

# Preventing chronic diseases with the Gbiota system

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## Preface

The preface is to prepare you for what is coming. At first sight Gbiota beds are just for the amateur gardener - an extension of Wicking Beds but aimed at improving gut biology, the supply of minerals and phytonutrients and being more suitable for larger scales production. That may be true but is only a fraction of my vision.

On a time scale measure in millions of year's humans and pre-humans roamed the earth as hunter gatherers living of wild plants and animals. Some - not many - people lived to a ripe old age but most died young often from violence.

We evolved a complex web of hormones to tell us when we hungry and needed to eat. With the wild foods and the virgin soils there was a balance between food for energy and food for refurbishing our bodies.

Then humans created the biggest innovation of all time - we created agriculture. With a more stable food supply populations grew and we started to live in close proximity in villages, towns and cities. Death from violence and starvation dropped dramatically but infectious diseases meant many people still died before old age.

But medical science such as antibiotics and engineering like sewage and clean water meant that people began to live longer - most reaching old age and population increased exponentially.

Then along came another technical revolution - the industrialisation of agriculture and our food system. We produced more than enough food to meet the energy needs of the greatly increased population.

But while high in energy it lacked lacking the essential components - the minerals, the phytonutrients and the biology to refurbish our bodies but most importantly it failed to refurbish our gut biology. Gut biology does many physical jobs but above all it couples with our head brain to create an intelligent system which controls our body.

There is a fundamental difference between what we should eat and what our bodies want to eat. What our bodies want to eat is the ultimate winner.

This has led to an upsurge in chronic or non-infectious diseases like heart attacks and diabetes. The average age of death is now declining.

The Gbiota system aims to increase food for refurbishing our gut biology and our bodies - but that by itself is not enough. We need to learn how to train our intelligence so we automatically balance our food intake.

Modern diets have become high mechanistic - we need to train our brains to read our internal fuel gauge so we are eating the right amount of fuel and refurbishing foods.

## Preventing chronic diseases by changing our food

The aim of the Gbiota project is to prevent chronic or non-infectious diseases like diabetes, heart attacks, strokes, dementia etc. by creating a food revolution.

These diseases are now the largest cause of death and discomfort. Heart attacks may lead to a quick and young death and but diabetes imposes a terrible financial and personal strain on the individual and the community.



It may take some twenty years before you actually die from a secondary effect of diabetes but in the mean time they can keep on chopping bits of you until you end up a blind, limbless torso like the Black Knight in Monty Pythons Holy Grail.

There is no issue - these chronic diseases are among the greatest challenges humanity faces. We need to do more than search for cures - we need to prevent them occurring in the first place

## Learning about epidemics



Medical action alone is not enough to stop epidemics. We learned this from the cholera epidemic of 1849 in London. There was no way that the epidemic could be halted by curing the already sick - the root cause had to be found and eliminated.

The current paradigm or conventional wisdom was that cholera was caused by bad air but Dr. John Snow correctly diagnosed it was contamination of the water supply by sewage.



Quick action, by shutting down the pump halted the epidemic - now this is a popular tourist attraction. It led to the construction of the world largest sewage system which allowed London to become the most important city in the world in Victorian times.

On day 1 the sewers were a popular tourist attraction but tourists rapidly decline from day 2.

It is the same with diabetes - of course we have to help people who already have diabetes - but that won't stop the epidemic - we have to get to the root cause of diabetes and fix it. I know physical activity, stress, sleep etc. all impact diabetes but prevention is all about food.

## Daunting scale 1,500,000,000 people

Humans are not very good at comprehending really big numbers. Around the world there are some half a billion diagnosed diabetics. That's the population of some twenty countries the size of Australia. How many doctors are there in Australia? How many really understand diabetes? The health services simply cannot provide proper care to those that are officially diagnosed - let alone those at risk.



But the estimated number of people who have diabetes but are undiagnosed, those who have pre-diabetes, and those that are overweight and likely to get diabetes is larger than the population of China, or India, Europe or Africa.

We do have some very good medical research facilities here in Australia with all that flash equipment needed to measure fat levels, mineral deficiencies etc. But if all those people who were suspected of being prone to diabetes were to line up to be tested to see if they were at risk the queue would stretch from Sydney to Adelaide and most would have died before diagnosis.



In looking to prevent diabetes we really need a solution which people can do for themselves without incurring the cost and use of resources of full medical treatment. That should be reserved for people who are already diagnosed with diabetes. The medical profession is much better at cure than prevention.

## Changing how we die



In the past infectious diseases were the major causes of death. Coupled with accidents and violence only a few people lived to a ripe old age.

The younger we were the more prone to die we were. Mortality among babies was horrific condemning women to continuous child production (tribes used to raid other tribes to capture their women to make more babies - don't try and con me that paleo times were great) while a significant proportion of teen agers and young adults never made it to maturity - let alone old age.



The only good news was that if you were lucky enough to survive these early years then you may live to a ripe old age.

Modern science and hygiene have dramatically changed this - even beds with legs have saved countless lives - as have sewers and clean water.



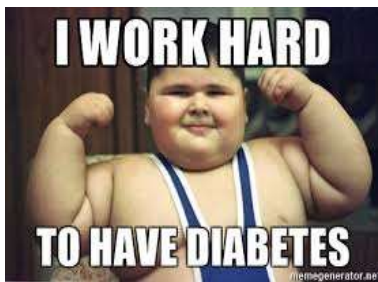
Average life expectancy has increased by some thirty years with most people expecting to reach a ripe old age but we are now losing the battle and the average age at death is declining. We have to be careful with averages; chronic diseases mean that more people are dying younger while those that are lucky enough to avoid these chronic diseases are living longer than ever.

## Diabetes a proxy



Chronic diseases are one of the major challenges facing humanity. They cause premature deaths and terrible suffering and put immense strain on our health services to the point where they don't really function properly.

Bad as that is - what is really scary is the rapid rate of increase particularly among the young - if we don't take avoiding action we will really be in deep you know what.



I am going to cheat a little and use diabetes as a proxy for all chronic diseases for the good reason that I have extensively studied diabetes and it does provide a simple way of indicating progress by measuring blood sugars, tummy circumference and weight.

I know that the increase in diabetes come from the change in our food system - we are slowly decimating our soils reducing the available minerals and the soil life which leads to a healthy gut.

## Prevention is better than cure - Changing the global food system



I greatly respect the research into finding cures for these chronic diseases - like the current research on insulin resistance which hopefully will lead to new pills.

But prevention is better than cure

We are turning into pill poppers so despite the difficulties we should aim for prevention. But the root cause of these chronic diseases is our food which means changing our food industry.

But there is a small issue with prevention. If I have tooth ache - go to the dentist and come out without toothache - I know for sure I have been cured.





I make no claims to moderation - I love food - I go to China frequently where each region has their own speciality food which tastes absolutely delicious - and I pig out. I don't have diabetes - does that mean I can recommend that life style to others to prevent diabetes. I would have to attend a TITA course for that (Trump Internet Academy of Truth).



