PROFESSOR TRIM'S WAISTLINE

THE PROFESSOR'S FEATURES

WINTER 2006

Energy Density: The end-game in the fat-food war?

Now hear this, dear friends of the Professor: You will only be told it several thousand more times over the rest of your lifetime. But it's probably the most important message related to weight loss that you'll ever get. And remember that you read it here first.

Forget diets – Atkins, Zone, South Park, Israeli Army, American celebrity-for-a-day – the brand doesn't matter; forget food combining so as not to eat that kangaroo with those yams; forget blood type tests to determine what you can and can't stomach. Instead, focus your attention on one thing, the 'end-game' in food politics; energy density.

The need for doing this has come about through some slippery commercial footwork; the exploitation of food manufacturers on a vulnerable nutritional science. To explain this, the Professor proffers a brief walk through the last 10 years of the world obesity epidemic.

The need for some understanding

There's little disagreement that food is a source of energy, which can be measured in calories, or kilojoules (1Cal = 4.2kJ). There's also little disagreement that the more of these that are consumed (and the less 'burned up' in exercise and/or metabolic rate), the greater the likelihood of a residual energy reserve (in the form of fat) being stored on the body.

Because different nutrients (ie. protein, carbohydrate and fat), have different numbers of calories per gram – fat is 9cals/g, protein and carbohydrate 4.5 – it was assumed in the 1990s that reducing fat in one's diet would be sufficient to reduce body weight. And while this would logically be true, all else remaining equal, it naively assumed that that all else would remain equal.

Food manufacturers however, being driven by more base motives than scientists, capitalized on this by reducing fat from their processed products, while surreptitiously replacing this with a greater number of sugar calories. In the process, they gained the high moral health ground by promoting foods as 'fat free' or 'x% fat free'. Nutrition and obesity scientists were left in the wake of this 'responsible' health initiative by the food industry to try and explain why fat wasn't pealing off the populace.

Calories and 'Energy Density'

While a 'biological' calorie may not be the same as a 'physics' calorie (see box this issue), total calories do count, and hence replacing one source of calories with a multiple amount of another source, is unlikely to solve the problem of excess calories in the diet.

So what's the solution?

The end-game, and one which devious advertisers can't distort, is an accent on 'energy density' when deciding on the weight loss benefits of foods and drinks. Energy density is quite simply, the number of calories/kilojoules per gram of a food or drink. The higher the energy density, the more potentially fattening that product. And while no scientific standards for this have yet been set, the Professor and his little elves have jumped the gun by proposing some cut-offs for this as shown in the figure on this page. More detail, and values for particular foods, can be gleaned from a closer look at the reference below.

For reference:

Egger G, Cameron-Smith D. *The Ultimate Energy Guide*. Sydney, Allen and Unwin, 2004.

ENERGY DENSITY: FOOD

Energy density = No. of kJ (kcals)/g of food

Energy density (ED) cut-offs:

LOW <7.5kJ(1.8kcals)/g
(eat at will)

MEDIUM <7.5kJ(1.8kcals) – 12kJ(3kcals)/g
(eat sparingly)

HIGH >12kJ(3kcals)/g
(eat rarely – if at all)

ENERGY DENSITY: DRINKS

Energy density = No. of kJ (kcals)/g of fluid

Energy density (ED) cut-offs:

LOW <1kJ(0.2kcals)/ml
(drink freely)

MEDIUM <1kJ(0.2kcals) – 1.4kJ(0.3kcals)/ml
(drink sparingly)

HIGH >1.5kJ(0.4kcals)/ml
(drink rarely – if at all)

in this issue

Will TV's 'Biggest Loser' create a nation of losers?

While ratings are soaring, and lard larrikins around the country are boasting the motivational benefits of the latest reality TV show, 'The Biggest Loser', a sole voice has so far been raised in opposition. The Professor has been soundly dressed down, given a 'spoilt sport' T shirt, and roundly pelted with soft foods for his sole outcry against the phenomenon.

