

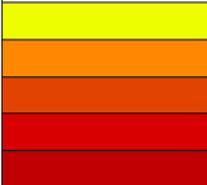
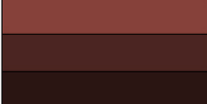


Health Factor Zone related to the GKI Ratio (Glucose: Ketone Ratio) This is for information (non-medical) purposes only.				
Health Factor Zone	Zone Reference Names	Blood Glucose Level mmol/L	Blood Ketone Level mmol/L	GKI Glucose/Ketone Ratio
1	Max Autophagy	3.9 to 1.7(*1)	2.6 to 6.5	1.5 to 0.4
2	Therapeutic	3.9 to 2.9	1.3 to 2.6	3.0 to 1.5
3	Healthy Target Range	5.2 to 3.9	0.9 to 1.3	6.0 to 3.0
4	Insulin Sensitive	5.3 to 5.1	0.6 to 0.9	9.0 to 6.0
5	Insulin Resistant	5.5 to 5.3	0.2 to 0.5	27 to 10
6	Pre-diabetic	6.9 to 5.6	0.2 to 0.4	35 to 14
7	Untreated Type 2 diabetic	> 6.9	< 0.3	70 to 23
7b	Type 3 diabetic (Alzheimer's)	> 6.4	< 0.3	> 21
8	Untreated Type 1 diabetic	27.8 to 7.0	< 0.1	280 to 70
1 - 4	LiCrON	5.2 to 3.3	0.9 to 5.5	9.0 to 0.6

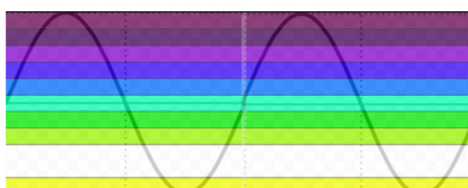
(*1) Blood glucose levels as low as 1.7mmol/L were consistently recorded during the last 8 months of the longest recorded healthy fast of 382 days.

The 2 infographics above and below **plus the supporting info**, should be combined to provide an accurate perspective of someone's physical, emotional and mental resilience and state of health & fitness.

The Be Super Combined Health Zone – Physical, Emotional & Mental			
Autonomic & Sub-conscious	Physical GKI Zones	Stress Zones	HRV (Heart Rate Variability)
	1 Maximum Autophagy		<p>This is an optimum health zone. Within this zone you may develop a stronger immune system to stress and optimise performance - providing you challenge yourself as much as possible – the ratio must be Relaxed 95%:5% Stress Increasing HRV is healthier!</p>
	2 Therapeutic Zone		
	3 Healthy Target Range		
	4 Insulin Sensitive		
Conscious Control Zone	PNS – Parasympathetic (Ventral Vagus) Nervous System SNS – Sympathetic (Fight or Flight) Nervous System		
	5 Insulin Resistant	Intermittent illness Chronic illness & stress	Food/drink dependant Seeks security & love Impatient Energy fluctuations. Lower HRV for age
	6 Pre-diabetic		
	7 Untreated Type 2 diabetic		
	7b Untreated Type 3 diabetic		
	8 Untreated Type 1 diabetic	Temporary physical collapse or mental shut down Conscious shut down Feeling dead, death feigning, paralysis	
	PNS – Dorsal Vagus (Safety Shut Down System) Short Term		

Brainwave entrainment via PEMF (Pulsed Electro Magnetic Field Therapy):

Delta (0.5 to 3.0 hz is zone 1 & 2); Theta (3.0 to 8.0 hz is zone 2); Alpha (8 to 12 hz is zone 3 to 5)
 Beta (12 to 23 hz is zone 3 & 4 - too much is zone 5 & 6), Gamma (38 to 42hz is zone 1)
 Sound Therapy via SSP works between zones 4 with Alpha waves and zone 2 with Theta waves.




