

How do we know

August 2014 Newsletter

Change of plan

This month I wanted to feature the new developments in the wicking basket system I have been working on. However we have had monster frost up here, most unusual but it has played havoc with my experiments on wicking baskets. Every day I look at my Google searches on diet and health and honestly the amount of lies, bogus information and scams about diet is just terrible.

So this month I have changed my plans and will talk about how do we know.

Alternative food production and distribution

Let me start with what I am sure is correct then look at why I believe this to be true.

The most significant development in modern medical science is our understanding of neurotransmitters – chemicals, produced in our stomach and the bacteria in our guts, which enter our blood stream and are transported to our brains to ensure we eat the right types and amounts of food.

They have evolved over millions of years to protect our bodies and ensure we eat a healthy diet.

Fatty sugary foods, typical of the fast or processed foods actually inhibit the sensors telling our brain to stop over stop eating so we tend to overeat leading to overweight and a range of deceases including diabetes, hearts decease strokes etc.

Conversely fibre and phytochemicals in fresh fruit and vegetables tell our brains when we have eaten enough food so we stop eating and become much healthier and fitter. These natural phytochemicals include the well-known vitamins and minerals essential to health we already know about but also include the many beneficial chemicals we are still learning about or have yet to discover.

However to produce these phytochemicals the fruit and vegetables must be grown in soils with a high nutrient content, particularly of minerals and trace elements and with soil biology to make them available to the plants.

The critical phytochemicals easily degenerate so produce must be eaten fresh preferably immediately after harvesting.

Traditional food production and distributions systems fail in these aspects so an alternative food production and distribution system is needed.

In the next newsletter I want to talk about an alternative food growing and distribution system in which plants growing in nutritious and biologically active soil are delivered directly to the consumer but for now ‘how do we know?’

How do I know what is true or just a con

Health on TV

The risks of our modern diet of highly processed food are real and have now been the subject of many TV shows on health – the men who made us fat, the men who made us thin, sugar versus fats and now Catalyst is running a two week special on diet.

How do we know what is true and what is just hype? We have the internet, if we know how to use it properly. We are absolutely awash with information, the problem is knowing what is right and what is a con and it is very easy to fool ourselves.

Look I am a bit of a red wine and chocoholic. Not that I am addicted, I once went for six months with absolutely no red wine or chocolate – for breakfast. But what if I wanted to fool myself and justify red wine and chocolate as a healthy diet?

I could simply google ‘benefits of red wine and chocolate’ and up would pop some serious scientific research which showed irrefutable evidence based on double blind testing that chocolate and red wine were beneficial based on tests with the Bolivian macaque.

They fed them a diet of 50 grams of chocolate and 100ccs of red wine a day and their health improved as measured by activity levels and muscle strength. Now what they did not tell you was that the Bolivian macaque (which I just made up) natural diet is cocoa beans and fermented mango juice so has all the bacteria and enzymes necessary to digest red wine and chocolate.

Reading just one view on the net does not prove anything. I have to look for alternative views. I could simply swap the word ‘benefit’ with ‘hazards’ and google ‘hazards of red wine and chocolate diet’ and find an equally impressive scientific paper in which artic lemmings were fed 3 Kg of chocolate and 500ccs of whisky a day and they all died within four weeks. (Probably very happy little lemmings but still dead!) Had they been gradually introduced to chocolate and whisky over time their bodies may learn to adapt, they would then be happy but alive little lemmings. Giving a totally different conclusion.

So how do we find out what we can really believe? Don't just google once, instead set up a ‘google alert’ and view over a period of time, months rather than days. You will pick up the various theories and counter theories and see how they are criticized by other experts. Science works by one scientist criticising the work of others. It is virtually impossible for a non-specialist (and most specialists) to see the missing elements in a piece of scientific research. But by following the debate over time and reviewing the various criticisms you then develop a reasonably reliable picture of the current views and cross check against your own observations.

And what would you find?

There is virtually unanimous agreement on the benefits of a high fruit and vegetable diet and the benefits of high fibre. It does not matter what particular dietary scheme

they are promoting, high or low protein, high or low carbohydrate, paleo, Atkinson's, vegan or whatever they all acknowledge the benefits of fruit and vegetables.

Just look and observe

But checking against personal observations and putting views into a wider context is an important part of evaluation of the various views.