Not alone in the criticism department, it seems he has been the only one silly enough to take up the opposition cudgel by complaining to the papers and TV station about the dangers of the program. As it turns out, several obesity scientists share his views, but none have yet stuck their head above the parapets to complain. Again, the Professor boldly walks alone, the basis of his argument being thus:

Weight loss is easy. Maintaining weight loss is hard. Very big, quick losses – particularly through artificial means, which are unlikely to be maintained – can cause even greater 'rebound' gains when the masochistic techniques used to achieve these are discontinued – as they ultimately will be. Hence, a 50 kilo loss over 3 months can equate to a 70 kilo gain over 3 years. Anyone working in weight loss therapy has seen this 'rhythm method of girth control' over and over again.

Secondly, the extent of exertion required to effect these means, by fitness training 'experts', (who are undoubtedly failed prison guards) with little expertise in genuine weight loss, is at the least, immensely painful for any overweight viewer tempted to emulate the feats shown on the program, and at worst likely to kill someone with a cardiac insufficiency. The message that this is the best, or indeed the only way to lose weight is counter-productive for the 99.9% of overweight individuals who don't like chewing power cables to strengthen their teeth.

The professor's exhortation to the offending TV channel to make this the 'Biggest Weight Loss Maintainer' after 3-5 years of weight loss has fallen on deaf ears. Ratings it seems, perhaps even television, won't last this long. And like the message of the Biggest Loser Program, if it doesn't happen today – and rate its socks off – it's not worth having. Pity, because it could be setting us up for some even bigger real time losers in the future. About the only positive that can be said is that the program may create an awareness of the problem which nobody else seems to be taking seriously.

TRIM'S TUMMY TICKLERS

THE FATE THAT AWAITS GOOD LOOKING SKINNY PEOPLE ON JUDGEMENT DAY.

Why a calorie is not a calorie

A calorie is a measure of heat energy. Specifically it is the amount of heat required to raise the temperature 1g of water by 1degree centigrade. Calories (or their metric equivalent, Kiljoules) can measure the energy consumed in food, or expended as exercise, heat loss or metabolism.

This basic fact has led to the notion of body weight being due to a simple equation: Weight = Energy in – Energy out. But while this is logical to anyone with a basic understanding of physics measuring these things in a test tube, it ignores the more complicated processes that occur in biology, or a living being.

When food is eaten, the reaction of a biological organism is not passive. In other words, such energy can either be stored or expended, depending on a range of factors including metabolic rate, level of starvation, age, gender, genetic factors and whole lot more. The fact that calories from fat in foods is stored as fat on the body with only 3% energy loss, whereas carbohydrate and protein require 25% of the energy of those nutrients to 're-package' this as fat, is a case in point.

Hence while a 'physics' measure may be 9kcals/g for fat and 4.5 for carbohydrate and protein, the 'biological' equivalents may be ie. ~12kcals/g for fat and ~3kcals/g for carbs and protein.

All this adds to the complications of weight gain and loss, and explains why all those dinner-party experts are well off the mark when extolling the virtues of this or that food or diet. Nothing is as simple as it seems. In biology, this applies doubly.

TALKING TURKEY WITH TRIM

Q. Unfortunately I seem to have a 'sugar addiction'. I can drink up to 80 cans of soft drink a week. I've tried the 'diet' versions and don't like these and just can't seem to break the habit. Any advice?

A. Does the name Pavlov ring a bell? Let's see if I can ding it for you.

An 'addiction' to sweet drinks doesn't just come with the umbilical cord. It's not biological, it's learned over many years. Thirst on the other hand is biological. It serves a very useful function by stopping us from dehydrating and ultimately drying up like a prune and dying. In a traditional hunter-gather environment, where there's no soft drink vending machines, thirst signals a desire to drink. Because this is usually water, the body learns that thirst = desire for water.

In the modern environment this can be distorted. At some time when thirsty, you've had the opportunity to satisfy this with a Coke, which, because of the sweetness, is even more satisfying than just water. So the next time you get thirsty, the chances increase that the desire will be for a Coke instead of water. Again, if this is satisfied, the association of Coke with thirst will increase, like the ringing bell and meat for Pavolv's dog.

So what can be done to 'decondition' the process. There are a few other tricks than just a period of withdrawal. But this is obviously one of the best ways. By drinking water when thirsty for a few weeks and resisting the desire to make thirst = Coke, you can eventually start to break the habit. An interim approach may be to use a diet version of the soft drink with a slice of lemon to change the artificial sweetener taste. Coke has also released the first version of a new manipulation of the artificial sweetener molecule in Coke Zero that takes away the metallic taste and makes it taste like the full sugared version. This might also help in the interim, although we don't yet know of the long-term effects of this.In summary, it's useful to differentiate between a biological craving and what you call an 'addiction'. The first can't be changed, but the latter, because it has been learned, can also be unlearned. It just takes a little time – and will-power.