High smooth HRV waves indicate a relaxed state of flow.
 You should be in zone 4 or above for 95% of the time.
 A little badness is VERY GOOD for you.
 So you should be in zone 5 for 5% of the time.
 You should try and avoid zones 5, 6, 7 & 8

The following opening statements may surprise you – they are simple but profound:

1. Good sleep and relaxation are more important to your survival, health and wellbeing than water and food!
2. Safety, trust and positive social interaction are more important to your growth, longevity and quality of life than the quality of your fluid and food!
3. The quality and variability of your hydration, nutrition and exercise determine how easily you find 'flow' or have dis-ease with life. (<https://youtu.be/4Mtw3vBQYOg>)

A little background information:

For you to survive and grow, your basic cells and genes need to keep replicating themselves and repairing the damage they get exposed to every day. This is done whilst your nervous system is in its relaxed PNS state (Parasympathetic Nervous System) – for many people, this relaxed PNS state is not accessed enough; and they spend too much time in their stressed SNS state (Sympathetic Nervous System) – this leads to chronic stress. The insights we provide guide you to spend most of your waking time in your PNS – good luck. 

When you are awake it is of benefit to spend 95% of the time in your PNS because this is the only state that promotes 'flow'. **Flow** is when you experience that all that you do is easy and fits in with your thoughts and feelings. This can be measured with a HRV (Heart Rate Variability) device. For example - during times when you are asleep or very relaxed (just after waking); your body, mind and emotions are all harmonised – subsequently, your HRV will be at its highest upon waking every day. The nearer you can get to this morning level throughout the day the better your level of health and fitness. Thus, HRV can be used as a tool to measure changes in your physiology caused by changes in your life. **We provide HRV testing, furthermore –**

[For those who undertake our Fasting Challenge these tests are included in your donation / sponsorship.](#)

HRV may be used as a tool alongside others such as PEMF entrainment devices or SSP therapy. The heart and brain waves have been shown to become coherent (mirror one another). Subsequently, a higher HRV (a more relaxed state, often with a lower heart rate) will lead to a lower brain frequency. Similarly, when the brain is entrained to a lower frequency, the heart rate has also been found to decrease and the HRV rise. **We provide heart and brain entrainment!**

In relation to the Health Zone Chart above; the following frequencies apply:

- **Delta (0.5hz to 3.0hz) is zone 1 & 2**
- **Theta (3.0hz to 8.0hz) is zone 2**
- **Alpha (8hz to 12hz) is zone 3 to 5)**
- **Beta (12hz to 23hz) is zone 3 & 4) – but too much time at this frequency is zone 5 & 6)** and this time is variable with each individual (those with greater HRV will be able to spend more time in Beta and still remain in their PNS).
- **Gamma (38hz to 42hz) is zone 1**

Sound therapy via SSP works between **zones 4 with Alpha waves and zones 2 with Theta waves.**

GKI Testing:

In addition to the above testing and provision, we also provide GKI testing for those who can visit us in Rochdale, England. We provide blood glucose and blood ketone level tests to find your GKI ratio.

[For those who undertake our Fasting Challenge these tests are included in your donation / sponsorship.](#)

You can purchase your own devices online together with additional glucose and ketone testing strips etc.

Timings with regard to sleep, rest, activity, exercise, fasting, autophagy, ketones and eating:

The timing of sleep and rest and the timing of what we do whilst awake is as important as how we do it!

Activating the PNS for sleep and upon waking:

[Insights about sleep will be of benefit for you.](#) This is particularly interesting for anyone watching TV or accessing their phone late at night or in bed – **IT IS NOT GOOD FOR YOU – NEITHER IS EATING OR DRINKING SUGAR OR ALCOHOL AT BEDTIME (THEY ARE ALL JUST AS BAD FOR YOU)!**

It used to be thought that humans could not influence the 'autonomic nervous system' (ANS), however, [certain breathing and mind techniques](#) and [controlled breathing in conjunction with very cold-water immersion or showers and mind focus](#) can influence changes from a stressful (SNS) state to a calm (PNS) state. [Full details within our Wellbeing Package.](#)

The following insights focus on activation of the PNS using fasting!

