**Ketogenesis**”; (**page 138**) in more detail. Readers are also encouraged to read insights on “**Intermittent Fasting**” on **page 193**.

### 47 **WHAT IS HUNGER?**

Hunger can be thought of as the lead-up state of compensations, prior to Starvation. If Starvation represents Terminal or Absolute measure of compensations, Hunger could be

interpreted as its lesser intensity. It is important to note nevertheless that Hunger is neither “**catabolic**” or “**benign**” state of physiology. As Readers gets to realise in later parts of This book - intrinsic metabolic repercussions behind all states of hunger are not to be semantically interpreted as “**black or white**” or “**good vs bad**”. As much of their hormonal, endocrinological and neurological mechanics impose far more elusive effects - which are quite frankly, are outside the credibility and scope of **This Book** at explaining them all succinctly.

Nonetheless, surface understandings are hereby presented by first outlining the three (3) main peptide hormones involved at compartmentalising states of Hunger. These are explained below; grouped by the two sites of organs as their primary site of secretion - the Brain and the Stomach.

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## 1/2 THE BRAIN / HYPOTHALAMUS

Two neuron peptides are thought responsible. Firstly - the NPY as shortened for Neuropeptide Y, and second is AgRP for “**Agouti-Related Peptide**” (*Juliana S. & Marks, D. 2008*). Neuropeptide Y is an abundant neuron peptide residing in the CNS

/ central nervous system and within the Hypothalamus. Receptors of these neurons further comprised of several subtypes (*Michel MC et al. 1998 / Wikipedia*) numbered as #1 to #5; with each differs in functionality depending on the number. Y1 and Y5 – seemed responsible for feeding stimulus. Where as Y2 and Y4 – have opposite actions by inhibiting feeding. Y3 however on the other hand remains paradoxically unstudied over its functionality (*Lee CC & Miller RJ, 1998*).

AgRP are neurons residing deeply within the Hypothalamus and appears to be actively rising in intensity during prolonged episodes of food scarcity; as suggested within various animal studies (*Chen Y. et al. 2019*). Synergically together with NPY, both AgRP and NPY appears to initiate food seeking behaviours. AgRP is also seemingly responsible for activating the HPA Axis (hypothalamic-pituitary-adrenocortical axis) to then release ACTH, cortisol and prolactin during stress episodes (*Wikipedia*).

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## 2/2 THE STOMACH/GI TRACT

**Ghrelin** (also known as “**Acylated Ghrelin**”) is proclaimed famously as the “**hunger hormone**” or in medical term “**orexigenic**” (as appetite inducing hormone). Ghrelin’s functions are

not confined to that of regulating hunger or meal-seeking / “**expectation**” episodes. It also promotes GH / Growth Hormone, implicated in bone metabolism, major homeostatic regulator of gluconeogenesis during fasting episodes, and many more according to one comprehensive, mechanistic study on Ghrelin alone (*Pradhan G. et al 2014*). Further, it has many contributing roles to other stress-hormones at their secretion (ACTH, Prolactin and Cortisol) (*Azzam I, et al. 2017*).

48     **SO WHAT PRECURSORS / SIGNALS HUNGER?**

Understanding “**signals**” of hunger has remained fervently since for decades to this day – an ever present ongoing debates amidst Nutritional Science. The reason for this complexity is because many precursors signals or “**Cues**” overlaps one another inbetween that of internal (metabolic / autonomous) as well as that of sociological / environmental cues as confounding factors. **This Book** however may only collate together various surface-level understanding, in order to pave way for later and hopeful wider and further – contemplations amongst the more discerning readers.

First and likely to be interpreted as most complex is that of environmental and sociological cues surrounding the perceptions of “**reward**” aspects of food (*Guyenet, S. 2017*). The higher rewarding potential, the more likely compulsion there is to both seek, and consume to repeat this experience.

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**One review study (Reichelt CA et al. 2015) on obesity hypothesizes that the triggering mechanics behind all hunger episodes is thought and derived upon from what is known as “Pavlovian Conditioning”.**

In fields of Psychology, Pavlovian Conditioning (or referred to as “**Classical Conditioning**”) is a learned mechanism towards an expected “**ritual**”; by which a biological entity derives from environmental cues at predicting where, when or how food or resource’s rewarding factors are to be anticipated (*Reichelt CA et al. 2015*). These cues, ranging from various stimuli (sight, touch, smell, taste, etc) are thought to play a role towards



accumulative **“learned”** experiences which the biological entity may then autonomously refer to overtime towards anticipating such any Hunger events. By and from the same cues (audible, visual, feel, time, proximity) first signalled, instilled and perpetuated; **all in a manner of coordinated sequence/s.**

To illustrate an example, if a dog is presented two items: a whistle or food - each in their solitary state away from each other - salivation in the mouth obviously occurs only when the food is present in sight. But salivation does not occur when the whistle is presented. However, when the whistle is presented firstly by its sonic / aural cues before the food is then presented - salivation then occurs. The dog thus have **“learned”** two (2) cues of food anticipation - either presence of food itself or the sound of the whistle blow. The **“whistle”** in this case, is the mediating proxy which that has been learned in memory. Even if the whistle itself is not seen as edible object, it has been **“learned”** as a hint to help sequence the Hunger signals.

Dopamine (or L-DOPA)’s activity as evident within specific areas of the brain known as the **“Striatum”** and the VTA (**“Ventral Tegmental Area”**) are thought to be associated with feelings of reward and motivation; especially in context of palatable

food intake (*Sabatier, N. et al. 2013*). Its considerable importance to the above Pavlovian mechanism was suggested by animal model study (*Darvas, M. 2014*), which found that depriving Dopamine in the brain to 5% impairs ability to “**learn**” interpreting food as rewarding, even after the Pavlovian Conditioning was “**taught**” and trained. However when reduced at 30%; desire for reward and that of “**learning**” its rewarding outcomes of the Conditioning were retained and “**maintained**”.

Readers may expect thus at this point, that anything is “**learnable**” including that of food restraint and abstinence; given some seemingly extreme and distinct enough inhibition of this Dopamine is reached. Indeed, this is possible evidently as numerous anecdotes and accounts of Intermittent Fasting can be seen today prevalently throughout social accounts; **This Author**, included. It remains arguable thus whether “**hunger**” in and of itself - is a phenomena of scientifically pre-determined ritualistic occurrence - or (rather vaguely yet possible view) - of simply that as temporary state of willingly disassociation from food. If all else fails **This Book** would then argue that it is of

prime importance for all readers to keep themselves occupied or productive during these episodes to induce themselves moments of resilient experience(s).

The most significant & “**productive**” of all life’s episode **This Book** encourages and believes - is simply that of reconciling Fitness meritocracies. Through exercise and resistance training within one’s own pragmatic capacity. This allows one to truly become (slowly through time) - become self-appreciative that one is productive, with however time is granted upon them - so that it prepares them to offset against any frailty’s later in life.

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**Arguably, to do so requires more than just willpower. It requires trust to the “self” to coordinate not just that changes of Abilities but also willingly that of changes to one’s surrounds as This Book coined to as the Liabilities Ecosystem.**

Nonetheless referring back to our discussion on hunger - ascertaining the fate on the “rewarding” aspect of food ingestion converges towards either one of two eventual outcome(s) :

- 1 *Metabolism becomes sensitive to release other hormones (Satiety markers) and thereby inevitably cease feeding ritual altogether, for the time being. Or;*
- 2 *Metabolism Remains Insensitive; as such that the reward-seeking expectations remains elevated or refuses to subside until certain “threshold” are fulfilled. This likely indicates that the physiology is in contextually insufficient state, starting all the way down from the micronutrients level. Anything that is currently ingested somehow prevents others from being partitioned sufficiently.*

49 **SO WHAT DETERMINES SUCH A “THRESHOLD”?**

A highly summarised hypothesis can be derived from scrutinising the compositional aspects of food themselves which alters these hedonic interpretation thresholds outcome. Consequently then followed by the taste flavouring profile from the food themselves.

It seems widely agreeable that the food’s macro composition ratios (Carbohydrates/Proteins/Fats) determines the compulsion to overeat. When the macro is manipulated in **specific ratios or bias** towards high in fat and high in carbohydrates (yet

low in proteins) - this macros seems to be the most prone to be supra-rewarding (*DiFeliceantonio GA et al 2018*) and triggering of increased intake (*Erlanson-Albertsson A. 2005*).

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**A study on human subjects found that taking the fat away from sugar in any given meal/s, on the other hand - appears to be less motivational-inducing (*Markus CR et al. 2017*) to overeat.**

...But conversely not when high fat and high sugars were to be combined together equally in this ratio. It is important to also take into account the Fructose vs Glucose ratios which may alter the above outcome. One study on women found that meals containing higher fructose meals suppresses Ghrelin much more poorly compared to glucose (*Teff KL, et al. 2004*).

On the topic of flavouring profile this discussion likely is best reserved for another separate technical reading altogether due to its complex density of research and academic technicalities. Whilst conventional truth persists in that sweet foods

is preferentially favoured over bland foods (Benso A. et al 2013) it may seem easy to conclude thus eliminating all hedonic flavouring profile altogether remains favourable as “**stoic subser-vience**”; widely prevalent and practised within today’s current paternalism of “**dieting**”. This abstinence approach to sustenance whilst indeed desirably seen as disciplinary - however remains impractical, unpragmatic and also counterintuitive to digestive health itself. Given that various flavouring condiments and spices (Platel, K. & Srinivasan K 2004) - also promotes efficacious release of bile acids towards the crucial unfolding of proteins into their singular essential amino acids uptake (Tyrosines and Phenylalanine).

Further our current pedestrian and institutionalised perceptions persists to counter these autonomous digestive actions; particularly that of stomach acidity with antacids. This is detrimental overtime as stomach acidity itself are crucial (Wright, JV. 2001) for unfolding and digesting of proteins into amino acids as well as also synergistic to Vitamin C utilisation (Roth, R. 2016). Ghrelin appears to be vital precursors to these much needed Gastric Acids (Yakabi, K. et al. 2008) for digestion; which are composed of HCL salts of Betaine, Potassium and Sodium.

A proposed theory known as “**Randle Cycle**” (often re-labelled as “**Glucose-Fatty-acid cycle**”) proclaims such combining fatty acids and glucose together as detrimental to overall metabolism (Hue L & Taegtmeyer H. 2009). Without resorting to advanced Biochemistry, The Randle Cycle poses concern in that one substrate methodology (“**Glycolysis**” vs “**Lipolysis**”) tends to compete against the other for energy utilisation in the mitochondria. This potentially leads to impairment of overall Nutrient Partitioning, or semantically defined to as “**Metabolically Inflexible**” or “**Mitochondrial Indecision**” (Smith LR, et al. 2018).

What is not known to the best of **This Author’s** awareness however, is the **RATIO** between the two substrates at determining which substrate pathway is favoured as the “**winner**”; though this is likely subjective to various physiological and metabolic scenarios or other confounders. Nonetheless it appears that an alternative hypothesis (“**Insulin-Glucagon-Ratio**”) may yet shed some clues to this concern (Smith LR, et al. 2018). That mechanism study proposes that if insulin to glucagon is high (indicative of “**fed**” state) - the body is generally perceived to be favouring towards Glucose oxidation. This obviously pre-

sumes that far more carbohydrates than fatty acids are present. However, if the converse occurs (high Glucagon-to-Insulin) it is widely thought that the body is in a fasting state with a metabolic preference towards Lipolysis. To do so, requires far more fatty acids than glucose in presence for Lipolysis to initiate.

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**Regardless, in real world practical applications, it remains arguably rare that such substrate/s (fat vs glucose) are consumed strictly in sole / synthetic isolation away from each other.**

...and that many differing constituents of each substrate are yet to be concisely understood for their confounders to the Randle Cycle (eg. Fructose/Glucose ratios in carbohydrates, MUFAs vs SFA vs PUFAs ratios in dietary fats). Also taking into account that dietary protein being technically considered to as partly 58% glucogenic as well as 48% ketogenic (McDonald, L. 1998); hence leading one to presume that protein intakes alone confounds Randle Cycle greatly. Sadly, no studies to the best of



this Author's awareness have thus far solely examined dietary protein's effects on the Randle Cycle; at least in concise pragmatic understanding. The Cycle nonetheless remains seemingly plausible for further understanding the pathogenesis behind Type2 diabetes & insulin resistance (Hue L & Taegtmeier H. 2009).

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## 2/2 SATIETY

### 51 WHAT HORMONES ACTUALLY SATIATE?

**"Satiety"** can be thought of as the **"internal"** marker than it is sociological or external marker. As it is most likely defined to as the inner biological and metabolic **"response"** out of interpreting any incoming resource or food. To the best of **This Author's** awareness and scope of research there are nine (9) documented hormones each contributing their proximal role towards Satiety (Austin, J. & Marks D. 2009).

- 1 CCK (cholecystokinin). **Locality: Duodenum, jejunum. Effect:** *inhibits feeding and stimulating pancreatic secretion, gall bladder contraction, intestinal motility, and inhibition of gastric motility.*

- 2 PYY (Peptide YY). **Locality** Ileum, colon. **Effect:** rectum Inhibiting feeding by inhibition of NPY and stimulation of POMC ("Proopiomelanocortin").
- 3 PP (Pancreatic Polypeptide). **Locality:** Endocrine pancreas. **Effect:** inhibits feeding.
- 4 Oxyntomodulin **Locality:** Distal ileum and colon GLP-1 receptor **Effect:** Inhibiting gastric acid secretion, decreasing gastric emptying, and decreasing pancreatic enzyme secretion.
- 5 GLP-1 (Glucagon-Like-Peptide #1). **Locality:** Distal ileum and colon GLP-1 receptor **Effect:** Delaying gastric emptying, stimulating glucose-dependent insulin secretion, inhibiting glucagon secretion, and stimulating somatostatin secretion
- 6 GIP (Glucose-dependent insulinotropic polypeptide). **Locality:** Stomach, duodenum, jejunum **Effect:** Glucose-dependent insulin secretion, induction of cell proliferation, promotion of energy storage, enhancement of bone formation.
- 7 Insulin **Locality:** Endocrine pancreas Insulin receptor. **Effect:** Inhibiting feeding.
- 8 Leptin. **Locality:** Adipose tissue Leptin receptor, **Effect:** Inhibiting NPY and AgRP and Stimulating POMC and CART.
- 9 Adiponectin. **Locality:** Adipo R1, R2 **Effect:** Inhibiting feeding.

Of all these nine it appears that CCK, Leptin, PYY and GLP-1 seemed most influential. A review + mechanistic study (Cees de Graaf et al. 2004) concluded that CCK appears to be the strongest. Then followed by Leptin, GLP-1, and PYY. Interestingly, Insulin was concluded by that study as “**improbable**” biomarker of Satiety.

It is important to note, that many biomarkers effects on metabolism are further classified by length of time on their secretion or release. These are referred to as either “**short term**” (considered anywhere between instantaneous upon ingestion to several hours) or “**long term**” (24 hours and up to 4 days). Hence, the most prominent biomarkers ranked from “**short**” to “**long-term**” release windows are considered to be: CCK, GLP-1, PYY Peptide, Insulin and the longest-term window – Leptin (Cees de Graaf et al. 2004).

Some hormones appears sensitive to elicit higher responses; depending on a meal's macro composition. CCK appears to be most sensitive to fatty acids and protein intakes (Cees de Graaf et al. 2004). Further instigations (French S. et al. 2000) revealed that long-chain-fatty acids led the highest CCK concentrations than do short-chains.

Protein intakes seemed to universally trigger an universal increase on all three (3) key Satiety hormones – CCK, GLP-1 and PYY Peptide (Marion Journal, et al. 2012) (Guyenet, S. 2016 [46 mins onwards]). While GLP-1 seemed to be responsive exclusively to carbohydrate intake (Cees de Graaf et al. 2004) another study (Hall et al. 2003) found that protein intakes once again raises not only GLP-1 but also CCK.

PYY peptide seemed to be responsive across both protein and carbohydrates intakes, but less from fat (Pedersen-Bjergaard U, et al. 1996). Leptin; considered as the “**long-term**” Satiety hormone indicator (Cees de Graaf et al. 2004) - appears to be responsive only to Carbohydrate intake (McDonald, L. 2016). As **This Book** later on discusses the concept of refeeds (**page 176**),

Leptin arguably remains crucial hormone of importance as its prevalence is encouraged to be increased during this period of refeeding; anywhere inbetween periods of 24 to 48 hours (sleeping window also accounted but only as undisturbed rest period) until once signalling to the brain is convincing enough as such that eating more calories becomes increasingly less motivational or “**optional**”.

On the topic of Fibre, this unfortunately remains somewhat inconclusive and mixed upon its effect on satiety. One study of human volunteers (Willis JH, et al. 2010) found higher serum Ghrelin readings at high fibre intakes of 12 grams per day, with decreased satiety readings on GLP-1 and PYY peptides. However, many studies claim viscous based fibres such as guar gum, pectins and beta-glucans does support satiety than other types of fibre (Slavin J & Green H. 2007). In light of all these, wholefood fibres residing within vegetables remains arguably valuable nonetheless as other micronutrients also exist.

One set of confounders seem noteworthy to instigate is that of understanding gut microbiome / bacterial makeup disorders (known as "**dysbiosis**"). However, this likely requires lengthy separate reading as this subject demands multiple overlapping disciplines of Biochemistry, and Microbiome awareness.

Nonetheless there is some plausibilities of Ghrelin's connection to gut bacterial composition(s) (*Queipo-Ortuno IM et al. 2013*) & (*Messaoudi, M et al. 2011*). An animal study (*Rajala WM, et al. 2014*) which induced leptin-deficient signalling and/or inactivation of Leptin receptors (known as "**LepRb**") on mice subjects seemed to increase bacterial gut species makeup towards "**Firmicutes**" than Bacteroidetes. This marked Gut bacterial alterations appeared to contribute to hyperphagia (or overeating). Ghrelin signalling also appears to be reduced by introducing dietary prebiotics such as Inulin or OGF (Ogliofructose) (*Neuman H. et al. 2015*) as prevalent in onions, garlic, wheat, and bananas. However, as Readers may or may not be aware, prescribing to increased intakes on these foods may subject to violate FODMAP regiment as explained later in **page 132**.

Next confounder worth investigating, comprised interestingly of both biological and environmental confounders - is simply that of temperature changes. Of the nine (9) Satiety hormone proxies as previously outlined, "**POMC**" (or **Proopiomelanocortin**) seem to be sensitive to heat changes. Both animal and human Studies seem to suggest that food intakes seemed reduced in presence of internal rise of core body temperatures (*Vincent MA, et al. 2018*) or imposed by that of climatic changes. Fevers and exercise states; included. **This Author** alone anecdotally finds there are indeed many frequent experiences of appetite blunting soon following resistance training exercises; however by no means this phenomenon readily applies to all individuals (*Broom RD, et al. 2009*).

So far, **This Book** solely focuses on "**Food**". Another biomarker deemed convincing to instigate is that of understanding other neuropeptides not necessarily nor holistically related to food consumption.

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**Oxytocin, is one of presumably many others noteworthy for contemplation. Its**

**functionality are not restricted to sociology and/or mating. But also been well studied / implicated in various addictive behaviour outcomes and reward-seeking mechanisms.**

At least from repeated animal model studies (Sabatier, N. et al 2013), there seems to be strong consensus on Oxytocin's anorexigenic effect on food intakes. In high fat induced obesity mice model (Deblon, N. 2011), Oxytocin's infusion via injection in the Central Nervous System suggests marked improvements on lipid metabolism, glucose tolerance and insulin sensitivity.

Another aspect worth mentioning which affects mechanistically to the Ghrelin's homeostasis is the implication of Aligned Vs Misaligned **Circadian Rhythm**. Circadian Rhythm refers to the hormonal synchronicity between light and dark exposure, overtime. One study (Qian J. et al. 2018) compares two groups of human volunteers. One who adheres to standard circadian rhythm (identified to as "**Aligned**" group) were found to have overall much less Acylated Ghrelin levels than



those who assigned to disrupted circadian rhythm (as “**Mis-aligned**” group). The Misaligned group in other words, seemingly reported more hunger in the statistics, with a reported increase in overall caloric intake. Consequently, there appears to be a worsening of overall metabolic profiling amidst late and/or night shift workers (*Qian J. et al. 2018*).

**This Author** (AW™) no doubt believes there are other related hormones, neuropeptides and/or other realm of biomarkers to be included as noteworthy here for continued discussion. However - credibility and academia limitations of **This Author** sadly prohibits this advance. Readers therefore are always granted full permission to seek further reading at their own circumstances.

# THE NUTRITIONAL PRINCIPLES

SCD / FODMAPS / KETO

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From here onwards lies the next bulk of **This Book's** intent; to acclimatise Readers towards readily planning a change of nutritional sustenance coinciding towards their authentic needs. Any Scientific "**Solution**" is literally speaking a moment which matter/s **dissolve** as "**one**".

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## THE IMPORTANCE OF WATER

The importance of clean, **drinkable water, cannot be understated.** Irrespective of which nutritional principle or intervention **This Author** encourages a reasonable first and foremost investment of a portable fluoride filter kettle; which typically is found for less than **\$99 per annual investment.**

“YOU MUST BE SHAPELESS.  
FORMLESS. BE LIKE WATER,  
MY FRIEND.”

---

**BRUCE LEE**

“99% OF WHO YOU ARE INVISIBLE  
AND UNTOUCHABLE.”

---

**RICHARD BUCKMINSTER FULLER**

Next, depending on the intervention the water intake should justify existing state of hydration or thirst sensation. Those practising Ketogenic or Fasting regiment need to take note that even drinking water **whimsically**; without thirst may result in unwanted mineral losses. Particularly sodium and potassium. It is for this reason that regular salting of water (with both 50/50 mixture of both at least ordinary rock & iodised salt) are sipped only as accordingly to thirst sensations throughout the fasting window. Having considered this first task we can proceed acquainting to the various Nutritional methodologies.

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## THE NUTRITIONAL STRATEGIES

**This Author** (AW™) believes that these three (3) principles broadly satisfies all curiosities to deepen their physiological resilience. They must however remain aware that time, and uncontrollable contexts inside out (genomics) and outside-in (sociology+scarcity) all imposes need for various re-evaluations. Be it soon (cyclical) or periodical in foreseeable future.

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**SCD****1/3**

SCD (*Specific Carbohydrate Diet*) is a dietary protocol emphasizing fermented food intakes with restriction of carbohydrate sources; particularly complex carbohydrates; to maintain balance of good bacteria.

SCD has been recognised as a “**clinical**” intervention for over 50 years upon the diagnosis of irritable bowel syndromes, inflammatory bowel disease, ulcerative colitis, crohn’s disease, and celiac disease. Founded in the 1920s by Sidney Valentine Haas as he hypothesized a documentation outlining positive results from his own treatments of childhood celiac diseases. He discovered that symptoms were alleviated by restricting sugars, gluten and starchy carbohydrates; as elaborated in the book “**Management of Celiac Disease**”.

SCD is mainly recognised as a therapeutic, clinical planing for the diagnosed patients. However since publicly commercial recognition (popularised from book “**Breaking The Vicious Cycle**” by Elaine Gottschall) - SCD are said to be safely adapted for all (*Gottschall, G E., breakingtheviciouscycle.info*). Much of the dietary plan emphasizes upon the need to maintain positive “**good**” bacteria gut balance.

## BENEFICIAL AND NON-BENEFICIAL FOODS (SCD)

Below is a listing of non-exhaustive samples of what to include as well as exclude - food and nutrition complying within SCD regiment. Readers are encouraged to do pursue further research at own end. Further details can be found at <http://www.breakingtheviciouscycle.info/legal/listing/>

ALLOWED / ALL BENEFICIAL FOODS

**Additives**

Baking soda, Potassium Sorbate, Sulphates, and Vanillin.

**Alcohols**

Ethanol, Gin, Mead, Scotch whisky Vodka, Wine (dry red and white).

**Condiments / Vinegars**

Capers, Horseradish sauce, Tabasco Brand Pepper Sauce, majority of all vinegars EXCEPT balsamic.

**Fruits**

Majority of all fruits / fructoses recommended EXCEPT otherwise stated below.

**Dairy \*\***

Asiago cheese, Blue cheese, Brick cheese, Brie cheese, Butter, Camembert Cheese, Cheddar cheese, Colby Cheese , Dry Curd Cottage Cheese (DCCC), Edam cheese, Gorgonzola cheese, Gouda cheese, Gruyere cheese, Havarti cheese, Parmesan cheese, Swiss cheese, and Yoghurt (homemade).

**Vegetables / Beans**  
Majority of all vegetables & beans (only kidney, navy, haricot & black beans) recommended EXCEPT otherwise stated below / BOTTOM ROW of Not Allowed Foods.

**Meats/proteins**

Anchovies , Bacon , Beef, Eggs, Fish, Fowl, Ham , Lamb , Pork, Pork Rinds , Poultry , Sashimi, and Shellfish.

**Spices / herbs**

Allspice Basil, Bay Leaf Cilantro Cinnamon Echinacea Garlic Ginger Nutmeg Oregano Paprika Peppers Rosemary Sage, Salt, Tarragon and Thyme.

**Nuts and seeds**

Almonds, Almond butter , Brazil nuts , Cashews Chestnuts, Coconut, Filberts (hazelnuts), Macadamia nuts, Peanuts, Pecans, Pine Nuts , Pistachio nuts / Seeds, Sesame seeds , Walnuts, and Water chestnuts.

**Oils**

Almond oil , Avocado oil , Canola oil , Coconut oil Corn oil, Flax seed oil , Ghee, Grapeseed oil , Macadamia oil , Mustard Oil, Olive oil , Peanut Oil, Sesame oil , and Walnut oil.

NOTES

\*\* cheese that has had a bacterial culture involved with its production and is aged at least 30 days

\*\*\* (Fruits canned in their own juice are allowed)

ALLOWED / ALL BENEFICIAL FOODS

**Additives**

Agar-agar, Arrowroot Carrageenan, Cellulose Gum Cornstarch Croscornellose sodium Granulated glucose Guar Gum, Gums, Lignin Maltodextrin Mannitol, MSG, Sago starch, and Xanthum Gum.

**Alcohols**

Beer, Brandy, Port wine, Sake, and Sherry.

**Condiments**

Bouillon cubes, Soy Sauce, and Tamari. Miscellaneous Baker's yeast, Baking powder, Bee Pollen, Carob, Chewing gum, and Cocoa powder. Sweets & Sweeteners Agave syrup, Bulgur, Corn syrup, Cyclamate, Date sugar, Dextrose, Glucose candy Isoglucose, Jagery (gur) Maltitol

Sweets & Sweeteners (CONTINUED)  
Maple syrup, Marshmallow, Molasses Pectin, Splenda, Stevia Sucralose, Tagatose Turbinado, and Xylitol.

**Dairy**

American Cheese Buttermilk, Chevre cheese, Cottage cheese, Cream, Cream cheese, Cream of Tartar, Dried milk solids, Feta Cheese, Gjetost cheese, Ice cream, Lactaid Milk, Lactose Hydrolyzed Milk, Mozzarella cheese, Neufchatel cheese, Primost cheese Processed cheeses, Ricotta cheese, Sour cream Soybean milk, Tofu, and Tofutti cheese.

**Grains & Flours**

Amaranth, Buckwheat Cereals, Chestnut Flour, Corn, Durum Flour Ezekiel Bread, Garfava flour, Millet Oats, Pasta, Pea Flours, Psyllium husks Quinoa, Rice, Rice Bran, Rice Flour, Rye, Seed Flour, Soy, Soybeans, Spelt, Sprouted Grain Bread Tapioca, Tapioca Flour Triticale, Wheat, and Wheat Germ.

**Vegetables / beans**

Algae, Artichokes (Jerusalem) Barley, Bean sprouts, Bhindi / Okra / Drumstick Bitter Gourd, Black eye beans, Burdock root, Butter beans, Canelini Beans, Canned Vegetables Chick peas, Chickory root Cucumbers, Drumsticks, Fava beans, Garbanzo beans, Jicama, Kohlrabi,

**Vegetables / beans**

(CONTINUED)  
Mungbeans, Nettles, Okra, Parsnips, Pinto beans, Potatoes, Pumpkin (canned) Quorn, Seaweed, Sweet Potatoes, Taro Tomato paste (canned) Tomato purée (canned) Tomato sauce (canned) Turnips, Vegetables (canned) Yams, and Yucca Root

**Fruits**

Custard Apple, and Plantains. Meats Bologna, Hot dogs, Meats (canned) Meats (processed) and Smoked meats.

**Oils**

Soybean Oils



2/3

Low F.O.D.M.A.P Diet is a protocol emphasizing restriction of short-chain carbohydrate Fructoses (primarily), alongside fermentable carbohydrates for alleviating various GI and IBS-like impairment states.

FODMAPs is a compartmental acronym for practitioners and discerning individuals to help identify and restrict any suspecting foods that impair gut functioning and integrity. Starting from the letter “**F**”- being Fructose first & foremost) and then throughout the rest of lettering as follow:

- 1 **O**- oligosaccharides (sugars from Fructans and Galacto-oligosaccharides); from garlics, onions, leeks, wheats, barleys, chickpeas and beans.
- 2 **D**- Disaccharides (double sugar molecules such as those found from Lactose) ([SheperdWorks.com.au](http://SheperdWorks.com.au), 2016). Dairy products and their derivatives including creams and certain cheeses (cottage / cream cheese). However conflicting study suggest gentle re-acclamatisations to lactose sources actually alleviate intolerances ([Suarez FL, et al. 1997](#)).
- 3 **M**- Monosaccharides (sugars from fruits / fructoses) such as honey, apples, pears and watermelons.
- 4 **A** - (to represent “**And**” / adjoining ampersand).
  - 5 Finally - **Ps** - Polyols (sugar alcohols. eg - Maltitols, Xylitols, Erythols).

In 2005 the term FODMAP first arrived into the public as hypothetical therapeutic intervention carried out by a team of researchers at Monash University in Melbourne ([Gibson, P. & Shepherd, J. 2005](#)).



