

# Reversing diabetes and Gut Biota

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## Paradigm shift

There has been a major paradigm shift in how we think about chronic diseases - particularly type 2 diabetes. I want to make sure that all my readers are aware of this paradigm shift and ask if you are interested in joining me in an important project in Australia to help people who suffer from diabetes.

For many years it has been thought that diabetes (T2) is not reversible, progressively getting steadily worse demanding stronger (and more toxic) medications. If you didn't take your medication you were likely to go blind and have some limbs chopped off.

Eventually you would need insulin injections and you likely to die younger from a heart attack. Not exactly a happy story!

The explanation was that your beta cells in your pancreas burned out (were destroyed) and could not regrow.

Now modern science has shown that your beta cells do not burn out they simply get clogged with fat from having too much insulin resulting from a combination of high glycaemic foods (sugar and processed foods) coupled with a compromised gut biology from exposure to toxins.

We now know it is possible for the majority of people to reverse diabetes by a combination of diet, exercise and avoiding stress.

I guess many of you know that I lived on an eco-village in Gin Gin, Queensland, Australia for many years (before I was stupid enough to get old). I still own two houses in the village and other houses are available if needed.

The question is are there people in Australia who would be interested in setting up an Australian diabetic refuge based on the Yangtou model. If so please let me know.

## The Yangtou project

I am involved in a most exciting project as part of a team with others in setting up an eco-village in Yangtou in Fujian province in China.

Asian people are particularly prone to diabetes as although they do not put on much body fat they do put on fat around their vital organs (visceral fat). China (tying with India) is the world's centre for diabetes with over 115 million people officially diagnosed and many more undiagnosed or pre-diabetic.

The aim of the eco village is to provide a refuge for reversing diabetes. We will grow foods (using Gbiota beds) which are free of toxic chemicals, high in nutrients and trace minerals and biologically active.

We will have careers - empathetic people who we will train in diet, exercise and stress reduction to selected a diet and routine customised to a particular guest so they can continue the reversal after they leave the village.

I have done a major restructure of my web [www.waterright.com.au](http://www.waterright.com.au) - you can find a mass of information on diet, health and reversing diabetes - from the front page click on library, then click on nutrition and you will find many articles on the Yangtou project and diet and health - well worth a read.

### **Who's getting fat? - me**

I try and take a pragmatic approach to life. I fully understand the importance of diet to health and generally eat sensibly. But when I go to China I am treated royally by my extended family (a feature of Chinese life) and have possibly too many Chinese feasts.

If I were a diet fanatic I would decline these feast but there are two facts which dominate my thinking. The first is that ancient joke which says that *giving up wine, women and song doesn't actually make you life longer - it just makes it seem longer.*

The second reason is that I am a natural pig and just love that tasty food.

On my previous glutinous adventures I have simply come back to Australia and gone onto my 10:14 intermittent fasting routing (a ten hour eating window and fourteen hours of fasting e.g. just a bit later breakfast and early dinner) which restores my weight back to normal.

So it seems a bit stupid to miss out on these feasts.

But this time when I got back to Australia and adopted my routine either the scales were malfunctioning (wishful thinking) or the weight was not dropping of as normal.

I think this may correlate with the fact that we now have my Chinese granddaughter staying with us (she is a student here and want to become a doctor like - her grandmother Xiulan my wife).

Sadly (for me) she loves cooking and makes the most delicious cakes and she would suffer seriously hurt feeling if I did not eat them (that's my excuse for pigging out).

The experts on diet write that you can eat what you like in the eating window - well as experts often are - they are wrong. My weight remained stubbornly high. (Obviously the experts don't have Chinese - cooking infatuated - granddaughters.)

I have now changed to a more sever 8:16 intermittent fasting regime and (this is the bad bit) become much more disciple in what I eat (or more correctly don't eat - definitely low carb - but not fully ketogenic).

Fortunately the grams (note the use of grams rather than kilograms) are slowly dropping off.

The moral of this is ignore the experts - with their tightly specified calories per meal - and have a self-regulating diet regime so you continuously control your weight yourself.

## Poor Xiulan

Xiulan is my Chinese wife who has the double disadvantage of being diabetic and the unfortunate role of being my experimental subject. Unfortunately for me she was previously a surgeon and totally ignores my advice and only listens to what the qualified doctors say.

Perfectly reasonable - after all I am her husband and therefore should be ignored on principle - and also an engineer - who may have been proficient in numerical methods years ago but is certainly not a doctor. How could a knowledge of thermodynamics have any relevance to diet?

But I have scored one victory - continuous blood sugar monitoring. This is a simple device you stick on your arm and give you a 24 hour record of blood sugar. Even better it does not hurt **me** a bit when I stick in on her arm (but she claims it does hurt **her** but the package says it is painless and they are the experts).

But the learning we have obtained from the graph is so stunning I simply do not understand why continuous monitoring is not standard treatment for diabetics. When you see the graphs it is obvious that the standard one time prick test is just a random number generator.

Regardless of what the experts say people are all different so the standard diet rule book does not work. The graphs immediately show what foods are causing blood sugar spikes and she has modified her diet to suit.

I assume her wifely logic is that it is the sensor that is telling her the results and not her husband so she is not breaking the rule of not listening to her husband as she is simply following the sensor.

Identifying problem and beneficial foods is really to be expected but there were more learning experiences in store.

