



PROFESSOR TRIM'S WAISTLINE

THE PROFESSOR'S FEATURES

NO. 26; SUMMER 2008



The 'Sweet Spot': Getting it right in health and life

An acquaintance of the Professor's drinks one and one-half 350ml glasses of his own home brew a night. Not a millilitre more; not a millilitre less. He always does this after 6pm, and before 9pm, retiring for the evening sometime after that. Ask him why, and he'll say that that that brew, in that amount, at that time, enables him to hit his 'sweet spot' every night. Any more and he gets tired and irritable; any less and he less effectively reduces his work day stress.

Sweet spots occur throughout life. They're typically associated with sport, such as the perfect meeting of club and ball in a game of golf, or a flowing moment in a football game. But they also occur in a marriage, a partnership, the history of a country, or a good night out. Think of John Lennon and Paul McCartney at the peak of their

combined creative genius; think of the Roman Empire in the middle of its eight hundred year dominance; think of Winston Churchill

in his 'finest hour', later to be dropped unceremoniously by the British voters.

But what has this got to do with health or body weight, you may well ponder - before acceding to the belief that the lead article of this esteemed tome is getting wackier and wackier each issue. The answer is 'lots' (if you've got a mind like the Professor). Healthy 'sweet spots' are manipulated by a sophisticated physiological mechanism called the immune system, without which no animal could exist.

The immune system guarantees that once things go wrong - as they inevitably do - certain actions are automatically undertaken to correct this. Take the case of a cold or flu: a bacteria or virus is somehow ingested into the body and attempts to take over the body's natural system by replicating itself. The immune 'Army' on the other hand, responds by confining this - building a wall around it, and then attacking it, killing it and mopping up the dead bodies.

Until around the turn of the century, we thought this only happened in the case of invading foreign 'antigens' such as bacteria or viruses. Since then though, scientists have discovered that it can also happen as a result of things

we do. Putting on weight for example, beyond a certain point for a certain individual, causes an inflammatory reaction in the body, which, although much lower grade and more widespread throughout the body than the reaction to a bacteria or virus, is designed to help the body correct itself. However if this goes on for a prolonged period, such as through the development of obesity, it doesn't prevent sudden acute diseases,

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like colds or flu, but causes long term chronic diseases, like heart disease and type 2 diabetes.

The form of inflammation associated with this is called 'metaflammation' as it involves the metabolic system rather than just the organs of the body. As we've shown in these pages before however, it may not be just obesity that *(continues next page)*

THE PROFESSOR'S POINT

Too often we respond to demands set by other's agendas. An individual's 'sweet spot' on the other hand, can be just that - individual. So when everyone is advised to reach, what is for many, an unrealistic body weight based on Body Mass Index (BMI) measures, this is likely to way surpass the 'sweet spot' for many individuals. One's healthy actions should be an individual's primary goal, and sometimes this is irrespective of body weight.

The world according to the Professor *(links to this month's stories)*

Creating diabetes to save the economy • Assessing energy drinks • Selecting drinks for weight loss • What drives us to drink • Fruit juice v alcohol • Inflammation is ageing us - how to delay it • Saving money while losing weight • How much protein do you need? • Does stress plus a high fat diet increase obesity?

(continued from page 1)

but the things that may or may not cause obesity, like over-eating, inactivity, lack of sleep, stress etc. In other words, the modern lifestyle and our modern environment, irrespective of how

comfortable it is, can be antagonistic to the body's 'sweet spot'.

The good news is that it can be regained, irrespective of whether you lose those surplus kilos. In other words, forget the dogma. You can be healthy and

fat. Check the Professor's table in this issue, for what causes and what prevents metaflammation and 'inflamm-aging' and hence, by extension, how you can get back to your 'sweet spot', even if you are carrying a bit more lard than you'd like.

The 'sweet spot' and the Fed's weight loss ads

The Australian Government, to its credit, has recently begun a social marketing campaign to make Australian's aware of the dangers of abdominal obesity. But some experts have been left wondering from where their advice for a goal waist size of 94cm for men and 88cm for women has come.

