Draft only - not for publication

This is an aborted front page article which I wrote then decided was too long but contains a lot of good stuff so I decided to put on my web for a few days for those interested - it has not been edited or checked - it is an as banged in doco.

Growing food for health

Food for health

This web site is about how to grow food for health. This is more than how to grow food it is about thinking how that food affects our body. Everyone want to be fit and healthy and have a long and happy life and the food we eat is right at the centre.

We must also consider climate change, a couple of degree temperature rise is serious but what could be totally catastrophic is the effect food production.

But there are bad things in life that the right food can help with - specifically non-infectious diseases like heart attack, strokes, dementia and the fastest growing disease of them all - diabetes.

Paradigm shifts

But sometimes it it not easy to break the current routine, if you eat chicken wings and chips on Monday, Hungry Jacks on Tuesday, Maccas on Wednesday then you may just not want to change that happy little routine.

Change is equally difficult for top civil servants and leading medical practitioners but sometimes change is just necessary.

Let me tell you a story. Every day 16 Australians have a limb amputated from diabetes. That is just a statistic, we tend to think that is terrible then carry on as normal - until it gets personal.

My wife Xiulan, a medical doctor (admittedly a gynaecologist not a diabetic specialist) became diabetic, the doctors gave the regular pills and it did not

seem an issue - until her foot started to turn black - which was not good but when they wanted to chop it off - we were not at all happy.

Now I am an innovator, I have had a bit of experience with paradigm shifts, creating them myself as I will tell you later but I did what innovators do - read anything and everything I could find about diabetes and then started to experiment. Reading and testing is what innovation is all about.

I realised that the information we had been given was twenty years out of date and she was going to have her foot amputated because of the shear incompetence of the diabetic bureaucracy. You think Robo Debt and the KPC scandals are bad, but that is just money and nothing compared with the way we manage diabetes where people are having their legged chopped when it is largely avoidable. I was ffurious (got a bit of a stammer there) and decided to do something about it.

We fitted my long suffering wife with a continuous blood monitoring device and photographed everything she ate and looked for connections and tried to understand what was really going on.

The good news is that she still has her foot, which is great for us, but I am now convinced that we can reduce the number of people having their foot chopped off by half, that means preventing 2,000 Australians having a leg chopped off per year.

We are lucky, I am one of Australia's leading innovators, I built up a company which was eventually sold for $500 million dollars and have spent two million looking for a solution to diabetes. I approached Diabetes Australia to see if we can cooperate on meeting my aim of saving 2,000 Australians from having their legs amputated.

All I get is thanks but no thanks, on your bike response.

Tell me how may people are there who are prepared to spend a couple of million dollars for the public good by preventing people loosing their legs.

I was ffffffurious (seemed my stutter has come back).

Homeostasis

The key word is homeostasis, how our bodies naturally self regulate.

For thousands of years the rate of diabetes was less than 1% of the population, now it is 14% and goes up every years.

We stand by and watch and take pills to ‘manage’ high blood sugar levels but these do nothing to prevent diabetes in the first place.

We are not going to achieve the target of saving 2,000 legs per year by taking pills when diabetes is well established, the solution is prevention and that solution is inexpensive and practical - eating fresh plants that are grown in soil made by breeding beneficial microbes in organic waste.

That worked fine for some two hundred thousand years until we changed our food system and stopped feeding our gut brain so the natural homeostasis system that we have evolved stopped working.

That is very simple and inexpensive, In a way that is the problem as there is no money to be made and therefore no financial incentive to run the needed promotion campaign, that has to rely on community benefit.

We stuffed up our natural homeostasis system and now we need to fix it by eating the right sort of food,

Technically we could save more but we need people to change how they eat and that it going to be the biggest obstacle.

So that is my target, to save 2,000 legs being chopped off per year, sound a bit crazy but I do crazy things as you will find out.

Looking for allies

But I can't do this myself, I can hold the flag and show the way but there is only one of me, I need help, but where?

I am getting a bit sceptical about the hyper capitalism we seem to be going through with multi billionaires taking their mates for totally pointless rides into space, costing vast sums and putting thousands of tonnes of green house gases into the atmosphere.

The pharmaceutical companies have a lot of money but it is not a drug problem. Drugs wont fix the problem and anyway the companies are making a small fortune managing diabetes so why destroy the golden goose.

The technology of feeding the gut brain is dead simple, just grow soil by breeding beneficial microbes in waste organics then use that soil to grow plants.