But a little message from TITA's. Every day I go out and dust my property with 'lion powder' which the suppliers claim will keep my property free of lions.

They claim that 49,765 people were killed by Lions (and other animals) in Australia last year. So I paid my \$15 for a packet of lion powder not realising that the number of people killed by lions is 0 and the number of people killed by other humans is 49,763.

My neighbour questioned me about this saying there are no lions in Australia. Don't worry I replied - I have had this stuff analysed and it is just plain flour - totally useless.

## The realities of food

If just one grossly wealthy person arrived on my doorstep and wanted advice on how to eat food that would keep his family healthy I could easily help.



My advice - go and buy a rural estate - with soil preferably volcanic, still in a pristine state, and a good stream. Eat good food - a wide range of fruit and vegetables, including herbs, grown using organic principles, without herbicides or pesticides - catch fresh trout from your stream and maybe supplement with wild caught sea food - eat free roaming wild life - preferably deer but kangaroo and even rabbits or wild pigs are still healthy.

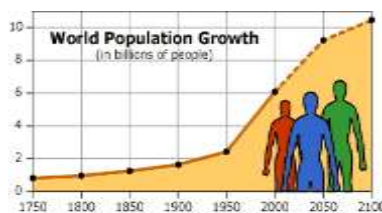
You may need a bevy of gardeners and game keepers but keep yourself active and the odds are you will live a long and healthy life.



This would give a diet similar (but more reliable) to our hunter gatherer ancestors. I am not a great enthusiast for the paleo fashion but I have to accept that their food (when they got it) was pretty healthy.

But here is the snag - for every one of our hunter gather predecessors there is now some 10,000 people.

Anthropologists who study these ancient people think these hunter gathers would stay in one place until they had exhausted the local land or there were some serious weather events - when they would move on to the next place.



Of course we only have limited information on what life was like but it appears they had a sort of circuit - run on a slash and burn system - which allowed plenty of time for the soil and vegetation to recover.

This was a great system when the global population was under a million people but not viable with seven billion people who want cars, TV, smart phones, plentiful food with a barbeque on Sundays.



Our modern farming practices may be productive when measures by quantity but are low in quality with deficiencies in minerals, phytonutrients, vitamins and the basic essentials for good gut bacteria.

That's our problem - how do we provide a healthy diet for seven billion people (and growing) who also want all the benefits of modern living which involves large areas of land being covered with asphalt and concrete to form our modern cities?

## No absolute shortage of food

Despite what we may be told there is no absolute shortage of food. In the past fifty years global population has doubled but food production has trebled - we also waste an incredible 30% of food produced. Simply stunning!



True many people are starving or undernourished but that is a political and equity issue not because there is no food.

But the problem is that the food that most people eat is deficient in essential minerals and far more important fails to support a healthy gut biology.

We may think we simply have to change the global food system so we can all enjoy a healthy diet and these chronic diseases will disappear.

Changing the global food system may sound totally daunting (particularly as it may mean conflict with the established and financially powerful food industry). Difficult as that is it is still not enough.

People actually have to want to eat the healthy food.

It is no good simply telling people to eat healthy - we have to programme our subconscious brains so we want to eat healthy (as I will explain later).



Our bodies are not dumb hunks of flesh - we have intelligence so our bodies (or guts) quickly detect they are missing some critical ingredients and send out messages for us to eat more. But simply eating more of the same deficient food - as we do now - is the cause of the problem.

People actually have to want to eat a healthy diet - of course logically we would all say we want to eat a healthy diet but our bodies also have to want to eat a healthy diet - that's a second monster hurdle to overcome.

## Let's look at the problems we have to solve.

We have to work out

- what a healthy diet actually is (no that's not solved).
- how to get the world's population to actually want to eat that diet
- how to change the world's food production system to produce the required food when the world's largest companies - with multi-billion dollar advertising budgets are going to fight us all the way
- The logistics to make this all happen.

Let's take it step at a time and work out what a healthy diet is.

## What is a healthy diet?



But what actually is a healthy diet - obviously we need to talk to a dietitian.

But what is obvious may not be correct - just look at the range of opinions from professional diet experts. Fat is bad, carbs are bad, sugar is bad, eat more veggies (which are carbs) eat more fruit (which contain fructose) - it is a nightmare.

For interest you may like to spend a happy couple of days on YouTube searching 'low carbs down under' specifically Low Carb Breckenridge 2017.



This will give a pretty good idea of the range of opinions and our level of understanding.

It is well worth while looking at Nina Teicholz video on how the meat, poultry, egg and milk industries with a high fat stance and the processed food industry with a high carb stance have been exploiting the most devious of campaigns to push their particular barrow.

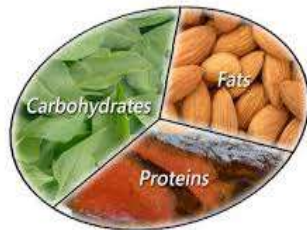
She is the subject of continuous abuse yet she still puts on a fun lecture - how does she do it?



Whatever we think about these mega corporation which dominate the world's food supply we cannot ignore them - possibly if we can devise the logistics to make it profitable for them they may become allies rather than enemies.

## Classifying food types

We need to change our food.



We have a system of classifying foods as carbohydrates, protein and fats with what may be a forth class for trace needs - minerals, vitamins, phytonutrients and biology - but I think this classification is not particularly helpful.

It may be more helpful to classify food by what it does for us rather than its chemistry, for example one part of our food supplies us with fuel and the second part supplies that concoction materials needed to refurbish

our bodies.



My image is like a car - it needs fuel to propel it - but it also needs a range of other inputs, oil, grease, coolants, batteries, brake pads and replacement for things as they wear out.

Our bodies are a bit smarter than a car as we can turn almost anything we eat into fuel but basically the easiest fuel is fast acting carbohydrates which the food industry produces in abundance.



But our modern food lacks those multitudes of proteins, minerals, phytonutrients, vitamins etc. needed to continuously refurbish the bits of our bodies as they wear out or are consumed. Almost every bit of our bodies (including our gut biome) are replaced on a schedule which is quite short - days, weeks or months depending on the bit.



We can simply consider food as made up of two parts, simple fuel to provide us with energy and that wide range of foods which are used to refurbishing our bodies.

The food industry is very good at supplying us with the basic fuel but poor in supplying the refurbishing foods.





This is a bit like driving in a car and seeing the oil light come on, pulling into a service station and filling the tank with more fuel and driving on.

Then the overheating light comes on and again pulling into the next service station and putting yet more fuel in.

The again with the brake fluid etc. and so it goes on.



This is analogous to our food, our bodies are smart - it can detect that we are missing a particular type of food. Hey guys we are running low on selenium but instead of emailing us 'eat an onion' it just says 'eat'.

So we simply keep on eating more fuel when what we need is protein, vitamins or whatever from that long list of essential materials for refurbishing.