Any specialist working in the area knows that goal waist sizes have a lower and an upper cut-off. As risk increases exponentially beyond the upper cut-off (102cm for men and 94cm for women), any initial goal should target the

upper level, which would be much easier to reach for a big person. The extra benefits gained from dropping from the upper to the lower level for many would not be worth the significant effort needed and would likely disillusion many from even trying.

Even more important is information included in the current National Clinical Guidelines on Weight Control that a weight loss of 5-10% for big people can result in a 1/3 reduction in disease risk. Perhaps this should be the population target.

Some Historical 'Sweet Spots'

• The Roman Empire around the time of Caligula • Winston Churchill's 'finest hour' • John Eales' field goal in the 2003 Rugby World Cup • The Mayan Empire of Central America at the peak of its powers • The inauguration of Barack Obama

Some Personal 'Sweet Spots'

• The early euphoria of a new romance • Annual holidays to the same location • Feeling a 'runner's high' in a long run • Graduation day • The birth of a new child • Just enough, but not too much wine

Creating more diabetes to save the economy

...and while he's banging on about 'sweet spots', it's become apparent to the Professor that the GFC ('Global Financial Crisis' if you've been asleep during the last year) probably signals a sudden end to the world's economic 'sweet spot' of the last 50 years.

The need to rethink the system is nowhere more obvious than in the gummint's reaction to the current crisis: get Australians, already overlaid with debt, to spend more. This is like getting someone with food poisoning to eat a salmonella sandwich. An article in this month's medical journal *Diabetes Care* illustrates the point.

The journal reported that Type 2 diabetes sufferers spend an estimated \$US4,100 more per year on medical care in their first year of detection than non-diabetics, adding an extra \$158 every successive year to Gross Domestic Product (GDP) – our measure of economic wellbeing. Currently, these physically unhealthy, but economically valuable people make up only 7% of all Australians, but there are 15% more with pre-diabetes, lining up to add to the nation's coffers.

Such a vital economic segment of the population could easily be doubled within a generation with money to consume more fatty foods, use gas guzzling cars rather

than walk or cycle, watch televised activity rather than actively participate, and engage in other pursuits involving carbon creating non-renewable energy.

If the economy still staggers, smoking, alcohol and drug use, which currently adds around 9% directly to GDP and at least another 9% from dealing with the consequences, could be increased overnight with a Government bailout. In the meantime, is there anybody out there who can at least discuss the irrationality of our drive for growth beyond a point of negative returns, as its architects JS Mill, JM Keynes and others had the foresight to do several generations ago.

Fear of shark attack is greater than fear of diabetes

Consider these statistics:

- There is an average of 16 shark attacks in Australia each year. Roughly three of these will be fatal.
- There are a quarter of a million Australians who contract type 2 diabetes each year. Most will die from this in a slow and painful way, often losing a leg in the process, much more painfully than a shark bite, or going blind or losing

kidney function.

- If Americans are any indication, around 50% of Australians are afraid of a shark attack, plane crash or cancer and only 3% fear getting diabetes. Yet 1.5 million Australians already have the disease and a further 2.2 million will get it in the next ten years.

What can be done? Quite simply, lose 5-10% of body weight and get

more physically active. A good healthy diet will also help, and these things can reduce the inflammatory process that is now known to cause insulin resistance and hence diabetes. Avoiding a shark attack is almost as easy – stay out of the water. Then you've only got the land sharks to worry about (and that should be more of a concern than the water variety!).

THE PROFESSOR'S PRACTICE

Are 'energy' drinks all they're cracked up to be?

Caffeinated 'energy drinks' ('Red Bull'; 'Mother'; 'V' etc.) have become a popular part of the soft drink market, and are also sometimes used as a way of losing weight. But are they all they're cracked up to be? Do they provide energy? And are there any particular downsides?