## BENEFICIAL AND NON-BENEFICIAL FOODS (LOW FODMAP INTERVENTION)

Below is a listing of non-exhaustive samples of what to include as well as exclude - food and nutrition complying within low FODMAPs regiment. Readers are encouraged to pursue further research at own end. Information below is Readapted from [ibsdiet.org](http://ibsdiet.org), [gesa.org.au](http://gesa.org.au) and directly from Monash University web themselves (<https://www.monashfodmap.com/blog/food-additives-and-fodmaps/>)

ALLOWED / ALL BENEFICIAL FOODS

### Alcohols

LIMIT ALCOHOL INTAKES WHENEVER POSSIBLE

### Condiments

Barbecue sauce, Capers in vinegar, Capers, salted, Miso paste, Mustard, Oyster sauce, pesto \*, Tamarind, Vegemite, Wasabi, and Worcester sauce. Sweets & Sweeteners Aspartame, Acesulfame K, Maple syrup, Marmalade, Marmite, Stevia, Sucralose and Erythritol (if gas or bloating discomforts are minimal to the individual's tolerance).

### Oils

avocado oil, canola oil, coconut oil, olive oil, peanut oil, rice bran oil, sesame oil, and sunflower oil.

### Dairy

Butter, Brie, Camembert, Cheddar, Cottage, Feta, Goat / chevre, Mozzarella, Parmesan, Ricotta \*, Swiss, Dairy free chocolate pudding, Eggs, Margarine, Milk, Almond milk, Hemp milk, Lactose free milk, Oat milk \*, enough for cereal, Rice milk \*, Sorbet, Soy protein (avoid soya beans), Swiss cheese, Tempeh, Tofu – drained and firm varieties, Whipped cream, and lactose free dairy products.

Meats / seafood Beef, Chicken, Kangaroo, Lamb, Pork, Prosciutto, Quorn, mince, Turkey, Cold cuts / deli meat, tuna, cod, haddock, SALMON or TUNA CANS, trout, crabs, prawns, oysters, and shrimp.

### Grains & Flours

Wheat free breads, Gluten free breads, Spelt sourdough bread, Potato flour bread, Wheat free or gluten free pasta, Buckwheat, Brown rice / whole grain rice, Chestnuts, Chips, plain / potato crisps, plain, Cornflour / maize, Crispbread, Corncakes, Polenta, Popcorn, Porridge and oat based cereals, Potato flour, Pretzels, Quinoa, Sourdough, Starch, maize, potato and tapioca, and Sorghum.

Vegetables / beans Alfalfa, Bamboo shoots, Bean sprouts, Bok choy / pak choi, Broccoli \*, Brussels sprouts \*, Butternut squash\*, Cabbage\*, Callaloo, Carrots, Cassava, Celeriac, Celery\*, Chicory leaves, Chick peas\*, Chilli – if tolerable, Chives, Cho cho, Choy sum, Collard greens, Corn / sweet corn\*, Courgette.

### Vegetables / beans (CONTINUED)

Cucumber, Eggplant / aubergine, Fennel, Green beans, Green pepper / green bell pepper / green capsicum, Ginger, Kale, Karela, Leek leaves, Black Beans\*/Lentils\*, Lettuce, Marrow, Okra, Olives, Parsnip, Peas, snow\*, Potato, Pumpkin, Pumpkin, canned\*, and Radish.

### Fruits

Ackee, Bananas, Blueberries, Breadfruit, Carambola, Cantaloupe, Cranberry, Clementine, Dragon fruit, Grapes, Guava, ripe, Honeydew and Galia melons, Kiwifruit, Lemon including lemon juice Mandarin, Orange, Passion fruit, Paw paw, Papaya, Pineapple, Plantain, peeled, Raspberry, Rhubarb, Strawberry, Tamarind, and Tangelo.

NOTES

\* restrict these intakes if at all ways possible. Individual experience of sensitivities / adverse symptoms upon elimination and reintroductions greatly vary.

NOT ALLOWED / NOT PERMITTED

O Oligosaccharides; Fructans and Galactooligosaccharides.

Wheat, rye, barley, onions, leek, shallots, white part of spring onion, garlic, legumes, lentils, artichokes, chicory, cashews, legume beans (including baked beans, kidney beans, and borlotti beans), and chickpeas.

D Disaccharides; which are Dairy lactoses.

Milk, evaporated milk, and other full cream derivative dairy products. Custard, Condensed milk, Dairy desserts, Evaporated milk, Ice cream, Milk, Milk powder, Unripened cheeses, (e.g. ricotta, cottage, cream, mascarpone).

M Monosaccharides; which are fruits that have an excess imbalance between fructose and glucose concentrations.

Apples, Boysenberry, Figs, Mango, Pear, Tamarillo, Watermelon, Asparagus, Artichokes, Sugar snap peas, Fruit juices, Dried fruit, High-fructose corn, syrup, and Honey.

(and) Ps Polyols; which are sugar alcohols that come from apples as well as industrial / derivative sweeteners. However Erythritol is allowed for as long as side effects are minimal.

Apricots, Blackberries, Longon, Lychee, Nashi pears, Nectarines, Peaches, Pears, Plums, Cauliflower, Mushrooms, Snow peas, Isomalt (953), Maltitol (965), Mannitol (421), Sorbitol (420), and Xylitol (967) .



The research found correlations between consumption of short-chain carbohydrates with Crohn's Disease and other gastro-intestinal stresses; ranging from significant bloating & discomforts amongst various test subjects.

This study along with many other observations past & recent (Halmos, EP et al. 2014); confirm the same outcome; in that restricting fructose alleviate many of the above symptoms. In two distinct phases (elimination and gradual re-introduction) - the Low FODMAP protocol mainly addresses an individual's sensitivity to fructose intolerances and thus call for their restricted intake from any direct source or all suspecting derivatives (Goldstein, R. et al. 2000). To date, official advisory (Varney, J. 2015) seem to suggest that Low FODMAPs are safe and well tolerated in both short (<8 weeks) and long term adherence (1 year onwards with intermittent periodisation/s).

Individuals persisting on a cyclical Ketogenic (**page 176**) OR combining ckd with Intermittent Fasting (**page 193**) may need regular re-evaluation of their choice of refeed foods.

**This Author** speculates, based on anecdote experience that fructose in excess - may adversely impact the next transition Ketogenic periods or fasting windows. Evidently as symptoms of significant malaise or feeling of fatigues. **This unfortunately requires patience to let such subsides within one to two and half days.** Several cycles of CKD refeed periods are thus likely needed to document for Readers to experiment which combinations of carbohydrates they respond best. Ketogenic or non-ketogenic - it needs to be stressed that such malaise out of fructose intolerances may vary wildly amongst individuals. By no means FODMAP foods are to be eliminated altogether permanently/longterm.

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3/3

*Ketogenic Intervention mainly revolves around complete dietary carbohydrates omission; to mimic therapeutic effects of fasting. Despite turbulent history, it has now developed beyond a dietary protocol.*

Much of Ketogenic nutritive interventions revolves around Fasting (complete abstinence from food); at least by evidence of earliest practise. In 5th century BC; Hippocrates prescribed fasting as remedy for seizures and epilepsy (*Wheless, WJ. 2008*).

In 1911, two French physicians Gulep & Marie successfully reconciled Hippocrates' Fasting regiment in the treatment of both adults & childhood epilepsies (Freeman, JM et al 1996). However, it was not until the 1953 Nobel Prize laureate Sr. Hans Krebs; who first identified & proposed the term "**Physiological Ketosis**" as the primary mechanism behind fasting (Krebs, H. 1959).

**This elusive physiological state;** was met with much confusions throughout the 1900s. Fatty acid mobilisation was thought to be very destructive as initially prompted by Dr Ancel Keys' Seven Countries Study (Keys, A 1984) & Anichkov's cholesterol-rabbit hypothesis. Both asserting Cholesterol as cause of vascular mortality.

John Yudkin (Yudkin, J. 1972) stood amongst the most prolific critic against this; highlighting the excess sugars & food refinements instead that precursors this mortality. Scientific communities throughout later 20th Century, however disputed Yudkin's counter-belief leading to government intervention known as the McGovern Committee to federally approve Keys'

hypothesis to reality. Nevertheless effectively leading to the establishment of what we know today as the “**safe**” dietary paradigm. The Food Pyramid.

However, from early 1990s to today, many scientific oppositions continued. Doctors Robert C. Atkins, Jeff S. Volek, and Stephen D. Phinney (to name a few); have all sought Independent experiments and clinical trials amongst individuals and endurance athletes with beneficially convincing improvements of various metabolic markers. Alongside, many studies have examined Ketosis’ neuroprotective effects on Parkinson’s to Alzheimer’s disease states (*Gasior, M. 2006*). Stem cell research likewise garnered supportive (*Board, M. et al 2017*) preference of Ketone bodies over Glucose for efficiency of energy production and reduced ROS (Reactive Oxygen Species). The degree of Ketosis seems exclusively mediated by hormones Insulin & Glucagon. Either by Fasting or replacing carbohydrates with fat. Either inevitably lowers liver’s glycogen stores (through daily caloric / activity expenditures) enough to reach **Ketogenesis**; a process which triglyceride remanifests as Ketone bodies (*Woodyatt TR, 1921*).

## LIST OF KETOGENIC FRIENDLY FOODS

The list is by no means a completely exhaustive overview of what to consume within carbohydrate restricted, Ketogenic regiment. This list is also subject for periodic revisions towards future editions of this Book. All Readers are encouraged to pursue further research beyond the scope of **This Book**.

It is in the opinion of **This Author** through years of anecdotal experience - monounsaturated fats source emits far less unpleasant symptoms; however to completely eliminate dairy or saturated fats sources would be unwise as they contain other surrounding nutritive components to complement what is missing as well as to provide palatable diversities. Given that monounsaturated sources are markedly more expensive than saturated fats; at least a weekly investment supply of olive oil with sour cream should nevertheless be adamant in all Ketogenic meal implementations. AT THE VERY LEAST; **This Author** recommends extra virgin olive oils, sour cream for probiotic content, flaxmeals, almond meals and with occasional coconut oils and flours in moderation.

**Dairy**

Butter, creams and most cheese sources. It is of **This Author's** opinion that Vitamin K2 rich cheeses, particularly among Dutch Gouda or Edam, must be incorporated regularly.

**Vegetables sourced fats**

Monounsaturated extra virgin olive oils are preferred. Almond oil, Avocado oil, Canola oil, Coconut oil\*, Corn oil\*, Flax seed oil, Ghee, Macadamia oil, Mustard (plain), Olive oil, Peanut Oil, Sesame oil\*, and Walnut oil. Polyunsaturated fats such as sunflower seeds may be consumed but due to their oxidative instability upon heat reception it'd be unwise for regular consumption. Additional Vitamin E supplementation on periodical dosages between none, low and high would warrant some individuals who'd likely rely on these affordable vegetable oils. As Vitamin E has been well documented to offset risks of excess lipid peroxidation damage [Princen H. et al. 1995](#).

**Nuts and seeds**

Unfortunately as all nuts sources are markedly expensive it is perhaps advisable to only buy these occasionally. It is the Author's opinion that Flaxseeds / Linseeds should be incorporated in every ketogenic practitioner's regular dietary plans; IN ADDITION - to fish intakes of Omega 3 fatty acids. Almonds, Almond butter, Brazil nuts, Cashews Chestnuts, Coconut, Macadamia nuts, Peanuts\*, Pecans, Pine Nuts, Pistachio nuts / Seeds, Walnuts.

\* be sure to limit these intakes. Particularly vegetarian oils which are questionably pro-inflammatory in their predominantly Omega-6 polyunsaturated fats. It is in the opinion of this Author to instead emphasize on monounsaturated sources. Some individuals react adversely to overeating with peanuts; hence monitoring intakes and hunger responses by ways of keeping a nutritional journey are encouraged.

**Eggs**

It is **This Author's** opinion that eggs are crucially affordable staple source during any forms of ketogenic intervention. Simply hard boiled eggs are superior as loss of nutrients are minimal. Be sure however to store them properly in the fridge by submerging with himalayan-salted water.

**Dairy source of proteins**

Any when supplementations and almost all cheese products may be consumed during the Ketogenic regiment; however some individuals may or may not express increased hunger response amongst the consumption of certain types of cheeses (low fats or cottage cheeses). Individuals are encouraged to keep a written journal over any adverse occurrences.

**Vegetarian based Proteins**

Pea proteins isolates are recommended as hypoallergenic option to use or as voluntary replacements to whey proteins. Soy based proteins; please note however that given within the Author's anecdotal opinions - Readers are encouraged to diversify their protein intakes as soy based proteins may not fully constitute the needs of utilising each and every amino acids.

**Meats based proteins**

All meat based proteins allowed. From poultry, game, beef, lamb to pork. It is the Author's opinion that farmed chicken cut/s with visible fats (such as legs and maryland cuts) may need to be substituted as they are likely polyunsaturated, inflammatory-prone omega 6's. Processed deli meats; including bacons and salamis and sausages however; may need to be moderated in consumption. Some individuals may or may not report adverse effects such as inflammation conditions.

**Seafood based proteins**

Mackerels and sardines are preferred. It is of the Author's opinion that heavily farmed salmon's may produce unpleasant symptoms (as it is likely fed with soy based feed), always check and read all labels when in doubt. Very large species such as Tuna may be consumed; but beware that they are higher in mercury as they're situated much higher in the food chain.

**Nuts and seeds**

Whilst nuts can be enjoyed in discretionary amounts they are however should not makeup the majority of fat intakes due to digestivity and sensitivity issues. Some form of nuts; in particular brazil nuts (for antioxidant Selenium content) however are immensely beneficial if somewhat prohibitively expensive .

Proteins and amino acids may be classified into two groups by their intended breakdown destinations- Glucogenic and Ketogenic. To name a few Glucogenic are [Glutamine, Alanine, Cysteine, Glycine, Tryptophan and Valine](#). Ketogenic are [Leucine, Isoleucine, Phenylalanine, Tyrosine](#). Some amino acids do share both qualities, these are Tryptophan, Isoleucine and Tyrosine.

**Low carbohydrate vegetable sources**

All dark leafy vegetables - from spinach, baby spinach, rockets, green capsicums, broccolis, brussel sprouts, lettuces, including cruciferous cabbages, cauliflowers, winter vegetables such as iron bark pumpkins, japanese grey pumpkins.

**Moderate carbohydrate vegetable sources (LIMIT / CONTINUE OMITTING)**

Onions, tomatoes (all ariants and types), butternut pumpkins, all carrots, all form of corns, all forms of "resistant starch", and all beans, pulses, legumes and lentils.

**Condiments**

Bouillons, stocks (gluten free), traditionally brewed and fermented soy sauce without additives, garlic powders, herbs and low carbohydrate spices such as chilli powders, parsleys, basil.

**Sweets & Sweeteners**

NOTE: Some individuals may express HIGHER hunger pang/s / responses from consuming certain artificial sweeteners regardless of anything "naturally" labelled. It is in the Author's opinion for Readers to experiment with cycling sweeteners from one to another. Especially amidst Intermittent Fasting regiment - try reduce such consumption until the next feeding window begins.

There are many theoretical variations at describing the biochemistry of Ketogenesis. The best **This Author** (AW™) may summarise collectively is that it is an overall fuel preferential shift by intervening the default glucose pathway (“**oxaloacetate->pyruvate**”) which triggers the break down of stored triglyceride (“**TG**”) as starting means of alternative ATP production. Having first depleted liver glycogen “**TG**” breaks down into fatty acids which then oxidises in the liver through CPT-1 enzyme (Carnitine Palmityl Transferase-1) (*McDonald, L.1998*). This then produces Acetyl-COA as a result which (by default) attempts initiating Krebs Cycle. Whilst the Cycle do need carbohydrate to initiate Gluconeogenesis, technically speaking few amino acids (eg.Iso-leucine, Arginine) can still be used instead as alternative precursors to the oxaloacetate pathway (*Krebs, H. 1959*) to nonetheless maintain (some) gluconeogenesis. But since there’s little to no incoming carbohydrates, Acetyl-COA instead accumulates and divides into 3 **ketone bodies = Acetoacetates, Betahydroxybutyrates then finally, Acetone. Noteworthy to realise is that the three Ketone bodies undergo each conversions progressively in the above order.** Firstly, Acetoacetates; detected by urine, then the BoHB detectable in the blood, then finally Acetone

detectable by breath. BoHB being water soluble is able to cross the brain barrier allowing many tissues (brain, heart and renal cortex) to utilise amidst low energy or Fasting states.

**This Book**, backed with many prior years of its Author's nutritional accounting suggests similarly to the above intervention amidst contexts of Resource scarcity / structural impositions. But with far more nuanced reiterations. Such is complex interlude between Cyclical Ketogenic, with up to 20 hours of Intermittent Fasting regiment. Also with influences of TKD (Targeted Ketogenic) and hypocaloric, yet high(er) protein intakes during the four or five hypocaloric, intermittent fasting days.

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**Reason for this complexity is allowing fitness training maintenance whilst at the same time meeting the most important overarching themes: resourceful Frugality and Self-Authentic “individual” sustenance.**

Ultimately, Readers are encouraged to take home final reassurance - that any interventions, ketogenic or not remain solely that as a **“theory”**. Such may not confide confidently upon all biological and sociological confounders.



# KETOGENIC METHODS FAQS, TRAINING & FASTING

**THE ALTERNATIVE WAY/S OF EATING**  
WITH MANY FURTHER QUESTIONS; ADDRESSED HERE.

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It is impossible to condense **This Book** any more succinctly to meet all ends of motivational readability and scientific curiosities at the same time. Before proceeding Readers are advised to read the Disclaimer immediately prior to Contents. This parent Chapter is divided into three (3) sub sections:

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**KETO INTERVENTION - FAQs (PAGE 146)**

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**CKD, TKD & TRAINING (PAGE 176)**

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**INTERMITTENT FASTING (PAGE 146)**

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It is widely acknowledged that any nutritive regiment bearing the title "Ketogenic" is presumably the same to that of "Low Carb". What primarily remains the defining key however is recognising the total daily carbohydrate allowance (such as overall Net Carbohydrates = Total Carbohydrates minus Fibre) as well as their macro nutrient composition or simply known as "Ketogenic Ratios". "Low Carb" is generally perceived as a dietary regiment requiring no more than 125 grams carbohydrate per day. "Ketogenic" on the other hand, is widely seen as therapeutically restrictive; no more than 25 grams per day. Another stricter level is that of "Zero-Carb"; by which all intake of indigestible fibres; both soluble and insoluble - are forbidden altogether.

STANDARD KETOGENIC DIET (SKD)

**General Overview / Implementation**

The most conventional yet also the most widely confused. The stringent Standard Ketogenic Regime calls for a need to restrict carbohydrate intakes to typically no more than 50 grams per day, every single day for as long as a physiological or pathological concern has been improved notably and significantly. This however has been scrutinised as there are wild debates upon the carbohydrate daily allowances.

**Macro ratio compositions**

70% fats, 25% proteins and 0% to 5% carbohydrates (as trace amounts from vegetables and fibre intake).

**Variations**

Numerous variations exist in the way of macro adjustments. From higher protein intakes (as much as 40% of overall macro composition) or higher carbohydrate intakes (though typically capped at no more than 125g per day). These are a transition away from the formal definition of "stringent" ketogenic formulae. Some individuals reportedly and anecdotally prefers to have higher percentage of proteins, whilst others to prefer higher amount of trace carbohydrates consumed around training (though still markedly below the amount classified for a TKD). However a general consensus seemed to imply a favour that an increased intake of Protein is widely believed to be superior for retaining lean body mass.

TARGETED KETOGENIC DIET (TKD)

**General Overview / Implementation**

Targeted Ketogenic Diet calls for a small allowance of carbohydrate ingestion; but never in a recreational or sedentary context of lifestyle. The allowance of carbohydrate intake (preferably in the form of simple glucose sources such as syrups) are believed to be crucial to maintain training and physical endurance during fitness and daily exercise /energy expenditure obligations. TKD specifically concerns a temporary replenishment of glycogen within the muscles to prepare the trainee enough store to be utilised favourably through his or her training / exercise daily regiment ranging anywhere between 35 to 1 hour and 30 minutes.

PLEASE NOTE that these primarily concerns toward strength training athletes wishing to improve or to retain existing LBM's, where as general / daily cardio light fitness work may not be as appropriate to use with the TKD regiment. Individuals however, may wish to experiment for what is appropriate to their existing physiology.

**Variations**

Some individuals reported greater recovery when splitting the extra carbohydrate allowance into two (2) episodes - one as 25g before training and the another 25g as post workout. Some may prefer all either before, or perhaps all allowance as after a workout / training episode. Metabolic as well as nutritive scheduling variances will likely confound to demand further individualised experimentation.

This author has had some experience; of using fructose / fruit / apples in particularly as the sole temporary carbohydrate allowance with unfortunately dubious training performance benefit/s. This is perhaps widely attributed to the fact that fructose mainly concerns liver glycogen recompensation than the muscular stores (Duchaine, D. 1996). Hence, it is up to further individualised interpretations to experiment with various simple glucose sources or any carbohydrate sources that call for high glycemic loads - such as sugar syrups, or even more than three spoonfuls of boiled white rice.

CYCLICAL KETOGENIC DIET (CKD)

**General Overview / Implementation**

The Cyclical Ketogenic Diet calls for a stringent / Standard Ketogenic Regiment for five days at a time, followed by 24, 36 or 48 hour refeed window. CKD is perhaps the most recognised form of mixed ketogenic intervention as first popularised by many nutritionist and exercise physiologists through successful publications before the turn of millennium - such as The Anabolic Diet (Di Pasquale M. G, 1995), and the BODYOPUS (Duchaine, D. 1996).

**Macro ratio compositions**

During weekdays / training days - to retain primarily SKD ratios 70% fats, 25% proteins and 0% to 5% carbohydrates (as trace amounts from vegetables and fibre intake). During refeed days / - to invert macros to very high carbohydrates, low to moderate proteins and low fats.

**Variations**

There are some reported confusions and interesting differences inbetween the earliest form/s of CKD in their early practice and public enthusiast following. The Anabolic Diet (Di Pasquale M. G, 1995) advocates much higher fat intakes during the carbohydrate refeeding period/s (as high as 30% to 40% of overall macros), whereas BODYOPUS (Duchaine, D. 1996) advocates low fats throughout the refeeding period/s initially beginning with strictly liquid intakes of food sources (such as glucose syrups / maltodextrins) towards solid foods later approaching afternoons and thereon. Once again, individual metabolic variability, insulin sensitivity and exercise vs sedentary status may vary greatly in one's own interpretive effects from intermittently transitioning between mild Nutritional Ketosis and then returning to glycolytic states. Hence this warrants further individualised monitoring, experimentation and nutritive / resources calorie tracking with consistent dietary journaling.

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## 1/3 THE LOW-CARB INTERVENTION - FAQs

55

### SO HOW DOES THIS INTERVENTION RECEIVED SO FAR?

It is safe to conclude that current dietary Institutions collectively frowns upon anything that challenges their approved conventions; Ketogenic Diets included. Treatments of various metabolic derangements, obesity (both rats and human studies), neurological disorders (*Baranano, K., 2008*) and Schizophrenia (*Kraft, B D. 2009*) have all been sought and testified under various forms of Ketogenic interventions. To be fair and impartial, there are counter studies claiming no “**metabolic advantage**” to conventional low-fat paradigm (*Johnston, C S. 2006*). A mountain of **anecdotal** evidences meanwhile, next to **This Author's** experience - remains to be the only best “**holistic**” evidence each so far as proclaimed Authenticity speaking for themselves. Regardless, naming “**names**” isn't the objectivity of **This Book**.

## KETOGENIC SUSTENANCE - A TIMELINE / WHAT TO EXPECT PART 1/2

Ketogenic Diets are not by any means a "light" or "recreational" nutritive intervention - they require holistic submissions for change from cognitive, metabolic, neurological, muscular and inevitably - gradual shift of enzymatic systems. NOTE: Nothing here is to be taken objectively or definitively universal since metabolic and physiological diversities differs greatly as accordingly to each individual. These information below provides a sample timeline of "what to expect" given an individual's keen and decidedly interest to partake in a Ketogenic regime.

### "Brainstorming and Awareness"

Initial first week of reduced carbohydrates would be both exhilarating and anxious at the same time. Individuals must willingly step forth on the brainstorming process of patiently noting down all effects of low carbohydrate intervention towards their every day living circumstances. From one hour, one day, month and year to the next. This brainstorming process - is what calls the initial "chaos" of introducing many variables into a Reader's current physiology; thereby it is recommended to write down and account / record everything to detail over how he/she feels nutritively, cognitively and physiologically. Mineral Intakes must be supplemented as a habit as either drinking water with pinch of himalayan salt or ensuring bone broths or stocks are regularly drank inbetween meals.

### Journaling / Nutritional Diary / Smaller Utensils

The very first few week/s will involve heavily around the familiarising of writing his/her first journaling. Early This period is simply that- an exploration phase over determining what foods; from type of fats to type of fibres and proteins; impose any either conducive or adverse - digestive effects onto an individual's existing gut biome and metabolism. Shortlisting of any select dietary nutrients may not be exercised at this early of a stage as noting down any effects - be it of cognitive or physiological - from simply reducing carbohydrates in the range of 50 or even as low as 25 grams per day are arguably more important here. Dining habits also needs to be readapted. Readers are encouraged to familiarise using a smaller set of utensils and to EAT A SLOWER pace than prior habits on carb eating.

### Hunger

The first few days may impose hunger pattern changes that some individuals may find no problems in readjusting to meet their objectivist / day to day energy expenditure needs. Some individuals may find their appetite reduced, whilst some increases. This is largely genetic and highly individual basis. However individuals MUST explore varying fibre intake at a level best for mitigating and moderating excess hunger - such as prioritising fibre rich vegetables and supplementation such as Pysllium husk, Xanthan or Guar Gums into various dessert meals should they choose to implement.

### Digestion health

Recall that Ketosis is a gradual, physiological readjustment of metabolism; thus impacting contrasting & differential needs of stomach acidity and digestive conditions against that of prior carb heavy diets. It'd be important to inevitably consider supplementing Betaine HCL or digestive enzymes at this stage to prepare and acclimatise a change of digestive conditions towards fats and proteins.

### Fitness / Muscular endurance

Generally speaking; if Readers have been regularly subscribed from moderate to high intensity / high tension / hypertrophic training paradigms - the first week may or may not be as "painful" later on; as it is only the first set of days they are now forcibly accessing existing fat stores to perform all of day to day / hour to hour needs. Even from as simple as breathing. Commencing a separate journaling for exercise and training is also highly recommended.

FIRST FEW DAYS / FIRST WEEK

NOTES

Early on - Standard Ketogenic Diet (SKD) Principles should no doubt be followed truthfully and transparently. Advanced forms of this diet (of TKD or CKD variants) may NOT apply to individuals whom they have not yet acquired enough convincing data for reconciling the numerous confounding experiences and trials between various specific foods, or supplementation intakes/research, or gathering sufficient sentiments from existing training regiment(s).

3 WEEKS OR APPROACHING 1ST MONTH

### Side Effects / Mineral Intake Crucial / Hunger

By second or third week is where symptoms may arise at their most peak effect- being the "side-effects" for establishing nutritional ketosis anecdotally ranging from noticeable light-headedness, chest pains lethargy and general weaknesses affecting their cognitive and fitness performance. All these are likely to be of micro nutrient and key mineral deficiencies (magnesium, potassium and zinc). This or that they are yet to consider digestive enzyme supplementations especially if they are finding it difficult to eat or to meet certain caloric goals. However in some individuals they may already witness some desirable changes - beyond fitness markers - a much better self awareness over hunger pattern/s as well as discovering what type of ketogenic foods (from type of fats, proteins ratio and allowed range of vegetables) impose for better or worse digestive experiences; day in day out.

### Cognition

Resilience at adhering to Ketogenic sustenance at this stage will continue to evolve. But side effects such as "fogginess" may persist from one individual to the next Patience and above all; adherence to various ergogenic and notropic aids such as teas and coffees must remain in use in respect to individual's sensitivity to caffeine. Fogginess or sluggishness is largely attributed to the individual yet to adequately depleting enough of their liver glycogen stores. Should individuals particularly conformed to high fruit consumptions for much of their life prior to Ketogenic dieting will no doubt be experiencing the most difficulty.

### Nutritional Journaling

Continue journaling daily as needed. Such Intuitive Data spanning across food selection, glucose level fluctuations reports, supplementation and training experiences will no doubt prove useful as the Reader may or may not be viably warranted to experiment with carbohydrate loading approaches as advocated much later as caloric deprivations, fitness objectivist expectations and/ or structural impositions expects to envelop. These approaches are open only when training or fitness decrements are notably reduced.

This is part 2 of the sample Timeline.

APPROACHING  
1ST MONTH  
(CONT.)

### **Fitness / Muscular endurance**

Discerning trainees and enthusiasts may or may not find they may no longer sustain heavy low-volume intensity regimens. If such is the case, an adoption of different training regiment might be warranted to reduce the onset of injuries. CONTINUED NEXT COL.

Though debatable, endurance style workouts seems much preferable against high intensity low volume training throughout episodes of standard ketogenic regiment (McDonald, L. 2016). Readers are encouraged to explore what is sensible and sustainable within their own authentic capacity.

NOTES

It remains debatable at this stage whether to continue strictly on SKD ONLY IF discerning Readers thus far subscribe to regular resistance / weight training. Strategically introducing carbs may be required for inherently lean individuals to prevent excess lean mass loss, or consider intermittently exploring higher versus lower - protein intakes.

2ND MONTH / 3RD MONTH

### **Seasonal fluctuation preparations**

Much of the initial brainstorming are more or less covered. By 3rd or fourth month Readers are likely to anticipate supplementation changes as seasons now becoming progressively either cold (towards winter) or warmer (towards springs/summers). It is in the opinion of This author himself that Summer would be the far **'easier'** season to maintain Ketogenic Intervention. Perhaps noteworthy if individuals are raised socially from a prior equatorial, geographical parts of the globe. Thyroid health remains quintessential for sustenance and studies suggest exposures to cold in general reduces free T3 concentrations (Reed, HL 1995). Iodised rock salts alongside dietary sources of Selenium and seaweed may prove crucial for individuals suspected for cold sensitivity and lowered body temperature.

As the season transcends (towards the colder) it'd be sensible to supplement with adaptogens (Eg. CoQ10 / Rhodiola Rosea) if stressful living conditions persists, whilst continuing to maintain adequate B & C Vitamin group microintakes. Thyroid health also remains essential via incorporating intakes of Nori / seaweeds & dietary selenium (mustards, brazil nuts and sardines). CONTINUED NEXT COL.

If however the above cannot be afforded due to frugality, at least a multi-vitamins, magnesium (both topical DIY oils and oral), with particularly - increased Vitamin D intake (Mackawy Husein, MA, et al. 2013) seems well warranted to control hypothyroid symptoms.