Our bodies are intelligent - they know that something is missing from our diet and sends out hunger signals (ghrelin). But our bodies are not so good at telling us what foods to go and eat.

## Failure in the design department



There are a whole bunch of hormones which control our feeling of hunger or fullness made in different parts of the body. Unfortunately they goofed a bit in the design department in that these hormones don't tell us what we need to eat (or drink).



This was brought home to me dramatically when I moved to Queensland. In the middle of the afternoon I would go into the kitchen with a raving thirst, drinks tonnes of water, tea and anything else but it did not good. I felt like a pregnant women running around with uncontrollable cravings. I tried everything from chocolate biscuits, crisps anything in the cupboard.



But the locals soon filled me in saying I was short of salts and pointed me to a mix of salts I could buy locally which immediately solved the problem.

You would have thought the design department would have equipped us with a little Wi-Fi chip so our tummies could send a text message to our phones telling us we needed this or that food.

This was not a problem when we were evolving as our food was low in fuel (carbohydrates) and high in the refurbishing foods.

Modern food is full of fuel (carbohydrates) so we end up eating far more fuel than we should which makes our bodies pump out insulin and we become insulin resistant or diabetic.

The Gbiota beds were developed to provide these refurbishing foods - but that is not enough - we need to look at why we eat the food we do and how to change our diets



In a well-designed body we would come equipped with proper instrumentation saying what we should be eating. Instead we come with a crude warning light saying full or empty.

In a nut shell that it the root cause of the diabetic epidemic.

Think about it - globally some half a billion people have diabetes; it cost Governments trillions of dollars, all because the design department forgot a 15cent chip. I want my money back.

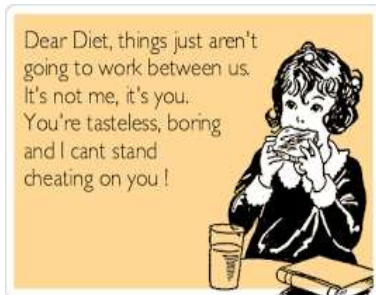
When I start my car the dash looks like a NASA space launch as it goes through and checks every conceivable function - why can't humans be like this?

Hopefully they will have fixed this when Mk 11 humans are released - whether this is human modified version with old humans having a human modified chip - or a new version evolved from natural selection (unless of course humans are replaced by a super intelligent cockroach).



But fortunately there is an aftermarket accessory which we can all use to rectify this design fault. That's coming soon.

## The diet battle



As we do not have this automated system built into our bodies to tell us what we need to eat we have come to rely on dietitians to tell us what foods and how much we should be eating

There is controversy among the food experts on what it the best diet and I am not going to get into this controversy because all these diets are missing the most fundamental of points -



they are looking on the human body as just a hunk of meat - just some dumb mechanistic creature and all they have to do is tell us what we should be eating and we will all go away and do what we are told.

Some wise man said once said that enduring characteristic of humans is our ability to cling to a course of action when it is proven not to work.

We have been fighting diabetes for over fifty years and it continuous to increase exponentially - time for a rethink.

## Want (to eat) rather than should



It is no good simply telling us what we 'should' be eating the question is how to get our bodies to want to eat the foods that will make us healthy.

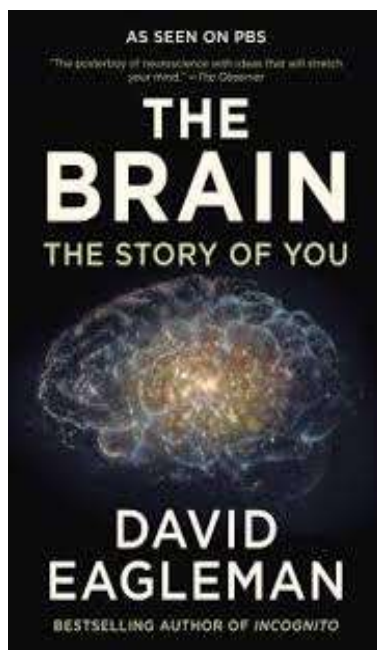
We are not dumb blobs of flesh and blood - we have a sophisticated control system which manages our bodies. Gary Taubes hit the nail on the head making the totally startling prediction that people don't get fat because they eat too much. Rather our bodies decide we need to put on fat (for some reason such as winter is coming) so to make up the deficit caused by storing fat our guts send out hormones so we simply eat more.

This is a real game changer but unfortunately Garry didn't tell us how the body decides whether we need to put on more (or less) fat. Neither did he explain the mechanism our bodies use to decide what to do with

the food we eat.

So we need to move onto the next question.

## Making us want to eat food that will make us healthy



Maybe we need the help of a psychologist - or maybe having been part of the primitive computer revolution I can help.

So in our explanation of what is a good diet we have to walk passed the doors to the dietitians, doctors, business experts and knock on the door of the psychologist.

If we are lucky she will say instead of paying me \$150 per hour - go and read

**The brain: the story of you by David Eagleman.**

Good advice!

I am not a psychologist but I did learn computer programming in the days of punched cards (yes I am really that old). Now my granddaughter makes me look a complete idiot on mobile phones - I can't even find a

proper on/off button - normal off is not off at all it is snoop mode (you can always take the battery out - that fixes them - stopping all those sales calls and pings in the middle of the night).





Those early computers were a bit like working on a vintage car - you could actually understand how they worked - believe me in those early days you had to get right down into the guts of the machine learning how to locate addresses and read the contents. And work out why - for no apparent reason - they would change values (usually overwriting because of faulty coding).

It turns out that the way our brains work have much in common with those simplistic computers.

## Human intelligence



Early computers - which are easy to understand - were based on two simple valves - diodes and triodes. Diodes were simply data storage - on or off. Triodes are much more fun and can be either on or off depending on the state of the middle electrode.

This allows that great statement which is at the heart of all computer programs.

If (something) then (do something) else (do something else).

If Sunday then snooze in bed else get up and go to work.

The power of this simple statement is they can be nested in parallel or series to form an incredibly complex system which appears intelligence.

If Sunday and it's raining - snooze in bed - unless the sun is shining and the kids want to go to the beach - then get up - unless the wife wants to go to the market then pretend your asleep.

This sort of intelligence (there are others) are just a spiders web of 'if - then'.

## Communication between cells

Just one diode or triode is useless - they need mind boggling numbers of individual units which communicate with each other which creates what appears to be an intelligent system.



This happens in computers, in nature with intelligent communities like bees and ants and the amazing slime mould which can hunt out its own food - and of course human brains - although human brains are much more complex than simple logic machines.

We can and do take decisions without adequate information to undertake a proper logic analysis - a feat which would stump even the most sophisticated computer.

You just get the 'division by zero in line 3759' the nightmare of every code cutter.



I say brains - plural - because we have two brains - one in our heads the other in our tummies. They both contain those needed huge numbers of cells and are connected together so we can think of them as one unit.