A technical problem is that we must breed the right sort of microbes and that means careful control of the conditions, particular moisture levels, but I am a world recognised expert in fluid flow so this is my home territory.

A further technical problem is that the beneficial microbes have a very short life so the plants must be eaten shortly after picking. This means that at first we must persuade people to grow the plants at home. In developing the

technology I have focused on making it as easy to use as possible so people living in flats can use it.

When established I expect that commercial suppliers will emerge.

A final problem is it is so simple and cheap that there is no financial incentive for commercialisation and marketing. This is a serious problem when the air wave are totally saturated with manipulative advertising of food that is full of energy food but totally lacking in gut brain food.

But that has been solved before. I was a toddler in the war when starvation was a war weapon. The Government of the day created an awareness program for people to set up Victory gardens - and it was remarkably effective.

People just ripped up their lawns and gold course and grew food, this amateur band was producing 40% of the fresh food. Amazing what Governments can achieve when they set there minds to it.

We just need a Government promoted 'grow real food - save your leg' campaign.

Once you have people motivated they self motivate - just look at the Matilda's with their get the job done attitude.

Cost is not in running such a campaign is not an issue - the Government only have to spend a tenth of the money they currently spend subsidising drugs that don't fix the problem.

Such a campaign would save both millions of dollars and legs yet the response is 'thanks but no thank, on your bike'.

Not this this is a new phenomena. In the war, that's some eighty years ago the Dutch were starved and of course got very thin, then after the war when food was available there was a wave of obesity. That told us that there is an intelligent control system regulating our bodies. But it tells us more, is tell us the this brain has a memory and can be trained.

Now look at the recommendation to reduce weight - cut down on calories. If that is done blindly then all you are doing is training you intelligent regulating system to store more fat. This no doubt well intended, but misinformed, advice is training our control system to store fat, which is a major factor in diabetes. It is doing more harm than good.

This was know eighty years ago and still the paradigm lives on.

Another so simple experiment which is nothing more that a junior school project. Just fit a continuous blood sugar monitor and link this to what people eat. You can see right in front of your very eyes how the bodies intelligent

control system is working with blood sugars zooming up straight after eating, then collapsing down as the control system pumps out insulin so blood sugar drops down to dangerous levels potentially causing a dangerous hypo.

This is obviously an intelligent control system at work and it is experiencing a problem with stability.

Then just do a little tweak, eat vegetables at the start of the meal. They act as a damper, just like in a cars suspension and the system becomes stable.

Such a simple thing but where is that on the Diabetes Australia web site.

All I can find there is simplistic diagrams showing how at first fat blocks the insulin letting sugar into the muscles then later the fat blocks the pancreas so it can no longer produce insulin.

That as an isolated fact is correct but it is not a real explanations of why people get diabetes.

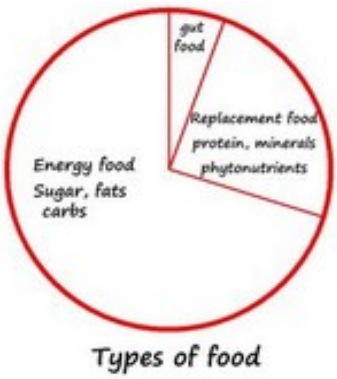
We know there is an intelligent control system regulating where and how much fat we store. We are simply failing to ask why is that control system.

We have known the answer for the best part of eighty years, it is in numerous books on diet and diabetes. We are just not feeding our control system.

It is not new information so why is Diabetes Australia not making that known through there web site.

It is either incompetence, negligence or just part of that do nothing indifference which seems to pervade the public service. The key is in the word public service - they just are not doing the job that tax payers are paying them to do. Worse that Robo Debt or PCW scandals.

Food for different jobs



Most of the food we eat, about 80%, is not critical to health, it is just burned off as energy - carbon and hydrogen being burned to form carbon dioxide and water.

But a smaller percentage of the food we eat about 15% goes into replacing our body parts, and that

$H_2 + O = H_2O$

requires a whole range of complex chemicals, minerals, vitamins, phytonutrients etc. This problem is aggravated as the amount of these crucial nutrients has sadly decreased over the last few decades.

But we also need some food to feed our gut brain and that is really at crisis point so I talk about this a lot.

Non-infectious diseases

We are suffering from a whole range of health problems which are directly related to what we eat. I am talking about the non-infectious diseases like heart attacks, strokes, dementia and the number one fastest growing disease on the planet - diabetes.

All these are related to the food we eat and storing the wrong sort of fat in the wrong places.