### **Hunger**

Self report and self assessments towards all resource consumptions; and to track any new pattern/s of hunger should continue. Especially if experimenting different ketogenic foods combinations at own time and research. All individuals are encouraged to keep updating their Nutritional journaling.

### **Fitness / Muscular endurance**

Those who are inherently lean by genetics - subscribing to a more aerobic conditioning based training may be beneficial at this point especially surrounding winter times; as this promotes overall mobility and movements. Beware however, that **if still persisting within prolonged resistance trained regiment - some carbohydrate intake interventions in form of TKD or CKD may well begin to be well warranted.** Caloric surpluses out of CKD help to replenish and restore the much needed glycogen to prepare the Readers to yet another week of depletion and general living through maintaining Standard Ketogenic ratios.

NOTES

Arguably at this stage - one may wish to consider partaking in TKD or CKD as modified Ketogenic Interventions especially if their lifestyle wishes aligns majority towards meritocratic fitness; similarly to that of fitness competitors or as firm enthusiasts.

6 MONTHS / 1ST YEAR / THEREAFTER

### **Seasonal variations / impacts to nutritional status**

Discerning Readers should have already found how seasonal fluctuations have impacted their nutritive needs across many societal context/s - from living and fitness regimes as well as work / employment obligations. **Other nutritional interventions now becomes relevant; the most significant of which; in the opinion of This Author for individuals to have reached this point (6+ months or one year) of Ketogenic intervention thus far would be INTERMITTENT FASTING.**

### **Research / Nutritional Journaling**

By this time around at least one year+ Readers would be well acquainted over his/her supplementation regiment and choices. Periodising between none, low and moderate intakes on various discretionary supplements (page 219) seems pragmatic as Readers may or may not notice any diminishing effect as signs of hormonal tolerance. Readers are still encouraged at collecting & curating further nutritional curiosities in forms of research, journals from hereonwards.

### **Hunger Patterns**

Readers by first or even second years likely have developed some awareness over which (in addition to daily expenditures such as Thermic Effect of Activity) - food formatting / configurations and timing (types of fats, types of proteins, macro-ratios) may trigger variable hunger episodes. However, dietary journaling and personally should continue to be of prime importance of regardless. **If and at any stage individuals wish to pursue greater resources preservation whilst able at maintaining and controlling hunger patterns: they may consider implementing INTERMITTENT FASTING. Consider this next step as the next episode of nutritional challenge/s as well as new realm of realisations; both awaiting to unfold.**

### **Fitness / Muscular endurance**

All accounts of fitness or training meritocracies should continue to be accounted in writing. Any or all injurious events shall have to be noted throughout as reminders to dictate when or how - an individual's training regiment should be re-evaluated best to alleviate any or all existing injuries. Alternative forms of therapies and exercises seems pragmatic ventures for all discerning enthusiasts. Further reading upon these topics of exercise physiology can be explored further at a Reader's end.

NOTES

At one year+ all discerning Readers may consider few week/s of **"Diet Breaks"** or prolonged period of refeeds to recondition all existing digestive enzymatic pathways back to allow handling of carbohydrates to reverse any possible adverse hormonal adaptation. Transitioning back to Ketogenic Intervention entirely remains at Reader's discretion. **HOWEVER; all Readers are to be well advised over the various effects from exiting and re/entering states of Ketogenic interventions outlined on page 191.** INTERMITTENT FASTING also becomes relevant at this stage for Readers wishing to reduce overall resource footprint and consumption; as they are likely prepared to meet such conditions and to have lived within the state of mild to nutritional Ketosis (0.2 to 3.5 MMOL/ BOHB blood meter).

In short - **yes and no**. Physiological and metabolic repercussions may prove noteworthy second reading as listed on **page 154**. However such a binary “**yes or no**” answer is too myopic given that **This Book** is neither prescription nor scientific clairvoyance.

No drugs or Institutionalised confinements may ever describe the elusive outcomes behind this somewhat extreme dietary initiative. Various mechanistic studies both human and animal models (Roberts, NM. et al 2017) have applauded Ketogenic protocol/s. **The question remains however, how should we best reconcile this mechanisms within our present day? Given our binary political tug-of-war amidst the name of “Science” and “Correctness”? The answer could not ever be simpler. We must exercise our scientific curiosity down to the “Self”. Putting our own “Selves” as the holistic subject criteria.** Readers wishing to know a sample “**life**” disclosure of this sustenance curiosity are advised to view the **Timeline on page 148**. Some discretionary cautions however are advised as much of these experiences are subjectively open and vary from one individual to the next.

Ideally, any discerning Reader would be wise to firstly request a full pathological panel by a general practitioner. However this is likely to be refused and frowned due to **General Practitioners institutionalised, prescriptive biases**. Finding a doctor or a physician willingly remaining impartial to such a request is sadly, an increasingly difficult endeavour.

On the much heated subject of Cholesterol and the Lipid Hypothesis - unfortunately, nothing so far seems conclusively decisive over their threatening plausibilities. Irrespective how much bickering one may dive down the rabbit hole, it is of **This Author's** opinion in all due respects -a combination of inherent genetics (*Weingärtner, O. et al 2009*), (*Di Pasquale G, M. 1995*), lifestyle+fitness, and psychological well-being factors are arguably far more relevant confounders of mortality and well-being. Despite convincing evidences that LDL-C Cholesterol correlates with risks of cardiovascular and coronary impairments (*Storey, C B. et al 2018*) & (*Ference, A B. 2017*) - it is prudent nonetheless for us to remain aware that scrutinising all mortality factors down on "**Cholesterol**" alone is insidiously simplistic at best. Because counter observational studies at present cannot be

dismissed. One study finds that lower LDL-C correlates paradoxically consistent amongst individuals with cancers (Lavigne, M.P. 2012). Also, another examines strong correlation with Psychosis and suicidal tendencies amongst individuals with lower (note: total) serum cholesterol (Srivastava, A. et al 2010). Speaking of the elderly a thorough meta analysis (Diamond, M D. 2015) paradoxically finds that all mortality episodes were correlated by **low** levels of LDL-C.

Understandably, many pedestrians quickly refute/reject all of the above by pointing to dietary rituals such as the Japanese Okinawans. They, the Okinawans, much to anyone surprise; consumed many animal proteins, particularly pork and goat; as part of centuries old ritual of consuming every part from "**nails to tails**"(Shibata H,et al. 1992).

Nevertheless, it's noteworthy to also consider concerns amongst "**hyper-responders**" phenomenon (cholesterolcode.com). Such that higher LDL & HDL readings; despite low triglyceride seems almost exclusively reported amongst **lean** practitioner of low-carbohydrates. A hypothesis seemed plausible that it is the LDL versus Triglyceride ratios (than LDL alone) that is



far more important marker at predicting CVD mortality risks; however such sadly is yet to have undergone formal investigations or clinically conducted experiments.

#### 57 **WHAT ABOUT THE TYPES OF FATS?**

Debates surrounding saturated, unsaturated and polyunsaturated fats for “**superiority**” contest is quite frankly, a frivolous pursuit. In context of wholefood sources - **all three types complements another that lacks in nutrient diversity**. Wholefood sources dairy fats especially amongst cheese for instance (Dutch Edam, Gouda’s and/or Goat’s) contain micronutrients and complex sub-vitamins (among them Menaquinone K”2” Mark IVs to Mark 13s) **which cannot be found in monounsaturated or polyunsaturated fats**.

Any ill-informed pedestrians would be quick to refute that dark leafy vegetables such as Kale and Spinach offers Vitamin K1 and thus purportedly negates need for saturated fats; however K”2” have been studied extensively as the more viable protector than K1 alone against CVDs (*Gast, G C 2009*).

It is likely impossible to curate all other concerns within this one succinct space of the book. **NOTE / DISCLAIMER:** These are by no means an exhaustively complete list. Readers are encouraged with or without pre-existing condition to keep an extensive dietary journaling as well pursue further reading outside the scope of this Book.

#### Gallbladder Disorders / Gallbladder Removal

One study suggests that HIGH carbohydrate diets exacerbates gallstone formations [Chhabra, N & Chhabra S. 2012]. Another also presents similar findings with pregnant women [Wong C A. et al. 2013]. Further, an online survey conducted on a Swedish low carbohydrate website amongst existing Ketogenic practitioners actually reported a massive significant improvement in Gallstone issues.

On the contrary and confusingly - one study amongst Korean laparoscopic cholecystectomy patients finds that two types of gallstones seems dependent from macro intake. That is - **"Pigment"** Gallstones appears to be exacerbated by carbohydrate / **"noodles"** intake whilst **"Cholesterol"** Gallstones - appear to be caused from **"Meat and Fried Foods"** [Park, Y et al. 2017]. For those with gallbladder removed perhaps are more concerned as without enough bile secretion; absorption of fat soluble vitamins (A,D,E,K) can be compromised. Further reading it seems, remains strongly encouraged.

#### Thyroid Health

There is some legitimate concerns that lowered thyroid (T3) exist amongst adherences to low carbohydrate interventions [Fery, F et al. 1982]; thus predisposing some suspected individuals to symptoms such as increased fatigues, cold sensitivity to the peripheries, hair loss and overall decreased Vitamin D status and thus - calcium uptake [Mackaway Husein et al. 2013]. The causal mechanism behind these is inconclusive, but nonetheless suspected by the increase of TSH (Thyroid Stimulating Hormone) alongside impaired conversions of Reverse T3 or T4 into the active T3 in the liver. This however seems to be mitigated by ensuring adequate dietary Selenium [Peat, R. 2011] [Ventura, M. 2017] as well as ensuring carbohydrate intake is no less than 50 grams per day [McDonald, L. 1998]. However should individuals are clinically reliant on prescriptions (such as L-Thyroxine) - external supervision on prolonged ketogenic intervention may seem warranted [Kose E, et al. 2017].

This book; whilst understandably subjective to criticism nevertheless hypothesizes that refeeding protocols (such as Cyclical Ketogenic Diet or full diet breaks) serves as the only last pragmatic solution as defense against temporary metabolic impairments and help reversing the hormonal adaptations that occur during hypocaloric ketogenic and/or fasting intervention. Indeed, studies on refeeding likewise support such an idea after prolonged starvation, and/or caloric reductions [Azizi, F. 1978]. Gender also appears to be a strong cofounder on how hypocaloric dieting affect metabolic health; with women thought to be more adaptive towards periods of dieting [McDonald, L. 2016].

#### Specific medication interactions

Blood pressure medications (Lasix, Lisinopril, Atenolol) and Lithium (anti depressant) could have their efficacies greatly affected by the Ketogenic intervention; individuals currently and strictly advised on these prescriptions may wish to seek further monitoring by their clinician.

#### PCSK-9 Gene overexpression

The PCSK-9 gene concerns the liver's LDL-R receptor recycling process; this (in addition to APO-E-Gene polymorphisms) amongst other suspected confounders nevertheless - effectively determines an individual's cholesterol mobilisation. The overexpression / overactivation of the PCSK-9 gene has been noted to impair overall cholesterol recycling mobilisation which could provide some causative explanation to Hypercholesterolemia [Jones, P. 2015].

#### Bariatric Surgery (gastric bypass)

In existing obese populations, there are some concerns raised upon surrounding the potential difficulties in fat digestion following gastric bypass operations. Although some anecdotal practises have been observed within some individuals after surgeries, it is always wise to keep a close clinical supervision with dietary journaling.

#### Kidney disease / Kidney issues

There is a widely known belief that high protein intakes may impair kidney function leading to eventual failures. Current studies unfortunately remains inconclusive at best found amongst long term studies on Ketogenic practitioners. However it remains critical for individuals with a pre-existing diagnosed condition of kidney to have their renal function regularly monitored should the individual insists on commencing a Ketogenic intervention.

#### Pre-Existing Type 1 diabetics

Type-1 diabetics are likely met with more (financial) challenges as they likely rely on prescriptive Insulin long term. Reassuringly however, a study on both children and adults with Type-1 Diabetics admitted on very low carbohydrate diets have found much success in glycemic controls as well as much-reduced Insulin dependant dosages [Lennerz, SB et al. 2018] & [Krebs, JD et al. 2016]. However, stringent monitoring upon individual's Ketones level still remain necessary to prevent both chronically elevated Ketones (Ketoacidosis) & glucose levels [McDonald, L. 1998]. It is unlikely that TKD or CKD is appropriate as the insulin dosages required at meeting such glycolytic demands are likely to be extremely high. Readers with pre-existing Type-1 Diabetics are strongly encouraged to follow the works & research by Andrew P Koutnik as well as Dr. Richard Bernstein.

#### Pregnancy

A study conducted on pregnant mice assessing a Ketogenic Diet intervention for 30 days upon developing embryos' organs seemed to result in adverse organs' growth [Sussman, D. et al. 2013] including higher risk of developing ketoacidosis. But a study on rodents found that Ketogenic Diet protects the offspring against Autism Spectrum Disorders [Castro, K. et al. 2017]. A Case study (Human) amongst epileptic pregnant mothers however, seemed mixed in sentiments [Van Der Louw E J et al. 2017]. On the contrary, low carbohydrate eating regimens before, during and after pregnancies - were seemingly successful without adverse effects to the health of the mothers and the child. A collective of these positive anecdotes & insights nevertheless serve as intriguing further reading [dietdoctor.com]. Female Readers are STRONGLY encouraged to seek further reading and research outside the scope of this Book.

#### APO-E Gene polymorphisms

There are concerns that a "success" of physiological compatibility with the Ketogenic interventions may be largely attributed to an individual current identification of the APO-E Gene Allele carrier determinants. Between APO-E Genotype Allele numbers #2 to 4 all have been identified to have significant role to pre-determine an individual's handling and overall capacity for cholesterol mobilisations. Please see page 163 for more information.

Vitamin K1 rich vegetables also needs to be combined with plenty of fat to improve bioavailability by as much as 70% (*Gijsbers, B L et al 1996*).

However for **This Book** to remain fair and impartial from any bias - plant source of fats in olive oils, peanuts, walnuts, and brazil nuts offers key nutrients that saturated fat lacks- such as the important Selenium, and Vitamin E. Unless if one is clinically allergic; it is of no conducive reason to exclude them altogether.

Speaking of Omega-6 Polyunsaturated fats (“**PUFAs**”); their relevance in Ketogenic interventions needs more critical re-evaluation/s. This study (*Fuehrlein, S B. et al 2004*) finds key ketone bodies **raised dramatically** on Omega 6 PUFA intakes (seemingly on walnuts) alone than do butters or other types of fats. Another study also have compared olive oils, safflowers and corn oils for their metabolic effects and thermogenic potential (*Kasper H., et al 1973*). Surprisingly, that study found corn oil exerted the most effect even at exceedingly high calories per day (3500+) within Ketogenic parameters.

Vegetable oils, irrespective how affordable, abundant or branded as "healthy" tablespreads; does warrant possible extra need for supplementing with Vitamin E. Vitamin E is well documented at offsetting risk of lipid peroxidation damages (Princen H. et al. 1995). This also coincides with safety concerns at using cheaply available N6 / vegetable oils; which they themselves are prone to cause LDL oxidations (DiNicolantonio JJ & O'Keefe HJ 2018). This risk may also translate to many who rely on consuming conventionally raised poultry meats; which likely is due to the overly imbalanced 20:6 - Omega-6 PUFA to Omega-3 dietary ratio of the hens' feedlot intakes (theconsciouslife.com). Vitamin E's importances extends beyond as lipid peroxidation control, but also interestingly sex-hormone / endocrinology health (Umeda F, et al. 1982), and also its undiscussed role on maintaining cellular signalling on the taste bud and olfactory tissue cells (Henkin RI. & Hoetker D. 2003). However, one side effect **This Author** (AW™) noted is expedited hairgrowth; which prevents much compulsion towards daily doses beyond 1000IU+ (670mg). It is noteworthy that there are two measurement formats; as IU and MG (Higdon, J. 2000). Depending on the type: One IU = 0.67 mg (for RRR), One IU = 0.45 mg (for ALLRAC).

In short- subjective weakness, yet subjective resilience. "**Resilience**" however; is not a state comprising ideal moral or physical "**Utopia**". **Ketosis is in a nutshell; a feeling of neutrality**. It is simply an overall alternative bodily state of using energy, nothing more superficial. "**Ketosis**"; sadly in today's pedestrian reception- is an overly commercialised & glorified state of "**Superiority**". Reality proves to be neither sensational nor uplifting. Ketosis; in **This Author's** opinion imposes not in a sense of "**adaptation**" (that egoistically implies irreplaceable immunity) but rather - an understanding and acknowledgement to it as an "compensative" route of autonomous sustenance.

59 **I'M WORRIED SO CALLED KETO-FLU?**

It is vital as a reminder that akin to state of fasting -all Ketogenic interventions are diuretic by nature's effect and repercussion (*Mcdonald, L. 1998*). Hence a profound loss of waters and minerals will inevitably result. Below is a series of such micro-interventions that all Readers must consider:

- 1 Emphasize salt intakes & mineral balancing between Magnesium and Potassium.** *First and foremost the importance of additional salt intake from Himalayan Salt and/or rock salts cannot be ignored.*

Magnesium Citrate (bound to citric acid) or glycinate are recommended. **This Author** recommends at least the Citrates over Oxides as the latter may exacerbate loose stools. For as long as sodium intakes is high enough - **This Author** wagers that extra **Potassium intake must be met with caution, but nonetheless, the most readily economical form would be from iodised rock salts (Potassium Iodide), Cream of Tartar (Potassium bitartrate) or Potassium Chloride**. Only at knife-edge of cream of tartar or Potassium Chloride suffices with water or coffees inbetween meals during fasting periods. BEWARE however that overdosing in any one particular mineral may also aggravates the very same symptoms as too little. Diarrhoeas episode may also occur.

- 2 Experiment with sodium bicarbonate intakes; especially during fitness training episodes.** There seems to be anecdotal evidences amongst Ketogenic practitioners to find their carbon dioxide levels lowered. This is speculated as the CO<sub>2</sub> byproducts from the Gluconeogenic Krebs Cycle is inhibited. Supplementation via baking soda seems a hypothetical suggestion to counteract this issue (Peat, R. 2011). As trivia, there appears to be evidences suggesting Sodium Bicarbonate to raise ketone bodies (Gougeon-Reyburn, R. & Marliss BA, 1989) & (Hood, VL et al 1990). Beware however that excessive bolus intakes (>10g at any one time) ARE NOT advisable as per **This Author** (AW™)'s experience suggests - excessive belching or GI distresses may result.

Next prime importance is **optimal acidity** for digestion especially as it is likely at some stage that protein intake must be efficaciously partitioned. If symptoms of discomforts or inflammation seemingly arise upon chewing halfway through a meal- such is most likely a suboptimal acidity. A common pedestrian (or Institutionalised) belief is that suppressing acid

is ideal. But accordingly to **This Author's** anecdote account and numerous scientific findings have both proved otherwise. There are risks of losing key vitamin & minerals (B12 all the way to calcium) absorptions in context of low acidity (*Kelly GS, 1997*). There also appears to be convincing case for further concern that endogenous stomach acid production declines by as much as 50% from age 30 years onwards (*Wright, V. & Lenard L., 2001*).

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**As pragmatic a recommendation goes - start from a very small dosage of Betaine HCL and Pepsin. It'd be wise to never take this supplement without food. Only during a meal or at least some presence of protein.**

**This Author** (AW™) recommends gentle acclimatising at low dosages first and foremost (starting at 150mg or even lower). Ensure each dose is taken as soon as from the very first chew of food. Beware however, that for those who intake very regular use of NSAID/s such as Aspirins; may likely be at

risk of aggravating the GI lining further if also supplementing with HCL (Wright, V. & Lenard L., 2001). Thus, it may be prudent to separate these supplemental intakes away from each other from timing perspective. Further, some alkaline/antacid food may impose synergistic concerns; particularly mint based herbs (Jarosz M, 2014) & (Thompson GW 2019). Gathering from these, Betaine HCL+Pepsins should be only taken on protein rich primary meals; never by itself.

Alternatively, readers may also consider spices and/or other food source as means of digestif assistance amidst feature meal episodes. Dietary fermented sauerkrauts, bitter herbs (gentian/cayenne), and white / black peppers (Damanhoury ZA & Ahmad A. 2014) both in particular have been documented to increase liver bile secretion function to assist lipid partitioning. Consider also occasional use of Apple Cider Vinegars in various warm concoctions (with gingers and lime/lemon) before or after meal/s (Kelly SG 1997).

Alternative anti-inflammatories such as fish oils, and additional **Zinc** supplementation may also be explored. **This Author** (AW™) did reconcile notable patterns from regular Zinc supplementation (Sulfate) in that overall heartburns and digestive



inflammation greatly diminishes. Thereby relying less Betaine HCL use overtime. Beyond Zinc's myopic reputation as "**taste perception**" mineral - it also has numerous implications to overall gut health (Skrovaneck, S. et al 2014) and supportive metabolic markers (Jayawardena, R. et al 2012).

60 **MY HUNGER NEVER SEEMS SATIATED.**

By no means an exhaustive list; below are some avenues Readers may consider implementing to help quell the response:

- 1 Slowly sip unfiltered organic Apple Cider Vinegar with warmed water; alongside beef / chicken stocks and sprinkle with Himalayan Salt / rock salts.** Readers new to this intervention are encouraged to practise this ritual multiple times per day, inbetween meals. However, they must take caution to SIP SLOWLY on Apple Cider Vinegar; to acclimatise the acidity.
- 2 Embrace drinking (black) coffees during fasting windows to encourage more ketone production.** The hormones which coffees tend to increase - such as cortisol, catecholamines, epinephrine, and nor-epinephrine, all do contribute to some degrees of ketone production (Grabacka, M et al 2016). Specifically in terms of appetite and hunger -evidence suggests coffees, particularly decaff - seem to promote Satiety hormone peptide "YY" (Greenberg JA & Geliebter A, 2012).
- 3 Not enough fats within solid meal/s.** Again, it is imperative that early on, all Ketogenic practitioners must emphasize Fats being the priority of food palatability ratio next to proteins. However if and

should individuals notice any mildly lacking sensitivities in "taste" or palatability of food in general; you must seek effort to supplement adequate Zinc as well as balancing it with other other minute minerals found in a multi-vitamin such as Copper, Chromium and Selenium. **This Author** anecdotally also finds Vitamin E improves taste perception. See Question "What about the types of fats?" on page 153.

- 4 Not enough fibre intakes / periodisation between low or high may yet be required.** Some individuals may (early on) need to readjust towards emphasizing far more vegetable intakes than their prior low-fat or carbohydrate regiment. It is not unusual for one to consume anywhere from five to ten (10) cups worth of vegetables per day. Pysllium husks on low carbohydrate dessert meals are also encouraged. These must be practiced long enough to promote a psychological transitioning of fullness perception from fibre intakes. Beware however, that overtime constipation may occur at any stage, only under certain months of practice has subsided and that hunger seems well controlled - individuals should then experiment with lower fibre intakes and reassess any constipation, GI or bowel discomfort issues. **This Book** implores a cautionary approach when it comes to fibre intakes. As general blanket advising may not be conducive to all individual physiologies, immunity and/or gut settings.

61 **WHAT DO YOU THINK OF KETOPIA®? OR THOSE KETO OS® / FOREVERGREEN® ? DO THEY WORK AS THEY CLAIM TO BE?**

For Readers who aren't familiar; these are supplementary product/s which claims a quicker entrance into the state of Ketosis more conveniently, rather than relying on internal enzymatic & metabolic pathway changes overtime. These products

often consist of instructions on consuming the included supplementary protein blend shakes and meal replacement cookies” More often than not - these companies (either PRUVIT® or KETOPIA®) impose hefty finances of at least \$150US for a 30-days “supply” of use. All without actual “food” whatsoever. Readers are encouraged to read **This Author’s** dedicated blog post ([Ketopia VS Forevergreen: Is this a dream or marketing unicorns?](#)) for more reading.

62 **WHAT CAN I DO IF I HAVE (OR AT RISK) OF HYPERCHOLESTEROLIMIA?**

First and foremost, please recall that neither **This Book** or **This Author** proclaims any or all hypothetical suggestions as doctorate or clinical replacement panaceas for all. Consider the following multiple options; keep in mind these however are subject to be revised overtime.

- 1 **Magnesium; responsible similarly to Zinc for the 300 enzymatic processes in the body.** *Magnesium is noted to play a role in controlling excess internal LDL-C (by activating LCAT enzyme (Lecithin-Cholesterol Acyltransferase) as well as controlling, NOT inhibiting - the HMG COA enzyme responsible for endogenous cholesterol production ([Rosanoff A, 2004](#)).*
- 2 **Try reducing all forms of saturated fats and begin concentrating on consuming on mono-unsaturated fats** from olive oils, and plant based Omega-3s from flaxseeds. Dr Peter Attia talked about his

experience for suggesting his patient with a similar workaround (Attia, P. *Eatingacademy.com*, 2015). Lyle McDonald; author of most respected "**Ketogenic Diet**" also shared similar sentiments (McDonald, L. 1998).

- 3 **Consider supplementing with Vitamin E, and occasional Vitamin K<sub>2</sub>.** This may likely be warranted should individuals resort to using affordable Omega-6 PUFAs (see question "What about the types of fats?" on page 153). Oxidation of LDL has been well thought to be mediated by additional Vitamin E supplementation (Princen H. *et al.* 1995). Vitamin K<sub>2</sub> MK4 and MK7 also appears to be of recent importance (Pollock KN, *et al.* 2016) & (Vik, H. 2016). However despite these two nutrients' potential antagonistic effects to each other (see "micronutrient interactions" on page 222), it might be wise to separate its timing of intake away from each other if readers are considering both supplementation within the same day / feeding window.
  
- 4 **Consider researching nutritional genomic testing.** Genomic research for public-inquiries are available in Australia, but sadly an extremely expensive endeavour given from **This Author's** prior year/s of researching and contact attempts. Genotyping tests are rarely affordable (in the range of \$500+ which may not be stated at all publicly AND NOT INCLUDING initial consultation which that alone which marks over \$200+). Alternatively, there is 23andMe® (23andme.com) genotyping test which is based in United States; funded by Google®. Confusingly however from evidences and communication attempts gathered thus far (between August to December 2015); it has been found that this service is NO LONGER based on Nutritional based genotyping.

Perhaps the only possible avenue to genomics is studying the works of **Dr. Pamela McDonald's APO-E Gene Research**. Much of her works revolves around hypothesizing that choles-

terol mobilisation issue/s may be determined by genetic carrier coding. Holistically by the genotype number (APOE 2 to 4). All individuals carry and inherits these genotype as two copies from their parents (E#/E#). Dr. Peter Attia likewise endorsed this research's importance for the addressing of his patients lipid metabolism markers *(Ferris, T 2015)*.

There are three (3) APO-E Overall genotype "family" classifications to begin with - they are APO-E2, APO-E3, and APO-E4.

- 1** APO-E2 carriers: According to statistical correlation/s thus far - these groups are found to be ineffective at mobilising cholesterol in the bloodstream. **High risk towards ADD& Parkinson's. Affects 11% of general population** *(McDonald, P. 2009)*.
- 2** APO-E3 carriers; According to statistical correlation/s thus far - these groups are either already diabetic patients (though which type remains unspecified) or are at **high risk / susceptibility to insulin resistances and metabolic syndromes. Affects 64% of general population** *(McDonald, P. 2009)*.
- 3** And APO-E4 carriers: According to statistical correlation/s thus far - carries the highest percentage of risk for Alzheimer's, Gout, Multiple Sclerosis, Arthritis, and even acute alcoholism ; **up to 90% chances of occurring at some stage throughout a carrier's life. Affects 25% of general population** *(McDonald, P. 2009)*.

The inline chart below shows over how the carriers of APO-E genes SINGULAR AND COMBINATION identifications (eg. E2/E3, E2/E4, E3/E4, E2/E2, etc) have thus far to this day have been “**successfully**” mapped on the basis of race and ethnicity. This information is highly subjective as it does not cover all ethnicities. Thus only to be taken as general statistical hypothesis. Readers are strongly encouraged to pursue further research outside the scope of **This Book**.



## APO-E GENOTYPING DISTRIBUTIONS BY RACE & ETHNICITY

Source: (adapted from Eichner et al, 2002. Am J Epidemiol 155:487–95).

ETHNICITY	INDIVIDUAL GENE (SINGULAR IDENTIFIER FREQUENCY)			GENOTYPE FREQUENCY (COMBINED IDENTIFIERS FREQUENCY)					
	E2	E3	E4	E2/E2	E2/E3	E2/E4	E3/E3	E3/E4	E4/E4
African Americans	13.1%	66.8%	20.1%	2.0%	18.0%	6.0%	43.0%	28.0%	3.0%
Africans (Nigerians)	2.8%	66.2%	31.0%	0.0%	3.0%	3.0%	46.0%	37.0%	11.0%
American Indians (Men)	1.7%	85.0%	13.3%	0.0%	3.0%	0.5%	71.6%	23.9%	1.2%
American Indians (women)	1.6%	85.8%	12.6%	0.1%	2.6%	0.5%	73.2%	22.7%	1.0%
Caucasians (Finland)	3.9%	76.7%	19.4%	0.3%	5.4%	1.8%	58.7%	30.6%	3.2%

Caucasians (France)	8.1%	80.2%	11.7%	0.8%	13.1%	1.6%	64.3%	18.7%	1.6%
Caucasians (Germany)	8.2%	78.2%	13.6%	0.9%	11.7%	2.9%	62.2%	19.9%	2.2%
Caucasians (Italy)	7.3%	82.7%	10.0%	0.4%	12.0%	16.5%	68.4%	1.6%	1.2%
Caucasians Americans (men)	8.3%	78.5%	13.1%	0.9%	12.9%	1.9%	62.9%	18.3%	3.0%
Caucasian Americans (women)	7.7%	78.9%	13.3%	0.3%	13.3%	1.4%	62.6%	19.3%	3.0%
Chinese	7.4%	84.4%	8.2%	1.4%	12.1%	0.0%	70.9%	14.9%	0.7%
Japanese	3.7%	84.6%	11.7%	0.3%	6.1%	0.7%	71.9%	19.3%	1.7%
Mexican Americans	3.9%	85.9%	10.2%	0.2%	6.7%	0.7%	73.8%	17.3%	1.1%

### 63 **I AM WORRIED ABOUT SOCIALISATION OPTIONS...**

The inline table below lists the most common considerations. Readers are encouraged to confirm with their restaurateurs beforehand should they willingly cater individual dietary needs. A pragmatic suggestion is to look for meat-only dish, a (predominantly) fat condiment and combine with a vegetable-only dish.