I did report on high fibre in recent newsletters from my last China trip. I made the point that the western diseases resulting from obesity were exploding in China with some 8% of the population now overweight and with diabetes rampant. But turning the numbers round this means that 92% of Chinese are slim and healthy, something I can verify by simply walking along the street and contrasting this with the high proportion of overweight people I see in my local shopping area back home.

How do the bulk of Chinese avoid becoming overweight when they are absolutely enormous eaters? Anyone who has spent time in China knows that the Chinese are a food obsessed race and a massive meal will disappear in minutes.

They certainly are not on a low intake diet and the vast majority somehow stay slim and fit.

I made the joke, but it was deadly serious, that one of my observations was the supermarket trolleys were just loaded to the brim with toilet paper. Now you may think this is just a bit of fun but when you look at the medical research there is clear evidence of the benefit of a high fibre diet which enables the body to get rid of all the unwanted fats and toxins.

Statistics and number 1

I was born and Hitler declared war! True but there was no connection. So why do I make such a silly statement? I am trying to highlight the silliness of so much statistical medical research. Statistical correlation proves nothing it simply sets the stage to find the mechanism. Science is not about collecting facts it is about understanding the mechanism that make things happen the way they do.

There is a clear correlation between length of life and how many days' people wear a woolly hat. (Yes it is actually true). So if you want to live longer wear a woolly hat. Right?

See if you agree when you understand the mechanism. Malaria is a major killer which statistically reduces the life average life expectancy of people living in hot steamy climates like Africa. But people don't wear woolly hats in all that heat.

Every day I sit at my computer terminal reading all those papers looking at statistical correlations between various diets and health and life expectancy. There are hundreds of such papers often involving thousands of people. In fact we are now getting meta-analysis where researchers combine multiple papers giving statistical analysis of hundreds of thousands of people. No doubt we will soon be getting meta-analysis of meta-analysis. Or even meta3 or meta4!

What really matters is understanding the mechanism.

Understanding the mechanism

One of the most important pieces of recent medical research is the understanding of the mechanism. Our stomachs are continuously sending signals, neuro-transmitters to our brain which determines whether we feel hungry or full.

Certain foods, particularly the sugary, fatty salty food actually stop us feeling full so we keep on eating. So eating that hamburger in itself is not that harmful to our bodies, the damage comes from the blocking signals which create what I call the hungry beast inside us which make us keep on eating. It is the overeating that's the problem not that hamburgers are intrinsically a bad food – it is that they generate the signals which make us overeat.

One interesting recent discovery is that milk contains chemicals which belong to the opiate family - like heroin. These release dopamine's into the brain which are an intense source of pleasure. Nature has developed this mechanism so that the newly born want to keep on feeding. This is nature's way of ensuring the young keep on feeding and grow into adults. They become junkies. I know I have a new grandson just one week old and he is already a serious milk junky.

(Apparently, according to the paper, if the mother is herself a junky this mechanism does not work so the baby is in danger of starving because it has no motivation to eat).

Maybe that is why, even at my age, when a lady with an attractive figure walks by I have to be careful not to stare longer than is polite.

Scientific research is continuously increasing our understanding of these neuro-transmitters and it is not all bad news – there are many foods which reduce our appetite and our desire to keep on eating – stuffing harmful additional food into our mouths.

Benefits of fibre

Fibre in our diet is among the most important - the fibres decompose to release acetates which are a hunger inhibitor so we feel full - stop feeling hungry and don't eat as much. So simple!

As I conjecture from my Chinese observations fibre has an additional benefit – it helps us get rid of any unwanted food. At first sight the Chinese diet does not look particularly healthy as it can be quite fatty and meaty. But they have mastered the art of making vegetables tasty so they eat a lot of vegetables which offsets the apparent negatives.

There are a number of medicinal herbs which are marketed by the snake oil brigade which are actually quite effective at inhibiting hunger. But they are not sold that way, the sales people simply say that take this pill and you will get slim. (This argument was put to me by a very portly Chinese gentleman). That's just not true, you have to go on a diet and then the pills will help you stay on that diet if you lack determination.

So we simply need to eat more nutritious fruit and vegetables, which are produced when the appropriate species which is grown in soil containing the needed nutrients in a plant available form.