So I talk a lot about diabetes and weight, not just because they are important but because they are the canary in the coal mine for a whole range of diseases.

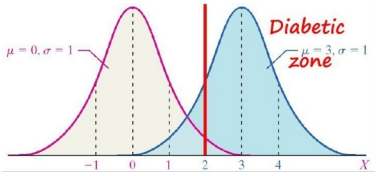
It very difficult to do any serious experiments on most of these non-infectious diseases. You just can't feed one group on Hungry jacks and another on Broccoli sprouts, wait for thirty years and see how many have ended up with dementia.

Diabetes

But with diabetes we can get results within about four months simply by measuring blood sugar levels and there is no serious risk as long as we watch the blood sugar levels so they don't go out of control - too high or too low -.

It is also on an epidemic scale which is largely man made. We can learn a lot about how to grow food that keeps us healthy from studying diabetes.

There is a genetic and epigenetics component to diabetes. Let think about the classic Gaussian bell shaped distribution for proneness to diabetes.



On one tail there are people who are prone to diabetes and whatever they do they will end up diabetic however careful they are with their diet and exercise routines.

On the other tail there are people who are virtually immune to becoming diabetic and can eat whatever they like, never exercise become fat and still never become diabetic.

Then there are the vast majority of people in the middle of the bell who may or may not become diabetic. We don't have to go far back in time, just fifty years and the only people who were diabetic were those on the diabetic prone tail, well under 1% of the population and the vast bulk of the people never became diabetic.

Then something happened and the bulk of the people in the middle of the curve became diabetic, this is currently running at about 14% of the population and is steadily increasing – diabetes is the fastest growing disease on the planet dwarfing the infectious diseases like Covid.

This is causing a great deal of misery, every eight seconds someone has a limb amputated from diabetes and the financial cost to society is massive, I have read estimates of up to a trillion dollars globally.

It is a big problem, and despite all our efforts is steadily getting worse.

The diabetes epidemic (not diabetes but the epidemic itself) is man made, we created the problem therefore we can fix it.

But we are not going to fix it by some new drug or tweak to the system we have to understand the real reason why diabetes is exploding, work out what we are doing wrong then make change.

This will involve a paradigm shift - a new way of thinking. Creating a new paradigm is never easy - so how do we create that paradigm shift knowing full well that it will be met with intense opposition from those that want to carry on as before with the old way.

How do we create a new paradigm for combating diabetes (and all the other non-infectious diseases). If we get this right we can get the rate of diabetes back to the 1% level which is the natural norm saving an awful lot of legs and many millions in Government expenditure.

But expect a battle.

Changing the paradigm

Stop and think - are we on the right road

It is really important that we really understand what has changed. The fact is that the diabetes epidemic (not diabetes but the epidemic itself) is man made.

There have always been some people who are diabetic, those on the tail.

But all those people in the central zone who are having their legs amputated or going blind or whatever and all those costs that the Government has to bear are the direct result of mans action and are largely avoidable.

By the end of the story I hope to have convinced you that we can reverse this if we are prepared to make the change.

What I learned as an innovator

I am an innovator, I have brought about paradigm shifts and changed an industry and saved many millions of dollars. I want to look back on this story to show how we can make the paradigm shift on how we combat diabetes. We can measure the success by how many legs we avoid being amputated and how much money we save the Government.

Leaving University and looking for the new

Way back in time, some sixty years ago I graduated in engineering from University and was wondering what I should do to earn the daily crust.

At that time engineering plastics, like carbon fibre composites and the new breed of engineering plastics were just becoming available so I thought what an opportunity for a young engineer to learn how to use these new materials.

I do have an excuse for going into plastics as packaging then was just one paper bag, not twenty

five layers of plastic blister pack to hold a 5 cent battery which is causing so many problems now.

Discovering computers

Now skip a few years when I was a humble lecturer at the RMIT in Melbourne.

They had what was then a state of the art computer which staff and student could use by loading a pack of punched cards - just terrible.

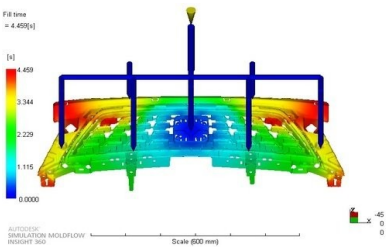
But I found that as staff if stayed back real late I could use the master terminal for writing my code, test and correct and run my code in real time. This was a truly transforming, road to Damascus, moment.

It suddenly clicked that this was going to totally change the way engineering was done. I just had to have one of those machines.