You may think that this logical system is how our brain works - and it is true that our brains can follow a logic train - but very badly - nowhere near as good as even an historic computer.

This leads to one of the peculiarities of humans - we decide the answer we want - then go to immense lengths to get all the data to support that answer. The cleverer a person is the more skilled they are in developing persuasive arguments but not in selecting the right answer in the first place. Design flaw number 2.

## **Human brain more than multiple cells cooperating**

But the human brain has a few tricks up its sleeve. It takes short cuts by taking much of the logic process and putting it into hardware (or preprogramed sub-routines).

Basically computer can't do much - they can store data (lots of it), they can compare data if  $a=b$  then goto somewhere (like start or address 3856). They can add up and subtract but they cannot even do simple things like multiply numbers.

If I wanted to multiply 2 by 3 I would have to write a piece of code a bit like this.

Basic set up:-

answer = 2 (answer is not the answer but the address where the final answer will end up)

maxcount = 3

ncount = 1 (just initialising or the address may contain the results of the last bingo game)

Start

Answer = answer + 2 (adds 2 to the address I have called answer)

ncount = ncount + 1 (counts the number of times I have added a 2)

If ncount is less than maxcount go back to start (keeps on going round in circles until I have added three lots of 2's)

That would then add 2+2+2 to hopefully give me 6.

All a bit silly but useful if I wanted to multiply 2785 by 87864.

If there were lots of calculations like this it may take an ancient computer a bit of time (I used to have to test my programs overnight) so they came up with cards like maths cards and graphic cards. A maths card would take logs of the numbers I wanted to multiply, add these together, then take antilogs to get the answer all in a fraction of the time to repeatedly add numbers.

These cards (now built into the chips) would take a fraction of the time but be totally transparent to the programmer).

$C = A * B$  (poof done in a flash)

## Pizza and cheese cake



I go through all this because I want to talk about how the brain decides whether I should eat another piece of pizza or cheese cake so I am going to call these conscious and unconscious decisions.

Conscious decisions are those I can feel the little cog wheels in my brain chugging round. Let me see I have had three slices of pizza at 456 calories per slice and

my limit is 984 so -

**if** current level is less than limit **then** scoff away **else** stop eating.

Unconscious decisions just happen without me even knowing - and fast. I will have eaten the cheese cake before my conscious brain has logged on.

Our gut brains are pretty much for unconscious decisions while our cranium brain is still largely unconscious with just a bit left over for those conscious decisions.

(It cannot even hold the whole of this article in memory - that's why I need to keep on rechecking what I wrote yesterday - think I will go and buy one of those multi-terra byte memory sticks and try plugging it into my ear.)

## Babies learn to program themselves



A baby when it is born has no idea about its limbs - it just wobbles them about in what seems a totally pointless way. But it is in fact learning where its limbs are at any time and how to move them and builds this conscious process into a totally automatic and hidden system (unconscious decision).



In later life this will enable us to walk upstairs, carrying a cup of coffee while discussing with a colleague why the latest terrorist attack occurred in a country which had nothing to do with Isis and deciding whether to go to the footy on Saturday - which could be potentially dangerous or go to the beach instead. Not even all the world's super computers combined could do that.

Computers may have an analogous process of building into the system various hardware functions like maths and graphic boards to speed things up but they are nowhere near as effective as us humans at unconscious decisions

## The yellow ute



For example we receive much of our information through our eyes but the process of transferring all the information our eyes see is a slow process and we only process a minute proportion of the information we see. Our eyes may see every detail of a car, is it a ute, what colour is it, does it have wing mirrors and doors etc. That's a lot of processing which our brains will do for us if we ask nicely but it takes times.

So unless we specifically ask our brains to analyse all that information our brain simply says that a yellow ute - I know all about yellow utes.

Typically our brains say - don't bother me with all that detail - I know what a ute is and it has wing mirrors and doors - I have seen thousand before and have a complete data base of yellow utes - I will just go and look it up - that's a lot quicker.



But it also knows from its data base that yellow utes tend to be driven by hot headed youths and tend to run red lights.

To process that by logic our eyes would have to locate the driver - determine the tightness of the facial skin, ask the brain to look up its data base and determine the

age - check whether he is wearing a cap backwards or normal - ask the ears to determine the loudness of his radio and then - most importantly determine the positions of the car at two points in time (now and a bit later) then ask the brain to calculate its speed.



By that time the tow truck will have arrived to clear up the smash. No it is too slow and just does not happen.

Instead - in a minute fraction of a second - our brain will take all decisions necessary to deal with a yellow ute -

all totally unconscious to us.

Let us see what options the brain has if this ute is actually running a red light and we are going to smash into it.

If we left the decision making to our slow conscious decision making process we would almost certainly smash into the ute. It is just too slow.



But our eye-brain-limb combination now has a short cut which totally bypasses our conscious state (that's how acrobats achieve the impossible) so our legs slam on the brakes so we just miss the ute. We are totally unaware this is happening - it is unconscious.

This process works so fast it does not have time to tell our conscious brain what is going on.

But long after the event (OK in under a second) our brain has processed what has happened and it is kind enough to tell our conscious state.

Being an egotistical creature which can reach conclusions before the facts are available we now say what a suburb driver we are, how attentive we are while driving and how quick our reactions are.

All nonsense of course, we had absolutely no idea what was happening - our brain had a preprogramed analysis of a vehicle (any vehicle including yellow utes) jumping a red light which included a preprogramed action plan of slamming on the brakes just ready and waiting to be applied in microseconds should the need arise.



We may be totally outclassed by a modern super computer when it comes to logic processing but we still beat them hand down on what the expert like to call intuitive actions. Intuitive is not a good description - they are simply preprogramed ready for immediate action but intuitive is the word the experts psychologist use.

And of course intuitive actions are what make us fat - most normal people do not wake up and take a conscious decision 'Ah nice day - I think I will make myself fat today so I can get diabetes, go blind and have my feet chopped off'. That is definitely abnormal.

What's the take home message?

**To prevent diabetes we need to train the subconscious mind.**

### **Diabetes and getting fat?**

Now what I am going to describe is just fantas but let's pretend - I am watching a really exciting program on TV and my loving wife brings me a plate of pizza and cheese cake.



She comes back twenty minutes later and finds I have scoffed the lot. Hey she says I was saving half of that. It would not be for her as she is diabetic and does not eat cheese cake so presumably she meant she was saving it for me to eat tomorrow.

But let us look at the logic processes that have been happening in this make believe situation.

I am not diabetic so I have not pre-programmed my brain to avoid pizza and cheese cake (yes we can pre-programme our brains - we do it all the time) and I have made sure I have good gut bacteria. So my gut bacteria - (which has been pre-programmed to like cheese cake) - quite unbeknown to me (but helped by the exciting TV drama) instructs my body to scoff the lot without even knowing I was doing it.