The benefits of a high fibre fresh vegetable and fruit diet are beyond question.

Science and the general theory

Science works by collecting fact and then formulating a general theory which can then be applied to specific cases. This is great for the physical sciences where an engineer can apply say Newton's law to the design of an aeroplane.

Medical science tries to work in a similar way but there is a snag in applying general laws - people are different. A particular diet may work well on a statistical basis but that does not mean it will work in all cases e.g. for you or me.

Self-experimentation

While diet is critical to health we are all different, both in our bodies but also in our philosophy to life. I want to talk about how I have applied the general laws of nutrition which are gradually emerging to develop a diet that suits me. This does not mean it will suit you but you may be able to use the methods I have used to develop a diet suitable for you.

Now first I must say that I love food. Sitting down to a nice meal starting with say Bosch soup, followed by roast pork, crab meat or Atlantic salmon accompanied by a mature Shiraz, then peaches marinated in wine and served with ice cream, followed by blue cheese on crackers and finished with chocolate, percolated coffee and a good port is a pretty good way to spend an evening with friends.

If I were told that this is very unhealthy and I must settle down to a diet of boiled cabbage I would have to think pretty hard about my life's values system. Remember the old joke, giving up wine women and song doesn't make you live longer it just makes it seem longer.

My guardian genie

Before I took any decision I would want to know what facts I could really trust. Let us just make up a story in which as I was rubbing the coffee pot clean while I was cleaning up from that scrumptious meal when the genie assigned to safeguard my interest suddenly appeared to tell me that this life style was all over and it was time to adopt a diet of boiled cabbage.

I would refer him to all the controversy there is about diet and health and say the science is not yet proven. Being a time travelling genie he said back in 10 minutes and he returned to tell me about the research project he had organised - a global research project which extended over the forthcoming two hundred years. He had taken the entire world population (which peaked at fifteen billion) and split them into a control group eating a conventional diet of processed food while the other half ate a strictly vegan diet. This was a triple blind test which proved beyond any doubt the benefits of the vegan diet and I had to accept a future diet of boiled cabbage.

Now as I do not want to give up my decadent life style I could have said that just because the entire world's population for two hundred years had shown the benefits of a diet of boiled cabbage that it did not necessarily prove it applied to me – I could be the 1 in 15 billion exception. No doubt being a genie he would have some smart answer which would blow any arguments I had away.

So instead I told him a joke once told by Pam Ayers – the comedian. A guy was walking along a cliff top when he accidentally slipped and fell over the edge. But he managed to grab hold of a tuft of grass which was gradually being pulled out by his weight. He looked down at the waves crashing onto the rocks 200 metres below and realised this was not the time to worry about social embarrassment and yelled out at the top of his voice **HELP**.

A booming voice came back saying I am the Lord, let go and you will be saved.

Being a quick thinking guy he realised that a plan B was required so he yelled out again, '**IS THERE ANYONE ELSE THERE**'.

I was just trying to point out to my beneficial genie that there must be something between my life of decadence and boiled cabbage.

Experiments on me

So let me tell you about my experiments on me to try and find a balance. I took a decision that my aim in these experiments was not to find a way to live until I was one hundred and twenty five but spending the last forty years of my life in wheel chair, unable to hold my head up straight, dribbling out of the corner of my mouth and peeing the bed.

I decided that the aim in developing a diet that worked for me was that I wanted to be fit and healthy and active while I was alive. Scientist like to measure things and death is easy to measure, it is a 0 1 answer well suited to our digital age. So they can do experiments on mice (people rather object to being experimented on to see if they live or die). Feeling fit and healthy is not good for scientific measurements – how do you measure a feeling of health.

But in my experiments on me that is no problem, I am perfectly confident that I know whether I am feeling fit and healthy or not. I am a very good subject for personal experimentation as I really like good food – so I tend to pig out and get fat.

I had already tested the theory that eating fats and sugary food like pizza and French fries inhibit the neurotransmitters that tell me to stop eating. This part of the experiment had already been completed. At a certain period in my life I was in the habit of getting together with a bunch of male friends and drinking beer and eating super-sized pizzas.

It was clear that by the time we were half way through the pizza's that we were actually full, so we stopped eating and had another beer and told a few more jokes, but then we went back and had another slice of pizza followed by another beer and a few more jokes by which time we could stuff another slice into our mouths but that just left one round more each which would be silly to waste so down it went.