At that time computers were just monster main frames but I saw an article about the emerging mini-computers.

I had to have one and bought what was the second mini computer to enter Australia. I had to take out a second mortgage on my house as the computer cost about a third of the value of my home and by today's standards was laughable with just 64Kbytes of memory.

The simulation that changed an industry



I started to write code that was a computer simulation of hot plastics flowing into a cold mould.

Actually quite a complex piece of code solving coupled non-linear partial differential equation but all the grunt work had been done for me by

mathematicians like Newton, Fourier, Leibniz, Pascal a couple of hundred years before.

They just didn't have computer to apply them.

All I had to do was dust off my old maths books and apply. There is a reason I mention this because applied science, which is what engineering really, is based on applying and integrating research from many different scientists all working in their own speciality. That is an important point in this story.

Having got my simulation working I started to run trials, one of the great benefits of a simulation is you can run hundreds of trials in a morning that just could not be done in the real world.

Discovering the world of fixed paradigms

And this was a second, transforming, road to Damascus, moment. People had been designing plastics moulds for years and they had developed a set of rules which were the guiding principles that everyone followed.

They were the current paradigm.

But my computer simulation was showing that these rules were just plain wrong. Conventional wisdom and common sense says that if you want to increase flow then you make the flow pipes bigger - how can anyone disagree with such an obvious statement.

But I checked and rechecked my simulation and spent a lot of worrying time thinking about what was going on until I convinced myself that the simulation was actually right.

Around the world being stupid

So what was the most stupid thing I could do? With no money having spent it all on my computer the most stupid thing I could do was to buy an around the world ticket on my credit card with no money in the bank and go and talk to other engineers about this new way of thinking about how to design a flow system for plastics moulds.

And what happened, well as you can expect a lot of abuse and jokes about nutty Australians with kangaroos hoping down the main street.

I learned that being an innovator involves a lot of rejection and ridicule but I was what is called in financial circles 'up shit creek' so I had no option but to keep going.

Learning the hard way

I was trying to convince people about my computer simulation I can still remember giving a lecture in which I tried to explain how I had solved those quite complex non linear coupled partial differential equation.

To say is was a disaster is a gross under exaggeration - it was really bad.

But eventually I learned the art of productisation, taking technologies from a range of specialities and then combining them into a usable product.

But there were a few (very few) people who were actually willing to give it a go and it worked and they told other engineers and the ideas became accepted as the norm.

That is how we need to convince people that the solution to diabetes actually works works, not experts with long technical explanation but ordinary people who try it and it works and they tell their friends then post it on Facebook.

But sometimes serendipity comes to the rescue and that was the time when the car manufacturers were going for full width dash panels and fenders which were bigger than they had ever made before and the electronic industry was making smaller connectors then they had ever made before - and they were both having real problems.

Note that - when people have a real problem - like having a leg chopped of from diabetes - their attitude does change and people are prepared to discard old paradigms and think afresh.

The risk takes save my bacon

Just a handful of highly enterprising engineers were prepared to risk their jobs and reputation in their companies on what was really a totally untested system.

These were major companies, Toshiba in Japan, GE, GM and AMP in the US and Siemens and Bosch in Germany.

And fortunately for them (and me) my simulation worked and they were more than happy to write papers for technical conferences showing their successful case histories.

And that saved my bacon and allowed me to pay off my credit card.

Pure and applied science

There is wide spread view that some brilliant scientist make some great discovery which magically changes the world.

That happens - but is very rare.

The more normal process is that there are a number of advances in various areas of pure science. Along comes an applied science and sees that these advances enable him to solve some major problem. He integrates all these technologies together and producticese them so other people can use them.

That is the way my simulation was established in the market place.

There is saying that science is the art of truth, engineering is the art of ignorance.

We engineers use safety factors which are really ignorance factors. Sometimes they go badly wrong like with the De Havilland Comet where the engineers just hadn't understood metal fatigue. But generally we get is right and make major progress.

But we can never be sure to the level that a scientist would accept it as truth but typically that process occurs in the early days of usage. That is the stage we are at now with the intelligent control approach.

But that will pass and we will be in the process of broad scale adoption.

Adoption

It was fun trying to persuade people how to adopt the technology. I use to divide them up into three categorises.

There were the crusties - they were generally experienced people in the industry who had a pretty good level of competence and were delighted to tell you why it would not work.

Then there were the puddings - they would agree it was a good idea but do nothing.

Then there were the intrapreneurs - typically young engineers looking for a break.