But why did my wife not scoff the cheese cake - because I have programmed her not to eat cheese cake.





I would like to tell you I stripped her naked - searched her whole body for a little purple socket - plugged my keyboard in and wrote some fiendishly clever code so she was programmed not to eat cheese cake. While it may be a nice thought it is not true. The truth is she has preprogrammed herself to develop the body equivalent of my computer card so she does not stuff herself with cheese cake.

She is also Chinese so was not programmed in youth to eat cheese cake so it was not too difficult to programme a 'don't eat cheese cake' card.

In her youth she was programmed to eat certain Chinese foods which I am sure are not healthy and it is proving much more difficult to de-programme her.

But programming is not so difficult. The brain hates doing all those logical steps and just wants to take the easy way out.

### How to programme yourself

I am always suspicious of the 'how to' statement. The fact is that you have been programming yourself from the moment you were born and found that breast feeding was not a bad way of filling in the day.



You probably programmed yourself to associate yourself with the type of cloth that your mum wore when breast feeding with tasty food. That's why you see toddlers running around holding a cuddly toy or even just a bit of cloth - it's associated with food.

Later in life you may have developed a liking for something sweet particularly after eating a big meal - which as you are probably already full doesn't seem to make much sense. But there is a good reason.

Let us say you eat a traditional meal of stewed meat, potatoes and cabbage. This heavy food takes a lot of energy to digest so although you may be actually stuffed to the brim your body is craving something sweet to give you the energy to digest this heavy meal.



That's why traditional meals have a second desert course which is sweet like custard, apple pie etc. Your body automatically programmes itself to look for something sweet at the end of the main meal.



Your bodies demand for sugar is high as you have little energy left so you feel sleepy and have a nap. This gives your body time to digest the heavy meal which together with the sweet desert gives your body an excess of energy so after the nap you feel an irresistible desire to do something energetic - may be just go for a walk but possibly chasing the kids or engaging in some maniac sport.

There is nothing really wrong with this and people ate this way for centuries without a diabetic epidemic.



But we may have programmed ourselves to want a sweet desert at the end of the meal. If we then substitute the heavy - difficult to digest meal - with a modern highly digestible processed meal our programming still tells us to binge on something sweet then we have a problem.

We need to re-programme ourselves - but how?

## Re-programming our brains

I hope by now I have convince you that appealing to the logical brains with slogans like **eat less move more** are just a waste of time.

We have to re-programme our fast acting and powerful subconscious.



You may be expecting some high sophisticated technique (or some weird technique of sitting cross legged and going um um) but the simple fact is that our brains are built to programmes themselves. Thinking (conscious decision making) is hard work, slow and tedious so our brains are always looking for the easy way by storing a pre-prepared answer ready for immediate access.

This is extraordinarily well developed in kids but older people, and believe it or not even people as old as me, have what the experts like to call brain plasticity which enables us to re-programme our brains.

The problem is that as we age we have so much programming that our discs (computer style memory) get full so we have to delete a few programmes so we can install new ones. They say you can't teach an old dog new tricks - but you can - you just need a bit of house (brain) cleaning first.

## Practical experience



I have already admitted my fondness for Chinese food (and I am a pig). Each region of China has its own speciality, I find Henan food a bit boring, Anhui seem to have the spice mix just right while Sichuan is just too spicy, for me. Shanghai buns are an out of this world experience - they are filled with some seriously tasty source but they are a trap for the unwary, you have to bite a small hole in the top and suck violently or you get covered in sticky stuff.

Typically when I visit these places I have my family and their 'cousins' with me and they are all out to have a good time (which includes the dreaded rice wine).

## The big decision



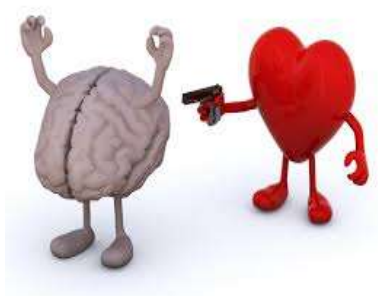
But I know that I can easily put on the best part of 10Kg on a trip - which is not healthy, that would certainly give me 10 points on the possibility of diabetes and may be cut four hours of my life.

What should I do - pig out and enjoy the fun or sit in the corner suck my thumb and sulk?

Now this is a totally personal decision so take no notice of what I decided to do but may be learn from the result

of my actions.

## Reaching a decision



The actual decision may not be so important but the thought processes in reaching that decision really get to the heart of the diabetes crisis.

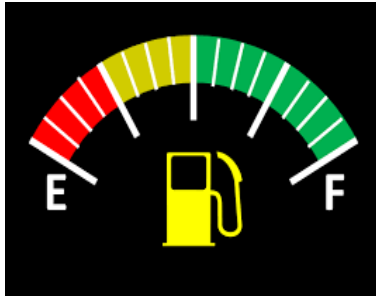
What do I know?

I know that -

Eating too many fast acting carbohydrates - which rapidly break down into sugars - makes my body release insulin to bring down the sugar levels. Flooding my body with insulin leads to insulin resistance and hence diabetes and makes my body convert the sugar into fats which is stored in and around my body. Not good.

My body needs both fuel and a whole bunch of stuff to refurbish my body including my gut biology.

My body will always burn easy fuel - like carbs and sugar - in preference to fats.



My body has a design fault - the fuel gauge is faulty - it will tell me I am hungry -even if my tummy is full - if I am missing just one component but (here is the bad bit) it does not tell me what I am missing.

In the past, traditional foods were relatively low in fast acting energy and high in refurbishing foods so the design fault did not matter. Modern foods are high in fast acting energy and low in refurbishing foods -

coupled - with our design defect - that is the root cause of the diabetic epidemic.



My brains have subconscious decision making which is very fast and essentially determine most of my actions and a conscious decision making which is slow, tedious, hard work and so often the conscious decision is too late because my subconscious has already done whatever had to be done.

## Piging out yes or no

So there are the facts - what did I do? I took the decision that if there was a way I could get rid of that 10Kg afterwards I would join in the festivities.



I decided to use intermittent fasting but it seemed to have the basic problem that all diets have - of being mechanistic - fasting between certain hours on a preprogramed schedule. This seems fundamentally wrong.

I don't put 60 litres of fuel in my car every Tuesday and Thursday whether it needs it or not. If I take the kids to the beach I need more fuel - if I stay home and watch TV less.

No - I look at the fuel gauge and when it is getting empty I fill up with whatever amount of fuel is needed.

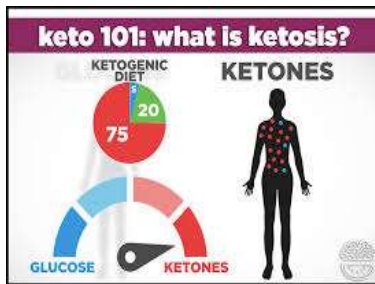
Why should I treat my body any different? I have a perfectly good fuel gauge - my hormones (like leptin and ghrelin) which tell me if am full or empty.