To the best of **This Author's** awareness, Fast Food is most likely not possible to be recommended as high-volume cooking practises (eg. reusing oxidative prone oils, reheating previously batched ingredients of prior hour/s or day/s) remain at best questionable, detrimental and thus should be avoided.



## KETOGENIC SOCIAL ENVIRONMENT DINING CHOICES

ITALIAN	<p>The safest choice and immediately available would be to ask for a large or meal version of anti-pasto platter with an array of cheese/s and ask for an extra serving of meat slices and olive oil / aioli dips. Given the right courtesy and if the restaurant allow, ask for salads ("<b>Insalatas</b>") with extra olive oils. If there are extra condiment choices; in particular - chunky pesto's- consider adding them to salads and main meal courses.</p> <p>Consider: Antipastis (meal platter size), Secondis (meat-only dishes), Bracioles - (thin meat-only dish with pesto rolled up and grilled). Escarole / Stracciatella eggdrop soups, Caprese Salads (Mozarella, tomatoes, basil), Carpaccio (aged raw thinly sliced beef with olive oil).</p> <p><b>Avoid. Pizzas, lasagnas, pastas, all breads, gnocchis, etc.</b> Beware and avoid all batter-fried entree foods (eg. calamari rings) as these are more likely contain flours and breadcrumbs for deep frying. All desserts.</p>
GREEK	<p><b>Many of Greece's culinaries utilises yoghurt in many of their dishes.</b> Use this as advantage and ask within the right courtesy for the establishment to serve an extra serving of yoghurts (such as extra Tsatsiki's or Saganaki). Otherwise substitute the rice in meat based souvlakis with salads. Lamb are frequently featured in their dishes so it'd be wise to inspect meat-only dishes whenever possible.</p>
GREEK (CONT.)	<p>Consider: Kebabs / Loashs skewer varieties, Gyro salad (with extra feta cheese), Banzinos (Grilled fish with olive oils + garlic) as well as Greek Salads (Melitzanosalata), Kleftiko (slow-cooked lamb on the bone), Anginares A La Polita (artichokes with olive oil).</p> <p>Avoid. Moussakas, meatball recipes, Greek pastas (spanakopita, tiropeta, orzos, and pasticchios), Dolmathes (stuffed grape leaves) Beware and avoid all batter-fried entree foods (eg. calamari rings) as these are more likely contain flours and breadcrumbs for deep frying. All desserts.</p>
MIXED / PUB SETTINGS /	<p><b>While most pub / Australian / mixed fusion dining setting offer their own ; though not always - low carb choices</b> - the safest strategy remains the simplest - ask for steak without potatoes and opt for side of salad instead. Or consider looking at an exclusive meat-only dish or having an entree course replattered for a main meal. For any courses that lists potato fries or chips ask to substitute them with simple salad/s or extra condiments (eg. extra aioli). Beware and avoid all batter-fried entree foods (eg. calamari rings) as these are more likely contain flours and breadcrumbs often deep fried with pro inflammatory Omega-6s.</p>



"OUR DATA SUGGEST THAT MAINTAINING A KETO DIET FOR MORE THAN FIVE YEARS DOES NOT POSE ANY MAJOR NEGATIVE EFFECTS ON BODY COMPOSITION, BONE MINERAL CONTENT, AND BONE MINERAL DENSITY IN ADULTS WITH GLUT-1 DS, A FINDING THAT IS AT VARIANCE WITH PREVIOUS REPORTS FOCUSING ON CHILDREN WITH INTRACTABLE EPILEPSY."

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**LONG-TERM EFFECTS OF A KETOGENIC DIET ON BODY COMPOSITION AND BONE MINERALIZATION IN GLUT-1 DEFICIENCY SYNDROME: A CASE SERIES / SIMONA BERTOLI, M.D., CLAUDIA TRENTANI, R.D., CINZIA FERRARIS, R.D., VALENTINA DE GIORGIS, M.D., PIERANGELO VEGGIOTTI, M.D., ANNA TAGLIABUE, M.D.**

"THIS STUDY SHOWS THE BENEFICIAL EFFECTS OF KETOGENIC DIET FOLLOWING ITS LONG TERM ADMINISTRATION IN OBESE SUBJECTS WITH A HIGH LEVEL OF TOTAL CHOLESTEROL."

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**"LONG TERM EFFECTS OF KETOGENIC DIET IN OBESE SUBJECTS WITH HIGH CHOLESTEROL LEVEL". KUWAIT UNIVERSITY / KUWAIT HEALTH SCIENCES CENTER, JABREYA HUSSEIN M. DASHTI,<sup>1</sup> NAJI S. AL-ZAID,<sup>2</sup> THAZHUMPAL C. MATHEW,<sup>3</sup> MAHDI AL-MOUSAWI,<sup>4</sup> HUSSAIN TALIB,<sup>4</sup> SAMI K. ASFARI<sup>1</sup> AND ABDULLA I. BEHBAHANI<sup>1</sup>**





## KETOGENIC SOCIAL ENVIRONMENT DINING CHOICES

THAI	<p>Few choices in particular are available. Yum Nua (steak salad), Tom Kha Gai (Chicken spicy and sour soup with coconut milk). Otherwise consider meat-only dish and combine with separate vegetable-only dish.</p> <p>Consider: Nuuryungnamtok (sliced steak salad with lime juice, chillies, onion and tomato + lettuce). Tom Yung Goong (shrimp soup with straw mushrooms, lemon grass and peppers).</p> <p>Avoid: All rice, noodle and peanut / satay based dishes, spring rolls. All desserts.</p>
VIETNAMESE	<p>Few choices in particular are available. Bo La Lot (grilled beef wrapped in betel leaf), Bo Bit Tet (steak on cast iron, served with egg). Otherwise consider seek for meat-only dish and combine with separate vegetable-only dish. Perhaps also instead of rice ask for extra bean sprouts.</p> <p>Consider: Pho (vietnamese noodle soup); ask without noodles, various salads (Go's, and Pad Thai Salads) ask without the noodles. Few Meat only dishes (Bo Luc Lac - cube beef wok fried with soy sauce, cucumber, tomatoes and onions), Cha Lua (Pork loaf / vietnamese ham meat only).</p> <p>Avoid: All rice, noodle and peanut / satay based dishes, spring rolls. Fish sauce condiments are more often than not filled with sugar. All desserts.</p>
INDIAN	<p>Consider meat-only dishes (Korma/meat in cream sauces, Tandorii mixed grill plates / curries - check ingredients and recipe profiles/ ) and combine with separate vegetable-only dish. Some dishes (tikka masala and chicken saag) also features greek yoghurt.</p> <p>Consider: tandori grilled meat only dishes, chicken tikka masala or chicken saag (chicken with spicy sauce variations and yoghurt),</p> <p>Avoid: All rice, noodle and peanut / satay based dishes, spring rolls. All naans, samosas and all desserts.</p>
CHINESE	<p>Omelettes (plain, seafood or meat based) are the obvious first and safest choice; although it may be wise to ask without the gravy. Otherwise you have to seek and combine meat + vegetable dish separately which are plentiful with meats ranging from beef to ducks. There are also hot and sour soup dishes / egg drop with scallions to consider.</p> <p>Consider: Sang Choy Bow (Eagle's Nest - meat / beef mince, garlic sauce enclosed in lettuce leaves) ask for three serves of this which should be ore than enough for one person. Crab Rangoon (deep fried crab wontons), Egg foo yongs or Omelettes.</p> <p>Avoid. Prawns on toasts, Dim sums, spring rolls Sweet and sours dishes, Honey based dishes, flour based deep fried dishes. Noodles, Chow Meins, Rice, bread, gluten flours, etc. BBQ dishes. Mongolian Dishes, and satay based dishes. All desserts.</p>

**This Author** highly recommend looking first at the “**Sides**” menus (especially in European / mixed dining settings) and ask within the right courtesy of the establishment to see if one can have a feature-meal platter serve instead of entree size. Many restaurateurs should oblige to these occasions. **This should suffice for one (1) patron.** Regardless if Ketogenic or non Ketogenic - express concern for food waste and request it to be packaged for takeaway. If however the restaurateur refuses - boycott and do not ever return to that establishment again.

<sup>64</sup> **WHAT ARE THE LONG TERM CONSEQUENCES, IF I WISH TO PRACTISE KETOGENIC INTERVENTION LONG TERM?**

There are many account/s of long term Ketogenic sustenances both easily and widely witnessed. Accounts ranging from at least several months, to years and as long as decades of practitioner claimant/s. Far and beyond on treating childhood epilepsy decades on end (*Helmholz, 1938*), to the present - everyday members of public (*Ruled.me, Keto Karma, Diet Doctor*). A fourteen-year+ insightful account of successful athlete (*Villasenor / Ketogains.com, 2015.*), then also amongst other seasoned endurance athletes (*Runketo.com*).

However naming "names" is not the focus of This book. If anything, experiences are memorable than anything of "titles". **This Book** wagers such powers are left to the reader to initiate.

<sup>65</sup> **SHOULD I BE USING KETOSTIX®? ARE THEY NECESSARY IN DETERMINING MY PROGRESS AT ALL TOWARDS KETOSIS?**

In short and in **This Author's** sole experiences - "**no**". During early stages of Nutritional Ketosis it is expected that more Acetoacetates (first metabolite of Acetyl-COA) are produced (Baggot, J. 1998). Acetoacetates primarily are detectable via kidneys through urine, which the Ketostix® are made to solely detect this ketone body **only**. Yet not the Betahydroxybutyrates (can only be detected via blood) nor Acetone (only through breath testing equipment). From here onwards is all a matter of logic. The aim of ketosis is to utilise these Ketone bodies, which ever one (1) of the three becomes available first & foremost. There is however a finding that athletes on prolonged ketogenic intervention gradually finds their blood ketones decrease (Sisson, M. 2017) thus hypothesizing blood ketone levels are being used more efficiently overtime.

Figures wise - Ketone levels vary immensely from one individual's conditions to the next. A typical "rule" seem to suggest a range between 0.5 to 4.0 MMOL/L to qualify within a state of "**Nutritional Ketosis**". However, this does not take other confounders into consideration. From Dawn's Phenomenon, gender differences, hydration levels, and degree of insulin sensitivity. To further put Readers mind at ease, many athletes and performance trainees have found themselves as low as 0.2 MMOL throughout their Standard Ketogenic Regiment. **This Author** instead recommends monitoring blood glucose levels. For one, they are of significantly cost effective investment (\$30-\$40 for 100 sticks versus \$7 for 10 ketone strips). Abbott®'s Freestyle Optium Neo covers both Ketone and Glucose testing. Perhaps one exceptional note is **for all existing Type-1 diabetics**. Due to the **complete absence** of insulin (*Attar, R., 2014*); ketoacidosis may likely occur. Hence, close supervision with continued dosages may yet remain necessary for those persisting within Ketogenic interventions.

Ultimately, nothing compares to the overall accounting and feeling of individual's well being. Be it through fitness meritocracies and/or cognitive resilience. Whilst surviving with less

resources amidst meeting structural obligations. For as long as Readers feel content with what they can do whilst still allowing room for discovering new limits, then neither meta-analysis or epidemiological opinions - shall erode their convictions.

<sup>66</sup> **IS IT POSSIBLE TO "BULK" OR EAT HYPERCALORICALLY ON STANDARD KETOGENIC ALONE?**

In theory, yes. But in practise overtime; strictly speaking from **This Author's** experience and physiology - both futile and ironically difficult endeavour to achieve. Not only will it be fiscally impossible (weekly budgets would cost at least \$75+ per week) the feeling of highest peak "**fullness**" within standard Ketogenic Regiment are so vastly different than that of eating carbohydrates. One would not feel "**nauseously**" full. But possibility of experiencing inflammatory like symptoms post meals.

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**This Author can recall many moments whereby eating a desired set of meals; even on a mild caloric restriction - has as much as 20% approx. chances as total**

## **inability to finish a meal. Such trivial chance is not to be underestimated.**

Readers who nevertheless believe they have a legitimate issue at not able to eat on a caloric surplus; would be wise investing these supplementations. Additional digestive enzymes (Betaine HCL + Pepsin), Zinc, dietary source of Iodine (seaweeds) & occasional Vitamin E (<1000iu per day)- are also pragmatic insurance against excess lipid peroxidation. Ketogenic hyper-caloric surplus thus are only reserved for amongst very well privileged.

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## 2/3 CKD, TKD & TRAINING

### 67 WHAT ARE YOUR THOUGHTS ON CARBOHYDRATE REFEEDS?

**This Author** may only express an opinion yet not a prescription to all. But concept of refeeds; especially surrounding contexts of both fitness training regiments and that of structural concerns of resource accessibility measures remains arguably - an inevitable necessity.

By no means **This Book** preaches Cyclical Ketogenic Diet as the “**one all be all**” solution. CKD however potentiates the most scrutinising and exhaustive of all metabolical testing of individual’s Nutrient Partitioning. Inbetween one of two (2) substrates of energy sources. Fat metabolism then glucose metabolism; cyclically. This allows efficacious nutrient partitioning at restoring both glycogen and all of organs function and their mass to homeostatic sufficiency. But it must be stressed that such self-allocation and willingness to submit to these episodes remains as planned and subject to further revisions, overtime.



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**This Book asserts that refeed periods need to remain nonetheless liberal but lower in Fats, high in both Carbohydrates and Proteins to encourage glycogen compensations. This protocol however may not be appropriate for all metabolism and physiology that are not yet accustomed to prolonged-conditions of calorie restrictions and/or microcosm lifestyle changes.**

As stated earlier **This Book** implores its self-enquiring journey towards two (2) periods - Scarcity and Abundance, each as one experience at a time. "**Scarcity**" may constitute anywhere between as at least four or five days to encourage fatty acids mobilisation within reduced caloric intakes - augmented with Intermittent Fasting, as well as combined with both productive and exhaustive volume resistance training. And the other episode of planned Abundance is an opportuned Refeed period using predominantly carbohydrates hypercalorically on no more than three days. If more than three days are desired, it

is more likely that individuals whom have already subscribed to regular fitness regiments and of non-sedentary lifestyle may find themselves reverting slowly back to maintenance calorie intakes. It is noteworthy however that a shifting of preferential enzymes within the liver will occur overtime; as the longer the body subsists within nutritional ketosis, a downregulation of enzymes towards glycolysis is greatly reduced, and vice versa; once at least several days of carbohydrate feedings are restored (McDonald, L. 1998).

CKD be it however scrutinised by today's correctness scepticism encourages not only impartial acceptance of "food" as means of strategised indulgence. But allows one to develop critical assessments on when or how to consume such foods as accordingly to frugality, metabolic preparedness and most important of all - inventory & resource availability. CKD, combined with intermittent fasting - may very likely be an inevitability amongst sociologically stratified individuals amidst very difficult, prolonged uncertainties.

Should an individual find he/she is finding short of carbohydrate supplies, yet still has reasonably supply of fats & protein based dietary resources – one would remain wise to save

such carbohydrate supplies during much later part of the week. However it remains stressed that all this is a stringent way of living. Not just as “**occasion**”, but a willingly adhered protocols of life and living through genuinely exhausting and utilising existing glycogen stores to meet that of structural obligations.

68 **HOW MANY CALORIES? AND IN WHAT TIMING?**

Provided that Readers are neither morbidly obese nor Leptin Resistant, “**Satiety**” will be the only intuitive means of judge for when to cease each refeed cycle. Refeed day of calories are estimated to be twice the maintenance intake (McDonald, L. 1998). This however, remains variable to individual Satiety and Leptin sensitivities. All carbohydrate recompensations will likely involve an additional gain of water weight hence as such must be accepted as inevitability (McDonald, L. 2016).

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**Over 10,000 calories of intake have been noted anecdotally in 1 day of refeed (Di Pasquale G, M. 1995). This much amount,**

## **may likely be interpreted as abusive and impractical to any fitness enthusiast.**

Carbohydrate refeeding are often preached to be most effective as 48 hours of caloric surplus commencing soon after last volume resistance training regiment is completed for the entire week. Presumably Friday PM. Commencing with very high GI index liquid only glucose syrups, or dextrose monohydrates Then simple starches towards more complex forms by 6:00PM onwards Sunday evening (*Duchaine, D. 1995*).

The above however, remains subjective in respect to individual hormonal sensibility, diversity and practicality. In the opinion of **This Author**; such Gospel tends to override **hunger responses. Which vary wildly from one physiology to the next following upon exercise.**

Should one immediately overeats, even when not physiologically compelled are likely to compromise their Nutrient Partitioning ability. Digestion and inflammatory responses may also likely result ; as what **This Author's** forced / early re-feeding experiences suggested. One pragmatic take-home advice is to

always assess end of training week overall hunger levels soon after a brief postworkout protein supplementation of no more than 30g worth of protein value. This protein amount at the very least allows some, but not all of the required glycogen compensation.

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**Should hunger remains blunted, Readers are advised to keep fulfilling their daily calories (whilst still at a deficit) until by sunrise of Saturday AM to condition themselves opportunely for 24, 36 or 48 hour refeeding.**

Many studies have tried examining the hunger blunting phenomenon of fitness exercises. Namely studying suspecting hormones Ghrelin, PYY-Peptide, Cortisol and GLP-1. A general “**bird’s-eye**” conclusion of their relevance to hunger remains undecisive to this day (*Broom, RD et al 2009*). But remains convincing that such a phenomenon **do nonetheless exist; variably so** at an individual level (*Contreras, B & Vårvik, TF. 2015*).

A mandatory supplementation during refeed days would be Insulin sensitizers or glucose disposal agents during these refeed periods (during or after meal/s) to allow effective partitioning of surplus calories. These supplements range from Brewer's Yeast (as wholefoods powder form), Chromium Picolinate, GTF Chromium, and possibly Vanadium Sulfate. Digestive supports as Betaine HCLs + Pepsins also must continue to be supplemented as priority especially when mixed macro ratios meals are expected.

#### <sup>69</sup> **WHAT ABOUT POST WORKOUT NUTRITION?**

As a **"balanced"** priority between partially maintaining a partially Ketogenic (fat mobilisation) state and MPS (muscle protein synthesis) a focus on protein intake with consequent Insulin response is most desirable as this elicits towards some glycogen uptake. Depending on the macro regiments readers have chosen (low fat or low carbohydrate) Consuming dinner and next meal/s hour or two afterwards however, should revert to their respectively chosen macro compositions.

There is much debate whether consuming fats at any stage or hour/s long after training completion is deemed desirable. One suggested that this practice impairs glycogen resynthesis in the muscles (McDonald, L. 1998). On the contrary, a study found that even after very significant fat intakes post exercise (up to 150g) did not any find notable difference in glycogen synthesis between low-fat and high-fat meal after exercise (Fox, AK 1985). However perplexing this may sound - nevertheless warrants individual experimentations alongside consistent nutritional journalling.

<sup>70</sup> ***I NOTICE THAT MY OVERALL FITNESS PERFORMANCE DECLINES / SUFFERS ON A KETOGENIC REGIMENT?***

**This Author** certainly cannot prescribe “**advices**” of training; as exercise physiology is outside of **This Book’s** credentials. However it remains arguable that training amidst low carbohydrate states demands far more different approach and sentiment. **This Author** thus may only mildly suggest based on experience that Productivity and genuine accumulative exhaustion training through hundreds of repetitions - compared to low repetition yet very intense, tension-based training - are far more valuable, and respectful to one’s systemic limits.

A **limited rest period but higher volume (Vince Gironda's 6x6)**, lighter to medium weight intensity program/s are thus, validly worthy training regiment to consider adopting. The 6x6 calls for minimal rests (15 seconds to 35 seconds) inbetween six sets for each exercise. It is speculated that anywhere between 10 to 12 sets per body part for each training episode (totalling between 200 to 300 repetition efforts, across up to thirteen separate exercises per day) is expected to authentically deplete glycogen levels (McDonald, L. 1998). This one (1) training template is expected to be exercised to no more than five days.

The emphasis behind this training philosophy is authentic and genuine exerting of relevant muscle groups; through both tension & negative holds. With minimal rest times (<30s) to encourage productivity with intensity to respect connective tissue limitations & tolerance before any injuries potentiate. **If form compensations are notably visible, then the given intensity is far too difficult for the trainee. It's far more pragmatic to de-load, rest only briefly**, but to keep exerting as much focus intently on the muscle groups; firmly as possible at both ending Range-of-Motions ("**ROM**") on at least one (1) authentic second. Rather than "**swinging**" via aerobic momentum.



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**Readers may find this training regiment, when practised year/s overtime to be the more “Authentically” challenging and productive.**

Combining inbetween that of compounds and isolations - all Readers must find themselves an exercise scheduling “**splits**” that works for them, but also must remain conscious that at least one (1) rest day is implemented amidst each weekly period of scarcity, intermittent fasting or low calorie intakes. **This Author** nevertheless further advises foam-rolling sessions before commencing compound exercises; as well every end of training episodes to sustain and encourage tissue mobility.

It is considered essential, by **This Author’s** opinion and experiences that a pre-workout supplementation be it in form of BCAAs or at least an adoption of TKD (Targeted Ketogenic) consisting of up to 20g of glucose sources mixed in liquid alongside caffeine, creatine monohydrate or Beta alanine, with a teaspoon of sodium bicarbonate or existing diet soda drinks- are well considered to both prepare and sustain the trainee’s regiment. If neither of these are available, at the very least,

flavoured diet soda, pinch of bicarbonate sodium, squeeze of lemon, a teaspoon of Creatine Monohydrate and 1 tsp of coffee powder is a necessity.

71 **WHAT IF I'M INJURED?**

Individuals who persisted on Ketogenic Interventions unfortunately; will have to cease its practise, as both collagen and ligament tissues resynthesis requires IGF-1 anabolism; which obviously necessitates the need to secrete enough insulin (Mcdonald, L. 1998). **Forced abstinence or at the very least - de-load of training episodes are also required. Intermittent hypercaloric refeeds alone, in the opinion of This Author, is not sufficient.**

If individuals insist remaining on low carbohydrate paradigm, consider higher protein intakes; particularly balancing between muscle animal meats, as well as **gelatins sources**. Vitamin C may also synergises towards both repair and collagen remodelling (DePhillipo, NN et al. 2018). A study on the elderly suggests that higher protein intakes confers greater recovery within many episodes of illnesses (Phillips, S. 2017).



## NUTRITIONAL INTERVENTIONS FOR INJURIES (BASIC / GENERAL)

Many nutritional books often focuses only on general evocative ideas of overall sustenance. But very few do not discuss varying strategies should sickness or injuries occur upon the individual. The following of course are by no means exhaustive and should only act as general guidance over the various sub nutritive interventions / deviations required with intent and goals towards recovery. **BY NO MEANS THESE ARE TO BE TAKEN AS COMPLETE HOLISTIC SUBSTITUTE ADVICES OR IF / SHOULD PERSISTENT TERMINAL levels of injury are already within reach; thus it'd be prudent to seek external guidance outside this Book.**

### DISC / LIGAMENT INJURIES

Main objective goal: collagen restoration, liver health, methylation and increase of protein intakes. No matter how and what type of injury (sprain - torn ligaments or strain - pulled tendon) your very first week could very well be the most painful series of events. It is in the opinion of this author solely that relying on body's own mechanism of "**Resorbition**" alone may not constitute effectively robust enough of a recovery method. Hence additional nutritive interventions are most likely beneficial. **PERSONAL DIETARY & EXERCISE JOURNALING AS ALWAYS; REMAIN MANDATORY IN ASSESSING AND RECORDING OF EVERY NUTRITIVE INTERVENTION.**

### WHAT TO DO

- **Immediately deload and eliminate ALL training upon FOR AS LONG AS NECESSARY.** If you are employed, asks for a mandatory personal leave. If possible asks to remotely work from home. One's well being IS FAR more important than the statement pride of resumes.
- **Overall calorie intake increase.** It makes no survival sense if caloric restriction continues regardless # of days planned towards injury recovery. However this also likely necessitates additional digestive supports such as Betaine HCLs and/or Pepsins especially when additional protein intakes during feature meals are anticipated.
- **If currently partaking on Ketogenic Paradigm; temporarily suspend up to a week or when mobility improves. WARNING: This may require very individual / specific readjustments.** This applies to all practitioners within SKD, TKD or CKD variants of the ketogenic regimen.
- **Immediately emphasize on supplementing organic MSM (Methylsulfonylmethane)** This enforces liver and cartilage health from improving nutrient assimilation, processing and methylation. Take as often as three times a day 5g teaspoon each dissolved in clear water. Or just prior to mobility events such as walking or driving.
- Consider limiting overall Vitamin D intake. Please note that this may only confide as an anecdotal opinion but authentic evidence for concern nevertheless - that excess Vitamin D may exacerbate existing overall sensitivity to pain. **This Author (AW™)** noted that high dosages amidst period of recovery from onset of back injury(s) paradoxically alleviate little if any, form of pain relief. However, all readers are to be reassured that this experience may not confide the same for all others. Further research and reading on this seem advisable.
- The same goes for fish oils, whilst tremendously still important for overall Omega 3 Balance it is within this author's experience paradoxically that stopping or limiting intake of fish oil did help in easing the pain.
- **Emphasize on dietary intake of sulfur rich foods and Gelatin.** as these compounds are precursors for rebuilding cartilage health. These include fresh onions, garlic and peppers.
- **Vitamin C and B complexes** should be increased in sensible dosages but taking care not to overdose.

### WHAT TO DO (CONT)

- **Perhaps unconventional - do not use cold or ice packs to numb the injury site.** Always use heat packs instead as this has been encouraged to attenuate the excess spasm.
- **Limit or moderate caffeine intakes.** Please note that this is highly variable as some studies suggest that caffeine promotes dehydration of fluids away from all cartilages, but this does not prove universally across all individuals hence this warrants individual adjustments and experimentations.

WHEN TO RESUME ACTIVITY	Determining when to resume activity is extremely variable and subjective upon the injury's severity and type of ligament trauma, but a self assessment once every two weeks at the very least seems to be the very first mild window of opportunity for one to determine his/her joint mobility. Once again, <b>This Author</b> (AW™) stresses the importance of both de-loaded volume and de-loaded intensity in all resistance training regiment especially if it is the very first training episode being resumed.
SEASONAL FLU'S / COLDS / IMMUNITY RELATED	Readers are highly advised to consider reading the dedicated chapter " <b>Immune Health &amp; Nutrition</b> " on page 239 Main objective goal: immunity restoration, gut health, gut lining & mucus restoration. Generally speaking, hypocaloric regiments are NOT recommended during times of sickness ( <a href="#">Andrews, A &amp; Pierre SB</a> ). A study suggests nitrogen loss may occur on individuals afflicted with fevers and infections; hence hypothesizes a need towards higher protein intake during illness ( <a href="#">Kurpad VA, 2006</a> ). Another study (mechanistic) likewise confirms this need ( <a href="#">Calder, P, 2013</a> ); that during episode of illness there seems to be a redistribution of skeletal amino acid profiles. Such that they are likely be withdrawn towards the liver to aid the host's overall immune system.
WHAT TO DO	<ul style="list-style-type: none"> <li>• <b>Overall calorie intake increase.</b> It makes no evolutionary / survival sense if caloric restriction continues regardless # of days planned towards injury recovery. Caloric surplus MUST be adhered to avoid drops of body temperature.</li> <li>• <b>Digestive aids</b> may likely be increased to accommodate utilisation and synthesis from additional dietary protein intake.</li> <li>• <b>Consider raising dietary intake of Zinc</b> zinc as a trace mineral cannot be understated its relevance; like magnesium from glucose metabolism to bone and muscular function/s. But also its immense implications to general immunity. Consider raising its intake via supplementation or increase overall oily fish seafood and nuts as dietary sources.</li> <li>• <b>Immediately emphasize on supplementing organic MSM (Methylsulfonylmethane)</b> towards enforcing liver and cartilage health as you are embracing an increase in caloric and digestive intake of foods.</li> <li>• <b>Consider warmed beef / bone stocks &amp; broths.</b> Emphasize on dietary intake of sulfur rich foods (garlic, peppers) as these compounds are precursors for rebuilding cartilage and gut lining restoration.</li> </ul>
WHEN TO RESUME FITNESS ACTIVITY / TRAINING	<p>Common viral / seasonal infections may subside in no more than two (2) weeks. It remains prudent however to never exercise whilst remaining at risk of spreading one's condition upon others. However, for more underlying serious infection affecting all bodily and respiratory systems - suspected and concerned individuals are advised to seek external guidance and provisions.</p> <p>For more extensive guideline on Immune Health &amp; Nutrition particularly surrounding our recent concern of COVID19 - please see "Immune Health &amp; Nutrition" on page 239.</p>

It is within **This Author's** opinion also that liver health serves as important role for recovery and also accompanied as digestive and filtration support. Hence, liver health supplementation such as organic sulfur / "**MSM (Methylsulfonylmethane)**" remains important confounders to ligament and joints func-

tion. Simply take up two teaspoons of MSM as needed with clear water before ANY significant mobility events. Other micro nutrients; especially water soluble B vitamins and C would be advisable to resume ordinary intake as usual.

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**Contrary to most advocates - this author remains inconclusive for recommending Glucosamine for long term disc/joint-rehabilitations or as regular supplementation.**

There have been conflicting findings of Glucosamine's possible impairment of glucose metabolism (*Kim Y B, et al. 1999*) and insulin sensitivity (*Dostrovsky, et al. 2011*). Those wishing to stay or to resume (after mobility is noted) within a strict Ketogenic dietary parameters may be wise to limit this supplementation. On the more severe scale of injuries (eg. from very noticeable disc slippages to significant disc fluid nuclear-annulus tears); especially significantly to the point whereby surgery is imminent - then significant caloric surplus perhaps

are reportedly necessary (Mcdonald, L. 2016). Combined also with intervention of NSAIDS (ibuprofens / aspirins), abstaining from both training and exercise for weeks on end **must be** routinely accepted. If individuals still insist on exercising, light aerobics, may be allowed.

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**If there is one more supplementation, despite anecdotal from experience - is (surprisingly) - simple Creatine Monohydrate.**

From recalling **This Author's** previous major injury; herniated disk episode / annular tear injury (along the L4/5/S1 lumbar spine); **Creatine Monohydrate** paradoxically alleviates the excruciating pain from everyday movements; even from as simple as holding a foot on the brake pedal while driving, or rising up from a sitting down **position**. Simply taking a small dose of Creatine (a finger-smidge amount with water) allowed some regain in mobility that much more noticeably. Perhaps indirectly supportive - several studies do document Creatine's

convincing uses in observational limb rehabilitation (Meschino, 2012) & all the way to fractures and osteoporosis intervention/s (Gerber, I. et al. 2005).