Obviously the intrapreneurs were great to talk to. They are the people who will go out and become ambassadors and lead to wide scale adoption.

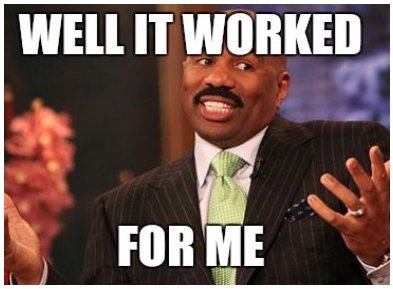
These are the people we need to spread the work on resolving the diabetes challenge.

Next I liked the crusties, the established experts. They would tell you why it would never work. Actually these were fun because they identified issues why it would not work but I could argue the technology with them and often they became my greatest advocates.

The pudding were the biggest challenge, they would agree with everything you said but never get around to doing anything.

Diabetes Australia has created a forth class. I spend two million dollars of my own money on trying to find a solution to the diabetes problem, I try and get

The importance of ambassadors



They were my ambassadors, unpaid salesmen who helped changed the industry.

Now that is important when it comes to changing our thinking about diabetes, people have to change their attitude to food but we don't need to spend billions on advertising we just need a threshold number of people who are prepared to stand up and say 'it worked for me'.

Faster, better, cheaper

The company I had formed just grew and grew and got more profitable and I started flying first class on my around the world trips, the company was a world leader in this new field and I was awarded many accolades as a pioneer.

Then yet another transforming, road to Damascus, moment.

I wrote a book, Faster, Better Cheaper - all about, you guessed it, making plastics part Faster, better and cheaper. But just looking at it I asked myself if this what I really want to do in life - make Plastics parts Faster, Better and cheaper.

So I asked what was the most critical area affecting humanity that I really wanted to work on and the answer was soil and water which are without doubt the most critical problems facing humanity (climate change may be critical but it effect will be that we cannot produce enough of the right sort of food to keep us healthy).

So I sold the company which meant I was now had plenty of money to play with on speculative research.

Meanwhile the company continued to grow and grow and was eventually sold for $Au500 million so the vulture capitalist made a nice killing. Evidence that the research and business philosophies I had established really work.

And that is important when is comes to grappling with the diabetes epidemic.

I have a track record, I was a pioneer of Computer Aided Engineering, I developed a technology which literally changed an industry which led to me being recognised by the Institute of Engineers as one of Australia's leading innovators and the company I formed went on to be sold for $Au500 million.

I had a formulae for tackling difficult problems and fighting outdated paradigms.

The whole point of this story is how to think about changing paradigms and develop strategies to tackle this major problems of fighting diabetes.

Doing daft things

Now I had enough money to go out and do daft things in the area of soil and water on the chance that I must stumble on a new way of thinking about how to grow food.

I did some truly daft things that respected research organisation would never consider funding - thanks but on your bike would be the classic comment.

I had this idea that I could bury lay flat pipes in the ground and pump them up to make channels though the soil which act as drain pipes.

I made other pipes with holes in it so I could pump air into the soil which made the farm dogs run around in total confusion as the soil started to whistle.

I did develop some intelligent irrigation software which monitored the soil moisture and the water input to calculate the rate at which the plants were using water then adjust the amount of water for the next irrigation based on predicted weather forecast.

It actually worked great but at that time there just was not the computer power for it to be really functional and AI was way into the future.

I mention these because I want to make a point about speculative research - what I call zig-zag development.

You have an idea and these seems good at the time, then it fails so you scrap it but it gives you another idea so you go down that road until that too fails but again it gave you yet another idea and off you go down that road.

All my failures led me to the development of Wicking beds which are now universal around the world, but they came from my failed attempts at subsurface irrigation and drainage which are at the heart of my solution to the diabetes problem.

So again what is the point, you can carefully plan out a research project and precisely implement every stage, this is how Governments funded research projects work.

But if you want to make the big jumps in technology you have to be speculative, try one approach which you think is fantastic, test it and if it does not work then brave up, admit it was crazy and move onto the next seemingly fantastic idea which will may well fail but eventually lead to that major breakthrough.

Totally unacceptable to the formal science community but I took the attitude - look it is my money and if I want to blow it on stupid ideas that is my business.

Applying speculative research approach to diabetes

And how is this relevant to diabetes? I fully appreciate that Diabetes Australia spend a lot of money on well run and managed research projects - which is great - but they are just not delivering the goodies and diabetes continues to grow at an alarming rate.

May be time for a bit of speculative research.