It just has one defect - if just one item is missing in my refurbishing foods then I will get an empty message. This happens when I am out in the garden sweating in the Queensland sun and get short of essential salts - I get undefined cravings.

This is what the Gbiota beds are all about - to ensure we have an adequate supply of refurbishing food.



## Carbs first then fat



The way I understand intermittent fasting works is that my body will preferentially burn up the sugars and carbs first and when they are pretty much used up my body will switch and I will go into ketosis and start burning up the fat (I have unwisely put on by pigging out).

I need to know when my body switches to ketosis so it starts fat burning. But I fear (just instinct not science) that if I get too far into ketosis e.g. semi starvation on each cycle that I may end up training my body to fear starvation so it will simply put on fat when I do eat. Human bodies are worse than teenagers in doing exactly the opposite of what you want and expect.

So I need to know when I have burned up my readily available carbs and burned my daily ration of fat but not too far so my body goes into panic mode that it thinks it may never be fed again.



There are of course plenty of accurate scientific instruments which will give me this information but I can't drag a medical lab around the back blocks of China.

It also fails my requirements for being a practical way of preventing diabetes with the approaching two billion people who are at risk.



But I already have a built in fuel gauge provided by nature for free - but it can give me false readings. Can I make my faulty fuel gauge give me reliable information?

I never ceased to be amazed of the power of the brain to control the body. At least other people's brains who are more skilful than me - like these acrobats.

But I have been experimenting with intermittent fasting for some time now. To be honest when I first started I thought it was terrible but after a while I learned that my body was signalling I was hungry (not nice) but after a period the hunger would pass and I would feel fine and the sensation was quite pleasant.



I even felt I could distinguish between simple hunger and a craving for a specific food. I now find intermittent fasting perfectly tolerable and I feel that I am in control of the process by just relying on my senses without relying on some arbitrary schedule. Eat when really hungry.

I can't prove it a strict scientific way but I believe this is true. I may be uncertain about my ketone sensing but one thing is for sure - I can lose weight and trim down my tummy in a very reliable way - much better than the 'eat less' method - and that is what matters.

Of course just because it works for me does not mean it will work for other people - but one aim of the Gbiota club is to see if it works for other people as well.

## Eliminating false readings

If my body is deficient in regeneration foods I will get the sensation of hunger even though I have plenty of fuel. This is what the Gbiota beds are all about - to ensure I have adequate regeneration food.



I can even get feeling of hunger if I am short of some specific requirements - like salts on a hot day. I can test scientifically if I am short of a specific need by taking a small amount of the thing I think I may be missing and see if I stop feeling hungry. If I have a craving I can test if it is a salt deficiency by taking a bit of the salt mix and seeing if the craving disappears - if yes I have a salt deficiency.

Now this may sound a bit weird but I spend quite a bit of time thinking about my hunger pains and what they are trying to tell me. It seems to me to be a bit like an acrobat - totally hopeless at first but gradually your

senses tune in.

I really think I can now tell the difference between hungry (short of fuel) where I want just want to eat anything and a craving (short of a specific food) where I know I want to eat something but am not sure quite what (until I eat it).

When I do intermittent fasting (which I do regularly) I reach a point where I feel hungry. I assume my body is hungry for carbs. After a period (may be an hour) this feeling passes and I stop feeling hungry so I assume I am now in ketosis.



I know this could all sound a bit airy fairy and unscientific but there is one overriding fact, - when I use intermittent fasting, scheduled purely on whether I am sensing I feel hungry I lose weight and my tummy gets smaller. That is the acid test.

## My pet doggy

A few comments on training my brains and body.



I think of all that biology in my tummy as a pet doggy which needs training, I learn to read what my pet doggy is telling me (actually becoming sensitive to all those hormones which it is producing to instruct my body) and then train my doggy.

This is simple self-experimentation - eat cheese cakes and see if it makes you feel hungry and want to eat more - then try other foods and find what makes you feel full and want to stop eating - for me that is bitter fermented cabbage and (believe it or not) dark chocolate.

I have no idea what will work for you but I have taught myself to become sensitive to when I feel hungry and am getting full. If I leave this to my subconscious decision making and I happen to be eating cheese cake I know I will just keep on eating.

But if my conscious decision making tells me that I am approaching being full I can simply eat some bitter fermented cabbage or a piece of dark chocolate (it does need to be a high cocoa content so it is a bit bitter) I find my appetite is curbed and my body want to stop eating.

And the more I do this the better trained by doggy becomes so I have actually trained my doggy to stop eating so I do not pig out.

## Changing the world's food system

Let's have a quick summary of what I am proposing. The current food industry is producing vast amount of high energy food at low prices. That's good.



But because it is lacking those regenerative foods and we are an intelligent creature (not just lumps of meat) our brains tells us we are not satisfied and need to eat more. That's good too.

But because of the abundance and cheapness (and I might add tastiness) we end up eating more high energy food.

If we had a smaller cousin to the giant food producing regenerative foods - like my vision of commercial scale Gbiota beds - then everyone would have access to regenerative foods.

Then - with a bit of brain training and incorporating some of this regenerative food into our diets when we actually felt full - we would stop overeating and we could say bye bye to those horrible chronic diseases. (That's a bit fairy taleish but we could certainly make a major reduction).



The idea behind the Gbiota bed technology is to develop a growing system which can produce this regenerative food and improve our gut biology at scale and at an economic price.



The issue is not basically technology (although my current version of the Gbiota bed has major room for improvement) it is a question of how to get this regenerative food industry up and running.

With the power of the commercial giants which control the global food industry this would appear impossible.

These giants are often portrayed as some evil force but that it not strictly correct. Many years ago (when I was young) business theorist would talk about the duties of company directors was to find a balance between the

three key stake holders in a business, the shareholders, the customers and the staff. The world has changed and now the focus is very clearly on profits for the shareholders.

That is not going to change so in our planning we have to consider how we can change the food system without adversely affecting the profits of the food giants.

Conventional agriculture, with its large fields, heavy machinery, and a variety of chemicals is very effective at supplying us with fuel.



Fortunately we can produce these in such enormous quantities that it is difficult to see us running out. We can readily calculate the amount of energy falling on the earth and is many times what humans need for fuel, but we need carbon dioxide which is in the atmosphere in excess, we need fresh water (which could be a limitation but there are many ways we could improve water used efficiency) and we also need a few minerals which are used in photosynthesis.

Modern agriculture with its huge fields and automated machinery can easily provide all the fuel we need.



We need a second type of agriculture - on a much smaller scale - to provide us with that complex array of minerals and biology so we can refurbish out bodies.

That is the aim of the G-Biota project. I well understand that many home gardeners are already producing this refurbishing food and many people are already buying organic produce but these are simply not providing enough refurbishing food to meet global needs.

We need to develop a system of growing refurbishing food on a large enough scale and at an economic price to meet the world's needs.

That's a big change.