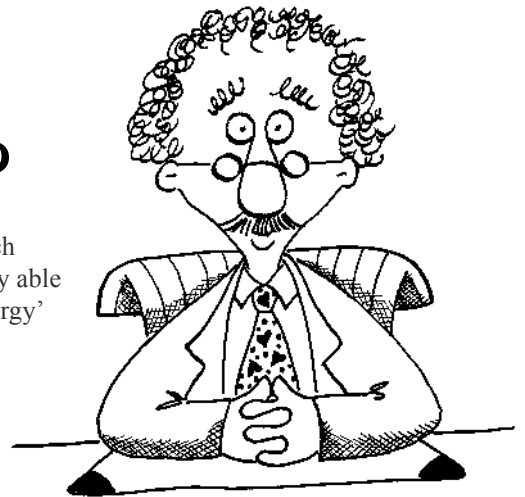
The answers are simple – but complicated. In the first place, such products tend to be loaded with both caffeine and sugar.

The caffeine (often the equivalent of 2-3 good strong cups of coffee in a serving), is likely to provide an energy 'hit' to the ~50% of the population who are caffeine sensitive. For these people, such 'energy' drinks are likely to cause jitteriness and inability to sleep, and possibly increase the adverse effects of stress. (It's no coincidence that manufacturers have specifically targeted the youth market who tend to 'binge' on such drinks to keep themselves 'up' while drinking alcohol until late which otherwise might bring them 'down'). For this reason, it's also possible that such drinks might have a weight loss effect in some people (by reducing hunger levels).

The sugar in these drinks provides the biological 'energy',

or calories, which makes them truly able to be called 'energy' drinks. This is likely to offset any weight loss benefits by increasing calorie intake (unless the caffeine is very effective in reducing other food intake). The energy it provides to carry out activity could be brief and intermittent.

A potentially more serious downside is death. A recent article in the *Medical Journal of Australia* (2009 Jan 5;190(1):41-3.), details the case of an 18 year old otherwise healthy young man in Port Macquarie NSW, who died after a day of moto-cross racing and drinking 'energy' drinks. Surgeons claim the excessive ingestion of caffeine and taurine in the drinks, combined with strenuous physical activity, can produce a heart attack by inducing coronary vasospasm.



Selecting drinks for weight loss

When it comes to choosing diets for weight loss, the concentration is usually on reducing food intake. However, recent figures show that around twenty percent of total energy in the diet today comes from beverages – mainly fruit juice and sugar sweetened soft drinks. But not all drinks are high in energy. So how do you know which ones to choose and which ones to avoid?

In the first place, plain water is not a bad choice. (Assuming it comes from a tap and not a bottle), it has no calories and no adverse effects on the environment. Other drinks need to be considered on the basis of their energy per volume. A good rule of thumb is to avoid drinks with more than ~1.5kJ/ml of fluid, and drink sparingly those with 1-1.5kJ/ml. This is not to denigrate the health benefits of drinks such as

full-cream milk and fruit juice. If weight loss is the issue however, these should be used sparingly.

You can check this by looking at the label and dividing the number of kJ per 100ml by 100. The picture below gives an example of some popular drinks and their energy content. Items marked with XX should be avoided if you are trying to lose weight, X indicates use sparingly.



Choosing drinks: is it just thirst?

What drives us to drink? If it was just thirst, as nature intended, there would be no problem with the current level of 20% of total energy consumed in beverages. Obviously it extends beyond. So what are the driving forces?

Thirst

Like hunger, thirst is a biological drive that prevents us from dehydrating, and ensures that the ~70% of the human body that is made up of fluid is maintained. Any decrease of body fluid by more than ~5% can cause major physiological problems – and ultimately even death. As a result, humans can't last for more than a couple of days under normal conditions with some fluid intake (where we can last for several months without food). Genuine thirst however, is satisfied by water. Yet many people go for years without drinking water. Obviously others drivers are involved in what drinks we choose

Taste

Again as with food, taste is a driver of consumption. As fat and sugar are nutrients designed to make us consume more (to get energy for survival), drinks that are loaded with either of these (eg. dairy based, sugar sweetened), will usually be preferred over water. If taste is an issue modern technology can provide an answer – artificial sweeteners can add the taste, but no extra energy.