No doubt about it, fat and sugary food does turn off the 'you are full button' so you just keep on eating.

This theory was clearly true for me; I just pigged out until everything was gone.

There is no doubt this theory works for me.

Finding what stops me feeling hungry

In my next experiment I would start the meal with the sweet and fatty food then (with great will power) swap over to other types of food to see if they stopped me wanting to keep on pigging out? Absolutely that worked for me.

When I switched as to a second course of fruit and vegetables I actually felt full and did not want to keep on eating. I had silenced the hungry beast inside. Even better I found that dark unsweetened chocolate also made me feel full. I could eat a few lumps of chocolate and actually feel full.

Next I decided to try a full on vegan diet of just fruit and vegetables. I had read that some neuro-transmitters came from the bacteria that inhabit our guts and that there are good and bad bacteria.

The bad ones live off the fat and sugary foods. When we stopped feeding them the diet they like they send out the 'we want more' signals which can make us feel pretty miserable. It takes a couple of weeks for the bacteria in the stomach to adjust with the bad ones dying to be replaced by the good ones. So I expected a few pains with the change of diet and was prepared for hunger pains.

I toughed it out! (Applauds please)

There was no doubt, I lost weight, it was nice to see again the bits of my body that had been hidden by my belly.

I felt better, I had much more energy, I actually wanted to go for walks and get out into the garden and do those heavy jobs I had been putting off.

I felt better.

BUT

Oh I did really miss all that tasty food, did I have to choose between feeling fit on a boring but healthy vegan diet or all that tasty food? Not a happy choice.

Clive Palmer - don't knock the Chinese

But luck was on my side. My wife Xiulan is Chinese so we visit China a couple of times a year. The Chinese have a lot to teach us about food.

They can teach us how to cook vegetables so they are really taste good. They will typically have a variety of main vegetables (which provide plenty of bulk and fibre) then flavour them with a mix of herbs and spices. This taste is really good and would

satisfy most people taste buds. These herbs and spices not only add flavour they are a source of valuable phytochemicals which are highly beneficial for health.

Life was looking better, it is possible to eat a vegan diet and still eat tasty food.

But was I really up to a purely vegan diet? I was not really sure I was up to a total vegan diet, however tasty, with all those spices.

This is a personal decision on how far to go but for me again I could learn from China.

Finding the compromise for me

The typical Chinese diet still incorporates some meat, (and a lot of fish and fungi) which increases the range of flavours but is still predominantly vegetarian. (Normal Chinese food in China is very different to the food in Chinese restaurants in the West).

The health benefits of this supplemented vegetarian diet may not be quite as healthy as a pure vegan diet but let's face it there are over a billion Chinese eating this diet who are thin and healthy. A billion is a statistically significant number but I am putting this to the real test **does it work for me?** A sample size of one may not be statistically significant but I am not looking for a universal truth, just what works for me.

If I was challenged on my predominantly vegetarian diet I would put forward two arguments.

First science is still discovering new phytochemicals so we don't really know which foods are beneficial so it makes sense to have as big a variety in my diet as possible.

Secondly when scientists do research on meat they do not seem to differentiate where the meat comes from. All meat comes from plants. Feed lot fed animals eating highly processed feed and pumped full of antibiotics are not eating a healthy diet so we cannot expect the meat to be particularly nutritious.

My personal decision is to avoid this factory produced meat.

However animals that are grazing on a wide variety of plants are likely to healthier meat so I am comfortable with a compromise. This is a personal decision and I don't believe in pushing my ideas on other people.

However I am suggesting you may like to follow my lead by experimenting with a largely vegetarian, herb and spice diet to see if it suits you. This is clearly far healthier than the highly processed food diet that most people are eating.

I walk around my local supermarket looking at how many people are overweight just walking time bombs for diabetes, heart attacks, strokes and all those other deceases that come from being overweight. I have many personal friends who are diabetic and fully understand resulting the pain and discomfort.

The financial cost to the community are massive, deceases that follow on from being overweight are the largest single cost to our health system.

Having spent so much time investigating the connection between diet and health I ask myself what can I do about this? But this is the topic of next months newsletter

Colin Austin