## Making it happen and the DOF barrier

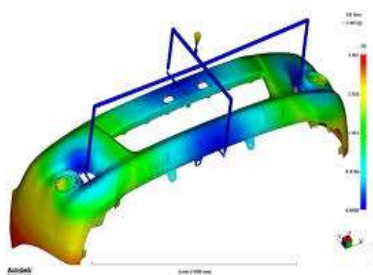
I realise that it seems impossible to make such a change to the global food system.



This problem of how to provide healthy food to seven billion people from our current limited resources has been the focus of some of the best brains in the world. How can I, as a DOF, hope to make any contribution to this vexing problem. For those of you puzzled by TLA's (Three Letter Acronym) DOF is a TLA for Doodery Old Fool.

But twice in my life I have found myself in conflict with conventional wisdom and was able to create a paradigm shift in conventional thinking. ( I was a lot younger then but the lesson of how to do this are still valid - even if I have to pass the baton to people a lot younger than me).

## My first paradigm shift



The first came from a computer simulation I wrote of a hot plastic flowing into a cold mould - the Moldflow technology (I taught myself to program in the era of punched cards - a bit like working on a vintage car - you could know how everything worked).

The classic theory was that if a cavity (or part of a cavity) was not filling then make the feeder pipe (called a runner) bigger. So obvious how could it be wrong - bigger pipe easier filling - obvious.

My simulation showed that this is not always the case and that using a smaller pipe to restrict flow into easier filling areas would force the plastics into the more difficult filling areas leading to a better - more even - filling pattern.

Smaller pipes - better filling! Quick bring out the straight jacket - this guy need help. A perfectly understandable view as I was an unknown guy working from my bedroom - so of course most 'experts' totally ignored me - but not all. Some (just a few) decided to give my simulation a go and found I was actually right.

## My second paradigm shift.

The second was Wicking Beds where all the expert gardeners said that you must have good drainage and that a water reservoir would simply become stagnant and putrid so killing the plants. But some people tried it and low and behold it worked.



Very different technologies but the next paradigm shift occurred in exactly the same way. I did not invent Wicking Beds but I like to go out to the deserts where I noticed oasis which had a clay under pan topped with sand.

When it rained (as it does sometimes even in the desert) water would be stored in the clay pan and wick up to support vegetation above.

However when I promoted the idea of making a false oasis by simply burying a polythene sheet it was poo-pooed by the experts who said the stagnant water would lead to petrification and kill the plants.

In both these cases the old technology was not proved wrong but simply no longer applicable.

### What made the change in attitude happen?

The key point is that the paradigm shift was not the result of my elegance or power of persuasion that caused the change in attitude but other people - totally independent of me - trying it and finding it worked and then telling other people. A pre-internet version of going viral.

In both cases my ideas led to a revision of the conventional wisdom (which was not actually wrong but only a partial truth).

### Wake up and take note - this is the crunch

This is the crunch - I did not change the world (ok a wee bit of the world) my ideas may have been the start but other people tested my ideas - proved they work - they told other people and the viral process got underway.



I may joke about changing the world but I don't live totally in fantasy land and on a world scale they were pretty small changes.

But these chronic diseases - like diabetes are on a global scale. There are some billion people in the world suffering from pre or full diabetes - just waiting to go bling and have their limbs chopped off. Even worse - the number of people, particularly the young - who are falling prey is increasing at an alarming rate - despite the efforts of thousands of dedicated professional around the world.

### This is a big deal and we are losing the war!



And as Dr John Snow realised with the cholera epidemic the problem is not going to be solved by developing some pill to fight off cholera - you have to get to the root of the problem. In his case by stopping sewage getting into the drinking water - in our case by changing the food system - not by throwing out the old system but creating a new horticultural system producing biological active, nutrient rich produce.

Now I want to try the same methods to solve the disaster of chronic illnesses - like diabetes - by changing the world's food system. A totally ridiculous aim which even I - with my great power of self-delusion - know I cannot hope to achieve - or can I?

But maybe I may be lucky on the third time by using the strategy of forming the Gbiota club and hopefully persuading other people to at least try my ideas and if they find it works that they tell other people and we start a worldwide food revolution.

I am basically asking people to try this system for themselves and if it works for them to become advocates. One man is powerless - a group coordinating together can change the world.

I have been in the innovation business all my (long) life and it can be a pretty rugged business so I wanted to finish by hopefully giving useful information on the processes of getting new technology and ideas accepted.

Nothing has ever been achieved without hope.

My job is to explain the basic principles of how innovation actually works.

### **The rugged process of innovation**

We live in the internet age where 80% of the information we have is fake and decisions need to be taken in 30 seconds or if it something really important like starting World War 3 in 90 seconds.

But I can still remember the far of days of old where the first step in taking a major decision was to lay out all the facts (or what we thinks are facts) and carefully reviewing them before deciding on a plan.

Before I start let me tidy up the wordage. Scientist are pedantic about what it true - nothing can be regarded as an absolute fact only extremely probable and even if some idea is pretty likely but not absolutely proven it is labelled an hypothesis.



But I was trained as an engineer and engineers are expected to produce something useful (typically by yesterday). I really like the phrase 'science is the art of truth; engineering is the art of ignorance.

Somethings are so 'extremely likely' in scientific talk I am going to say I 'know' this or that. If some idea is more than likely then it may be classified as a working hypothesis i.e. an idea which can be used but may be proved wrong later. As an engineer I will be sloppy and just say I 'think'.

## So what do I know?



The traditional model of a human body as a hunk of flesh which we have to feed the needed food, minerals and biology is just too simplistic. Our bodies are an intelligent system and unless we get our hands on the control levers (our brains) which determine how our food is directed inside out bodies I think our chances of success are low.

If that sound depressing then it gets worse - when I read about how our brains work I realise what a long way we have to go before we really understand how it works sufficiently to control it.

But let's not get depressed - let's look at how innovation and new technologies work in practise.

## How technology develops 1 - bottom up push technology

There is a classic image of how technology develops from fundamental research leading to an in depth understanding which leads to a technological revolution. This is well illustrated by the development of the transistor which the name William Shockley is associated.



Shockley could be described as 'bit different' holding some unconventional views and it is doubtful if he really appreciated the future impact of what he and his team had developed.

He did write about what he thought were his greatest achievements - the number one was some quite weird ideas but despite being the pioneer of the transistor he did not list this as his major achievement and I guess he would not have said that he pioneered transistor technology so that in fifty years Google could set up a system to capture the world's information.



That is not unusual in the technology world - the early pioneers often had little understanding of the importance of what they were developing.

We must recognize that major advances have been made by smart people who recognize a major invention when they see one, Bill Gates saw the importance of the graphical user interface while Steve Jobs saw how recently developed technologies like the touch screen could create the smart phone.



This push technology - based on research - is typically highly organised and subject to critical analysis at every step. It is for those with a neat and tidy mind.