Q. At 50 years of age, I don't seem to be eating more or doing less exercise, but I just don't seem to be able to keep my weight stable like I used to. Why?

A. Simple. Age. No, on second thoughts, not so simple: It could be age, because as you get older your metabolic rate slows down, meaning your are burning less energy at rest than you were when you were younger. This can be quite considerable if you do the sums: Bear with me. Metabolism can slow down by around 2% per decade from age 20. This means that by age 60, you're burning around 10% less energy than at age 20. If resting metabolism is around 1 Calorie per minute (in a standard sized person), this equates to around 1440 Calories per day. A 10% decrease in this is 144 calories per day. And as a half kilo of fat is the equivalent of around 3,500 Calories, this would mean (in theory at least) a half kilo weight gain every twenty-five days.

That's the not so simple part. A more simple possibility is that you may be eating, just fractionally more at your current stage of life than you were in the past. Because at the older age you're likely to have more time, money and a tendency to socialize, and because the food environment and its availability has changed over recent years, it's quite easy to be taking in just that little bit more. Research with Australian women has found that their average annual weight gain of around 0.5kg can come about through a change in energy balance of just 10 Calories a day (*Obesity Research*, 2005;13(8):1302. It doesn't seem much – but it can add up.

Q. When I joined the Professor Trim program I had high blood pressure and was advised to lose weight to get this down. Now I've lost a considerable amount and my bp – when I take it – is almost normal. However when the doctor takes it, it is still high. Who should I believe?

A. This is one case when you should really believe in your self. Even doctors talk about a 'white coat effect' when taking blood pressure. This means that the blood pressure of some people goes up when they know they are going to be measured by the doctor. In one recent study in the US (*Journal of Hypertension*, 2006; 24(1):67-74) it was found that not only hypertensive patients (ie. those with high blood pressure), but those with normal blood pressure can be affected by the 'white coat effect', although in patients with normal blood pressure, the effect can be negative (i.e blood pressure is measured as less than the actual value). Measuring patients in a non-medical clinic on one day and then a medical clinic the next, showed that it is not only the doctor that seems to cause the white coat effect' but the whole clinic and surroundings. An alternative is to get your doctor to get an ambulatory measure over 24 hours. This is done by wearing a blood pressure sensor that can be hired, over a whole day and night with constant measurements stored in the machine, and then looked at by the doctor later.

TRIM TIPS – 1

DON'T OVER(H)EAT

You've probably heard about tight jeans and how they can affect the family fortunes. But it's heat rather than tightness that tummy tadpoles don't like. So it's probably more effective getting rid of your doona or electric blanket than buying baggy pants. Doonas can also reduce metabolic rate and may be helping keep you fat.

New Guidelines on Beverage Intake

US specialists come to terms with the demon drink(s)

The 1990's emphasis on fat in the diet as the main cause of the obesity epidemic, put the emphasis on food and diverted our attention away from fattening drinks. Soft drink manufacturers became so confident that they even sponsored international scientific conferences on obesity. Now, it's become clear that fat, alone, is not the issue; it's total energy density that tends to increase total energy intake and make us fat. This applies to the calories in each milliliter of drink, as much as to the calories per gram of food. And because soft drink consumption has doubled over the last 20 years, the spotlight has shifted to the fattening effects of drinks.

To help the public to understand this better, scientists in the US have come up with new guidelines for fluid intake, breaking the different types of fluids down into 6 levels with recommendations on increasing or decreasing levels of consumption for each.

Current and Recommended Beverage Intakes

Current and recommended levels are shown in the drawings. Overall, it's recommended that the energy (calories) from beverages be reduced from the current level of 20% of total intake to 10%. This means increasing consumption of some fluids and decreasing that of others. The levels and recommendations are listed below. The first 4 levels should make up ~80% of total fluid intake.

Level 1: Water. *Should be increased to 2-16 glasses a day (depending on age, climate etc).* Tap water is generally good enough in most parts of Australia and bottled water may contain less fluoride than that from the tap.