As regards the Health Zones (indicated above), the PNS is predominantly activated within zones 4 to 1; in zones 5 to 8 you will predominantly be in your SNS stress state (Sympathetic Nervous System). Subsequently, we want to clarify that **fasting**, which promotes resting of the digestive system, helps trigger the PNS.

After an evening meal and drink (ideally no later than 1900 hours); your body will then not take in any more food until the following day (until you sleep and wake up the following day). At 0700 in the morning, you will have 'fasted for 12 hours': **THE FOLLOWING TIMINGS ARE APPROXIMATE AND VARY FOR EACH PERSON.**

Every 60 to 90mins after waking you would benefit from a 10minute SCP (Schedule Cycle of Positivity). If this includes [4mins of HIIT/Tabatta and 6 mins of PNS breathing](#) it will help keep you in the PNS state longer! [Full details within our Wellbeing Package.](#) **More importantly, this practice will help you to learn how to breathe normally (with a slightly longer out-breath) - as opposed to constantly breathing in a way that activates your SNS (which is what most people do).**

After 12 hours of fasting your body will start to produce GH (Growth Hormone) – this may lead to an early morning rise in natural blood glucose levels and a rise in cortisol (you are naturally primed to enter a 30 min to 60min period of SNS activation – your Sympathetic Nervous System will kick in allowing you to 'get out of bed' and start thinking etc). GH however, continues to be produced after this initial burst and is the main fat burning and healing hormone - you may want to 'keep this activated as long as possible'. Exercise, especially, HIIT, further activates GH and you would benefit from doing this every morning in a fasted state – or for 4mins every 60 to 90 mins (you could encourage your school, college or work colleagues to join you!?!).

If you were to eat breakfast or drink a protein or energy shake, then this would STOP the fasting benefits and STOP GH and you would get no benefits from it - so why stop? (more on eating later).

If you were to drink only water or black coffee then the benefits of GH would continue, moreover the benefits can increase considerably if you continue fasting a little longer. So, lets stay with it . . .

After 16 hours of fasting (approx. 11.00am) a particular catabolic healing process called autophagy starts. It initially starts by recycling old and damaged protein cells – such as those caused by [AGE \(Advanced Glycation End Products\)](#). It also clears amyloid proteins from the brain which then helps you think more clearly. Autophagy starts replacing old cellular material that causes inflammation and oxidative stress with new and

rejuvenated cells by converting the worn-out cells into energy. It also recycles fat and toxins stored in fat, into energy – this starts a fat burning energy system called ketogenesis, that produces ketones!

From 18 to 24 hours of fasting your body will be running on ketones (fat burning system) instead of glucose (fat saving system) – and more importantly, **ketones are not just an energy source** – they are a source of healing and regeneration – they are a preferred energy source for your body and brain!

Fasting (due to its zero food intake) triggers ketogenesis after about 16 hours, however, if you were to stop fasting but eat less than 20g of carbs and consume 'fat', this also triggers the production of more ketones.

Eating will stop autophagy (unless the carbs are zero and the protein is below 20g) – it is possible to extend autophagy whilst eating - AND THIS MAY HAVE SIGNIFICANT BENEFITS. [Full details within our Wellbeing Package.](#)

Autophagy induced by fasting overcomes man-made toxins (this is a serious issue) – and includes:

- Cigarette Smoke (benzene, lead, arsenic, acetone)
- Auto Exhaust (benzene, carbon monoxide, formaldehyde)
- VOC's or Volatile Organic Compounds (paints, strippers, adhesives, cleaning products)
- Mercury - heavy metal, poison to your nervous system (fish, some vaccines, pesticides on produce, emitted by coal plants, trash incinerators)
- Cadmium (batteries, plastics, insecticides)
- Lead (paint, dust, soil, water, old pipes, older homes built before 1978)
- Aluminum (anti-perspirants, some cookware, antacids, skin creams, dandruff shampoo)
- Excitotoxins (food additives that over-stimulate the brain, Aspartame, saccharin, hydrolyzed vegetable protein in processed foods/frozen dinners, MSG or Mono-Sodium Glutamate)
- Alcohol (overindulgence depletes protective glutathione and can lead to liver disease)
- Pesticides and Herbicides (used in growing food and in yard care)
- Carcinogens (Dioxin, radiation, asbestos, vinyl chloride to make plastics)
- Formaldehyde (preservative, used in toners, paints, building materials)
- Chlorine and Chloroform (released in a hot shower)
- Acetaminophen (Non-Aspirin Pain reliever, reduces levels of protective antioxidant glutathione)
- Household Cleaners (acetone, benzenes)
- Radiation (microwave, X-Rays, Ultraviolet Radiation from sunlight)
- EMF's - Electro Magnetic Fields that damage nerve cells (cell phones, electric blankets, computers, TV screens)
- Perc or Perchloro-ethane (used as a solvent in dry cleaning)
- Acetone (automobile exhaust, industrial emissions)
- Aflatoxin (from moldy nuts)
- Aromatic hydrocarbons (fuel, solvents)
- Nitrosamines (smoked and cured foods, hot dogs, bologna, etc.)
- Benzopyrenes (fuel exhaust, barbecued foods)
- PFC's - Perfluorinated Chemicals (nonstick cookware, non-stain carpets)

Man-made toxins, make it more difficult to reduce blood glucose levels. This is because they cause so much stress and trigger the SNS ([which inhibits ketones and promotes glucose and insulin](#)). Amazingly, prolonged autophagy (as opposed to ketones without autophagy), will help remove man made toxins; however, in doing so; they may be released from the adipose fat and enter the blood system, causing unpleasant feelings – this will pass once the toxins have been removed.

Autophagy and a ketogenic diet are both beneficial and similar – [the key difference](#) is autophagy is focused

more on repair and rejuvenation (no growth); whereas a keto diet helps allows you to grow muscle and increase new cell growth.

Autophagy enhances the immune system against infections such as COVID-19, by eliminating intracellular pathogens. Ketones totally remove triglycerides and lowers LDL cholesterol. Autophagy and ketones significantly improve cognitive function, brain structure and neuroplasticity. This is ideal for people seeking to overcome strokes and other degenerative problems

Autophagy also protects stability of DNA and healthy gene regeneration.

Prolonged autophagy (zone 1) selectively removes specific damaged proteins that lead to [Parkinson's disease](#) and [Alzheimer's](#). It also regulates tumour suppressive genes, especially in [cancers](#). Prolonged autophagy helps overcome neurodegeneration, cardiomyopathy, diabetes, liver disease, autoimmune disease and infections; preventing damage to healthy tissues and organs (known as necrosis).

Is there a maximum time period for being in autophagy?

If you are seeking to overcome a serious illness, then the longer you are in autophagy the greater the benefits.

Exercise, strength and muscle growth as regards health:

Exercise enhances autophagy and this can be achieved during carbohydrate restriction or exercising in a fasted state. By tapping into autophagy during exercise the food you eat later will be used primarily for lean muscle growth, not fat storage nor accelerated aging. HIIT and [Tabata training](#) is excellent in a morning, whilst strength training is better just before eating later in the day.

[According to research](#) – In elderly people, long term strength training promotes '*regenerative autophagy*' (RA).

Your entire body and all cells are made of protein, which requires the presence of anabolic precursors and building blocks. That's why you need mTOR and amino acids for existence, DNA repair and growth.

If you are seeking to grow muscle, then autophagy should be limited to 18 to 24 hour periods. This is because autophagy deactivates mTOR (an enzyme protein kinase) needed for muscle growth. The problem with muscle recovery growth and **chronic mTOR** is that it promotes cancer tumours, antiaging, insulin resistance and chronic stress (this explains why so many body builders become seriously ill).