But this bottom up - or push - development is only one way that new technology is developed.



## How technology develops 2- top down pull technology

We also have the top down - or pull development. If there is an obvious and pressing need innovators will struggle to pull together the best available technology to solve a specific and pressing problem. It is typically chaotic - ideas are just thrown together to meet an urgent objective - hoping it will work.

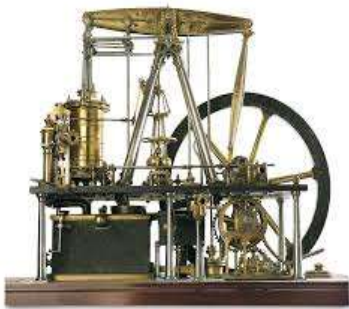
If it 'sort of works' then later each stage is subject to critical scientific analysis to refine the whole system. Pull technology is not for the feint hearted.



The steam engine is a classic example. It was not developed because a brilliant scientist called Carnot developed the laws of thermodynamics.

It was a classic case of necessity being the mother of invention. Mine owners needed a way of pumping water out of deep shafts, horses could no longer do the job, the mine owners were going broke so they

manufactured (cobbled together) the first steam engine.



This can truly be described as a terrible contraption. But give them their dues, they had to create a whole range of supporting technologies, how to make huge casting, work out how to machine them to some degree of accuracy, then develop seals because the machining was so bad, then develop lubrication systems. It was awful but it did keep the mines working so the owners did not go broke.

The limited success was enough to convince people that the steam engine had potential, James Watt realised that heating up and cooling down a massive hunk of metal at every cycle was just plain ridiculous.

Meanwhile the French - worried that those sneaky English were stealing a march on them employed one of their top scientists - Monsieur Carnot - to develop the theory of thermodynamics.

The rest was like a fairy story - if you were a mill owner - less so if you were factory fodder.

Academics find it is very easy to criticize pull technology - but there is just one critical question - does it work better than what we have now?

It certainly worked for the steam engine. I know the Gbiota system works for me - the real question now is - does it work for most other people?

## Aims, actions and ambitions

In the following articles I want to describe the nuts and bolts of how to make a Gbiota bed.

A Gbiota bed is really simple - basically just an extension of the Wicking bed concept but aimed at making it more suitable for larger scale (e.g. commercial) production.

The key aims are to improve our gut biology - working from the soil, through our food to our guts and also add the essential minerals and phytonutrients to our diet.

Wicking Beds are now established globally and I expect that many home gardeners will be happy to try a Gbiota bed for their home use. That's fine by me - go for it.

But I see the Gbiota bed as a way of preventing diabetes (and the other chronic diseases). But only a small proportion of the population are interested in growing their own food - so I want to reach out to these people so they don't end up with the horrors of diabetes (to become a blind limbless torso).



We know how effective fecal transplants are - they change the gut bacteria which leads to incredible success - reduce weight and reversing the threat of diabetes. This shows just how important our gut biology is.

Yet around the world people spend billions of dollars on diets that don't work yet I don't see them queuing up to have someone else's poo poked up their bums. That clearly shows something about human nature - I just don't know what.

## Changing gut biology really does works



But fecal transplants fail my test of availability to the massive number of people who need to improve their gut bacteria - what do you say about 1,500,000 fecal transplants? (I know but I am not writing it here). But that massive number of people could change their gut bacteria - in a far more pleasant way - simply by changing their diet and controlling how much fuel food they eat and ensuring they eat refurbishing food.



We really don't understand fully the mechanism of how gut biology is transferred into the gut. We know how mice and elephants do this but humans don't seem to be into eating each other poo.

When we are invited to a party and asked to bring a plate it is not normal to go to the toilet and load the plate up with a mega turd for others to enjoy.

Perhaps that's why I don't get invited to parties any more.

## Team work always wins

There is no way I can do bring about these changes myself - it needs a team with a spectrum of skills and contacts (I am also getting too old - but that's my problem I know I need to pass the baton).

The concept of the Gbiota club is to recruit the motivated gardeners to try it - suggest any technical improvement in the system (there is plenty of scope here particularly in growing plants without the use of aggressive chemicals) observe any improvements in their health - then become advocates.

There is a great need for a range of technical expertise's - particularly in gut microbiology. What exactly is the process of growing plants in biologically active soils and then transferring the biology to the gut?

What's in it for the advocates? I am tempted to say nothing but the obvious answer is their health - but there is satisfaction in being part of a globally important social project.

Why do I spent so much time on this project?

The answer is simple - my wife came from China, started eating Western style food, got diabetes, here eyesight began to deteriorate, she fell down a flight of stairs and broke many bones in her foot which did not heal properly so we were looking at amputation.

Well we both worked hard on this and she still has eyes that can see and feet for walking.

That sent me a trail to learn about diabetes and how it can be cured. The classic view is that diabetes is a non-reversible chronic disease and all you can do is to manage it as best you can. There are many qualified doctors - albeit a minority - who disagree and argue we are overloading on fast acting carbs which makes us insulin resistant.

But that raises the question of why we overdose on these high speed carbs - my answer is because our diet is deficient I key components which fall into the refurbishing group.

You don't have to be Einstein to work out that the solution may lie in growing just part of your food in biologically active soil loaded with minerals and the micro-nutrients. That's what Gbiota beds are all about.

I have been lucky in life and if I can pass on my findings to prevent a billion or so people getting diabetes that's my reward - I get a kick out of thinking that I am a useful member of society. I should put a 'still' in that sentence - there is that dreaded feeling for those of us DOF's who have led an active life - NLU (No Longer Useful).

## Why we need advocates



The reality is that people on the internet just don't want to read about doom and gloom stories. We are all totally saturated with the horrors of war, refugees, starvation, crime and sexual abuse and global warming.

They want a story about a cat that runs to the middle of the road, stands on its hind legs and waves its arm like a policeman to stop a bus. Seconds later a huge crevasse appears in the road so everyone who has been saved makes a lifelong contribution of pilchards to the hero cat.



Even if you have a viable solution to some worldwide tragedy no one believes you or if they do they think you are just out to make money.

We have what is called conventional wisdom and anyone who challenges conventional wisdom is subject to social hostility.

I know I have twice in my life challenged conventional wisdom and been proven right - but I carry the scars. I have challenged conventional wisdom hundreds of times and been consistently been proven wrong.



Having a level of intelligence which is slightly greater than a garden slug as soon as I realise I am in the wrong I try my hardest to hide my follies. If that does not work I claim that my experiments were based on the work of Dr Otis Epstein and professor Chin Chang of Harvard University and although I thought their paper total rubbish - in view of their status I wanted to test their ideas for myself.

Hopefully Epstein and Chang are totally fictitious characters or else I may be facing some monstrous legal case - but at least Mr Google has never heard of them.

So come on folks - let's give it a go.

To join the Gbiota club email me at [colinaustin@bigpond.com](mailto:colinaustin@bigpond.com)

Colin Austin