Mind alteration

While there's usually little genuine thirst involved in the craving for alcohol, kava and other mind altering drinks, these do provide some fluid to the body. And while these seem to have no real biological (although they may have a psychological and/or sociological) purpose, mind altering fluids have been consumed in some form by most cultures throughout the ages. The need may be, as some drug experts claim, to alter our normal form of consciousness from time to time. Fortunately, most mind altering drugs (eg. alcohol), although high in energy, are disposed of quickly in the body. If the accompanying diet is controlled, they should not be a problem for weight (although they could cause other problems).

Conditioning

This is the big one which is often overlooked when trying to manage body weight. By opportunistically consuming a high energy, tasty drink when genuinely thirsty, the odds of craving this when thirsty the next time are increased. Drinking full strength soft drink after a dehydrating game of sport for example, increases the chances of that drink being preferred over water the next time thirst strikes. In this case (as often occurs in children who are given soft drink or fruit juice when thirsty, the only real option is to go 'cold turkey'

and stick to water or diet drinks when genuine thirst strikes.

Arousal

Drinks like tea or coffee or those with added caffeine can aid arousal and are therefore often preferred when a 'pick-me-up' is required. In their 'raw' state, tea and coffee add no calories to water, hence these can be useful for managing body weight. The addition of caffeine to high-energy drinks on the other hand (see story this page), is not so likely to have the same benign effect on body weight.

Advertising/Marketing

Finally, beverage choice is often based on the images associated with that drink. How else could a dirty black fluid with some coca stimulant make you feel young, sexy and as if you're having a great time when you drink it – even if you're not thirsty and feeling miserable at the time? Consciousness of advertising messages and what is being done to persuade you to pay money for, and pick up that climate-changing can of soft drink, instead of grabbing a glass of water from the tap, is about the only thing that can help keep the weight off. Meanwhile ... all this speculation is making the Professor thirsty. Now where's that double scotch that makes men especially attractive with the soda, orange juice and a dash of genuine H₂O?

Fruit juice or alcohol

A common belief (particularly amongst men such as the valued readers of this esteemed publication) is that exchanging fruit juice for beer (in equal volume) will assist their weight loss cause. But while the energy (calorie) content of both drinks is similar, alcohol calories now appear to be processed differently in the body than other types of calories. This is used as energy much earlier in the cycle, as it is a toxin, which must be disposed of. Hence, provided the rest of the diet is not high in energy, alcohol calories are likely to be less effective in adding to body weight, than fruit juice calories.

As unrealistic as it may sound, fruit juice is likely to be more fattening (and possibly less healthy) than alcohol in moderation.



As a caveat, it should be added that the fructose (fruit sugar) argument is currently splitting the nutrition science community. Some say it's much worse than other forms of sugars in causing obesity; others say not – but then that's not unusual. In any case, there's probably not enough fructose in most fruit juice to worry about in the amounts this is consumed. We'll continue to report on how this one pans out.

For reference:

Palmer J, and others, 'Sugar-sweetened beverages and incidence of type 2 diabetes mellitus in African American women.' *Archives of Internal Medicine* 2008; 168: 1487-1492.

“Inflamm-ageing”: The new theory of ageing – and possibly how to delay it.

You may not have heard of it (apart from in these privileged pages), but inflammation, is a hot topic in health research. Now a new variant has been added to this: ‘Inflamm- ageing’, or a form of inflammation that occurs throughout the arteries of the body simply as a process of ageing. So what is it, what causes it and how, if possible, can it be avoided)? Let’s start at the beginning.