Xiulan's foot.

But then my wife, a medical doctor became diabetic and we were told by our medical adviser that diabetes was a progressive chronic disease that would just get worst and worse and they would put her on stronger and stronger medicines until she would need insulin injections but would probably die young from related problem like kidney failure.

With those sales skills I hope she does not have a second job as a door to door salesperson.

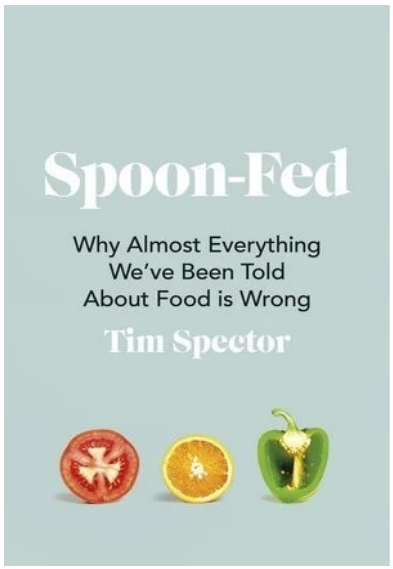
Then Xiulan's foot started to turn black and the doctors started to talk about amputation.

I was totally taken back by this news and wondered if these guys really knew what they are talking about.

My wife is a medical doctor and I am an engineer and innovator so we were in a better positioned than most.

Failed paradigms and legs being chopped off

Yes I am still horrified by the information supplied to us by our medical adviser. It was totally wrong and twenty years out of date.



I could go the library or the web and read the latest publications from key researchers like Professor Roy Taylor on reversing diabetes, Professor Tim Spector on the Diet Myth and Dr. Andrew Jenkinson of why we eat too much.

It was clear there was a failure of productisation – what was being told to us in our Medical Centre was just out of date, not in touch with the latest research and wrong.

Now don't get me wrong, I am not blaming the medical centre, one of the lesson I had learned from making new technology useful is that it has to be productised - turned into a system which is readily accessible and easy to use.

There was simply no system for productising the information on how to reverse diabetes, not to the medical staff let alone the public.

Read everything you can find then digest

One of the basic rules of innovation is before you do anything read everything that you can find about the topic, then put it all aside and just think what it all actually means.

So I read and read everything I could find about diabetes and lo and behold what they were telling us was just plain wrong. There is a whole library of scientific publications on how to manage diabetes but the overworked medical practitioners on the front practitioners just do not have time to read the mass of scientific literature on diabetes and work out how to apply it.

Around the world

Reading is fine but some times you have to get off your bum and go and see for yourself.

So have been to many countries in Asia, Africa, South America to study traditional agriculture.

The aim was not to copy their techniques it is just not possible to apply these in a modern industrialised society and there are just too many off us now but to try and see what I could learn from how they grow there food and in many cases propagated their soil for many thousands of years in a totally sustainable way.

So I have been to many countries, China and India are particularly interesting because these populations seem much more prone to diabetes. Why? Nature does things for a reason.

There are some tribes in Africa who are resistant to malaria, yet when white man goes to Africa they drop lies flies if they have not had their injections.

The reason is obvious, the white man has no need for malaria resistance but the African does so evolution works it magic trick.

So why do Chinese and Indians have a low resistance to diabetes? Could it be that in their traditional culture there were some factors which protected then from diabetes.

China is particularly interesting - it is really two countries. Modern Chinese city like Shanghai and Shenzhen are ultra modern cities with all the latest technologies like electric buses and cars, the most spectacular civil engineering and modern production and research facilities and a Western Style food system and a very high incidence of diabetes.

Yet go to the back blocks of rural China and it is like stepping back centuries into time. One thing you can't miss is the old ladies in the markets. They go up the mountains and collect plants from the forests.

Fortunately my wife speaks Chinese like a native - not surprising considering she was borne there and very useful for me as it is really difficult to get a good picture of what is happening in other rural non English speaking countries.

Naturally I want to know what species these plants are as I am very interested in plants that help diabetes - the only answer I can get is Mountain plants which is really frustrating.

I have been able to lay my hands on some of these plants through the local Chinese community.

It would be wrong to make categorical statements as there is wide variation in soils, crops, growing techniques and climate there is also difficulty in obtaining hard information in rural area where the people speak their own local dialect.

But we can have confidence in the statement that in areas with beneficial soil, plant species and growing techniques conductive to a healthy gut biome diabetes is simply not an issue where in urban environments reliant on food produced by chemical industrial agriculture there is a significant and ever increasing occurrence of diabetes.