For a body builder or anyone concerned with strength, then eating after an evening strength training session to reactivate mTOR would probably be better for you; at the same time, eating certain foods before exercise may also be of benefit – it can be balanced! [Full details within our Wellbeing Package.](#)

Extensive training (aerobic or anaerobic) will stress out the body. If this stress is done without the body being able to heal and replace damaged cells with healthy components, and remove dead cells efficiently, then toxins will build up and tissue damage will accrue – there needs to be a balance between activation of mTOR and autophagy. It is helpful to know that **mTOR signalling is not reliant on insulin stimulation (carbs are not needed for muscle growth) – moreover, ketones are mTOR limiting.**

Having a lean and or a muscular body or being capable of performing at a high level in sport does not make you any healthier "if you have chronic glucose intake" – looking great and being fit will not induce optimal health. **It is most beneficial to be fit strong and muscular AND TO BE HEALTHY – as this also leads to improved memory and a creative mind - [Full details within our Wellbeing Package.](#)**

Thus, the perfect relationship is to activate mTOR after strength training to maximise 'lean muscle strength'. This activation needs to be over as short a period as possible, to induce ketone health and autophagy benefits. [More on mTOR here.](#)

- Lean muscle gain using ketones for energy is healthier than using glucose and insulin.
- Your brain functions better using ketones for energy rather than glucose.
- Your body experiences less damage whilst growing using ketones for energy than glucose.

- When your body needs glucose for energy, such as during anaerobic exercise, it will utilise its naturally produced glycogen stores.
- Ketones produce GABA ([Gaba is very significant – more info here](#)) that helps calm your nervous system and promote PNS – it also stimulates GH (Growth Hormone) - perfect for body builders and those seeking to improve their mental agility – [prolonged fasted ketosis](#) can **raise GH by over 1250% - WOW!!**
- A little extra glucose some of the time is good for hormesis (meaning a little of what is bad for you can be very good for you in the long term). The ratio should be 95% of the time in Health Zones 1 to 4; and 5% of the time in Health Zone 5. (No time should be spent in zones 6 to 10).

After 18 to 24 hours, you have a choice to eat or continue fasting:

Let us first consider eating – with the normal (carb based) balance of foods:

Glucose intake will trigger insulin and this will STOP fat from being used for energy – insulin triggers fat storage (so excess glucose will also be stored as fat). Insulin reduces GABA, which may lead to ADHD, anger problems or mood swings.

Salads will not trigger insulin – so you can eat as much salad as you want – whoppeeee (sorry – lol).

Glucose intake above 20g to 50g of carbs leads to blood glucose levels > 5.3mmol/L and limits blood ketones levels to under 0.5mmol/L (putting you in zone 5). Such levels should only be experienced after an occasional evening meal (and preferably less than once per week); furthermore, this should be balanced after waking with some HIIT to burn off the excess glucose.

This is aimed at 'living in Health Zones 4 to 1, rather than 5 to 8'.

Chronic/daily glucose intake will more than likely keep your body stressed and keep you in your SNS most of the time. This means that the food and drink you eat can trigger SNS symptoms such as:

Racing heart, sweating, shaking, throat constriction, breathing changes, blurred vision, nausea, irritations, worry, poor concentration, blank mind, a focus on the negative and sleep problems – it may also lead to problems with social interaction, stress, anxiety, trauma and depression.

Chronic (daily) glucose intake also leads to insulin resistance, AGES, free radicals, inflammation, oxidation, premature aging, paralysis and slow death.

Some individuals have a greater capacity for holding adipose tissue (fat) than others (once your body exceeds its own personal adipose limit, it transfers fat to the organs and into the blood).

N.B. Calorie restriction on its own is not healthy and cutting calories, compared to fasting, is not only different but a potential disaster – [more here](#).