Inflammation, ‘Smouldering inflammation’ and disease

Inflammation is the body’s reaction to a foreign invader – bacteria, virus etc. It’s designed to build a wall around the invader and stop it from spreading. In doing so, it causes four things: (a) calor (heat) (b) rubor (redness) (c) tumor (swelling) and (d) dolor (pain) –as well as some loss of function. Like foot soldiers holding back invaders, this allows time for the infantry to come in and wipe out the enemy. Hence a cold or flu is usually over quickly and another part of the immune system is sent in to clean up the mess.

More recently, a different form of inflammation, which is much lower in intensity and spread throughout the arteries of the body has been discovered. This has been called

‘metaflammation’, because it involves the metabolic system, or ‘smouldering inflammation’, because of its lower level of action. Unlike the classical form of inflammation however, which resolves disease and returns the body to equilibrium, metaflammation is long-term and tends to cause diseases like heart disease, type 2 diabetes and some forms of cancer.

So if a biological pathogen (eg. bacteria) gives rise to classical inflammation, what causes metaflammation?

The answers to this are only just beginning to surface. Obesity was one of the first, identified in the early 1990s. Hence it was thought this is how obesity causes disease. But not all obese people are unhealthy and not all lean people are well. So obesity may be just a marker for something else.

Antigens and inducers

Classical inflammation is usually caused by a foreign invader called an ‘antigen’. Lifestyle and environmental factors on the other hand appear to be the cause of metaflammation. Different foods, such as a high fat, low fibre, typical western diet can have this effect (an

Egg McMuffin for example can have an instant metaflammatory effect). Smoking, air pollution, depression and lack of sleep can also be metaflammatory. But these hardly meet the criteria of an ‘antigen’. Hence the term ‘inducer’ has been used.

More recently, age has been identified as one of the most significant inducers. As we age, low level inflammation slowly sets in throughout the body, increasing the risk of age related diseases like dementia, heart disease and diabetes – sometimes with, but often irrespective of obesity, leading researchers to suggest that the process of aging may be one primarily of inflammation, or a break down of the immune system’s ability to cope with life. The new name for this is ‘Inflamm-aging’.

Inflamm-ageing and what can be done about it

If ageing is an inflammatory reaction caused by lifestyle and the environment, what can be done to delay it? There’s no single answer, but all the evidence points to those factors typically regarded as being associated with a healthy lifestyle shown in the table. It might not guarantee you’ll live forever, but it should delay the inevitable for a while at least.

Factors causing Inflamm-ageing	Factors delaying Inflamm-ageing
Obesity	Weight loss
Alcohol in excess/binge drinking	Exercise
Fast food/‘western’ style diet	Alcohol (in moderation)
Fasting	Cocoa/dark chocolate
Fat in the diet: saturated, ‘trans’ fats	Dairy foods (calcium)
Fructose	Fat in the diet: mono-unsaturated
Glucose: high GI foods	Fish/fish oils
Meat (domesticated)	Fibre (high intake)
Refined carbohydrate	Fruits and vegetables
Soft drink	Glucose: low GI foods
Inactivity/Too much exercise	Herbs and spices
Smoking	Meat (game)
Sleep deprivation	Mediterranean diet
Stress/anxiety/depression	Milk
Low humidity	Nuts
Air pollution	Quitting smoking
‘Sick building’ syndrome	Soy products
Vitamin D deficiency/excess sunlight	Tea

How to save money – and lose weight during the second Great Depression

As of February 2009, there is increasing acceptance that the world is in a recession. This is even amongst those politicians who, as late as Christmas 2008, said we'd seen the worst of the GFC (get used to it dear reader, we're not going to spell it out every time). Now, there's even discussion of the D word – depression – and after all, in practice, this is just an extended form of recession. So how can we capitalize on this? Well, as discussed in previous issues, it's likely to make losing weight much easier (less big expensive meals, more walking etc). Here's some other ways to capitalize on the downturn:

Stop buying water in bottles

It was a silly idea in the first place – enough water for drinking flows freely in most states of Australia. So cut the cost, and reduce the environmental problems of plastic bottles by drinking from the tap.