Prevention and Food not drugs

It is absolutely clear is that diabetes is not a simply a medical problem which is going to be fixed by drugs we have to focus on prevention by food.

The focus should be on prevention as well as cure.

I am not saying that just focusing on food is going to be able to manage diabetes in the way that drugs control blood sugars, but will certainly help but it you eat the right sort of food, which includes gut brain food then diabetes can be prevented. Diabetes is simply not an issue in these societies growing their food in a traditional way.

The Diabetes epidemic is a man made result of our modern food system, we need to study and learn from how our gut brain which controls our bodies has evolved from the traditional way of growing food.

The need for productisation

It is fine to undertake top level research but that information needs to be processes so it is readily available for wider use both by the front line medical practitioners and the public.

This is the stage that is currently missing and why so many legs are being chopped off.

The pharmaceutical industry

The pharmaceutical industry really understand the process of productisation. So when you go to the doctors you are prescribed an assortments of different medications all carefully formulated to control everything from high blood pressure, cholesterol and of course blood sugar level.

They are very good at productisation so they get a lot of business and make a lot of money.

The broccoli salesman is not good at productisation so has to sell his produce at a low price and does not make much money.

Experiments with continuous blood sugar monitoring

If you are in the innovation business like me you are very sceptical about fancy sounding theoretical arguments as to why this or that is good and I wanted to test these ideas to see how they really work.

So I fitted my long suffering diabetic wife with continuous blood sugar monitoring and photographed everything she ate to see what I could learn.

On average her blood sugar was pretty well balanced - no doubt because of all the pills she was taking. But when you looked at the minute by minute graphs it was fluctuating widely, not just going high at times but also dropping down to very low levels where I felt she was in danger of having a hypo - which is really scary. Apart from being grumpy there were no other symptoms.

But then I came across a piece of information from the research scientist that if you start the meal by eating the vegetables that is coats the inside of the gut so when you get around to eating the chicken wings and chips followed by a hunk of cheese cake the coating on the gut wall slows down the transfer of sugar to the blood stream and smooths out those wide swings in blood sugar level.

It seems that neither our doctor nor the broccoli salesman know that and that is because that really important piece of information has never been properly productised.

Yet it is very important for a diabetic to know - it could save the leg (or life hypos are nasty).

Getting the bottom of thing

Ask a kid why they did not do their homework and they may say the dog ate it, but then you have to ask why the dog ate it and you may get the answer that he had not fed it then you get another answer that he had been too busy playing with his new video game. Why why why until you get to the bottom of it.

That's what we must do now.

Hop into my time machine

Come for a trip with me in my time machine - I will set it to 200 hundred thousand years ago when homo sapiens first appeared.

There is a couple of homo sapiens celebrating their newly acquired name, one weighed just 50Kg while tho other weighed 150Kg.

Along comes a pack of hyenas. The skinny humanoid shins up a tree and escapes, sadly for the heavier human the branch breaks and he falls to the ground.

The hyenas put on their napkins, whip out a bottle of tomato source and a sprig of parsley and have a very nice meal. It is a bit difficult to breed when you are mincemeat inside a hyena so those genes are lost of ever.

But the skinny humanoid waits for the hyenas to nick off, climbs down the tree, finds a nice lady humanoid, has a bit of a randy up and those genes are preserved and ended up eventually inside you and me.

We have evolved over these couple of hundred thousand years a highly sophisticated intelligent control system which manages our appetite, how much we eat, what sort and where we store fat and it works really well.

We got it wrong

Some fifty years ago we made major changes to our food system which meant that we were no longer feeding our gut brain which sent our message saying it was hungry.

Some smart dietitians thought they could set up system where we measured precisely how many calories, micro grams of this and that nutrient and vitamins we should eat and everything would be fine.

But it wasn't. Our gut brain said stuff the dietitians I am hungry, sent our yet more signals that it was really hungry and it won that little conflict and diabetes became an epidemic and people in bulk started having their legs chopped, Governments started paying millions of dollars to subsidise expensive drugs and pay for a lot of amputations.

That will keep on happening until we recognise that this will get worse and worse until we accept that we need to feed our gut brain.

How to feed our gut brain

So I needed to put my innovator hat on again and find a practical way of feeding our gut brain.

The answer (after lots of crazy ideas that didn't work) turned out to be dead simple. Just study how gut brain food has been grown naturally over the last few hundred thousand years and productised that into a process which can be done in modern society by virtually anybody - even if they live in a flat.