Eating with LiCrON permits a more varied eating lifestyle than following a strict keto approach (because we have identified certain carbs and foods, such as dark chocolate, that can be eaten and keep you in the top health zones. The key to what you eat and drink is to initially measure your blood glucose and ketone levels to ensure the GKI Ratio is in the zones 4 to 1 – otherwise you are in danger of becoming insulin resistant and subject to all the associated illness and diseases etc. Once you know your levels with your normal food intake, then you do not have to test very day.

When to eat:

Bearing in mind the benefits of autophagy and ketones for health and their link to the Healthy Zones 4 to 1; it makes sense to maximise their benefits. So let us first consider when to eat to maximise autophagy and ketone benefits:

Eating one meal a day (OMAD) will allow you to benefit from autophagy and the production of ketones. OMAD normally means you are eating after 23 hours of fasting. Doing this on a regular daily basis would mean you are getting repeated benefits of autophagy and ketones every day – so your body would have ongoing and continued benefits.

If you followed LiCrON or a strict keto eating approach, then you would constantly be using ketones and benefit all the time. Ketones via more GABA, provide mood enhancement and improved social interaction, creativity and learning.

Undertaking longer 'prolonged fasting' of 3 days, perhaps once a month, would provide you with greater benefits; [a fasting regime combined with an exercise regime would be highly beneficial if done correctly.](#)

When to continue fasting:

If you want to prevent an illness or already have an illness (especially an inflammatory problem such as arthritis – or even cancer); then a prolonged fast of perhaps 14 to 40 days or longer may have life changing benefits.

Fasting for longer than 24 hours will allow you to benefit from both ketones and autophagy:

For many people the burning of adipose fat will have significant health problems. Even those who are lean (including athletes and body builders) would benefit from prolonged fasting and further fat loss – even the loss of a little muscle is of benefit as the recycled proteins will be used to provide energy to allow autophagy to 'reset your health' – it takes longer to turn a big ship and put it back on course – give your body time to reset itself – do not be afraid of a little weight loss (including muscle) because you can easily put it back on; whereas correcting bad health and slow death is a priority!

After 24 hours of fasting all inflammation is improved significantly – especially gut healing and IBS. More antioxidants are produced at this stage. After 24 hours BDNF (Brain Derived Growth Factor) increases by as much as 1200%, which stimulates more brain capacity and function.

Muscle wastage during this period will not happen.

Such an approach even for body builders may help overcome [endothelial dysfunction.](#)

After 72 hours of fasting stem cell production increases and is used wherever needed in the body and brain – this is great for antiaging. Mitochondria growth and efficiency is now improved and after 72 hours tumour cells are diminished.

Fasting beyond 72 hours may lead to nutrition deficiency (which may not be a problem). If you have an illness, and overcoming the problems it causes is a priority in your life, then considering longer fasts may be beneficial for you. Consultation or insights from [fasting clinics](#) would be reassuring for you.

If you simply seek to prevent illness and disease then perhaps a longer fast of 14 to 30 days may be a consideration once a year.

My own fasting regime is linked to my fitness and strength training regime and my social interaction regime; based on a desire to be as healthy and fit and strong as possible for as long as possible. [More details here.](#)

Health Factor Zone	Benefits or Problems
5 Insulin Resistant	Please watch this YouTube video from Sten Ekberg – we think he is very informative.
6 Pre-diabetic	Please watch this YouTube video from Sten Ekberg – we think he is very informative.
7 Untreated Type 2 diabetes	Please watch this YouTube video from Sten Ekberg – we think he is very informative.
7b Type 3 diabetic	Untreated Type 3 diabetes (Alzheimer's disease) – (https://www.diabetes.org.uk/diabetes-the-basics/type-3c-diabetes)
8 Untreated Type 1 diabetic	Research info on dementia - https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3955123/

This information and all links are provided for information only and are not intended to replace anything you may currently do. I personally do everything that is indicated from above and I test and record my GKI and HRV results for everyone to see.

Thank you for reading this – good luck on your journey.

[Please consider signing up for one of our Wellbeing Packages.](#)

All the best,
Marcus Pearson