Buy a bicycle

There may be some initial outlay, but a \$400 dollar hybrid cycle can pay for itself within a few tanks of petrol – and you're getting the extra exercise that also helps keep the flab at bay.

Walk to the shops

While in the past there was always the temptation to jump in the car and drive around the block to pick up the paper, the fuel costs of doing that now makes walking a more attractive option.

Visit the local grower's market

When money grew on trees and nobody gave a stuff about the environment it was about as cheap to buy an orange from California as from the citrus orchard down the road. Local grower's markets are now springing up to combat the rising price of imported foods, and you get the exercise walking around them.

Only eat foods grown or produced within a 100 kilometre radius

The 100 km diet produced by two Canadians, has a lot going for it in terms of sustainability and good health. Unless you live in the Nullabor, it's also likely to be cheaper.

Bottle your own

It used to be the fashion, but then it became easier to just to pick up a slab at the local. Now, you have control over energy content and preservatives again – and you can save money.

Grow your own

You may have thought you need a big plot for growing fruit and veg. But a wooden barrel filled with soil on the back verandah can produce all kinds of healthy product. Get them going and you'll also be struggling to contain mushrooms grown in the garage.

Cut your fuel bills – by losing weight

OK, so petrol prices have dropped dramatically since their peak in mid 2008. But hold on to your roller coaster: all predictions are that as peak oil is reached (which may have already occurred), prices will fluctuate dramatically.

What can you do about it? Drive less and walk more? This could be one way of helping weight loss. It could also be a way of using less fuel because of the reduced weight being transported in your car.

In a widely publicized study in 2006, University of Illinois computer science professor Sheldon H. Jacobson and doctoral student Laura McLay estimated the amount of vehicle fuel consumed as a result of overweight and obese

passengers. This has now been followed up in new study, which indicates that more than 1.1 billion gallons of fuel consumed each year in the US (about 50 million gallons in Australia) can be attributed to the excess weight of vehicle passengers (*Transportation Research*, December 2008).

The obesity problem and the fuel-dependency problem are also related, "We cannot hope to tackle one without also tackling the other," Jacobson says. And, the problems are not limited to the United States. Chinese fuel consumption is rising rapidly with the big increases in body weight of the Chinese with increasing affluence.

So, if you're not getting good fuel economy, it may be better to check the scales before you blame the donk.



THE PROFESSOR'S THOUGHT FOR THE DAY

There is more money being spent on breast implants and Viagra today than on Alzheimer's research. Does this mean that by 2040, there will be a large elderly population with perky boobs and huge erections and absolutely no memory of how to use them?



How much protein is enough?

The recommended dietary allowance (RDA) of a nutrient is an estimate of the minimum average dietary intake level that meets the nutrient requirements of nearly all (~97%) healthy individuals. Based on this recommendation, the RDA for protein in the diet is 0.8grams per kg of body weight per day. So a 100kg man should be eating about 80g of protein (about the amount in a good piece of steak) per day.

Athletes on the other hand are advised to eat up to 3g/kg/d – around 300g for a 100kg man – because of their extra muscular needs.

However, as pointed out in a recent issue of the Journal of the American Medical Association (JAMA), the term “recommended dietary allowance” is often misleading as it is misinterpreted as being the “optimal” rather than the “minimal” dietary requirement. But protein recommendations for those wanting to lose weight have now been put at around 25% of total energy intake, so for a 100kg man needing about 3,500 Calories per day, this would translate into a protein content of ~ around 200g/day, which is obviously more than the RDA, and closer to the athlete level. So who is right?

Because loss of body muscle during an energy restricted diet is counter-productive for good weight loss, the higher level (even up to 35% of intake from protein is more likely to be effective.

Are there any risks at this level? Those with kidney problems or potential kidney problems do need to be managed differently, but for the others, there does seem to be little risk. As hunter-gathers, humans often took in as much as 30% of their diet as protein on a regular basis. Hence, it's likely that we are attuned to a higher protein intake than is current. Of course the other point of concern is that the source of the protein should be lean meats or vegetable proteins. Higher fat varieties (eg. such as feed-lot farmed animals), are likely to reduce the benefits by increasing the fat (and hence energy) content of the diet.