I never expected exercise to have such an impact. The experts say that exercise does not reduce weight by much as the calories you burn are relatively small and it simply makes you hungry and you eat more.

They are wrong - exercise (at least on my wifely sample specimen) has a dramatic effect and leads to a significant reduction in blood sugar. It just means that I have to go for a walk with her every night (I could have achieved the same result by getting a dog but then a dog would listen to what I told it).

What really shook us both was the effect of cortisone - the stress hormone. This is well known to increase blood sugar and sure enough when I am stupid enough to tell her what to do and she gets angry with me up goes her blood sugar as expected.

I am now avoiding this blood sugar spike by being nice to her - but only for scientific research.

But - and this is the big finding - when she gets hungry (I am trying to sell her the idea of intermittent fasting) her blood sugar goes way up. The only explanation is that her body is going into stress when she starts to feel hungry - out comes the cortisone and up goes her blood sugar.

We (I really mean she as despite the success she still ignores me) have to work out a diet which does not send her into dietary stress.

There is one other feature of continuous blood sugar monitoring - naturally it shows you the sugar spike but it also shows how quickly the blood sugar drops (and being an ex-numerical methods guy) I can see that the slope of that recovery line is a measure of how well the insulin is working e.g. it says whether her beta cells in her pancreas are working.

I am pleased to say that it looks as though her beta cells have not gone the way of the dead parrot and are alive and well.

Before changing her diet I never saw her blood sugar drop below acceptable levels to cause the dangerous hypoglycaemia but now she is modifying her diet they are dropping below the dreaded line.

I should now go to war with our doctor for permission to reduce her medication. As our current doctor believes that diabetes is cannot be reversed I expected a battle so have changed doctors - hopefully to one who has read 'The diabetes code' by Jason Fung - my diabetes bible.

(If you don't relate to my humour don't take it seriously she is really a lovely wife)

### **How are my Gbiota beds faring?**

One of the negatives of my life style is that I am away from home so my experiments tend to get be a bit frustrating.

I very clearly understand the difference between automated and maintenance free. In fact my very first engineering job was for a company that made industrial control systems.

But that was eons ago when steam railed supreme but no doubt to the amazement and annoyance of the current generation the basic theory of automatic control was fully developed way back then before the electronic revolution. PID (Proportional, Integral, Derivative) had been around since Newton's days.

If you go to a museum and see an old steam engine working you may have seen little balls winging around (that look as though they have been stolen from a fair ground). They are a centrifugal speed controller so the steam engine doesn't get faster and faster and explode. A little control has a big effect.

My Gbiota beds are totally automated - apart from the weather which does not seem to understand the importance of keeping my rainwater tank full. But what happens with no maintenance when there is no one around to check things out?

On my return this was obviously far more important to check out than unpacking the suit cases.

As Mr. Murphy is my constant companion in life I was pleasantly surprised to see it still working. Nevertheless I have made a few tweaks.

I don't have any of those fancy first flush systems on my rainwater tanks so any rubbish on the roof gets into my water tank. The float valve (just a regular toilet type

valve) was still working but was getting clogged up with rubbish so I have fitted a filter and up till now (stay away Mr. Murphy) has worked well with a good flow into the local reservoir where my pumps sit.

But I have had a little rethink about the compost system. I have been concerned about the toxic chemicals in labile (new) compost as it can act as a growth inhibitor for the plants and could potentially contain human health hazards. As the aim is to regenerate gut biology we often eat straight from the garden (just saving the fattest caterpillars for my granddaughter to put in her cooking - but by the commotion she kicks up I am beginning to get the feeling she is not really into gut biology).

In my previous system I used a multi stage composting system or more accurately I would just pile up any old rubbish which could possibly be called compost into a pile - let human and eco selected plants (posh words for weeds) grow - and harvest them for the real compost bin. The weeds were acting as toxin filters.

I have used this system for over twenty years and am still alive so I consider this safe.

However my bin is now getting seriously high with a layer of well matured compost at the bottom which I could convince myself is acting as an effective filter so - for the experiment - I am just tossing everything into the bin but I am adding significant natural nitrogen fertiliser (pooh) to aid the decomposition.

So far all is fine but if you never hear from me again you know this experiment failed.

But now the compost level is so high the pond pump was not developing enough head to reach the top of the pile- so I went out and bought a dirt tolerant sump which develops tons of pressure and flow. So much that I thought I might be a bit silly and replace the three existing pumps with this larger one.

I had used three pumps before on the theory that I needed to let the small local tank refill between irrigating each area. This is in line with modern design philosophy - think of every eventually before starting the design then allow for all these eventualities - then prove (test) that the final design actually works.

Years ago when I was a kid my uncle George was the village blacksmith - no theoretical training whatever but he built the most amazing machines on a totally different philosophy. He makes the machine as simple as possible then proves (test) it and if it does not work then make a modification until he ended up with a machine that finally does work. This is then the simplest way of doing the job.

He would have won in this case as the simple one pump design worked fine (better than the more complex three pump system) and revealed an important feature. The bigger pump drains the small tank very quickly but before it empties completely the return water flushed back in and with a little help from the float valve keeps enough water in the tank.

Clearly when the soil is saturated there is little further flow only a small wicking into the surrounding soil - a useful concept to understand - thanks Uncle George.