That it the fun part of innovation and it turned out to be dead simple to feed our gut brain, you just need a twin flower pot system, in one you grow soil (with a bit of help from the worms, soldier fly larvae, beetles, fungi, microbes etc) some organic waste and rock dust. The grow plant in the second pot and anyone can grow the plants which will act as pre and post biotics so our intelligent control system works as it has done for thousands of years.

I can test this on myself (as it would not get past any ethics committee but as with my money, it is my body). There were no serious side effects, just an excessive toilet paper consumption on some trials.

Then I could get my long suffering diabetic wife to start eating some rather weird looking plants (I experimented with different variety of plant species as well - I'll try anything once). But it is a problem getting her to eat some varieties and she certainly did not want to make friends with some of the weird creatures in the soil but there was enough to convince me that this really works.

Back to the simulation era

This takes my thoughts back to the time when I had spent all my money on buying that first computer, spent hours reading everything that had been written on flow and heat transfer and then hours of patient coding and testing then buying a ticket on had no money to pay for in the hope that I could convince other engineers that my simulation actually worked and was useful.

Back then I had serious financial problems now I had other financial problems.

I think that gross inequality is a scourge of modern society, I had now restored the balance, at least on a person level, by spending the serious money I had acquired from my simulation to finding a solution to the diabetes puzzle.

But the problem is how to convince people that growing plants in soil made from kitchen waste will end up with a healthy gut and not having their legs chopped off.

It is just to simple and cheap it is difficult for people to believe that it can actually work.

The obvious organisation to approach is Diabetes Australia who spend millions of dollars on super high tech medical solutions.

The first problem is that is just seems inconceivable that a solution so inexpensive (about $48 for as set of pots) could actually work when medical solutions costing in the millions are not working.

The answer to that of course is that diabetes is not a medical problem it is a food problem. For some two hundred thousand years our gut brain controlled out diet and where and how much fat we stored and it worked perfectly.

Then we changed out food stopping feeding our gut brain and diabetes became a major epidemic. It would seem almost child like logic to go back and start feeding our gut brains again.

But that is not the way the modern sophisticated high tech world thinks, how can a simple cheap solution work when an expensive complex solution does not work.

It is about as logical as getting a head ache from banging you head against a wall and taking some high powered pain killers rather than stop banging your head against the wall.

So what is the next step, exactly how my computer simulation became the norm and changed the paradigms. Find some enterprising people who are prepared to see if it works for them and let them become ambassadors.

Any volunteers?

If you don't won't to volunteer yourself you may like to email Diabetes Australia and suggest they could help by putting me in contact with some diabetics who may be willing to become volunteers. At least then I wont have to mumble on about do nothing government departments like Robo Debt and the PWC skandal.

The contact email address is Liam Ferney<lferney@DiabetesAustralia.com.au>

Thanks for reading and your support

Summary

Diabetes is increasing at an every alarming rate creeping into that central zone of the population causing a great deal of destruction to peoples quality of life with the only side benefits to the drug and mobility device industries.

What I see is that strategy adopted by Diabetes Australia is a high tech approach looking for a drug solution which is really doing very little to stem the growth of diabetes.

The reason is that it is not facing the root cause of diabetes.

The root cause is that we are simply not feeding our gut brain which acts as an intelligent control system regulating our appetite and deciding how much and where we store fat. The wrong fat in the wrong place is at the core of all non-infectious diseases, particularly diabetes.

With the best of intentions I have spent a significant amount of money (in the millions) developing a system where people can grow plants in soil teaming with beneficial microbes and minerals. It is inexpensive any one can do it with a little education which I am geared up to provide as part of the productisation process.

It is here and now and ready to go.

It does not require massive expenditure on promotion but is does need a quorum of people who have tried it, find it works (easily measured by blood sugar levels) and users simply tell their friends either real or on the internet.

It does not take a lot of sales skills to persuade people that incorporating a few fresh home grown plants is better than having you leg chopped off.

The issue is getting that quorum against the massive promotion from the pharmaceutical, food, supplement industry and lets face it Diabetes Australia.

I am not asking Diabetes Australia to pay for any development, the technology is here ready to go and productised. As a direct result of my crazy enthusiasm for speculative research I have already paid for the development costs.

What I am asking Diabetes Australia to do is to run an awareness campaign just to let people know that if they prefer a simple time tested natural solution to diabetes which works, rather than taking wads of pills that the technology already exists and all they have to do is go to my web www.gbiota.com and read all about it.