TRIMLINES:

A sample of life's little learning lines from the Professor:

- Time flies like an arrow.
Fruit flies like a banana.
- A backward poet write inverse.
- In democracy it's your vote that counts. In feudalism it's your count that votes.
- A chicken crossing the road is poultry in motion
- You'll feel stuck with debt if you can't budget it.
- A calendar's days are numbered.
- A boiled egg in the morning is hard to beat
- Those who get too big for their britches are exposed in the end
- When you've seen one shopping centre you've seen a mall.
- When a woman sees her first grey hair she usually wants to dye.
- Marathon runners with bad footwear suffer the agony of defeat.

Stress and a high fat diet may work together to increase obesity

It might be an overworked term, but 'stress' is a word that is generally understood by all. Most have felt the pressure that comes from losing control for either a brief or extended period. If it's the latter, it might be accompanied by either gaining or losing weight (more women tend to gain during periods of stress, whereas more men tend to lose).

The relationship between stress and weight gain however is not clearly understood by research scientists, partly because of the difficulty in measuring stress. Stress can also be good ('eustress'), or bad ('distress'), with a total lack of any stimulation being regarded as almost as bad as being 'totally stressed out'.

It is possible however to accurately apply and measure the effects of stress in animals. And this is what scientists from Georgetown University Medical Center have done to test its effects when combined with a high fat diet, on the development of obesity in rats. The group, publishing in the esteemed *Annals of the New York Academy of Sciences*, was interested in the fact that stress activates the beta-adrenergic system, a mechanism for enabling 'flight' or 'fight'. The system is also

the body's fat burning mechanism, so should ensure that stress = weight loss. However, it can also stimulate the intake of high fat foods (probably to 'power' the actions involved in flight or fight), and hence cause a mixed weight gain/loss reaction to chronic stress.

The researchers found that not just stress, but stress + a high fat diet is the problem. This probably comes about through the stimulation of a brain chemical (called neuropeptide Y or NPY) into fat tissue. This stimulates both the filling of existing fat cells and the growth of new 'baby' fat cells to help expand the total body fat supply. This suggests for the first time that chronic stress, via the NPY pathway, amplifies and accelerates diet-induced obesity, as well as the metabolic syndrome, or the diseases that go with excess body weight.

What can be done about this? Here's a couple of tips from the Professor:

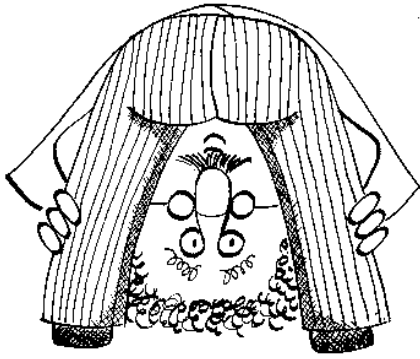
- In the first place having ways of coping with stress before it gets on top of you (ie. before losing 'control') would be an advantage ("if you can't take the heat get out of the kitchen" is still one of the best pieces of advice for doing this).

- If it's not feasible to change the 'stressor' (ie. the boss, the job, the wife, the kids), you'll need to work on the 'stressee' (ie. you) to change your perception of stress and start to regain that feeling of control. This could involve a different thought process, learning meditation or relaxation, getting stress relief from being physically active, or changing your whole outlook on life.
- If you are feeling stressed, try to become extra conscious of your food intake and avoid the high-fat and high-sugar foods which make stress so fattening.
- If, like most men, you tend to drink more and eat less when stressed (women tend to just eat more), you won't need to worry about your weight (you'll probably lose it). But you might need to worry about the drinking. In any case, dealing with the stress should be the first priority.

For reference:

Huo LE and others. Chronic stress, combined with a high-fat/high-sugar diet, shifts sympathetic signaling toward neuropeptide Y and leads to obesity and the metabolic syndrome. *Annals of the New York Academy of Sciences* 2008;1148:232-7.