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## **WHAT HAPPENS DURING THE EXITING OR RE-ENTERING PHASES OF CKD?**

Below is a generalised though not exhaustive list of various physiological signs. Although please note sensitivities vary amongst individuals.

- 1 FREQUENT BOWEL MOVEMENTS.** *Some CKD practitioners may experience (depending on fibrous intakes and degrees of complex carbohydrate intakes during refeeds) very frequent stool outputs upon re-entry of the SKD day/s. Frequencies of such movements should resume back to its' prior defaults within 24 to 36 hours of carbohydrate restrictions. IF HOWEVER diarrhoea like symptoms persists - this signifies perhaps a symptom of excess Potassium intakes or too much Magnesium (specifically Oxide forms, which thought to be poorly absorbed). These minerals likely need self-moderations.*
- 2 LACK OF APPETITE** *It is not unusual for some individuals to report lack of appetite comes first thing upon dawn particularly after a hypercaloric refeeding. Recall that hunger-blunting phenomenon do exist surrounding post-exercise/s (Broom RD, et al. 2009). Nonetheless re-supplementation is warranted to restore vital digestion and partitioning. Beyond Zinc or appropriately dosed Betaine HCL/pepsin. By clear conviction for many months, **This Author** finds that **Vitamin E (dosages between 200-500IU, equating between 130 to 335MG) as periodised on/off alternate day dosage** supplementa-*

tion paradoxically helps restore taste & digestibility perception. To date and to the best of **This Author's** awareness, only one research study led to hypothesize that Vitamin E may play a role in stem cell regeneration on tastebuds as well as the olfactory systems (Henkin RI. & Hoetker JD. 2003).

- 3 **GENERAL FATIGUES upon re-entering SKD DAY/S.** **This Author** only suspects that if individuals did consume large / heavy consumption amount of fructose or fruits - they'd be well advised to keep a journaling insight/s upon what type / source of fructose as some may affect how the individual may transition enzymatically towards Ketosis either reasonably well without such symptoms or not at all; with prolonged state of "**delays**" and sluggishness during the day-time. If so, try reducing fructose or substituting various carbohydrate sources.
  
- 4 **GRADUAL ENZYME REGULATION SHIFTING** Individual/s who decidedly venture away from nutritional Ketosis for at least week or more may experience a change in enzyme regulation system (from predominantly fatty acid utilisation to glucose) (Randle, PJ. 1995) & (McDonald, L. 1998). This may predispose towards higher blood glucose readings amidst high carbohydrate feedings only the first day/s of transitioning away from ketosis. **This Author** anecdotally confirm such is the case amidst very few transition accounts towards HC (high carbohydrate/standard low fat) of Intermittent Fasting.



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## 3/3 INTERMITTENT FASTING

### 73 WHY SHOULD I CONSIDER INTERMITTENT FASTING?

“Fasting” is simply part of Self-Enquiring over how one productively interprets “time”. The virtue of being “Fast-er” qualitatively subjects one to be more productive at pursuing objectivities. During whatever length of time is specified without hindrance of additional consumption of Resources. Beyond neurological benefits and cancer protection (*Fann, W Y. et al., 2017*), and improved bodily composition with various health markers (*Moro T, et al. 2016*) - Fasting revolves around the concept of **Autophagy**; an epi-genetic, process of “recycling” of cells into new forms, during all presence of prolonged caloric deprivations or of resource scarcity (*Kim I & Lemasters J J, 2011*).



### INTERMITTENT FASTING OVERVIEW

FOR INDIVIDUALS NEW TO KETOGENIC INTERVENTION / FASTING / GENERAL DIETING

FOR EXISTING NUTRITION / FITNESS ENTHUSIASTS / RECREATIONAL SEASONED TRAINEES

Generally speaking, **This Author** proposes that individuals who have NOT yet developed ANY prior nutritional journaling rituals for at least two (2) month/s at minimum practise - should NOT consider Intermittent Fasting.

Likewise to all unfamiliar to general dieting or yet to succumb for personal holistic changes through exercise, fitness training and nutritional awareness.

For these segments of Readers, it is far more advisable to first adopt inquisitive awareness ritual/s as discussed in earlier **Chapter "HOW and where do we/you start?" on page 44.**

Readers are also encouraged at reading a sample "**timeline**" of what to expect at experiencing an array of effects amidst prolonged Ketogenic intervention on **page 148** however be aware that not all physiological experiences are translated the same.

Intermittent Fasting focuses solely on embracing Individuals towards caloric restrictions.

Those who are already familiar within these experiences may find Intermittent Fasting relatively less challenging. Regardless all are encouraged to acquaint with the principles of Ketogenic intervention as set out earlier in (**page 145**) as mandatory metabolic readjustments and practising rituals such as sufficient minerals and micro-nutrient intake from increased salt intakes among other precautions - are adhered to first and foremost.

Combined with nutritional journaling, training and frugal living; Intermittent Fasting inevitably becomes warranted once Readers have felt confident by starting with either one (1) day of fasting per week to slowly then increase to two (2) and onwards however # of days required until pragmatic limits are reached.

Readers are to remain aware that there are no totalitarian correctness when it comes to fasting regiment(s). As there are multiple folds of versions which can vary widely in their applications, uses, and contexts.



## INTERMITTENT FASTING 16:8 SAMPLE

Below is only a sample outlook of the most frequently referred method of Intermittent Fasting ; the 16 hours fast, 8 hours feeding window as prescribed by **Martin Berkhan (leangains.com)**. Readers are encouraged to pursue further reading by subscribing to his media channel upon further interests. However, by no means **This Book / This Is™** - willingly disclose any more nuanced intellectual property

FEED / FASTING WINDOW /  
KETO+IF APPROACHES

**Determine and plan your fasting / feeding window AROUND your training regiment/s.** Ideally, fasting window should predate / closely following all training segments of each day.

For example if the individual rises at 8AM and trains during the hours between 5 or 6PM, then it'd be wise to start the fasting window from ten PM (yesterday night), abstain eating for sixteen hours, then break the fast with preferably liquid proteins supplementation (such as whey proteins) at precisely 2:00PM, followed then by a small solid meal at least one hour of waiting window beforehand. For those wishing to delay feeding window further - break the fast only with BCAAs or a prework-out supplementation close to training window anywhere between 4 or 5PM.

**USE KETOGENIC + IF APPROACH SPARINGLY FOR VERY LEAN INDIVIDUALS WITH REFEED/S.** Keto + IF approach; especially when hypocaloric combined with depletion resistance training are expected. Hormonal repercussions will likely manifest.

It's generally wise to consider Keto+IF approach to no more than several months at a time continuously; even with inclusion of refeeding periods included subject as per individual needs and nutrient partitioning ability at handling episodes of low calorie day/s as well as high calorie refeedings.

(CONT.)

**WHEN TO FINISH A FEEDING WINDOW / RESTART FASTING CYCLE** For many, including **This Author** - it is generally desirable to finish a feeding window close to sleep / retiring hours of the evening as this conveniently sets towards the next fasting window.

For all others consider periodizations inbetween HC & Keto versions of IF/s; and decide which of the two respects one's existing food resources economics & availability. Readers are to remain advised however; that carbohydrates are arguably the easiest+quickest to be depleted & consumed.

PRE-TRAINING SUPPLEMENTATION / VARIATIONS

**CONSIDER BCAAs / Branched Amino Acids PRE-TRAINING SUPPLEMENTATION/S; if affordable.** It has been well speculated that training completely in a fasted state, with no ergogenic aids except water - are likely detrimental ([Berkhan, M. 2010](#)).

At the very least, consider preparing a pre-workout mix of Creatine Monohydrate, a teaspoon of instant coffee powder, and a teaspoon of baking soda into a sugar-free flavoured soda of choice.

Alternatively, for those more financially affluent may tinker with options such as ALCAR / Acetylated L-Carnitine, Branched Chain Amino Acids (a ten gram powder of any flavoured supplement would equate around 7.5g of effective BCAA concentrations), Beta Alanines, to name a few. Or consider purchasing an all in one preworkout supplementations widely available.

Another means of a preworkout would also be to use whey protein. 1 regular scoop amount can be used however beware that this may trigger gut discomforts for some individuals during training, hence it may be wise to consider this as a "meal" at least 30 minutes before training episode. Otherwise at bare minimum, Creatine and source of caffeine are essential.

#### **ADOPT VARIATION/S**

Consider TKD / Targeted Ketogenic principle surrounding Dextrose and/or simple sugars dissolved in cold liquids (with lime/lemon, Creatine, Baking Soda) as intraworkout solution should neither BCAAs nor whey protein supplies are affordable.

Consider adopting a 2.5 Day Refeed protocol to merge with that of classical Cyclical Ketogenic principle - instead of reserving refeeds during week-ends, commence carbohydrate refeedings from Friday PM training onwards for as long as 16, 18 or however # of fasting hours have been followed days or weeks prior.



## IF / TIME RESTRICTED FEEDING VARIATIONS

**"Intermittent Fasting"** is also most often famously retitled as **"Time-Restricted-Feeding"**. By no means the list below are exhaustive as many trademarks overlaps inbetween these principles. Readers are encouraged and reassured that these are subject to individual variants of metabolic, nutrient partitioning efficacies as well as (obviously) - Structural impositions at barring access to such qualitative resources.

**16:8** Perhaps the most publicised and readily promoted time-restricted-feeding regimen. Calls for sixteen hours of fasting, and eight hours of feeding window. Subject to vary per individual needs and scheduling.

**20:4** A more constricted version, calling for twenty hours of fasting, and only four (or less) hours of feeding window. Feeding window may even be less for some individuals as additional time needs to be factored in towards the Sleeping / retiring window.

**23:1 / OMAD / One-Meal-A-Day** A further constricted version, calling for twenty-three hours of fasting, and only one hour of feeding window.

**ALTERNATE DAY FAST or "ADF"**. Alternate Day Fast; as exactly it implies - is a proposed full-day of food abstinence followed by ad-libitum calorie intakes or at least maintenance the next 24.

**This Author** caution that should only one (1) large meal is permitted, some digestive challenge are to be anticipated. For individuals suspected to this concern, digestive enzymes including Betaine HCLs, pepsins and other liver support would be wise to supplement during feeding. It may also be wise to consider preparing warmed Apple Cider Vinegar concoction for added digestif comfort.

ADF may have many political variations; depending on context and audience. Calories within ADF day/s are still however permitted but no more than 25% of total TDEE (typically 400-600 kcals); and more desirably attuned to higher protein intake to help offset lean muscle mass losses.

**SOFT FAST** A complete abstinence of food for whole 24-hour period or longer. **"Soft"** denotes that only liquid intakes are allowed.

**DRY FAST** A further variation of the **"Soft"**. But calls for both complete abstinence of liquids and solids foods.

It is pragmatic to consider that mineral intakes remains critical. Vigorous exercise and training is not, by the sole opinion of **This Author** - sustainably compatible under prolonged SOFT FAST regimen.

Considered to be the most restrictive as individuals are expected to remain free of suspecting on-skin or topical application of all absorbable or ingestible elements - **including toothbrushing, and flossing.**



## CONTRAINDICATIONS & POSSIBLE CONCERN/S

Currently, a conflicting array of opinions exist amongst fasting patients with various stages of Kidney Disease; even if all renal functions seem stable. A study amongst Ramadan fasting participants did not recognise further detrimental effects amongst those on Stage 3-5 of CKD ([Kara, E et al. 2017](#)); however suggesting older populations were found with worsening renal functions. An animal study (on rats) focusing on Polystic Kidney Disease interestingly slowed its progression by fasting and caloric restriction interventions ([Boletta, A. 2015](#)).

Proponents of religious / Ramadan fasting encourages the youth to practise fasting as early as puberty. Whilst **This Author** holds no religious affiliation, moral / faith subscription bias; it remains strongly pragmatic that children and adolescents should NOT commence any form of fasting during their early years. However Scientific consensus on this is sadly few and mixed. Some statistics suggests that 44% of children preferentially skip breakfasts ([Liu, J. 2019](#)); hence implying a hint it'd be wise never to forcefeed if child refuses. Some practitioner/s however do not condone longer fasting ([Fung, J. 2018](#)) but pragmatic advice remain at reducing added refined sugar intakes. If however obesity is already prominent, many research outside the pages of **This Book** unfortunately, are needed.

There is perhaps a potential concern towards lean mass losses upon persisting in very prolonged fast/s in amongst already lean individuals. In addition compressing from such a prior "normal" eating window to a fraction of hours will prove immensely difficult to meet maintenance TDEE. When combined with regular fitness training (within fasting window) - **This Author** noted that exclusively based on prior experience - digestive capacities WILL become compromised due to lack of digestive and enzymatic activities during all fasting windows. Betaine HCLs with pepsins supplementations, alongside with Zinc and incorporating gelatins into the diet may assist in maintaining digestion efficacies. Introducing bolus amount of solid foods thus, in the opinion of **This Author**, would not be appropriate and a liquid meal to break the fast, such as combining milk with a serving of whey protein is more advisable.

This book would never condone any form of fasting for the vanity of "**losing weight**"; at the sake of that of the foetus health. Current medical literature remains mixed in sentiments. One study amongst Ramadan fasting mothers finds higher relative risks towards low birth weight of foetus (Ziaee, V. et al. 2010). However another study found no associations between fasting pregnant mothers (of specifically - Asian ethnicity) with any adverse birth outcomes (Petherick, S E. et al. 2014). Another study interestingly found that Intermittent Fasting brought all beneficial metabolic markers (HDL, HBA1C, and insulin sensitivities) amongst 78 pregnant subjects (Gur, E.B. et al 2015). However reassuring these claims may be, decisions and awareness inevitably must be explored further at the Reader's end.

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#### **FEASTING (BINGEING) AND FASTING (PURGING). HOW IS THAT "HEALTHY"?**

Recall that the word "**Healthy**" is ambiguously Utopianist (**page 95**). Should readers wishfully remain in the comfort of normalcy and institutionalised of "**everything-in-moderation**", then they are fully granted to do so. The question that remains however - moderated by "**whom**"?

No matter how much praiseworthy scientific studies **This Book** throws at its readers - it all leads back to readers themselves to own up to their own curiosity at Self-Enquiring towards a more resilient and mindfulness awareness inbetween that

of his/her **Abilities and Liabilities - Ecosystems**. Improvements on various Intermittent Fasting protocols range from MAED / Multidimensional Assessment of Eating-Disorder Symptoms, **"Body image perception"** (*Hoddy, K. et al. 2015*), weight loss meta-analysis (*Alhamdan BA et al. 2013*), and various metabolic marker improvements from insulin sensitivity + CVD/CHD risk factors (*Bhutani S, et al. 2010*).

Understandably, **"Binging"** and/or **"Purging"** both sound semantically very depressive, often dismissed today as "hopelessness", "hysteria" and/or simply uninhibited "Chaos". Seeing these fearful images easily lure us back to the notion of what is **"comfortable"**. Alas that sadly, when structurally imposed as epidemiological doctrine of **"everything in moderation"**, is unbeknownst to most - nothing more than prescribed stagnation. Because such remains an ambiguous irony in and of itself that we have to wait until anything worthwhile or significant - were to happen. By resorting to "Everything-in-moderation" this implies there must always be "new" or "contrasting" experiences amidst infinite array of subjectivities. So long we remain obliged to be the same as epidemiology tells us to - as "be in balance". Or be part of "equal harmony". Be in "equal measure", etc.

...Whether that is vague "Insanity" or peaceful "Complacency" - is up to readers to decide. Were our biological convictions to be surrendered then, to the collective "other" to decide on each of our biological (individual) behalf - surely that - is sour enough recipe for Quantified Paternalism on infinite repeat.

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**This Book implores that each and everytime you “eat” - is a reclamation of “why” you eat in the first place. Hence, Intermittent Fasting is a state of both allowing and reinforcing your body - to “reason” with its own self - against all entropy. To ably reconcile a contrasting enough any difference from "Scarce" and "Abundant" intensity(s), far away from the vague "everything-in-moderation".**

What **“enough”** means remains arguably Anarchaic. By constant transitioning between the two realms of scarce and abundance life is enlived (self-enriched) with more clarity and

authentic resilience. There is nothing "vague" in this sustenance at all. We simply let our own biology to dissolve; in such process of self-enquiring (or self-reasoning) over what we can or cannot do. Hence, a progressive reconciling on what enough means.

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**Many Readers assume that This Author (AW™) has vested interest towards “Religious” affinity of fasting much akin to Islam, Hinduism or Buddhism. This is never the case.**

**This Author** reassures that all decisions whether to fast or not fast - should be entirely based not of collectivism akin to political dictation or act of coercions. Given the sheer diverse methodologies outlined (**page 193**) it remains strongly arguable that how one implements shall vary as accordingly to their pragmatic limits. All decisions should be based not that of morality but that of their own rational, conscious realisations at what they can or cannot do amidst all episodic scarcities.



In general, hunger is surprisingly well-tolerated during fasting. **This Author** asserts, that patience, as one re-coordinate their existing Ecosystems (Abilities & Liabilities) - is to be redirected towards the respecting of existing Resources availability amidst period of Scarcity. A study shows that the hunger hormone ghrelin; whenever expressed - remains adaptive mechanism as however it is set accordingly to our own amply shaped circadian rhythms (LeSauter, J. et al 2009). Adding the word “**break-**” in front of “**fast**” therefore sociologically disrupts this biomechanical intent of preserving its own resources (Fung, J. 2016).

Nonetheless, Readers who previously succumbed to decades of carb-heavy diets may find this regiment challenging due to unprecedented hunger episodes; set by the prior hormones Ghrelin VS Leptin mechanism balance and that of “**Pavlovian Conditioning**” as we discussed earlier (**page 116**). Hence the best **This Book** may suggest is to consider acquainting first few months into **Standard Ketogenic Dieting format**; eating to regular Satiety with existing fitness regiments. Develop various new cues at recognising what foods, in what amounts, and compo-

sitional macros to satiety before tinkering with calorie restriction, before then consider Intermittent Fasting from only one (1) day, for at least sixteen hours. Journal & account everything.

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**Repeat this for however long is deemed required to meet resource-preservation demands or that of objective fitness meritocracies. Revise. Reflect. Repeat.**

<sup>76</sup> **WOULDN'T I BE STARVED OF NUTRIENTS?**

As much positivity is applauded; there is nevertheless legitimate concerns of deficiencies since fasting is akin to a state of dehydration (McDonald, L. 1998). A recently published study on athletes (March 2018) found these to be Magnesium, Potassium, Zinc Folic Acid & Calciferol / Vitamin D (Pons, V. et al 2018). Thus it remains imperative for all Readers to consider additional multivitamin and mineral supplementations as outlined on **page 216**.

Multiple studies suggest that “**starvation**” of cells; via either prolonged fasting and/or caloric restrictions interestingly induce resilient protections against oxidative aging itself (*Steegborn, C., et al 2008*). A study (however done on rats) suggests that from such starvation; glucose utilisation and uptake is greatly enhanced (*Goodman, M N. & Ruderman, N B. 1979*). Understandably, pedestrian sentiments quickly resort to point to the famous (or infamous) **Minnesota Starvation experiment**; fuelling belief that starvation causes permanent “**Metabolic Damage**”. Yet multiple studies refute such biological state even exists (*Henselman, M. 2016*).

Inevitably, nevertheless one must eat. **This Book** neither advocates prolonged fasting nor hyperconsumption extremes; long term as unchanged linear constant/s. What **This Book** proposes from **This Author’s** (AW™) lens and structural frugality experiences however are both philosophical and metabolic Authenticity; through frequent cyclical fasting and feeding/s within various formatting/s.

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**The most dire This Author has so far experienced; on top of two years (& ongoing) CKD+19:4/IF, 35% deficit - are the Alternate Day Fasting/s. followed by another 18-20 hours of “standard IF” days back-to-back. All this combined with up to ten exercises, four-days per week fitness training meritocracies.**

During ADF days, only minute (25% of TDEE) calories are allowed within “**PSMF / Protein Sparing Modified Fast principle**”. Equating anywhere between 300 to 600 calories. Whilst likely reserved only for amongst highly invested fitness athletes towards scheduled events or those seeking to attest their resilience to live with much lesser resources. Such, in the opinion and experience of **This Author** are neither sustainable nor pragmatic in terms of physiological sustenance. Obviously, another individual’s experience remains free to object against this.

Essentially, nothing but water intakes to address hydration need/s. **Alongside salt (himalayan, rock & iodised)**, Black Teas or Black Coffees without any sweeteners should remain as staple. A 1/4 squeeze of lemon may somewhat be permitted within caloric footprint of no more than 40 calories; as it nevertheless provide some Vitamin C. In addition, **This Author** suggests drinking (boiled) water with Apple Cider Vinegar, pinches of himalayan salts and baking soda. Also, to ensure adequate potassium 1/5th teaspoon Cream of Tartar / Potassium Bitartrate, or very small pinch amount of Potassium Chloride are recommended to be mixed in with warm beverages. **Beware however that excess Potassium may also cause loose bowel movements.** It may be prudent to periodise low and high potassium supplementations during one's fasting windows.

All Readers new to Intermittent Fasting may first experiment a multivitamin or a teaspoon of MSM (Methylsulfonylmethane) in water - in the morning upon rising. However, all Readers must gradually subside to be reliant on just water and/or warmed caffeinated beverages throughout the day.

Those who serve labour-intensive employment/s would be advised to bring their iodised salted water with them. Should light-headedness or minor headaches occur during the Fasting Window- **50mg or 100mg Aspirin** with black coffee would alleviate this succinctly. Should this intensely persist, you must ask your employer for brief pardons. Especially if your employment involve interacting with heavy or intricate machinery.

<sup>79</sup> **HOW SHOULD I BREAK MY FASTING WINDOW?  
WHAT SHOULD MY FIRST MEAL BE?**

Ideally, all fasting window/s should end prior to Resistance Training / Exercise Windows. Either a serving of whey protein (up to 30 grams worth protein content), up to 25g worth of easily digestible Dextrose (if opting for a TKD/Targeted-Ketogenic-Diet principle). OR a 10g Branched Chain Amino Acids (equating concentrations of 2.5g of Leucine, 1.25g Isoleucine and 1.25g Valine). Any one of these three solutions are to be taken within 30 minutes before training began. However, they may also be taken as an Intra-workout. Some individuals may be prone to

gut discomforts whilst training on protein-rich supplementation before all strenuous episodes, hence experimenting which of the three solution/s at best, is recommended.

For all resting day/s general advocates suggests re-conditioning the digestion system; by sipping a warmed glass of fish/beef or chicken stocks/broths with Apple Cider Vinegar; before intaking the spoonful of the very first solid meal.

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**However, This Author in contrast anecdotally prefers liquid meal as opposed to bolus amount of solid foods to break prolonged fasting.**

A whey protein shake with just 1 scoop amount equating to 25g of protein, with small amount of calcium source such as full cream milk in no more than 150ML amount, a little salt be it sodium or potassium chloride, then some extra water (<150ML) suffices comfortably. The reason for this liquid meal preference OVER SOLIDS is to ensure that gastric upsets, heartburns

or general feelings of unease - are avoided altogether unless aided via additional Betaine HCL+Pepsin supplementation. Certainly speaking out of repeated dire experiences at consuming bolus solid foods under **This Author's** conviction prove worthily nonetheless as such that this indeed, may yet happen to many others. There is evidence suggesting that gastric acidity is lowered during fasting episodes (*Johnston DA & Wormsley KG 1989*). Further, many anecdote likewise (upon which too laboriously numerous to include in **This Book**) reports tremendous relief upon supplementing with betaine HCL+pepsin.

Another reason would be to expediate amino acid ingestion and thus, help fulfilling the needed sufficient protein macro-nutrient much sooner to that of one gram per pound of body weight; especially amidst very low carbohydrate intervention.

After consuming this liquid protein meal (no more than one & half hours) simply fulfil TDEE requirements across however # of (solid) meals to satiety before next fasting schedule begin. **An entire chapter on protein intake is detailed on page 78.**



First and foremost, it is never pragmatic nor conducive to eat beyond one's threshold of Satiety. Recall that **This Book** advocates the preserving of resources. At best **This Author** recommend periodizing between HC+IF (High Carbohydrate) against Keto/LC+IF fasting regiments for Readers to determine best balance of resource preservation and digestive readiness to fullfil Nutrient Partitioning needs.

Irrespective low or high carbohydrate interventions - should difficulties arise from consuming adequate calories **This Author** endorses all fitness enthusiasts and athletes (in addition to multivitamins) - additional mineral/s magnesium and particularly - Vitamin E & Zinc - to restore taste perception, help improve glucose utilisation (*de Carvalho G B et al 2017*), alongside with maintaining **over 100 enzymatic process homeostasis** (including DNA synthesis) in the body (*Prasad, A S. 1983*). Stomach / digestive enzymes and exogenous support/s Such as Betaine HCL+Pepsins, Papains, Bromelains, Amylase, Proteases may also be recommended during and after meal/s. One way at determining digestive enzymes' efficacy is by perceived warmth

and immediate digestive comfort. Optimal dosages varies per individual sensations but general advice is to begin from a lower dosage (always with protein) then upwards to tolerance.

**81 I FEEL EXTREMELY SLUGGISH IN THE "GUT". HOW COULD THIS BE?**

Some individuals may or may not experience sluggishness upon their next fasting window. **This Author** speculates the following three (3) causative possibilities. The first which may not seem related is (prior) heavy fructose intakes. Some individuals are perhaps still in the process of exhausting existing liver glycogens. Recall that Fasting mimics the mechanisms of depleting said reserves likewise to a Ketogenic protocol (Fung, J. 2016) & (Mcdonald, L. 1998). Excess alcohol intake may also play a role. SCD and/or Low FODMAPs principle/s as outlined back (**page 130**) **thus likely serve as notable intervention for those with suspected intolerances.**

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**From strictly This Author's anecdotal experience – offending sources of fructose seem to emanate from raw**

**honey; including commercially produced honey, raisins, some concentrated fruit jams, and very ripe fruits.**

Secondly, is possible malabsorption of key micronutrients. Counting months of scrutiny, **This Author** first encourage experiment intaking various form of salts in beverages; try pink Himalayan one day, then rock salts or iodised rock salts. Another suspect is fat soluble vitamin/s (Vitamin D,A,K,E) absorbability. One prevalent vitamin of scrutiny would be Vitamin D; for it governs many cellular growth/s, apoptosis, and impacting many hormonal processes such as cortisol and melatonin (*Gutierrez-Monreal MA, et al 2014*). Individuals are encouraged to experiment supplementing Vitamin D in a variety of circumstances; eg. with largest meal of the days (of feeding window) vs empty stomach during fasting window. Daytime vs nighttime. On skin vs oral. And perhaps more importantly - periodising between up to monthly periods of None vs daily Low (2k IU) vs daily high (10k+iu) dosages. Beware also, that seasonal variations

(summers vs winters) may dictate these dosaging requirements. Please consider reading "Essential Dietary Supplements" on page 216.

Third and last possible confounding factor would be excess fibre intakes; especially if one proceeds on (last day of refeeding window) mixed-macros, high caloric refeeds. It is well thought that fibre slows all episodic digestion of incoming nutrients, which is thus not ideal in context of hypercaloric refeeding episodes (McDonald, L. 2016). Should individuals consume a lot of fibrous sources (soluble and insoluble) including supplemental psyllium husks ON TOP of fruit consumptions – all these no doubt prove to be the suspecting scrutiny.

Inevitably, to determine when such symptoms subside is to simply rely on time itself. **This Author** anecdotally notes that wakefulness first thing in the morning serve as such signs. Also, any noticeable bowel movements (ranging as high as four or five times per day) serves as cues of progress.

# FURTHER DISCUSSIONS

## FURTHER CURIOSITIES WORTH READING.

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*“Food, Inc.”* is a Documentary witnessing the corruption and plutocracy behind everything there is in our food supply. Whilst many may perceive this as vested interest to promote veganism, a neutral underlying message nevertheless remains firm & clear - efficacious nutrition - plant based or not - are consistently declining as Hierarchical Powers above structures these conditions.

Tom Naughton’s *“Fat Head”* gives viewers a friendly and tonally accessible overview over what is detrimental amidst our existing nutritive paradigm/s. Dr Peter Attia’s *“Readdressing Dietary Guidelines”* is immersive critique on our current institutionalised nutritive guideline worthy for multiple viewing. Inevitably, all Institutions prefers symptomatic **“treatments”** hence no doubt drugs remain a deservedly awaited discussion of its

own controversial usages. *The “Heart Of The Matter” on ABC’s Catalyst Show;* attempts to put all of these effectively under a questionable spotlight. “**Paleolithic**” nutritional interventions have come and gone in terms of surge of interests particularly of its sensationalism value. But a *2013 TED® EX Talk by Christina Warinner;* examined this from a different perspective as an archaeologist.

Finally, much of **This Book** explores not just within the realm of Nutrition; but also awareness of its cognition impacts towards civility. *A TED® talk presented by Paul Zak;* explores such that our social morality are governed by our misunderstood yet elusively “**empathy**” hormone - the *Oxytocin.*

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**This Book is likely never by itself satisfactory to the more discerning individuals. Hence, an additional companion book was written in mid 2019.**



## COMPANION BOOK “DIETARY D-AGES”

**This Author** has invested many hundreds of additional hours writing a companion text manuscript “**This Is™ About Advanced Glycation End Products**”. This Companion book features over 4000+ words as unofficial and independent - elaboration amidst concerns of dietary Glycation-End Products; written in lay, yet enthusiastic readers' perspective in mind.

Pragmatic cooking methodology workarounds, supplementations and highlighting other less-discussed sentiments surrounding glycation end products research are covered in detail.

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## EXAMINE.COM

Examine.com provides an independent 'encyclopedia' for many supplementary compounds, ingredient, amino acids, and/or herbs. Useful is their indication of every category of explanation are their **Human Effect Matrix** which take into each supplementary item's concern as to how they affect human physiological processes from energetic, and all the way to digestive and (if any) - no-tropic effect/s.