Level 2: Tea/Coffee. *Can be increased to 6-8 cups/day.* There is a inverse link between tea consumption and heart disease, with both green and black tea having health benefits. There is also an inverse relationship between filtered coffee and type 2 diabetes (unfiltered may be less healthy). The limitation is in the level of caffeine consumed which may adversely effect some people. A limit of 400mg of caffeine a day (about 3-4 cups coffee or 6-8 of tea) is suggested.

Level 3: Low fat/skim milk and soy beverages. *Should be increased to 1-1.5 full glasses a day.* Low fat dairy is a good source of calcium and vitamin D. It can also increase satiety, and may help weight loss and has been found to be inversely related to the metabolic syndome. Soy has health benefits also, but less calcium than dairy.

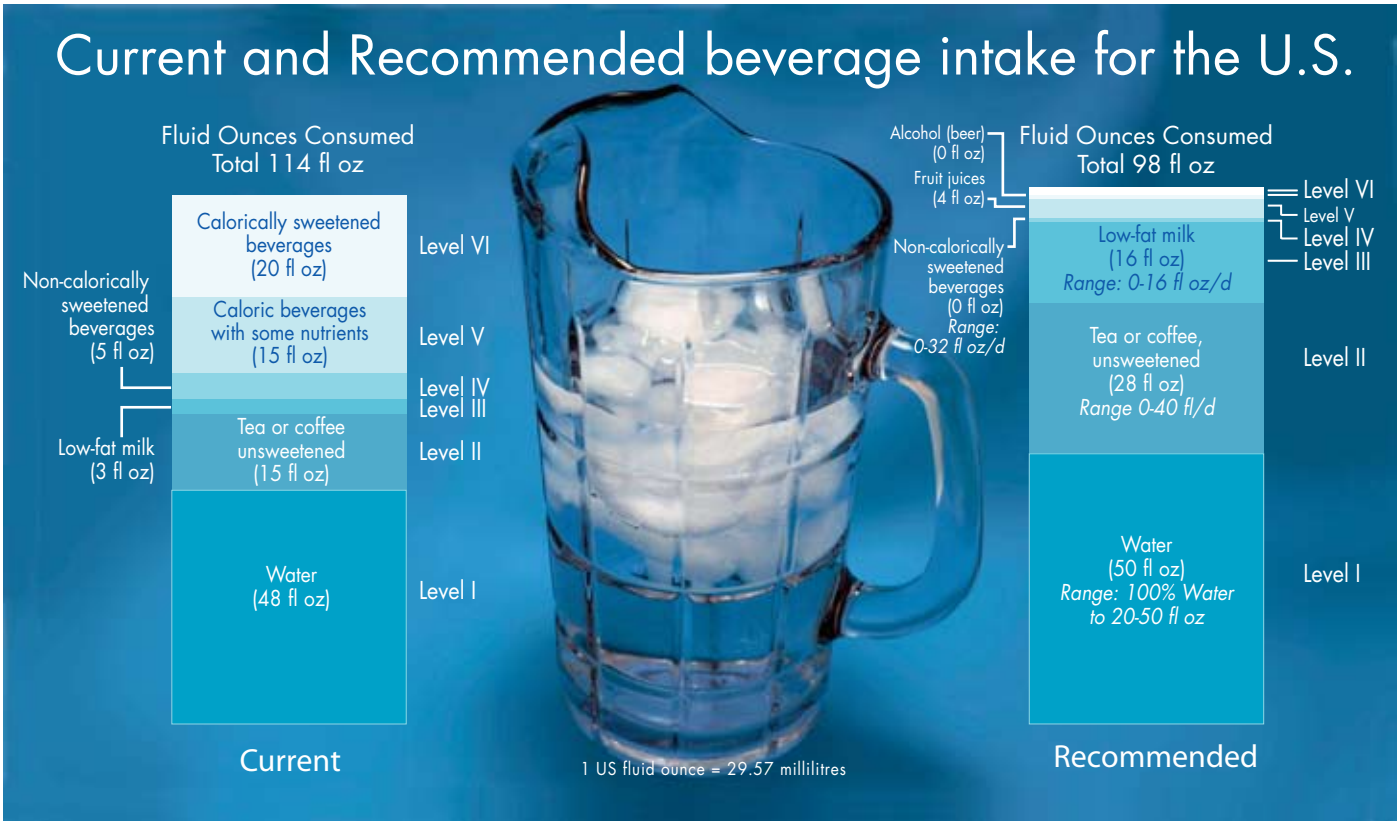
Level 4: Non calorically sweetened beverages (diet drinks). *Can be up to 0–3 glasses a day.* These should be drunk instead of the next two levels. Although they are recommended, there is no long-term evidence for their safety. The sweeteners used may also increase a desire for sweet foods, although this is currently unproven.