PROFESSOR TRIM'S REAR END



The flattening (but not fattening) effects of coffee

It's not most men's perception of Swedish women, but researchers working with a small sample of around 300 Swedish women have found that their breast size is reduced according to the amount of coffee they drink in an average day. According to the researchers, three cups a day was enough to start making breasts shrink, with the effects increasing for every cup drunk. They claim this is because about half of all women possessed a gene shown to link breast size to coffee intake.

"Drinking coffee can have a major effect on breast size," said Helena Jernstroem, a lecturer in experimental oncology at Lund University in Sweden. But before you get that special lady on the de-caff, consider the good news: A regular intake of caffeine helps to cut the risk of diabetes and breast cancer.

In the meantime, research on the health and weight control effects of coffee have

failed to show any adverse effects, at least in moderation. Indeed, if anything, the stimulant effect of caffeine may have some minor weight loss benefits.

Lack of sleep increases cold risk

In a study of sleep deprivation and the common cold in 153 healthy men and women, US researchers have proven what we may have already known: that poor sleepers are more likely to get a cold when administered nasal drops with a cold virus – and probably other infections than those who sleep long and soundly (*Archives of Internal Medicine*. 2009;169(1):62-67). With less than 7 hours sleep a night, the risk is almost tripled. Poor sleep is also known to cause 'inflamm-aging' (see story this issue)

Can food really be addictive?

The summer months in Australia are often slow news months. So stories that would go unheralded at other times of the year, often become front page during January.

This is what has happened to a piece of ordinary 'research' from Auckland in New Zealand. Publishing in a journal called *Medical Hypothesis*, which, as the name implies, is not a forum for peer reviewed research, but more for hypothetical speculation, a NZ neuro-scientist claimed that because certain foods light up parts of the brain that are also lit up by drugs, these foods must be addictive – thus explaining obesity.

Not unexpectedly, the foods that do this are the standard culprits: processed carbohydrates, in particular, and in the

vernacular of the modern food scientist, those with a high 'glycaemic index' (GI), or quick sugar response.

As reported by the popular media, this implies that all carbohydrates are addictive = fattening = bad, begging the question of how humans could have evolved, gorging as they have on fruits, vegetables, plants and other carbo rich foods.

Fortunately serious scientists, such as the GI's founder, Professor Jenni Brand-Miller, from Sydney University and Deakin University's Professor Boyd Swinburn, were given a mediating quote in such journalistic misrepresentation, but this is hardly likely to dampen the impact of the headline message: 'Carbohydrates = Bad'.

For most food scientists, the low carbohydrate road is well travelled, and very rocky. While the GI message has some traction, it is to be hoped the total low carbohydrate road is not re-opened to general traffic as in the days of the early Atkins diet.

More exercise needed for weight loss than originally thought

Guidelines for physical activity for health have been around 150 minutes of moderate intensity activity per week. For weight loss though, double this (ie. 200-300 mins/week) is thought to be necessary. Now a re-evaluation of available data (*Medicine and Science in Sports and Exercise* 2009;January 5) has shown that 150-250 mins/week is probably also necessary to prevent weight gain, but this will only result in modest weight loss, and only then provided there is reasonable dietary restriction.

What your mum ate (or didn't eat) while pregnant could still be making you fat

It's well known that rats that are underfed during pregnancy produce fat babies, with metabolic problems. To do the same studies with humans is difficult. But a 'natural' experiment was provided during the second world war when the German invasion of Holland result in a major famine over several months. This has now enabled Dutch researchers to look at the offspring of mothers who were starved during pregnancy, some 60 years later (*American Journal of Clinical Nutrition* 2008 Dec;88(6):1648-52) Out of 730 men and women there was a greater tendency to crave a high fat diet than a similar group who's mothers were not starved. This is the first study to show that dietary preferences can be influenced even before birth.

TRIM'S TUMMY TICKLERS

The Australian man's weight loss program