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## ESSENTIAL DIETARY SUPPLEMENTS

The inline-table on **page 219 shows** for a full list of supplement items irrespective over any dietary choices or paradigm/s you wish to undertake. **This Author** believes that beyond mandatory minerals (Magnesium, Potassium, Zinc, Calcium, Chromium [please turn over for more insight]), water + fat solubles vitamins; other supplements listed in the table are discretionary and only be used sparingly if the contexts warrants such use. Reason for this sparingly use is such that all supplementation may (or may not) imposes insensitivity



and tolerances overtime; hence **diminishing effects**. **Periodising between, none, low and high intakes per day for any given micronutrient - seems pragmatic in the opinion of This Author AW™. For at the very least - these fluctuating episodes allow the physiology and metabolism to re-adjust and compensate as accordingly.**

Fish oils, digestive enzymes (Betaine HCLs+Pepsins, Papanins, Bromelain etc) , major mineral support (in particular Magnesium, Zinc, Potassium), Milk Thistles / MSM, COQ10, and fat soluble specifics (Vitamin D, E and K2 MK4 or MK7s) would likely constitutes a broad enough coverage of micronutrient needs. Amongst for the highly invested athletes - Sodium, **Chromium, Magnesium, Copper, Zinc & Iron are likely to be depleted during perspiration & water loss** (*Sarraymen, 2010*); **thus additional supplementations are warranted under these requirements.**

Whilst certainly debatable, **This Author** nevertheless (sparingly periodised from none to moderate) recommends Chromium as part of Cyclical Ketogenic regiments or those with legitimate glucose control difficulties. Studies suggest markedly improved insulin sensitivity-thus glucose mobilisation which improve markers against cardiovascular and diabetes (*Zafra-*

Stone, S. et al 2007). But not all studies shared the same sentiment (Masharani, U. 2012). If asked rigorously upfront, **This Author** can only speculate that if one (amongst already lean individuals) - exercises vigorously at DEFICIT calories on top of Fasted regiments; adequate intake of essential mineral Chromium are thus likely challenged. Chromium supplementations (either in Picollinate or the GTF variants) thus likely improves Nutrient Partitioning across fats, carbohydrates and proteins.

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**Finally, the term “Essential” in front of Dietary Supplements may not necessarily constitute “finality” advice for “all” physiologies. Readers are “individuals”, who remain subject to their own terminal or clinically prescriptive needs outside This Book’s scope of awareness.**

Hence, nothing in **This Book** may be taken as “**prescriptive**”. As however implied objectively even with supporting attached citations and references.



## OTHER DISCRETIONARY VITAMINS AND SUPPLEMENTS

### DIGESTIVE ENZYMES / PRO-BIOTICS / PREBIOTICS

Generally, probiotic / prebiotic supplementations are not necessary as long as dietary intake of dairy yoghurt alongside with natural prebiotic fibres (from Garlic, turmeric, and various spices) are maintained.

Digestive enzymes and support however are likely to become essential (periodically) amongst those practising Intermittent Fasting long term, and/or those aiming to raise occasional dietary protein intakes. These supplements come at least in the form of Betaine Hydrochloride (powdered forms) with or without Pepsin. Combination formulae (Papain, Cellulase, Proteases) are affordably priced at \$20 for 200 tablets ([pipingrock.com](http://pipingrock.com)).

However an affordable route would be to consider bulk purchasing Betaine HCL-only powders. Although no pepsin is included - they are usually found on Ebay® at less than \$20 for 50 grams equating anywhere between 250 to 300 serves at 150 to 200MG each. NOTE: OPTIMAL INDIVIDUAL DOSAGES IMMENSELY VARY BASED ON COMFORT, MEAL COMPOSITION AND ANY PREEXISTING DIGESTIVE / GI CONDITIONS. INDIVIDUALS MUST CONSIDER ALSO PURCHASING EMPTY BULK GELATINE CAPSULES (SIZE #3) WITH MILIGRAM PRECISION SCALE for all DIY setup.

### MAGNESIUM, POTASSIUM, CHROMIUM

For Magnesiums, **This Author** recommends at the very least a chelated amino-acid form as the bare minimum ([Nature's Way or Nature's Own](#)). DIY Magnesium oils can also be prepared by buying bulk magnesium chloride flakes ([1kg can be purchased under \\$20 from various Ebay sellers](#)). To prepare DIY magnesium OIL - Simply bring distilled water to the boil turn off heat and mix with magnesium chloride flakes in a 1:1 ratio. Let cool and store in spray bottles. Simply apply onto skin whenever needed.

Potassium would likely be an impending necessity for individuals subsisting on prolonged ketogenic or intermittent fasting regiment as this key mineral is likely compromised amidst fasting conditions; and may also be associated with loss of insulin insensitivity ([Norbiato, K et al. 1984](#)) especially amidst context of ADF protocols. Potassium is implicated towards all cardiovascular functions and in many respect - mediators of insulin sensitivity. Unfortunately supplements such as Potassium Bicarbonate or Citrates are not easily accessible in Australia and often imposed with much higher prices due to geo-import policies; forcing individuals to consider buying from third party sources. [A 100G pouch of food Grade Potassium Bicarbonate \(\\$6 exc. postage\)](#) should suffice for approx up to 300 serves equating to 333MG each minute dose. Alternatively, a pinch of potassium chloride in drinking water suffices. Specifically - during Intermittent Fasting windows- Cream of Tartare or Potassium Chloride may be mixed with a warm beverage (Apple Cider Vinegars, coffees or teas).

For fitness enthusiasts -Chromium maintains Insulin sensitivity and an anti-inflammatory. Although individuals are advised to periodise between high and low dosages or wherever periods during high carbohydrate intakes. [Chromium \(NOTE: TOTAL ELEMENTAL CHROMIUM\) intake would be well advised limited to under 100 MCG. Picollinate or GTF variants of chromium are widely affordable under \\$20.](#)

### FISH OILS

Each and every fish oil is different in terms of how they're supplied, packaged and processed. It would be well advised to only get fish oil sourced from smaller fishes (sardines, mackerels and anchovies); as these are species most likely situated far lower on the food chain; thereby less likelihood of accumulating pollutants. **This Author generally advise NOT taking the odourless nor those which are further deodorised / mixed with orange oils; as these are likely added with frivolous additives.**



## OTHER DISCRETIONARY VITAMINS AND SUPPLEMENTS

MULTI  
VITAMINS

In the opinion of **This Author**, multi-vitamins generally are only warranted in contexts of multiple deficiencies, if however keep in mind that micronutrient interactions (page 222) will impose different physiological and metabolic interpretations. Nonetheless, ensure that a multivitamin of choice is NOT filled with **extra sucrose, glucose, colouring or in chewables form**, as they most likely contains added saccharin as a sweetener and/or worse - **such additions not plainly stated at all in the packaging**.

Vegetarians must consider a bioavailable / readily active Vitamin B12 supplementation (namely Methylated Cobalamins). Any multi vitamins should suffice BUT READ ALL labels and make sure that it least have **IODINE and SELENIUM** (particularly important to maintain / recycle the bio availability of existing anti-oxidants). 100 Serve capsules of Selenium (**200 mcg can be had for less than \$20 delivered from Ebay**).

LIVER HEALTH / VITAMIN D & K2 / ZINC

Liver Health and Digestion wise - consider Organic Sulfur **MSM** as well as **SAME (S-AdenosylMethionine) if only within affordable allowance, and Milk Thistle/s**. **\$15 for 30 serves. 500g of MSM \$25 Ebay** should suffice for two months of use. **100 Caps Healthy Care Liver Detox (10g of Milk Thistle)** can be acquired for \$18 from a local Chemist Warehouse. Liver Health maintenance should be incorporated with MSM / Organic sulfur and or Milk Thistle. Both serve beyond a liver proctectant, joints health and digestive tonic.

**Vitamin D & K2** - Vitamin K2 (MK4 or MK7) next to COQ10 and Vitamin D are what **This Author** would consider synergistically essential as these addresses multiple systemic insufficiencies from sex-hormones / endocrinology (**Izadi A, et al 2018**), anti-oxidative health (**Banihani AS 2018**), and also mineral utilisation, immune health, and cardiovascular health. **This Author** recommends bulk purchasing high dose Vitamin D (4000iu to 5000iu); as desirably enclosed in olive oil based delivery vehicle in each tablet than soybean oil (**Doctor's Best, @ Ebay**).

Alternatively Liquid Forms (5000IU per drop - **Pipingrock** brand) are also available. **This Author (AW™)** recommends instead of swallowing these liquid forms, consider rubbing these liquid forms on areas of skin least likely to irritation eg. shoulders forearms and wrists.

For more information in Vitamin D readers are encouraged to visit (**vitamindwiki.com**) as the more complete source of research and repository.

**Vitamin K2**; available in supplementary Mark IV and Mark VII are highly advised only to be taken in periodical amounts between none or low on any other day when preferably - higher Vitamin D intakes are also anticipated in the same day. Comparative study (**Sato T et al 2012**), on Mark IV and Mark VII on women finds that Mark IV have shorter half-lives; hence suggesting that MK7 would be wise taken as periodical dosages of, for example - every 24 or 48 hours depending on calcium intake. However many anecdotal report(s) seem to prefer the MK4 instead of MK7 which causes unexplained heart palpitations in some but not all individuals (**inspire.com**). **This Author (AW™)** included - did have similar symptom but curiously - all effects subsided over time with MK7. Vitamin K2 MK7 are widely available in 150mcg dosages at Chemist Warehouse for usually less than \$20. The MK4 variants unfortunately may only be ordered online through pipingrock or Iherb at more or less the same pricing; minus delivery.

For Zinc - like magnesium; the best **This Author** rec- oncile from memory are that of Picollinate version, however they are likely more expensive. Otherwise, amino-acid chelated are the minimum recommended requirements (**Cenovis**). As most likely these amino acid chelated brands also contains other useful co-factors such as Vitamin B6 and trace manganese.



## OTHER DISCRETIONARY VITAMINS AND SUPPLEMENTS

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">VITAMIN E AS LIPID PEROXIDATION PROTECTION</p>	<p>Dosages wise, <b>This Author</b> (AW™) would caution against excessive dosages of 1,000IU upwards daily as adverse effects may vary amidst various individual's physiology(s) (<a href="http://linuspaulinginstitute.com">linuspaulinginstitute.com</a>). <b>This Author</b> (AW™) instead pragmatically advise an on/off periodical dosages of perhaps 1,000IU every two or three days; depending on vegetable oils PUFA N6 intakes. The higher reliance of these vegetable oils may indeed possibly warrant more frequency, however, should readers are currently undergoing cancer diagnosis or therapy - may be wise to conduct further reading as research suggests mixed sentiments with high Tocopherol supplementation (<a href="#">Patrick, R. 2014</a>).</p> <p>Nevertheless <b>This Author</b> (AW™) reason for the periodical dosages as pragmatic hypothesis; is to respect the body's internal autonomous balancing of Vitamins &amp; Minerals equilibrium. Since dietary Iron is documented to conflict with Vitamin E; by allowing at least two or three days of no Vitamin E intakes, it is hopeful that during these period the body should capably re-coordinate all Vitamins &amp; Minerals back to its equilibrium; allowing Iron metabolism to resume their regulatory processes once again.</p> <p>General literatures on Vitamin E appears to suggest strong preference towards Tocopherol rather than the Tocotrienol variants; due to Tocopherol's reportedly much longer half-lives (<a href="#">Aggarwal BB e al. 2010</a>) and their stronger affinity for the liver's carrier protein to transport for better utilisation than the Tocotrienol (<a href="#">Cassiday L. 2013</a>). However, it may be wise to conduct further research as Tocotrienol's benefits seem more potent seen in some studies despite the half-lives limitation (<a href="#">Aggarwal BB e al. 2010</a>).</p> <p>However <b>This Author</b> (AW™) finds that Tocotrienol supplements are generally more expensive and more geographically inaccessible than the widely available Tocopherols. At best therefore, whilst it is more ideal to get a mixed isoforms of Tocopherols in both Delta &amp; Gamma's (\$20 @ Pipingrock.com for 50 tablets), a local Cenovis® brand of Vitamin E's Tocopherol (&lt;\$15 per 250 capsules) may nevertheless suffice given all of the above research readings and contingencies are taken into consideration.</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">RHODIOLA / CQ10</p>	<p>ALCAR / akin to <b>Rhodiola remains noteworthy adaptogens however not entirely necessary due to their exotic prevalence and high costs especially Rhodiola (\$40+ Ebay®) unless individuals are subscribed to very strenuous training meritocracies.</b> Co-Enzyme CQ10 however, may be warranted as occasional necessity to promote overall anti-oxidants intake. Any Co-Enzyme CQ10 supplementation suffice as antioxidative contingencies; as <b>150mg to 300mg daily dosage.</b> Less than \$20 from local Chemist Warehouse. The only drawback to CQ10 is that it may interfere to those who rely on prescriptive blood thinners such as Warfarin®, hence separating these away from each other seems pragmatic.</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">NO-TROPICS</p>	<p>Prolonged psychological stress as imposed by structural living arrangements or stratifications; combined with pursuits on challenging fitness and resistance training regiment AND on top of restricted food intakes - all will no doubt warrant likely supplementation of NOTROPICS. ALCAR (Acetylated L-Carnitine) are the most widely advocated for an array of antioxidative, neuroprotective, antihypertensive and anti-diabetic potentials (<a href="#">Mingorance, C. et al 2011</a>).</p> <p>Should affordability is not a concern; individuals are also free to consider <a href="#">Mucuna Pruriens or L-Dopa extracts (in various intensity from 25% to 99% as therapeutic Levodopa extracts)</a>. <b>This Author</b> (AW™) firmly recommends solitary intakes of ALCAR or any other NOTROPICS on an empty stomach with a warm caffeine source either tea or coffee. <b>A 250G ALCAR pouch at \$25 available at Ebay®</b> suffices 300 hypothetical serves per purchase. ALCAR powders are generally advised to be taken no more than 2 grams per day; especially also when fitness and resistance training are to be expected. Nutritional journaling is strongly advised on individuals taking NOTROPICS for any adverse effects if any; arising from prolonged use. Periodizing between high / low / none intakes are advisable.</p>




## MICRONUTRIENT INTERACTIONS

Despite sophisticated understanding in nutritional science – one inescapable incomprehension remains. Micronutrients be it Vitamins or Minerals – exerts competitive interactions towards its partitioning within the organism. Such logistics inevitably lead to outcomes as either (medically termed to as) "Antagonistic" (displaces another's uptake or utilisation) or "Synergistic" (cooperates another's uptake or utilisation) (*Watts, LD. 1990*).

This subchapter proposes both as warning and disclaimer in mind; that it should not be completely interpreted as exhaustively accurate nor is it failsafe proof tabulation. However it nevertheless provides pragmatism at-a-glance; showcasing the nuance interaction of various nutrients that may prove useful to many discerning individuals. One main reason for **This Author** (AW™) for offering these (readapted) tabulation, is to curate together various textual sources and references into one directly accessible point of information. Another is to address various concerns in that not all publications consistently share the exact same coverage listing of all trace minerals from the Periodical Table for human nutrition. Hence this imposes additional comprehension difficulties due to partially incomplete information. For example, one source may share noteworthy interactions coverage on Chromium (Cr), yet this information may not appear in another dissertation or publication/s.

The majority of information here is re-adapted and manually re-collated based on existing, freely-published data/s in public domains of world wide web - (*Watts, LD. 1990*), (*Minich D, 2018*), and the *Linus Pauling Institute*. This Section is divided into several tables, each focuses on the above outcome cat-

egorisation of either "Antagonistic" or "Synergistic"; further then collated by three relationships - Vitamin-to-Vitamin, Minerals-To-Minerals, and Vitamin-to-Minerals.

 <b>VITAMINS TO VITAMINS</b>	
<b>Vitamins</b>	<b>Antagonistic / Reduces uptake of...</b>
<b>A</b>	<b>K   D</b>
<b>D</b>	<b>A   E</b>
<b>E</b>	<b>D   K</b>
<b>K<sub>1</sub> and/or K<sub>2</sub></b>	<b>A   E</b>
<b>C</b>	<b>B<sub>12</sub></b>
<b>B<sub>1</sub></b>	<b>B<sub>6</sub></b>
<b>B<sub>2</sub></b>	<i>Sources inconsistent. Please see following paragraph</i>
<b>B<sub>3</sub></b>	<i>Sources inconsistent. Please see following paragraph</i>
<b>B<sub>5</sub></b>	<i>Sources inconsistent. Please see following paragraph</i>
<b>B<sub>6</sub></b>	<b>B<sub>1</sub>   B<sub>9</sub></b>
<b>B<sub>9</sub></b>	<b>B<sub>6</sub>   B<sub>12</sub></b>
<b>B<sub>12</sub></b>	<b>B<sub>9</sub>   C</b>
<b>Vitamins</b>	<b>Synergistics / Enhances uptake for...</b>
<b>A</b>	<b>B<sub>2</sub>   B<sub>3</sub>   B<sub>1</sub>   B<sub>6</sub>   C   E</b>





## VITAMINS TO VITAMINS

<b>D</b>	<b>B<sub>12</sub>   E</b>
<b>E</b>	<b>A   B<sub>6</sub>   C   B<sub>12</sub>   B<sub>1</sub>   B<sub>5</sub>   B<sub>3</sub>   B<sub>10</sub>   D</b>
<b>K<sub>1</sub> and/or K<sub>2</sub></b>	<b>D</b>
<b>C</b>	<b>A   E   B<sub>6</sub>   B<sub>3</sub>   B<sub>5</sub></b>
<b>B<sub>1</sub></b>	<b>E   C   B<sub>6</sub>   B<sub>12</sub>   B<sub>3</sub>   B<sub>5</sub>   A   B<sub>10</sub>   B<sub>2</sub></b>
<b>B<sub>2</sub></b>	<b>A   B<sub>3</sub>   B<sub>10</sub></b>
<b>B<sub>3</sub></b>	<b>B<sub>1</sub>   B<sub>2</sub>   B<sub>6</sub>   A   B<sub>5</sub>   E   B<sub>10</sub></b>
<b>B<sub>5</sub></b>	<b>C   E   A   B<sub>1</sub>   B<sub>3</sub>   B<sub>6</sub>   B<sub>10</sub></b>
<b>B<sub>6</sub></b>	<b>E   A   B<sub>1</sub>   B<sub>3</sub>   B<sub>5</sub>   B<sub>12</sub>   B<sub>10</sub></b>
<b>B<sub>12</sub></b>	<b>B<sub>1</sub>   B<sub>3</sub>   B<sub>6</sub>   E   B<sub>5</sub>   C   B<sub>10</sub>   D</b>

There appears to be confusingly differing opinions on certain B vitamins particularly B2, B3 and B5. One source suggests they are volatile against many other B vitamins (*Watts, LD. 1990*). That particular study considers two (2) types of antagonistic characteristics as either "Observed" or as "Theoretical"; both presented as circular chart showing these somewhat ambiguous interactions. However, another publication omits these conflicting relationships altogether (*Minich D, 2018*). Unless if

individuals indeed are diagnosed with rare genetic disorders conditions which warrants highly specific B Vitamins, taking B vitamins in the minutely specific variant in large doses might not be necessary for the general population whose intakes are already derived from whole foods.

Note on Vitamin K. **This Book** would like to add some nuanced specifics. Vitamin K, is in actuality comprised of much more complex sub fat soluble derivatives beyond  $K_1$  (phyloquinones / phytonadione as plant based sources),  $K_2$  (menaquinones as animal sources). and  $K_3$  (menadione) exists as synthetic water soluble form. Further these in actuality comes as family of subvariants akin to that as B complexes. Eg. as MK2, MK4, MK5, MK7, MK10 and MK13. Unfortunately, discerning each and every interactions of each sub-variant with other minerals or vitamins proves far too impractical and likely inaccessible for the lay audience.



## MINERALS TO MINERALS

Mineral	Antagonistic / Reduces uptake of...
<b>Calcium</b>	Magnesium   Phosphorus   Sodium   Manganese   Iron   Zinc



## MINERALS TO MINERALS

<b>Copper</b>	Iron   Molybdenum   Selenium   Zinc
<b>Chromium</b>	Manganese   Iron
<b>Iodine</b>	No current sentiment / No data source available.
<b>Iron</b>	Calcium   Copper   Manganese   Zinc
<b>Manganese</b>	Calcium   Iron
<b>Molybdenum</b>	Copper
<b>Magnesium</b>	Calcium   Phosphorus   Zinc
<b>Potassium</b>	No current sentiment / No data source available.
<b>Phosphorus</b>	Calcium   Magnesium
<b>Sodium</b>	Calcium
<b>Selenium</b>	Copper
<b>Sulfur</b>	No current sentiment / No data source available.
<b>Zinc</b>	Calcium   Copper   Iron
<b>Mineral</b>	<b>Synergistic / Enhances uptake for...</b>
<b>Calcium</b>	Magnesium   Phosphorus   Copper   Sodium   Potassium   Selenium
<b>Copper</b>	Iron   Cobalt   Calcium   Sodium   Selenium
<b>Chromium</b>	Magnesium   Zinc   Potassium
<b>Iodine</b>	Selenium




## MINERALS TO MINERALS

<b>Iron</b>	Copper   Manganese   Potassium   Sodium   Chromium   Phosphorus   Selenium
<b>Magnesium</b>	Calcium   Potassium   Zinc   Manganese   Phosphorus   Chromium
<b>Manganese</b>	Potassium   Zinc   Magnesium   Iron   Phosphorus
<b>Molybdenum</b>	No current sentiment / No data source available.
<b>Potassium</b>	Sodium   Magnesium   Manganese   Zinc   Phosphorus   Iron
<b>Phosphorus</b>	Calcium   Magnesium   Sodium   Potassium   Zinc   Iron
<b>Sodium</b>	Potassium   Selenium   Cobalt   Calcium   Iron   Copper   Phosphorus
<b>Selenium</b>	Sodium   Potassium   Copper   Manganese   Iron   Calcium
<b>Sulfur</b>	Molybdenum
<b>Zinc</b>	Potassium   Magnesium   Manganese   Chromium   Phosphorus

**This Author** (AW™) would like to remind all readers once again that the above Minerals to Minerals interaction table consists of information from multiple general commons/public sources. Keep in mind that all Trace Minerals here are deemed as essential for human nutrition. Hence, **This Author** would caution its readers that there are also appear to be guides and interaction charts that imposes DIFFERENT information;

these are likely stemming from plants and/or aimed towards horticulture (hydroponics / gardening) specific concerns and applications.

 <b>VITAMINS TO MINERALS</b>	
<b>Vitamins</b>	<b>Antagonistic / Reduces uptake of these minerals...</b>
<b>A</b>	Calcium   Copper   Sodium
<b>D</b>	Phosphorus   Potassium   Zinc   Chromium (See Following Par.)
<b>E</b>	Magnesium
<b>K<sub>1</sub> and/or K<sub>2</sub></b>	Copper // <b>IMPORTANT: See the next following paragraph</b>
<b>C</b>	Copper   Calcium   Zinc   Manganese <b>IMPORTANT: See following par</b>
<b>B<sub>1</sub></b>	Magnesium
<b>B<sub>2</sub></b>	Calcium
<b>B<sub>3</sub></b>	Sodium   Calcium   Copper
<b>B<sub>6</sub></b>	<b>Sources inconsistent / Unknown</b>
<b>B<sub>10</sub></b>	<b>Sources inconsistent / Unknown</b>
<b>B<sub>12</sub></b>	<b>Sources inconsistent / Unknown</b>
<b>Vitamins</b>	<b>Synergistic / Enhances uptake for these minerals...</b>
<b>A</b>	Zinc   Potassium   Phosphorus   Magnesium   Manganese   Selenium



## VITAMINS TO MINERALS

<b>D</b>	Calcium   Magnesium   Sodium   Copper   Selenium
<b>E</b>	Sodium   Potassium   Calcium   Iron   Manganese   Zinc   Phosphorus   Selenium
<b>K<sub>1</sub> and/or K<sub>2</sub></b>	Calcium   Zinc   Magnesium // IMPORTANT: See next following paragraph
<b>C</b>	Iron
<b>B<sub>1</sub></b>	Selenium   Sodium   Potassium   Iron   Manganese   Magnesium   Copper   Zinc   Phosphorus
<b>B<sub>2</sub></b>	Iron   Phosphorus   Magnesium   Zinc   Potassium   Chromium
<b>B<sub>3</sub></b>	Zinc   Potassium   Iron   Phosphorus   Magnesium   Manganese   Sodium   Chromium   Selenium
<b>B<sub>6</sub></b>	Zinc   Chromium   Magnesium   Sodium   Potassium   Phosphorus   Iron   Manganese   Selenium
<b>B<sub>12</sub></b>	Selenium   Copper   Calcium   Sodium

What appears to be arguably the most important fat soluble hormone, Vitamin D was theorized to have competitive interactions with Chromium (*Watts, LD. 1989*). However, an experimental trial on human subjects (*Imanparast, F et al. 2019*) found instead - a beneficial, synergistic effect at mitigating HOMA-IR insulin resistance marker. Considering these two papers polar opposite conclusions - unfortunately there may yet appears to be more elusive readings on this interaction.

Vitamin C appears to be elusively journalled amidst current literatures. One telling source (Roth, R. 2016) on various case reports suggesting high dosages appears to deplete key mineral/s such as Copper, Zinc, Manganese and interestingly in some cases - Calcium. Making this as one of the few, amongst unknown amounts out there in various literature domains today - as valuable insights yet to be shared.

In regards to Vitamin K, to the best of **This Author's** knowledge thus far, very few publications or literatures investigates **any interactions of Vitamin K with other minerals besides its known antagonism to Vitamin A, Vitamin E** (Minich D, 2018). The only clues we gather so far is that Vitamin K is undoubtedly, a coagulation factor (thus supporting blood-clotting) in which that anticoagulant drugs (eg. Warfarins) may interfere. **This Author** thus proactively sought additional research on minerals that affect blood coagulations. These led to three possible suspects; if however remains subject to further research and scrutiny(s):

- 1 Zinc (**possibly SYNERGISTIC**), **This Author** can anecdotally confirm Zinc's clotting potential via immediate small supplementation (1/4 bite size of a tablet dose) of amino acid chelated Zinc; upon instances of (rare) occurrences of prolonged bleeding from glu-

cometer test finger prick events. A research paper (*Tubek, S. et al. 2008*) seems to likewise suggests Zinc to be supportive for blood clotting.

- 2 Copper (**possibly ANTAGONISTIC**). An in-vitro study seems to suggest Copper's anticoagulant properties as increased blood clotting time (*Jelis E. et al. 2004*).
- 3 Magnesium (**possibly SYNERGISTIC**). A study appears to highlight Magnesium's as contributing factor to Vitamin K<sub>2</sub> (specifically MK4 in this study) role at preventing excess bone mineral leeching or "mineralization" (*Amizuka N. et al. 2005*).

82 **WHY DOES EVERYTHING APPEARS SO COMPETITIVE AGAINST EACH OTHER? WHAT SEEMS TO BE THE POINT OF UNDERSTANDING VITAMINS & MINERALS INTERACTIONS IN THE FIRST PLACE?**

Whilst indeed very difficult to comprehend for the lay audience, **This Author** (AW™) instead both asserts and motivates a different mindset. At the very least, far and away from that of binary associative metaphysical semantics. Akin to Nihilistic Bickering. **Eg. if "Magnesium competes with Calcium, Phosphorus, zinc, etc" then it must also mean that it's "BAD" interpretively even if taken in varyingly remote degrees be it small, medium or large.** Keep in mind we are trying to solely understand their interaction/interaction level. **Only strictly as**



**"interactions" sake.** Yet their interpretations as their intended destinations - remains - elusive and thus requires further lateral thinking.

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**If anything, This Author (AW™) nevertheless believes such chaotic diversities are deservedly COMPLEMENTARY, rather than HOSTILITY. Considering that each & every micronutrient can either leverage, mediate or even help reduce excessive absorption of another.**

In other words, these competitiveness may yet proves to be "good" and perhaps in many cases - essential (Roth, R. 2016). To name a few - Calcium helps inhibits excess iron absorption. Vitamin C and Iron may seem overly glamourised today as "healthy" combination to augment overall Iron absorption, but an excess storage of Iron itself may potentially raise cancer risk/s (Peat, R. 2006), and as discussed later on **page 249** - a

risk factor for ARDS or acute respiratory symptoms. Another case for nutrient competitiveness - those who consume organ meats regularly, particularly that of Lambs, Beef, Pork, Chicken Livers; are subject to one day be accumulating an excessive amount of tissue stores of Vitamin A. Thus, supplementing with Vitamin K; preferably K2 MK4 or MK7 to help mediate these excess - seems a wise and pragmatic resolution. Zinc also comes in as an essential mineral beyond immunity and digestive health, but also ensuring to help leverage intakes of pre-formed Vitamin A.

So what can we do amidst competitive interactions nevertheless? A pragmatic advice would be not to take any combination of antagonistic nutrients simultaneously in one (1) sitting or one whole swallow; or in one exact same timing, especially if each is in high dosages (Minich D, 2018). Another would be to periodise supplementation as on/off days. For example, it may be wise to take high dose of Vitamin E away from Vitamin K<sub>2</sub> supplementation to opportunely provide window of absorption best for each supplementation. Another example would be to opportunely match supplementing with key meal's nutrient

bias profile. Taking Vitamin K<sub>2</sub> or Vitamin D alongside meal/s consisting of high calcium would offer greater chance of its intended utilisation.

**This Book** implores repeatedly in all its thematical messaging such that Achieving "Balance" requires willingly INDIVIDUAL enquiring and experiencing of many "devils-in-details" journey that is likely unaccepted; especially amidst our today's pedestrian yearning towards instant gratification of "Scientific" advice.

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**"Balance" depends on individual interpretation/s. We have to work with contextual complexities of Nature. Not to egoistically override it by means of Authoritarian egoism ~ the chronic ambiguity of "everything-in-moderation".**

**IF EVERYTHING CONFLICTS WITH ANOTHER, IN  
WHAT MANNER OR "CLUES" CAN WE DETERMINE  
IF ONE'S INTAKE IS IN EXCESS OR DEFICIT?**

Unfortunately, to the best of **This Author's** thus-far understanding of decentralised Nutritional Science - so far there is no concrete definitive methodology other than individual blood pathology panels. These as one expect - are very costly requests and at times constitutes inaccuracies as it opens yet another series of subjective interpretations.

Eg. are we trying to track a particular mineral at a TISSUE cellular level or at the PLASMA level or URINARY output level? Each setting dictates very different interpretations as not all mineral panels tested at the Plasma is of any definitive indication on deficiency or sufficiency status. Just to illustrate as proof in concern as example - a review study (*DiNicolantonio J. et al. 2018*) showcased that Magnesium tests on serum level is a dubious sufficiency assessment; as intracellular assessment in muscular tissue levels on the other hand is deemed more viable assessment. Moreover, tissue hair mineral analysis may not be as straightforward nor time effective as costly logistics need to be taken into account when submitting and analysing each sample from multiple laboratories and/or institutions.