Level 5: Caloric Beverages with some nutrients. *Decrease to less than 1 glass a day.* This includes fruit and vegetable juice (although the latter are generally OK because they are lower calorie), whole milk, sports drinks and alcohol.

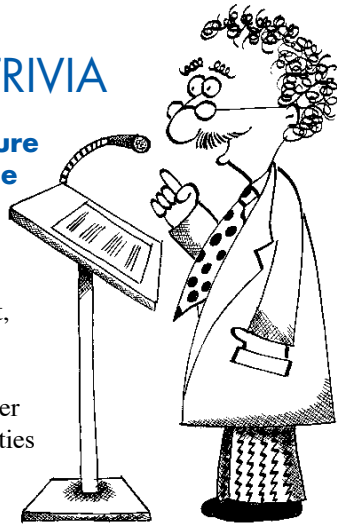
Level 6: Calorically sweetened beverages. *Decrease to less than 1 glass/day.* Standard soft drinks are usually high energy density, but low nutrient density and therefore have no health value.

For reference:

Popkin B, and others. *American Journal of Clinical Nutrition*, 2006;83:529-42.



TRIM'S TRIVIA



Blood pressure on the throne

Now here's a novel idea. Monitor your weight, body fat, pulse and blood pressure while carrying out other necessary activities in the smallest room in the house. Asian ingenuity (obviously from an inventor who was not properly potty trained) has created a toilet seat that takes all these measures and feeds them back to you while you are simply obeying a call of nature. The process is discussed in an issue of *Physiological Measures* (2006;27:203-211).

Of course toilets with blood pressure measuring capability have been around for some time (hasn't everyone used one?), but this usually involves a blood pressure cuff attached to the tank or within reach of the seat. Now Korean researchers have developed a method for measuring blood pressure using a specially designed apparatus that is set up under the toilet seat. The makers say this is particularly useful because it is non-intrusive, it's convenient for everyday use and is useful for long term blood pressure monitoring.

Scales for measuring body weight would be a simple technological process compared with this. However, it does beg the question of when the measure should be taken. There are some people we can think of who would be considerably lighter on completion of the said activities than on commencement.

Another breast feeding benefit

Breast-feeding has served us well. *(Q. Why don't men make eye contact with women? A. Because breasts don't have eyes)*. Through thousands of years of evolution it has provided humans with a kick start for life. As a natural process, it seems logical that it would have health benefits above those of bottle-feeding, and research suggests that this is indeed the case. Not only is the long term health of the breast-fed baby enhanced, in terms of reduced risk of obesity and long-term disease, but the breast feeding mother appears to benefit also by gaining less weight than if she had not breast-fed.

Now another benefit appears to be added for the breast-feeding mother. Research published in the *Journal of the American Medical Association* (2005;294:2601-2610) has shown that lactation is associated with improved glucose and insulin functioning. The take up of glucose into the body's cells through the secretion of insulin is vital to prevent excess accumulation of sugars, and hence type 2 diabetes. The current research suggests that breast-feeding may reduce the risk of type 2 in young and middle-aged women, a group which is particularly prone to this during and after childbirth.

Having a dog could mean being 5-6 kg lighter

Getting and walking a dog could mean a 6kg weight loss in a year according to a new study carried out in the US. More importantly, this was shown to help the economically disadvantaged, who typically suffer more from obesity than the well off.

Individuals in the program, supported by the Missouri Foundation for Health began by walking 10 minutes a day, three times each week. Eventually, the participants walked up to 20 minutes a day, five times each week. During rainy days, they walked an inside route. There was also a short and long walking group. The first group walked for 26 weeks, while the second group walked for only 5 weeks. The researchers found that the first group averaged a weight loss of 6.3kg, a better result than most diet programs. The weight loss in the second group was not statistically significant, but participants did engage in other activities that surprised the researchers.