Alas, such a need for extended enquiry(s) remains highly frowned upon amidst today's paternalistic view of Nutritional Science. Generally speaking, the more such tests one requests out of General Doctors/Family Practitioners - the more likely one has to face scrutiny(s) with frownful condescends. Hence in the general opinion of **This Author** (AW™) such a request is best avoided altogether unless: 1) a cooperative, neutral-non paternalistic consultancy may yet ever be found elsewhere; despite however few they are and/or 2). Should clinical symptoms of deficiencies are noted to closely follow that of terminal or pathological proportions.

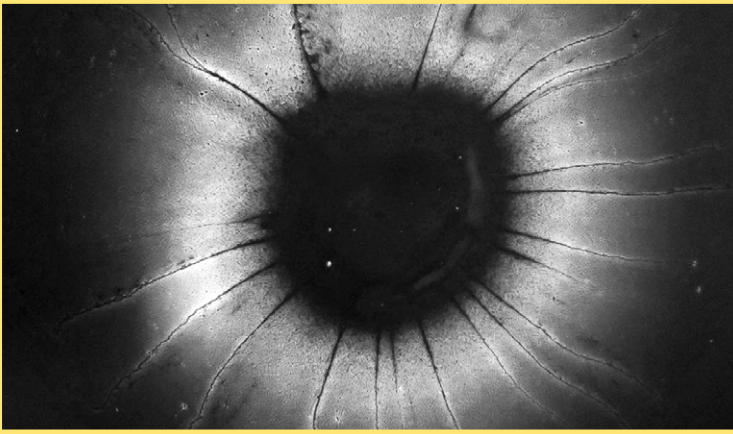
Perhaps the only clue left one may resort to, despite likely of with criticism and scepticism - is simply that of subjective markers for wellbeing & psychological composure.

**This Author** unfortunately and certainly cannot confide his own anecdote as "the" exemplary guideline for all. However readers' own physiological subjective markers may yet only offer the most intuitive route of assesment. For example, in context of Intermittent Fasting or Ketogenic regiments - should

feelings of unease / unsettling or more frequent loose bowel outputs are noted, then **it is likely due to an excess mineral supplemental intake of either sodium, potassium or magnesium.**

84 **WHERE CAN I FIND OUT MORE? WHERE ARE YOUR SOURCES?**

All scientific references and citations are collated altogether in the "bibliography" on page 270. Specifically, more invested readers are encouraged to examine the publications of (Watts, LD. 1990), (Minich D, 2018), and Linus Pauling Institute. Simply click on the above bracketed which as hyperlinks which will take you to their corresponding sources.



## IMMUNE HEALTH & NUTRITION

In response to escalating COVID19 Governmental impositions and mediations; **This Author** (AW™) has reserved this sub-section as Dissertation highlighting these concerns for pragmatic contemplations; worthy for further discussion. As prominent disclaimer, **This Author** hereby admits that Immunology or Disease Prevention are beyond comprehensible credibility; given his financial incapacities and impositions. Hence, this Dissertation neither confide nor proclaim itself as irrefutable "cures" or flawless "panaceas", but rather a listing of readily-available contingencies for any discerning readers to consider;

without excessive pharmaceutical or questionable synthetic interventions. Nevertheless, those with existing terminal conditions should still conduct their own continuing research with their physician or health care provider.

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## **RATIONALE / REASONS FOR THIS DISSERTATION**

### **The first rationale for writing this Dissertation is to promote lateral pragmatism. From analysing & considering all progressive Scientific journalism & decentralised Nutritional Science.**

Repercussions from "waiting", for governmental "treatment" - confides anything but assurance. Hence, should we remain comfortable by "waiting"? As contraction and mortality rates becomes increasingly prevalent, does "waiting" paints a picture of insured serenity? To what extent or how far, should individual Privacy/s be willingly intervened by powers-that-be for the increasingly desperate containment measures (Kaye, K.



2020)? Considering the Ebola vaccine alone took over twenty (20) years to materialize before public distribution; Individual "inactions" therefore, is no different than submitting to coercive, authoritarian overrides and surveillance. **We'd be long remaining-ill equipped then, until one take actions for the "self".**

This follows onto our next reason - we must question the lengthy political motives & bureaucracy involved in such ventures. Considering the one such proclaimed drug solution "hydroxichloroquine", consequently have already prompted further cascading concerns. Firstly, the impending shockwave of demands. Many medical practitioners reportedly have hoarded stocks for "themselves", and to willingly thus ignore (ironically) existing pharmaceutical governance (Sanders, T 2020). This paints dire urgency, alongside with potentially adverse, undocumented potential side effects (Patrick, R. 2020). Secondly, the outlook on vaccine development seems thus far long-winded. One recent published sentiment (Bernstein, L. 2020); projected up to eighteen (18) months are needed BEFORE any official vaccines may possibly materialize (on top of legislations). In comparison once more - Ebola vaccines took more than twenty (20) years before public dispensary approval, and within those years

- were once glamourised as "Lucrative" period for profiteering ventures (Nickerson, J. 2020). Considering how much globally is at stake, COVID19 may likely be a repeating of our history.

**This Author** (AW™) sincerely believes that if we are so ill-"equipped" at handling such a crisis, it should have been a questioning of our prior history of "preparedness"; on comprehending contributing mortality risk factors. Readers are free to call this egoistic speculation. But a call to such "preparedness" should be exercised by the free-will of the individual, rather than "handed-over" to imposingly coercive paternalism. By no means however "hoarding" mentality is glamourised anywhere within **This Book**. "Empathy" stems from within; cumulative exercising of our physiological & metabolic interpreting of what "enough" means. Fasting vs Feasting. Revise, Reflect, Repeat.

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**Third and last reason for this dissertation are its careful selection of pragmatic interventions. That not only addresses one (1) sole function for Immunity; but also others too-numerous-to-list**

**supportive roles for the human physiology. Each carries their deserved scientific voice/s, nevertheless.**

Indeed, by no means **This Author** (AW™) ever dismisses the profound efficacy of pharmaceutical drugs for specific illnesses or dysfunctions. However, to equip our "own"selves via better "preparedness" holistic approach - remains arguably and deservedly - a far wiser quest for lateral enquiry(s) within Nutritional Science. Again, recalling **This Book's** ethos-"Nutrition" is the first and final call for "Rationale". Adopting (or willingly adjustment) to this train-of-thought arguably is more approachable Authentic. Rather than resorting (or "waiting") for authoritarian surveillance or questionable pharmaceutical ventures.

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**BRIEF** CONTEXT ~ THE PATHOLOGY

To summarise its general course of pathology, COVID19 (also referred to as SARS/COV#2/NCOV) triggers a series of cascading inflammatory responses; which ultimately leads to "ARDS" or Acute Respiratory Distress Syndrome. Due to accu-

mulation of fluids in the lungs evoked via excess autoimmunity (known as the "Cytokine Storm" [*Mehta, J. et al. 2020*]). This appears to be at its most prevalent; once the COVID19's viral replication to surrounding lung tissues have commenced within all ACE2 (or "Angiotensin-Converting-Enzyme #2) receptors.

The end result of "ARDS" is **Pneumonia**; causing multiple organ failures due to excess fluid retention. This fluid retention is believed to be initiated by the excessive "Cytokine Storm" - preventing the much needed oxygen delivery for all organs. Hence, leading to cascading organ failures, and inevitably, total cardiac arrests.

These outcomes often require immediate ventilation intervention strictly in hospital settings. The machines responsible in the hope of delivering adequate oxygen supply; as part of ICU (intensive care unit), to this day remains increasingly few. Hence much of our cumulative fears (at the time of this writing) mainly revolves around the overlapping challenges of insufficient resources. From the healthcare personnel, protective

clothing or PPE's. To perhaps the more worryingly - inadequate infrastructures needed at present (and beyond) to cater exponential increase in Pneumonia cases as time unfolds.

Statistics reconciling highest death rates (or at least those exhibiting the most severance of symptoms) amongst key capital cities of the world (UK, Italy and US) seem to suggest that either age, AND/or obesity seem to be the most recently highlighted risk factors (Watts, M. 2020) & (Lighter, J. et al. 2020). Additionally, as according to recent meta (Wang, B et al. 2020), specific co-morbidity markers include Hypertension, followed by COPD (Chronic Obstructive Pulmonary Disease), either Cardio/Cerebrovascular Diseases, and Diabetes.

It is noteworthy to realise that "Cytokine Storm > ARDS > Pneumonia" is so far only one proposed pathway of pathology. Two emerging alternative pathology mechanisms also have gained some plausible interests but may need further replication / confirmatory findings. Firstly, the blood type group hypothesis. It appears the O Blood Type groups correlates to better resistance against COVID19 (Zhao J. et al. 2020). Another theory (perhaps coincidental in proximity) suggests that COVID19 seemingly infiltrates the haemoglobin of the red

blood cells. As this (pre-print) mechanistic study suggested (Wen-zhong, L & Hualan L 2020) - COVID19 triggers a cascading series of events leading to excessive iron overload; thereby disrupting oxygen delivery mechanisms. **This Author** (AW™) sincerely believe many other hypothesis are yet to be listed here; hence kindly advising all readers to continue research at their end.

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**The pragmatic contingencies of this Dissertation is divided into three overarching hypothesis. Vitamin D, Antioxidants, and General Considerations.**

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**1/3 VITAMIN D**

Vitamin D is perhaps likely seen too insignificant as that of a general supplement. Yet its lateral definition as "steroid" hormone, carries significant contributions beyond that of bone health but also responsibly numerous for over a thousand genetic expressions (Higdon, J 2000) initiated by each and every active Vitamin D receptors residing on all organs and

tissues. There seems to be conviction hypothesis that Vitamin D is less about skeletal or bone health, but more as an immune vitamin (Patel, K. 2017).

One case control study (Mamani M. et al 2017) finds Vitamin D deficiency as strong confounder to community-acquired Pneumonia; as there appears to be 3.69 times more risks for likely infection than those of sufficient Vitamin D status. Vitamin D also appears to inhibit biochemistry pathway that enables the Angiotensin conversions to the harmful form (Ajabshir S. 2014).

The timing of Vitamin D as viable contingency amidst this crisis could not have been more "inconvenient". As different geography(s) approaching that towards winters or cooler season - combined also with mandatory self-confinement, lack of exercise / inactivity as mandatory Governmental imposition - all convincingly makes supplementing additional Vitamin D more necessary than ever. **This Author** recommends a form that is delivered in EVOO or olive oil based vehicle, rather than encapsulated in PUFA or soybean oil. However pragmatism suggests any form is better than nothing.

On related note in conjunction to a later section of this dissertation - a recent meta-analysis on ten collected studies ([Yang, L. & et al. 2019](#)) finds that low Vitamin D is associated with decreased resilience against the highly prevalent bacteria *Helicobacter pylori*. This - we shall discuss in more detail on how it affects immune health later; in the following pages.

Generally, Vitamin D should be supplemented within larger meal episodes ([Raimundo VF, et al. 2011](#)) when ideally both calcium and some fats are present. However it is recommended to split into multiple dosages should higher net overall dose is required beyond 10,000IU per day; and that monthly periodisations between very high, none and maintenance intakes seems pragmatic ([vitamindwiki.com.](#)). However, occasional Vitamin K2 MK4 or MK7; might also be needed to offset risks from hypercalcemia ([Masterjohn, C. 2007](#)) & ([Cozzolino, M. 2019](#)). The K2 MK4 appears to have shorter half-life than MK7 ([Sato T et al. 2012](#)); however there appears to be anecdotes suggesting fewer side effects in MK4 vs MK7 intakes ([inspire.com](#)). More comprehensive guidelines on Vitamin D, alongside research surrounding its relevance for COVID19 management are available for further reading at Vitamin D Wiki ([vitamindwiki.com.](#)).



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**However, in order for This Book to remain impartial and unbiased, not all distinguished author(s) agrees with prolonged megadosing of Vitamin D (especially with Vitamin A combined) as plausible contingency (Masterjohn, C. 2020). To succinctly explain however is inappropriate given the layered complexity.**

Hence, it seems prudent nevertheless to consider all opinions and/or sides of the table; by researching other insights and sources as openly provided on **page 262**.

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### **2/3 ANTIOXIDANT CONTINGENCIES / VITAMIN C AND IRON INTAKES CAUTIONS**

Antioxidants by **This Book's** definition - necessitates beyond just Vitamins C, E, polyphenols or phytonutrients. But there are other "quin-ols" or lipid soluble nutrients that contributes significantly at reinforcing the body's own antioxidative defenses.

Notably, COQ10 or Co-enzyme Q10; serves similarly to Vitamin K2 to help assist and mediate against cardiovascular disease risk ([Menaq7.com](http://Menaq7.com)).

COQ10 has been documented for its defense against symptoms of EMC / encephalomyocarditis viral induced lung injury; as proposed by experimental research ([Kishimoto, C. et al. 2003](#)). Coincidentally, EMC viruses, much akin to COVID19: are one of many "Zoonotic" viruses; as initially hosted notably amongst various bats species ([Doysabas CK, et al. 2018](#)). There are indeed literatures suggesting that aging itself greatly diminishes tissue levels of COQ10; thus potentiating greater mortality risks ([Hernández-Camacho DJ, et al. 2018](#)). Particularly of concern - older individuals who rely on pharmaceuticals such as STATINs (which are well known to INHIBIT internal endogenous cycling of COQ10 [[Hernández-Camacho DJ, et al. 2018](#)]), would be wise to consult with their clinicians to assert COQ10 as an additional supplemental necessity for added peace of mind.

As discussed earlier, a speculative yet plausible hypothesis on COVID19's pathology proposes that it appears to adversely impair the oxygen delivery mechanism of the red blood cells.

Thereby potentiating over-accumulation of free, unbound IRON at damaging various organs (Wenzhong, L & Hualan L 2020). This theory, whilst still preliminary; nevertheless were cautioned many years prior. Highlighting such concern of combining high Iron food source with Vitamin C (Peat, R. 2006). Therefore, this warrants careful timing of intakes of these two nutrients, especially amongst individuals young or aged; whose auto-immune or immune functions are already compromised. **Hence, in light of these findings at the very least - separating Iron intakes away from Vitamin C rich foods appears pragmatic.**

Those who rely on NSAIDs, in particular Aspirin-may wish to conduct further reading whilst still adhering to their existing clinical supervision if applicable. There appears to be mixed sentiments; at least in its efficacy at managing pre-(and post) symptoms of ARDS. Two studies suggests meaningful benefits: one as human ICU intervention study (Boyle, JA et al. 2015) and another as research review at explaining Aspirin's hypothesized beneficial mechanism in detail (Toner, P. et al. 2015). One randomized controlled trial however, found no benefits (Kor JD 2017). Nevertheless, one extensive meta-analysis (Amisa BP et al. 2017) suggests that there might be heterogeneity / unex-

plainable variability responses to Aspirin, which may confounds and explain these mixed sentiments; at least from this analysis' curation from 15 "pre"clinical and 8 clinical studies. Given these mixed findings, the best that **This Book** may suggest is simply to remain congruent to any existing terminal supervision.

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### 3/3 GENERAL DIETARY CONSIDERATION/S

**1/4 CLINICAL ADVICE PENDING ON THE USE OF ACE INHIBITORS PRESCRIPTIONS.** First and foremost, **This Book** only offers contemplative yet unfortunately not clinical - replacement of current supervisions. Readers who are currently prescribed ACE Inhibitors (ACEi) or ACE Blockers (ACEb) may wish to conduct further readings as research surrounding their efficacy in risk management against COVID19 are wildly mixed (*Kuster MG et al. 2020*). In spite of ACEi and ACEb are seemingly logical clinical contingencies to prevent contributing risk factors COVID19 (high blood pressure, CVD) unfortunately, it is unclear on why the paradoxical overall increase of ACE2 receptors from having supplemented these ACEi or ACEb's (*Fang, L et al. 2020*).

Nevertheless, given that blood pressure control seems to be an on-going necessary prevention against CVD and diabetes (*Brewer, F. 2020*), the best **This Book** may ever suggest is for the readers to once again adhere to existing terminal supervisions.

#### **2/4 INCREASE DIETARY / SUPPLEMENTARY POTASSIUM.**

To recall there seems to be wide agreement that ACE2 receptors amidst key organs, the lungs in particular - are convincing areas for COVID19's to "latch onto" as its primary translation and thus DNA replication docking sites (*Rndsystems.com*). This led to hypothesis that potassium intakes may also correlates to favourable blood pressure control (*Smith SR et al. 1992*). There appears to be study (despite limited to rats-experimental) that ACE2 receptors seems subdued upon increased potassium intakes (*Gonzalez, AA. 2019*). Potassium also seems to be an essential mineral for many of the key neuromuscular tasks during digestion (peristalsis) (*Raman, R. 2018*) and common signs and/or deficiencies appears to be that of constipation, and/or bloating.

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**Relative to This Book's one of many themes surrounding Intermittent Fasting,**

**there appears to be plausible need for additional potassium for those on prolonged fasting regiments; to ensure favourable insulin sensitivity (Norbiato, G et al 1984).**

The above human experimental PSMF (Protein-sparing-modified-fasting) study suggests that overall potassium status is likely compromised amidst these protocols hence raising pragmatic recommendation for added potassium during fasting. Despite that study being limited on obese subjects, Obesity;in and of itself nevertheless has been reportedly a strong factor for COVID19 mortality (Watts, M. 2020) & (Lighter, J. et al. 2020).

In light of Potassium supplements, Potassium Citrate seems most preferable (Masterjohn C. 2018), however due to their lack of availability due to geopolitical impositions, **This Book** also recommends those readily available in Australia - Cream of tartar / potassium bi-tartrate, food-grade bicarbonate powder, and/or food-grade Chloride powder. Despite Potassium Chloride's apparent risk predisposition towards ulcerations (Mas-

terjohn C. 2018), a separate trial study (by abstract front text only) (Moore GJ et al. 1986) found that despite lesions forming after two weeks, interestingly continuing KCL supplementation onwards appears to have "spontaneously" healed these lesions.

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**These confused findings warrant us to scrutinise another confounder to these ulcer formations ~ *Helicobacter Pylori* infection (Ahmed, N. 2005).**

One extensive review on H.Pylori curates many concerns beyond that of gut health but also many clinical pathologies, including autoimmunity (Smyk SD et al. 2014). Despite no literatures have been found at examining H.pylori connection specifically with that of COVID19's ARDS syndrome; there is nevertheless correlative concerns for bronchitis and lung cancers (Roussos, A. et al. 2003).

**3/4 REDUCE INTERMITTENT FASTING WINDOWS TO NO LONGER THAN 48 HOURS.** "Good" news seem to derive from this study examining the effects of just 24-hour fasting on human trial experiment (Traba J. et al 2015). Here, upon eating 500 calorie meal followed by the 24 hour fasting - the fasting group appears to be very effective at inhibiting Inflammasome gene "NLRP3". This gene expression has been associated with a number of pathological conditions ranging from obesity, Alzheimer's, Gout & atherosclerosis (Grebe A, et al. 2018). Including that of our concerns for ARDS respiratory conditions (Cao, F. et al 2020).

**To be impartial nevertheless, one concern remains visible. The study above (Traba J. et al 2015) found that upon refeeding, the Inflammasome "NLRP3" appears elevated again.** However, the study did not disclose as to how the refeeding protocol are carried out. Eg. macro-compositions or proportion of meals other than the statement "fixed calorie meal" as 500kcal.

On a separate trial on rats model (Zens, G. et al. 2019) suggests that fasting (at least in long term window) seem to worsen viral infection susceptibility. However, "bacterial" infection resilience on other hand, improves. One thing to keep in



mind is that that particular study solely uses synthetically introduced viral agent (as polyinosinic:polycytidylic acid [Poly(I:C)]). Thus it is so far unknown whether this viral agent is indicatively similar or relate-able to that of COVID 19. Further, there is no mention of the Poly:I:C viral agent's effects on lungs tissues within the study; nor there seems to be any comment upon its effects on cardiovascular or respiratory systems.

One proposed reason (hypothetically) that **This Book** may advise against prolonged fasting during more potentially compromising seasonal (winters) is that in addition to **This Author's** anecdotal years of self-enquiring - are concerns towards lowered gastric acidity output, at least during prolonged fasting. Thereby impairing ability for efficacious nutrient partitioning, especially upon reintroducing bolus amount of solid foods. Heartburns, general feelings of digestive discomforts hence warrant further digestive supports such as betaine HCL+pepsin.

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**Another reason why This Author speculates 48 hours as the fasting limit is to never allow Leptin levels to drop**

**questionably as such that it may potentially impair immune function.**

This mechanistic study (*Matarese, G et al. 2005*) shares many interesting yet very technical insight on Leptin's regulating of the Immunity system (either "for" or "against" depending on contexts). For example, a decrease in Leptin is documented within that study as beneficial for auto-immunity management; yet not in many other nuanced compromised state(s).

At best and irrespective, Intermittent Fasting is likely not detrimental. However perhaps in the best interest for reasons discussed so far, it might be wise to reduce fasting windows to no further than 48 hours given the mixed sentiments. Further insight of these from other reputable channels; beyond this manuscript also remains encouraged.

**4/4 RAISE DIETARY PROTEIN INTAKES / OPTIMAL STOM-ACH ACIDITY VIA BETAINE HCL+PEPSINS.** Protein intakes; as what **This Book** previously discussed on earlier chapter, may be an increasing essentiality. Considering that the majority COVID19 mortality cases appears to be those of seniority ages

with already prevalent co-morbidity factors, this lead to **This Author** (AW™) speculating that protein intake is correlated with immune health. Review papers indeed finds that it is not only the old (*K. Appleton. 2016*), but also the youth particularly amongst athletes - have been documented to be likewise immuno-compromised; especially if inadequate dietary protein intakes persists (*Walsh PN, 2019*) & (*Kurpad VA, 2006*).

Proposed methodology(s) on managing higher protein intakes inevitably requires periodical supplementing (ideally taken only in as needed amounts between low, high and no dosages at all): Betaine HCL+pepsin. Signs of its effectiveness is dependant on level of digestive comfort, which remains variable to individual's diet, macro composition of meal and timing. Alternatively, readers may resort to dietary fermented sauerkrauts, bitter herbs (gentian/cayenne), minute amounts of white / black peppers (*Damanhoury ZA & Ahmad A. 2014*) to suit palatability, as well as consider occasional use of Apple Cider Vinegars in various warm concoctions (with gingers and lime/lemon) before or after meal/s (*Kelly SG 1997*). It's advisable never to take Betaine HCL+Pepsin in isolation without any presence

of food, particularly protein. Individuals who constantly rely on Aspirin might be best to consider separating their dosages away from each other (Wright, V. & Lenard L., 2001).

The importance of stomach acids relativity to immunology, appetite and overall digestive health; holds a fascinating history. Back in 1820s, physician William Beaumont was compelled to observe this connection with his patient (Alexis St Martin); who survived a gunshot to his stomach. Yet the wound still allowed a visual "window" for Beaumont to have complete observation on all various motions of digestion; in a variety of immune-compromised states. Relevant to our concern - Beaumont found that digestion seems slow amidst flu or fever like symptoms (Howden CW & Hunt HR. 1987).

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**Were it not for Beaumont, his observatory works on digestion from that of his willingly voluntary patient ~ the famous "Pavlovian Conditioning" theory (page 121); proposed by the Nobel Prize recipient Ivan Pavlov almost a century**

## later in 1904 - would never have happened.

Further studies (Juanita L. et al. 2002) & (Souza R. 2009) suggest that it is not stomach acid that is to blame for GERD or acid refluxes. But rather the unexpected release of cytokines that trigger the series of symptoms of GERD or refluxes.

There appears to be convincing evidence that declining stomach acid secretion itself remains in close association to various comorbidities, from metabolic to immunity; all appearing sooner than coming of middle age seniority (Wright, V. & Lenard L., 2001). Lack of gastric secretions impairs immunology because amino-acids are likely unable to be cleaved, translated or replicated qualitatively as needed towards building many other biomolecules needed for, as one may suspect - both bacterial and viral resilience needed. Ranging notably from lung abscess & Pneumonia like impairments; to name a few (Howden CW & Hunt HR. 1987). It is also interesting to note that gastric

cancers are associated with the use of acid suppressing drugs (*Ahn, JS et al. 2013*); thus certainly warranting further scrutiny surrounding current reliance of PPI's and the like.

The need for higher protein intake may also extend to be of relevance to parents; whose child's may be clinically advised (under diagnosis of epilepsy) to follow stringent or the "classical" Ketogenic protocol. Research suggests that this classical Ketogenic intervention proposing as high as 90% daily TDEE from fats; appears to be well documented for its impairment and compromise to the immune systems; likely due to the very low protein intakes (*McDonald, L. 1998*).

85 **WHERE CAN I FIND MORE INFORMATION?**

It is noteworthy as a reminder that **This Author** (AW™) have prepared a revision update to the accompanying technical manuscript Dietary Glycation End products; surrounding COVID19's concern with various added supplementation contingencies to consider. **This Author** thus implores all discerning readers to refer to this separate manuscript intently wherever required (*nutritional-humility.me/dages*).

A separately written blog article are available at (<https://nutritional-humility.me/about-the-corona-virus/>). Beware however that these were constituted only as surface / very preliminary ideas before the eventual need at writing this Sub Section as the more comprehensive curation of insights. All readers and visitors however are welcome to contribute their own thoughts further in the comments section.

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**Nevertheless, This Book is never formulated without the prevalence of external credibilities, and by no means any "opinion" it exerts, be it that its own ego ~ confide as "the" authoritatively "superior" correctness panacea in place over existing institutional supervisions.**

**This Author** (AW™) humbly admits that for any intricate enquiry(s) surrounding immunology or that of advanced biochemistry; would be best reserved for the following established external channels at providing more enlightening dissertations and/or insights:

- 1 MedCram - Medical Lectures Explained Clearly. (Youtube®: <https://www.youtube.com/channel/UCG-iSMVtWbbwDDXgXXypARQ>)
- 2 Chris Masterjohn, PhD. [www. https://chrismasterjohnphd.com/](https://chrismasterjohnphd.com/) (Youtube®: <https://www.youtube.com/user/chrismasterjohn/>)
- 3 Dr Peter Attia, MD. <https://peterattiamd.com/covid-19/> (Youtube® <https://www.youtube.com/channel/UC8kGsMa0LygSX9nkBcBH1Sg>)
- 4 Dr. Rhonda Patrick, PhD. / Found My Fitness Youtube® (<https://www.youtube.com/channel/UCWF85qJVNIx-ctXbLswcTcA>)

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## INTERPRETING MEDICAL LITERATURE

**This Author** (AW™) believes that readers who already possess pre-emptive knowledge surrounding statistical analysis, no doubt presents an inquisitive advantage. However it is not entirely necessary to comprehend **This Book** and its' overlapping nuances inbetween nutritional science, economics and philoso-



phy. Most (though not all) Medical literatures today are accessibly written towards graduate level academics or adequate general literacy. However many, notably that of mechanistic studies are very difficult to comprehend. This Section nevertheless help acquaint Readers with only the most succinct factors for interpreting these literatures. As a disclaimer, whilst **This Author** does not originate from statistic, scientific or academic journalism background - below are only attempts at simplifying for the lay-audience; subject to scrutiny by rigorous statistician.

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### STUDY TYPES (VALIDITY-RANKED HIGHEST TO LOW)

Generally speaking, a study can either be considered as "**Experimental**" or "**Observational**". Experimental refers to a clinical trial upon a protocol, drug, or some scientific intervention is imposed upon the sample data. Observational refers to (visually of outcomes) observational tracking of changes with little to no - intervention measures imposed on the sample data.

- 1 *Meta Analysis [EXPERIMENTAL + OBSERVATIONAL]. A review of all collected "studies" towards one (1) conclusion presented; having examined each of the studies' strengths and weaknesses. A visualised "Forest/Tree Plot" diagram is often accompanied with summary of each recruited study to help visualise the average finding of that*

study's hypothesis. Usually plotted on an axis inbetween two (2) linear outcomes. A display of "**Averaged**" sentiment out of all studies' aggregation of differing hypotheses; be it favoured or conflicting - is most commonly expected.

- 2 Randomized Control Trial [EXPERIMENTAL]. 2nd highest regarded study. Subjects or Sample Data are randomized into multiple groups, including external control; as accordingly set within various criterias.
- 3 Prospective Cohorts [OBSERVATIONAL]. A study with speculative predictions **of a FUTURE**; given past (reworded as "**Retrospective**") and present data. Uses "**Relative Risk**" Ratio to determine risk probability based on examining prior (retrospective) data.
- 4 Cross Sectional [OBSERVATIONAL]. Similar to Prospective but solely focusing upon the **Present** findings. Uses "**Prevalence**" graphs and correlative relationships to any implications of all subjects' sample data extracted; usually **at present**.
- 5 Case Report / Case-Control Study [OBSERVATIONAL]. A Case "**Report**" usually concerns on the study of only one (1) subject of any pre-existing condition. Case-Control adds a comparative group as "**Control**" who may or may not mimics the conditions to those of the focused subject. This is statistically considered to be the "**weakest**" of both validity or "**Correctness**" strength by any governing collectivist scientific consensus.

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## STUDY MODEL TYPES (VALIDITY-RANKED HIGHEST TO LOW)

- 1 Human / Epidemiology. A peer reviewed trial conducted amongst human subjects. So long as parameters remain approved within allocated Ethics Committee charter.

- 2 Animal Models .A study conducted amongst animal (mostly sacrificial / pending life terminated) models. Usually rats / mice / rodent models which can be further selected by specific criterias; usually by specific genetic traits and/or various sensitivities.
- 3 In Vitro / In-Vivo. A study on living cell/s; isolated from its main physiological organism. This is regarded as the weakest studying methods as much of a cell's connectivity to the physiology is not accounted for in all hypothesis generation.

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## DATA ANALYSIS

- 1 P Value. Instead of confusing Readers by explaining "null" hypothesis" or "H-Naught", **This Author** describes P Value as determinant of **conclusive strength** on a theory, or hypothesis. The lower P-value is presented (for example, "**p<0.05**") it is considered strong, valid, confident & more immutably "**conclusive**". The higher the value - it is considered less definitive and thus - widely interpreted as statistically indecisive or insignificant.
- 2 CI Interval. Confidence Interval determines an **average** calculation of any sampled (extracted portion) range of data. This often appears as a line with the confidence mark as circle. . Confidence Intervals are most often used in meta-analysis to conveniently express at a glance averaged findings of a study's plot of data.

Every aspect of **This Book** concludes from here. I sincerely hope despite lone effort covering as many variables of nutritional interests delivered in just one writing - nonetheless served its purpose for Readers to enliven, reclaim, metabolic and physiological states of sufficiency.

Humans do not die simply because of "atherosclerosis". Such is isolated assumption as simply that - a medical "condition" compartmentalised of many impositions. Humans die because of many things intertwined, beyond expendable means at apprehending or redeeming themselves away from such inevitability towards "atherosclerosis".

As long as the sun and the moon cycles we must biologically adjust accordingly to these Nature's impositions. We must willingly let ourselves, temporarily become Peasants to our own vices, pursuits and desires; proving ourselves against outside condemnations and condescends. For days, and/or weeks, at a time with only succinct consumption to realise our contentment with less resources. For only amidst however lengths of time, pragmatic to the limits of our physiology. Knowing that we shall set aside time and resources ahead - feasting like Kings and Queens. Brief yet so fruitful that we are able to re-sensitize our senses on things we've taken for granted. And repeat.

The time of our play in this theatrical drama called "life" is finite. That carrot luring in front of you is all but a play on someone else's part. Serve and apply your convictions - in the interest and curiosity of your heart. Transition yourself away from pedestrian chatter.

Every Virtue spares a vice. And vice versa.  
Live-It-Forward.



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ANDREW WIGUNA / NUTRITIONAL-HUMILITY.ME VERSION 1.753 / 14 SEPTEMBER 2020 9:45 PM

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## REFERENCES, PROFESSIONS AND CREDENTIALS DISCLOSURE

*Nothing written in This Book is of a professionally accredited insight nor is by any means serving as an accredited series of medical advice/s. What This Book is however - a reflectional, anecdotal experience account based on factual existing account of Nutritional frugality; seen and felt by the lens of its Author. Structurally imposed beyond consent nor legal or financial capacity to retract; whilst all living conditions remains stratified and on-going. This Book implores at providing research and supporting citations to showcase counter argument/s against prevailing social and nutritional / medical dogma's of financed "correctness"; as well as sharing of holistic and anecdotal experiences of Scientific integrity on N=1.*

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## OPEN SOURCE PHOTOGRAPHY

*This Author (AW™) would like to sincerely thank all independent photographers who submitted their works through these online photographic platforms: PEXELS.COM, & UNSPLASH.COM.*

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## NOTEWORTHY BOOKS

*This Book represents years of acquainting various scientific journals, research and texts. By no means however, that This Book willingly shares the more nuanced topics of nutrition methodologies bordering towards harm of INTELLECTUAL PROPERTY. Readers are encouraged to consider purchasing or explore the following texts whom This Author wholeheartedly recommend below. By no means This Author (Andrew Wiguna / AW™ / andrewwiguna.com) is an ever self-proclaimed "established athlete" or an "academic" researcher. Readers*

are well assured the following text book runs far and wide beyond scopes of Nutrition. But also that of exercise and physiological science alongside sampling of Biochemistry.

- 1 **Ketogenic Diet** by Lyle McDonald.  
bodyrecomposition.com / amazon.com
- 2 **Underground BODYOPUS : Militant Weight Loss & Recomposition**  
by Dan Duchaine / amazon.com
- 3 **Anabolic Diet** By Dr. Mauro Di Pasquale  
maurodipasquale.com / amazon.com
- 4 **Leangains Method** by Martin Berkhan & Alan Aragon  
leangains.com / amazon.com

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## PROFESSION / CREDENTIAL DISCLOSURE

*This Book; be it however convincingly inundated with scientific references nevertheless are imposed with structural limitations; in that its Author is financially incapacitated at accruing any or all - indemnity protection(s). Hence, This Book and its overall parent branding initiative may yet to be interpreted as entirely that of open-sourced, Scientific Charity.*

*This Author openly admitted he has had no formal extended qualifications or academia completion studies within Economics, Biology, or Nutritional Science amidst Structural Impositions and Limitations. This Author nonetheless have accrued multiple on-going academia studies as proofs of academic interests and resilience for diversifying career opportunities:*

- 1 **Accredited Certificate of Human Nutrition.**  
Institutionalisation Dogma: Conservative. Cadence Health Learning
- 2 **Certificate of Sports Nutrition.**  
Institutionalisation Dogma: Conservative. Beck Health Nutrition
- 3 **Advanced Diploma of Diet & Nutrition Level 5**  
Institutionalisation Dogma: Conservative. Brentwood Open Learning College UK.
- 4 **Biochemistry Course**  
Institutionalisation Dogma: Conservative.  
(Surface overview course of biochemistry and branching sub-disciplines)  
Centre of Excellence UK.

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**The following bullet point(s) discloses both legal and professional scoping boundaries of This Author (Andrew Wiguna / AW™ / andrewwiguna.com) as ordinary member of public :**

- 1 Demonstrative Academia Writing. This Book** demonstrates; despite no prior commercial experience -of **This Author's** writing / copy-writing skillsets in however respectful and pragmatic at elaborating various topics of concerns within Nutritional Science for the end-consumers. Every line of text(s) within context of disclosing sentiments as well as transparent delivering of existing publications sentiments, hypothesis and conclusions - are solely done within singular effort by **This Author (AW™)** himself. Any third party oversights remained financially inaccessible.
- 2 RESPECTFUL INTEGRITY OF SCIENTIFIC / MEDICAL JOURNALISM INTELLECTUAL PROPERTY. This Book** is never an exhaustively complete replacement to existing Medical or Scientific literature/s nor does it constitute medical "**advice**" over existing terminal or institutional supervisions. Many suggestive phrases such as "**this study suggests**", "**it appears that**", or "**there appears to be evidence**" - discloses honesty and transparency that no one evidence is to be definitively defined to as immutably concrete. Only Readers themselves shall determine the best of all pragmatic course of actions amidst their journey of self-enquiry.
- 3 DEMONSTRATIVE PROFICIENCY IN GRAPHIC DESIGN.** This Is™ Nutriments, its Parent Book/Manuscript and **This Book** are concept trademarks of The Author Andrew Wiguna / AW™ / andrewwiguna.com. All work/s pragmatically showcases beyond coincidental task

*within field of profession (Creatives and Graphic Design) but also that of The Author's deep enthusiastic interests within Nutritional Science.*

- 4 DEMONSTRATIVE INTERESTS IN NUTRITIONAL SCIENCE.** *This Author nonetheless have acquired multiple academia studying opportunities; as proof of interest and resilience despite financial incapacities - towards career opportunities in Health Wellness or Nutritional Science.*

# ABOUT THIS AUTHOR (AW™)



Andrew Wiguna (“**AW™** / [andrewwiguna.com](http://andrewwiguna.com)”) is a multi-disciplinary creative with lateral interests amidst decentralised nutritional science. His creative, career focus for creative design spanning across multiple design disciplines ranging from Brand-

ing, Visual Identities, Web Design/s, and all the way to 3D, Video editing, and Motion Graphics. He lives and resides in Perth, Western Australia, and is an Australian Citizen since 1998.

First Graduated from Central TAFE Western Australia School of Art, Design and Media for three years for acquiring an Adv. Diploma of Graphic Design in 2006 with majoring in Multimedia 4D Design. Before then acquiring the Undergraduate Bachelor Of Arts / Graphic Design Major Degree from Curtin University of Western Australia in late 2007.

Bearing no commercial, nor monetary incentive/s, **This Book** is aimed towards establishing free awareness and self incentivising education; in a form of progressive questions-meet-answers Manuscript. The Author transparently admitted he has had no prior formal writing nor journalism experiences; nor having adorned any thorough undergraduate “**degree/s**” recognised by any governing institutions related to Nutritional Science nor Economics. **This Book demands no obligatory expectations from its Readers other than itself to remain as an anecdotally genuine, isolated voice of concerns amidst turbulent times.** All text, including blog articles, insights & scientific journalling cita-

tions acquisition, alongside the design, branding, maintenance and web layouts are all personally derived out of The Author's own time and resources.

**This Book** and its overall parent concept branding initiative (This Is™ Nutriments) can be accessed below:

- 1 **Nutritional-humility.me** *The main promotional hub and access to the Nutritional Humility™ (formerly as Humility Through Frugality™) book; free for download.*
- 2 **The Youtube® Channel.** *The Youtube viral video repository relative to all this Concept Initiative's concerns.*
- 3 **Nutritional-humility.me/blog** *The main "blog" journal hub of This Book as proudly maintained by the Author alone.*
- 4 **Nutritional Humility™ at MEWE.** *Previously a Google+ page - the social media / social portal hub of news-snippets, influential sharing/s relative to this concept initiatives' interests.*

He remains eternally grateful to receive any feedbacks in sincere writing form (as "Live-It-Forward" gratuity model). As opposed to arithmetic receivables of Likes and subscription-fellowship expectations ("Pay-It-Forward" model). Any extended viewerships are appreciated.

# PROLOGUE

IT WAS THE YEAR 2013, AS I WAS SITTING IN THE PATIO WITH OLD FRIENDS AMIDST SOCIALISING; SOMETHING RINGED LOUDLY IN MY HEAD.

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A voice message instead, prevailed in my head. ***"I haven't done anything...yet"***. There I was, at 28 years old. Still thinking the Government would take care of me and my superannuation. Still thinking my **"super-saver"** savings account will take care of me. Blindingly thought I was **"okay"** with everything there is to what life has offered me thus far. **Up to that point.**

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**Fearlessly the word 'budget' back then-  
didn't exist. I churned, toss & burn  
without fear.**

At least that very night, the message remained persistent, loud & clear; as I opened a textpad and began typing down my every objectives for the future ahead. My very own investment



folio to hopefully bear its own fruits; preparing me for the next uncertain years of life. Admittedly, beneath all this hopeful planning - I have been naively trusting to the powers-that-be. Unadmittedly, I was my own student and face of embarrassment. Because nobody told nor showed me what a P/E ratio is. Unable to comprehend the financial world; I wasn't willing to sit down and spend thousands with a financial planner, per hour.

None however is as pragmatically reconciling what I could do, from my **"self"**, from within. Little by little. From scouring Youtube® Videos and staying up late browsing Investopedia® articles on the how-to's of investments. Convincing myself then to downsize my mobile phone plans, and setting myself up that automatic withdrawal system in Netbank®. Then rang up my glossy **"world class"** internationally-recognised gym membership of the past seven years, apologised upfront and said it's been all good, so long. Even though I've never spoken a word to them since I've signed that dotted line; seven years earlier.

Months passed, this **"saving"** as a ritual remanifested as a journey elsewhere forming yet another curiosity. An observation of my surroundings, my work, and the environments.

The take away drive-thru's, and the supermarket checkout/s. Somehow witnessing the people within these environments brought moments of dejavu'. A reflection of my own old self. An absence of consumptive conscience.

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## **They take all “food” for granted. Our [four-million-tonnes] of wasted food each year did not seem to affect them.**

Yet I paused at my own guilty conscience - My \$AUD80 worth of groceries per week. Binging yet discarding food away from the fridge even after mere three or four days. Hence, I evidently raised myself a question. If one were to have any financial “**investment goal**” or any “**desirable**” outcomes involving some sort of saving money in its equation somewhere - which one of these actually impose the biggest influence towards a goal - Is it simply “**sociological**” or “**Physiological**”/Biological? My bet was both. Each feeds and rationalises the other. I speculated thus only one realm exists at mediating both simultaneously. Our understanding of “**Nutrition**”.

In early 2014, I started writing a series of blog article/s imploring about Humility through wise eating; on my main freelance identity website. I began sharing my views with coworkers within this hopeful, connected world of “**social media**”. I expected benevolence. Alas, “**Be quiet.**”, “**You are annoying sometimes.**” were commonly thrown sentiments. Such; to this very day remain embedded deep within the neocortex.

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## THE TURBULENCES

Amidst these side curiosities before I knew it, a year and half was already over. I have established **my own investment folio. That was October 2014.** Diversified assets. None of those \$400 per hour advisors required. Just me learning from zero.

Yet, an unthinkable series of event/s unfolded. Turbulence in ways I’d sworn that whatever efforts done in all that investment, all that saving - gradually undues and subdues themselves to nothing. Two months later; I’ve lost my primary source of income, and along with it year/s of embracing myself long periods of with very few / next to nothing income support. Worse, every pedestrian expectations of me as a “**Freelancer**”

grew exponentially demanding. Abuses, hostility & legal threats enveloped to permanent relation strains. I could not help but asked myself, **“Is this people’s interpretation of “Humility”?** An extortion of someone else’s Utility by overriding and desensitizing - someone else’s capacitive limits of forgiveness? The thousand(th) ghosted job applications I witnessed, and then the long-ignored freelancing tenders (read: discounted pricing and offers) one after another - gradually painted a sombre realism.

Without a witness to my predicaments but my own - I'm witnessing elsewhere - daily mosaic of depravations everywhere, with heavy heart. Foreclosure signs. Wage stagnations, technological unemployments, clinical depressions. Homelessness, and youth suicides. These were warnings I was implored as far back in the year 2011 - by very few people I've met amidst public libraries back then - as my very first experience of **“brief”** unemployment.

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**Only this time, five years later, and ongoing- things brewed to the worse.**

Despite numerous major vitae and self-professional rebrandings, customised web presences throughout LinkedIn®, Behance®/Adobe Folios, The Loop®, Hiya® video interviews and Branded.Me were all apparently - not 'fitting' enough for me to earn a job stocking up shelves overnight, or flipping burgers. Or dishwashing at a small humble restaurant. Reprinting, posting and sending out so called "**self-promotional designer's CV folios**" and physical courtesy of interest/s letters via snail mails. Locally to interstate; have not returned with news, amidst days then mounting to **years** of effort.

My reserve - my very own Investment Folio themselves I worked very hard for back since 2013 - diminishes as I relied my life on it. \$1,000 later spent on self promotions and less than \$12,000 (and lesser) in freelance income - was all that I had to live on year-to-year. Then, I had no choice- I submitted for institutionalised welfare support.

I gave up applying for jobs "**in person**". I was a fly-on-a-wall. Before I knew it - I soon was labelled yet another stigma; just to service someone else's employment. By way of "**Government Social Welfare Corrective Services**". The staff, responsible

for my concern shuffled one after another, continued condescending me in all ways possible. Days progressed so begrudgingly slow; it enforces one to keep on masked optimism. In civility, one appears quiet. Yet deep within this stoicism, something else slowly dissolves.

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**They say “suicides” are both foolish and selfish mean/s of exiting life. Despite similar contemplation/s (five years prior); I kept looking for a reason. Any reason at all why I should be alive.**

What is this ONE hierarchy of need that kept me alive, despite all outside contempt on me continuously? The cognitive and physiological stress ensuing day in day out? Again, it funnels back to **“Nutrition”**. The many years since 2016 to this day have proven my self-enquiring journey at understanding Nutrition ever so convincingly - that we, dare I say - are living beyond our means of comfort. My own account at persisting food budgets on as low as <\$25 per week through one+ year

of cyclical ketogenic sustenance, DIY haircuts, then Intermittent Fast every weekdays for up to 20 hours fasting whilst fulfilling fitness training on <1400 calories - all proves that whilst indeed debilitating, authentic survival it and of itself - was more gratifying than chasing “careers”.

A mere person would be clinically pronounced as dead from malnutrition, deficiencies or nutrient abuse. Indeed, I convincingly thought to myself I was “dying”. But how can I still be alive then, resiliently to this point in time? I am more convinced, increasingly - our subscription of what “enough” means is far too institutionally intervened and distorted. Resorting to “Scientific” method remains troubling, at best.

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**Cooperating with brainwashed Doctors proved to be expensive and futile exercise. Since when self-enquiring is unscientific? Such questioning have led my instincts to began its scrutiny at full force.**

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## **“FOLLOW THE MONEY”**

My scrutiny follows the questioning of scientific **“correctness”** prevalent amidst today’s Normalcy. What defines “objectivity”? Have we been mistaken of it all as conquest for proclaiming against all “subjectivities”? What seems **“objectively correct”** seems to be forever imposed as **“correct”**. Is Human nature destined to be forever dogmatically this way? Only to binarily follow what is statistically **“correct”**? My instinct suggests unless something is compensated by something **“else”** more quantified in numbers than biology itself - then that something else foresees itself as more important than biology and/or **“time”** itself. Hence, the invention of **“currency”**.

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**My hunch grew more and more suspect of this instrument that it is likely “the” reason for leveraging behind every so called correctness. Irrespective of interpretations. Irrespective of competitions.**



**"I LEAVE SYMBOLS  
FOR THE SYMBOL MINDED."**

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**GEORGE CARLIN**

**"ALL MONEY IS  
A MATTER OF BELIEF."**

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**ADAM SMITH**

Enter "**Money**". "**Money**" is an instrument of both order and allure at dictating how Qualitatively one living being or even ideas - either survives or dies. We deliberately complicate such instrument to inventing "**hedge-funds**", "**collateralised-debt-obligations**", "**credit-default-swaps**" and "**Quantitative Easing**". What good is it to have such "**Instruments**" of exchange only to have our Biology so overruled, QUANTITATIVELY by these Instruments- before our very own authenticities are "**QUALITATIVE**" enough to be granted survival?

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**THIS IS™** HUMILITY THROUGH FRUGALITY / 1ST VERSION

Having all these experiences and questions loudly embedded throughout the year/s 2013 and 2015 - I was ready to write my first passage, my "**Book**" - focusing on Nutrition, and its role as anchor behind all of Life's turbulences.

How or what should I go about "**reminding**" all these concerns, to the current **Pedestrian Normalcy**? Should I write some sort of a narrative? I have never classified myself an (accomplished) author nor journalist. But I know exactly one thing persisting behind all "**curiosity**" itself. Each is firstly shadowed

with a Question. Yet becomes enlightened with an Answer. This conversational approach I believe - is a form of writing I could adapt overtime. What all started from an 80 page “DIY”, crudely self-printed book in 2015, to now at its present form. Thousands of hours in making beyond as mere “**hobby**”. Or towards potential job-seeking prospects calling it a “**Design Exercise**”.

As I looked back to where I was; sitting down on that porch on the breezy night of March 2013 - my life gradually awakened to Reality. Through feeling each and every intermittent fasting day, weeks month and year/s. Each and every eccentric tension holds of glycogen-depletion repetition. Each and every hours of condescends & stigmas amidst all patronisations.

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**War never changes. But “people” and “nature” always change. So what good is it from us overriding contextual chaos?**

As long as the sun and the moon cycles we must biologically adjust accordingly to these Nature's impositions. We must willingly let ourselves, temporarily become **Peasants**; proving ourselves against outside condemnations and condescends. For days, and/or weeks, at a time with only succinct consumption to realise our contentment with less resources. For only amidst however lengths of time, pragmatic to the limits of our physiology. Knowing that we shall set aside time and resources ahead - feasting like **Kings and Queens**. Brief yet so fruitful that we are able to re-sensitize our senses on things we've taken for granted. And repeat.

**This Book** seems boisterous thus far at exerting its own "**opinion**". But I wish to leave a note to my parents. However abuses remains embedded deep in my youth implicit memory - I'd never dismiss them as biological relativity, nonetheless. However be it as "**painful**" or pitiful their sentiments may be; out from reading this very passage, I've nevertheless aged to realise both paternalism and traditionalism are only scriptures, yet to be revised and advanced in synchronicity to Life's own incomprehensible chaos. **Time itself**. If "freedom" lead us to genuine authenticity, then why should paternalism inhibits evolution?

I caution to whoever yearns such a state of Self-Authenticity entirely from collectivist ideals of "**Religion**". There is absolutely nothing "**wrong**" with unconditional benevolences - for principal surrenders. But remaining happy within one's own composure amidst both involuntarily imposed - turbulences of Scarcity and what one can prepare, plan or withstand from it all towards Abundance - is arguably more peaceful, genuine and authentic; than submitting or handing-over one's own baptised name towards collectivist crusades of quantified "fellowship". Through binary good/evil damnations or condemnations. Let us consider that all scriptures and cultures are all "**scripted**". Hormones/Primal Admissions on the other hand? They cannot be scripted.

I yearn for an age whereby "Science" is an age of respect - for individual/s forming each as their own - Individual discoveries. All this seems "common sense" indeed, yet we remain involuntarily mistaken.

Live-It-Forward,

*AW™ / 14/09/20.*

This is <sup>tm</sup>

CONCEPT  
BRAND  
PROJECT  
OVERVIEW

TIFIED  
ER ENOUGH  
D SIX DAYS  
DY MEALS.

20 SERVINGS =

6.25 DAYS

75GRAMS/DAY

\$0.325 per serve

OLLUM QUIS QUID OCCURRIT VOLOR RE PELENNE  
IN PRATURE VOLUPTAS IN OPERATIUS AS ESSE  
MOSIANI. STATUERE OFFICIOR CARMINI PICOI DUT ED  
ILLORUM PERIPED QUI UTIMODI QUICL, ULTIMUS  
REPE VERIATUR ENGITEPLABO. RESEX EACUSSILLO-  
DO SET FIUT LARORIBUS QUI BUSTIONEM SET ON  
CONSECTIBERLIN EACQUAD PICTOTA TENQUAT LIT-  
BUS. CLIC.

MAX NO OF  
SERVES = 20

	PER SERVE (25G)	PER 100G
ENERGY	400	1600
TOTAL FAT	40G	160G
TOTAL CARBOHYDRATE	0G	0G
TOTAL SUGAR	0G	0G
TOTAL PROTEIN	0G	0G

QUANTITIES LISTED ABOVE ARE APPROXIMATE ONLY. PERCENTAGE  
DAILY INTAKES ARE BASED ON AN AVERAGE ADULT SET OF  
BONES. YOUR OWN SET INTAKES MAY VARY DEPENDING ON YOUR  
CALORIC ENERGY NEEDS.

INGREDIENTS: ORGANIC CERTIFIED  
100% FULL FAT COCONUT VIRGIN OIL, SALT.

is <sup>tm</sup> OUR ORGANIC,  
PRESSED BUTTER.  
OUGH FOR UP TO  
FULL DAYS OF  
RVINGS.

500G

PRODUCT OF AUSTRALIA



This is <sup>tm</sup> 100% RAW.  
100% COLD PRESSED.  
SUITABLE FOR ALL HIGH  
TEMPERATURE COOKING.

37.5 SERVINGS =

7 WEEKS (24 PER DAY)

21.4GRAMS/DAY

\$0.08 per serve



AUSTRALIAN  
CERTIFIED  
ORGANIC

MADE FROM FRESH COCONUTS, RAW AND COLD-  
PRESSED. NO ARTIFICIAL COLOURS, FLAVOURS  
OR PRESERVATIVES. PURE COCONUT TASTE AND  
AROMA. HIGH SOURCE OF CARBON CHAIN LIPIDIC  
ACID (ONE OF VERY FEW FAT SOURCES FOUND FOR  
ANTI-BACTERIAL AND IMMUNE BOOSTING PROPERTIES  
IDEAL FOR COOKING, BAKING, DESSERT MAKING,  
SMOOTHIES AND SKIN CARE.

MAX NO OF  
SERVES = 20

	PER SERVE (25G)	PER 100G
ENERGY	400	1600
TOTAL FAT	40G	160G
TOTAL CARBOHYDRATE	0G	0G
TOTAL SUGAR	0G	0G
TOTAL PROTEIN	0G	0G

QUANTITIES LISTED ABOVE ARE APPROXIMATE ONLY. PERCENTAGE  
DAILY INTAKES ARE BASED ON AN AVERAGE ADULT SET OF BONES. YOUR  
OWN SET INTAKES MAY VARY DEPENDING ON YOUR CALORIC ENERGY NEEDS.

100% MECHANICALLY EXTRACTED COCONUT OIL  
FROM ACTUAL SURFACE AND MEAT OF VIRGIN  
COCONUTS OF AUSTRALIA. THIS WILL SOLIDIFY AT  
LESS THAN ROOM TEMPERATURE.

This is <sup>tm</sup> OUR  
COCONUT OIL.  
NO HEXANE. NO  
SOLVENTS. 100%  
MECHANICALLY  
EXTRACTED.

500G

PRODUCT OF AUSTRALIA

# ABOUT THIS IS™ - CONCEPT INITIATIVE

**"THIS IS"™ (CIRCA 2015) IS A PORTFOLIO CONCEPTUAL SELF-BRANDING INITIATIVE DESIGN BY ANDREW W. (ANDREWWIGUNA.COM)**

This Is™ is a conceptual modular branding identity for the budget-conscious - everyday health & nutritional merchandise items as a concept competing against the comparatively "no frills", generic low-cost alternative labels in major supermarket chains and groceries stores. Designed to attract health conscious, lower to middle income groups who have already established a sound awareness in sound aspects of progressive nutritional aptitudes with sensible affordability as a hypothetical and addressed response to the increasingly difficult living conditions in Australia and (potentially / hypothetically) abroad globally.

This is™ - is a minimalist, typographic, modular brand that connects itself implicitly to the product it tries to promote. With no fancy “**product**” or “**brand names**” for superficial identification & motive/s. This approach challenges the conventions of today’s excess visually pretentious consumerism/s in the entirety of Foods and Advertising industries- in that they uphold the brand name with visualisation for capturing the majority of Visual Attraction Marketshare . Towards marketshare conquest and success - before the implicit messaging arrives to the consumer - of that the product and ingredients itself.

How This Is™ operates however; is completely the opposite / away from any means of standards of competitive normalcy. By simply naming the brand modularly as “**THIS IS**” - emphasizes the need for consumers to implicitly connects to the constituents behind each and every product as a biological need; within a humble and of humility connectedness - frame of mind.

If there is one distinct difference of “**Products**” portfolio however; is that this brand is not envisioned to see itself mass-producing “**ready-made**” or convenience frozen products. As



**This Author** expects nothing but more haphazardly demands on an exponential curve; should this cater towards the more (increasingly) excusable **“Time poor”** of its audience.

---

**“Food” should empirically STAY branded strictly as a nutrient. NEVER as “speculative resource” - to be exploited or traded as an array of likewise product(s).**

Do we need five or ten competing brands claiming to be certified **“Organic”**? Do we need five or ten brands of smart-phones claiming to have an altogether-“smart” functionality? To put things in retrospect - we buy grocery foods every day/week to and for implicitly one thing and one thing only - to nutritionally supports us to live from day to day. Why should things that implicitly sustains us have such **“competitions”** to further justify its existence?

All this being entirely both conceptual and fictional in nature such branding initiative certainly will NOT survive in the context if it were to lawfully comply within today's complexity of legislations, procedures and marketing laws. Add to that taxation, fiscal complexities of running franchised brand with sourcing/employing contractors and properties one after another. Perhaps in an entirely different System (whereby money; as an instrument of leverage is not implemented) - everything and all that we know about "**visual strategy**", branding and competitive marketing "**personalities**" as such - would be interpreted very, very differently if such competitive motive/s (towards monetary & profiteering goal/s) do not exist in the first place.

Despite these are nothing but primarily fictional concept project/s in nature (without governing accreditations nor institutionalised approval/s) it nonetheless bears a personal trademark such that it beckons mutual respect from those who have seen and witnessed the branding's true sampling of personality and its purpose to the world at large.

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## ACCOMPANYING PROJECT/S

This parent concept initiative consists of many accompanying projects. Firstly, is that during early exposure, this initiative recognised its reliance on publishing various "Motivational Quotations / Memes" posters. Spanning throughout almost two (2) years of development (2016-2017) across 40+ posters; these are one-off individual quotation sharing imploring lateral philosophy of motivations and concerns relative to the branding initiative. Spanning across themes of nutrition, sociology and economics. **Sadly once again, lack of viewerships have led to the shutdown of this sub-project.**

Next, being arguably most personal and exhaustive in writing form - is **This Author's** own Blog platform (nutritional-humility.me/blog). Curation of all personal, nutritive, scientific contemplations and auto-biographical / auto-journalistic accounts of nutritional science amidst structural implications.

Another ambitious sub-project are the MiniBooks series to extend the nuanced topics of Nutritional Science in conjunction to this main Book. The (first) as of July 2019 is on "**Dietary Advanced Glycation End Products**"; outlining its con-

cerns with readapted database of over 500+ food items from existing publicised literature. All manually recollated low to high d-AGES concentrations; which the original literature did not - to allow more pragmatic usability with more lateral thoughts included.

The last although not strictly seemingly that of a “**project**” is a social media gratuity model concept trademark; which **This Author** titled to as “**Live-It-Forward**” model. Our present marketing expectations funnels down to nothing more than an exchange of survivorship arithmetics. Likes counters and subscription followers. These are indeed virtuous displaying of charity as such as that one has “**repayed-it-forward**” unto others to uplift another’s down of luck. Or simply a grant of pity. However this is myopically dismissive, as much akin to the sentiment “**I hereby giving you my token of - a Like - and that is that**”. All appraisals of numerics are subject to Inflation (desensitisation) overtime. Biological interpretations of Gratitude however, are finitely sensitive.

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**This Author hence asserts a lateral convention is needed to re-sensitize our receivals of gratitude. Inspired from everyday reception that human beings do not simply thank each other for “nothing”. There is at least, a biological implication behind every gifting, or thanks-giving.**

That biological component is what **This Author** proposed to as the “**Live-It-Forward**” model. Exuding the biological highlighting one has had; as felt experiences. To be shared in concrete form of writing. This serves as the more authentic reasoning; behind such a feeling or reception of “**gratitude**” that “**Like/Dislike**” toggle may never provide.

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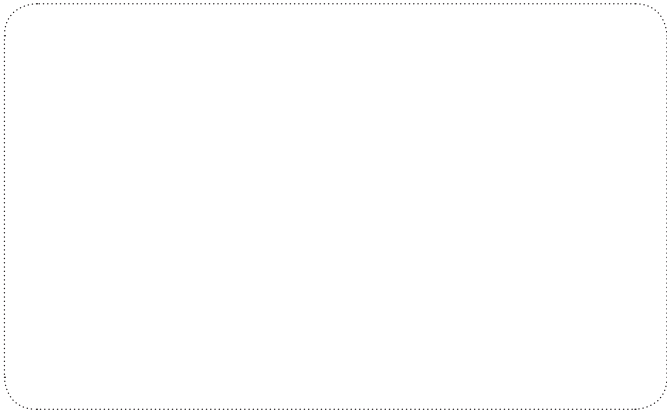
"SUN IS FOR EVERYONE.

BEACH - FOR A FEW."

*Buscape*

**"City Of God" / "Cidade De Deus"**

(2002)



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