Is wine healthier than beer?

There's a general feeling amongst the public – probably fostered by scientific findings – that alcohol may have health benefits, and that the best type of alcohol for this is wine. However in a recent study published in the *British Medical Journal* it was found that the reason for this may be because of what wine drinkers eat, compared to what beer drinkers eat, not just the drink itself. Researchers who studied 98 different supermarkets in Denmark, found that wine drinkers tend to buy more olives, fruit, vegetables, poultry, cooking oil, low-fat cheese, milk and meat than beer drinkers. Beer drinkers purchased more pre-made meals, sugar, cold cuts, pork, butter, sausages and soft drinks. Research from France and the US has also shown that wine drinkers tend to eat fruit, vegetables and fish, and use cooking oil more often and saturated fat less often than those who prefer other alcoholic drinks.

Warning: These trousers mean that you're too fat!

A US Government adviser wants big trousers to come with a health warning. Professor Muir Gray believes shops should attach labels to larger sizes telling overweight shoppers to eat less, exercise more and even visit the doctor. His advice comes as research suggests a spare tyre, especially on men, can increase the risk of heart disease and diabetes five-fold. The Glasgow – born professor said: "I would like to see trousers with big waists carry information about the risks of a large waist and suggesting people go and see their doctor. If the waist size was 44 and the leg size 49 the label could say, 'Wait a minute, sunshine, you need a pair of walking shoes as well.'" (from www.diabetesincontrol.com). Who knows, the next target may be big underpants - although on second thoughts, that could introduce a confounding factor that men don't mind being big.

TRIM TIPS – 2

FLOAT YOUR FAT

If walking is a problem because of sore knees or hips, walking in waist-deep water in a pool or lake could be the answer. Fat floats (that's the reason why Fat Albert would last longer than Arnold Schwarzenegger if they both fell overboard out to sea). So walking in water can take the pressure off the joints until such time as you lose weight to make walking on land less painful.

Some common problems in losing weight — and how to deal with them

Everybody knows how to lose weight. At least you'd think so from the discussion around the dinner table at parties.

So why is the world becoming increasingly fatter? As the Professor knows, it's not as simple as the Friday night expert thinks. On top of the physiological brakes on weight loss designed to ensure survival, there are common problems that occur in a modern 'obesogenic' environment relating to food and exercise. Below is a list of some of these and how you might deal with them:

COMMON PROBLEMS: FOOD

Excessive Hunger: Dealing with this is the key to successful weight loss. The first question that has to be asked is 'is it real biological hunger, or just learned appetite? (see below)' Try to distract yourself, and if it doesn't go away it's real. Meal replacements can help. Also snacking on protein and fibre rich foods. Try to avoid salty foods and foods cooked with MSG.

Impulse eating: Don't have tempting foods in the house; avoid situations where impulse buying is tempting (eg. petrol stations).

Eating out: Go Japanese or low fat Asian. Don't use it as an excuse to pig-out because it's an 'exception'.

Eating late: Try to eat more food earlier in the day. Eat cereal or bulky high fibre foods.

Cravings: Try to 'de-condition' these (see answer in 'The Professor's Practice'). For example drink water when thirsty; eat good food when hungry, so that thirst doesn't signal soft drink and hunger doesn't signal chocolate or high energy-dense foods.

Alcohol: Drink small, drink often. Be careful with drink 'mixes' (ie. soft drink, milk, fruit juice) and replace with low calorie versions. Watch food available with drinks (ie. nuts, chips, cheese) because inhibition goes down with each drink.

Can't eat breakfast: Start with something small (ie. a slice of toast/small apple). Build up to fibre and protein to help stay satiated longer – and hence eat less for the day.

Snacking: Don't go for more than 4 hours without eating (something healthy).

Lack of time to eat well: Use meal replacements.

Appetite: This goes away when distracted. Learn the conditioning links that cause it ie. peanuts go with a beer; friday night means letting the hair down etc.

COMMON PROBLEMS: EXERCISE

Cramping: Regularly work and stretch the affected muscles (preferably against resistance) ie. practice picking up a pencil under the toes for cramps in the feet.

Constipation: Do more long distance (aerobic) exercise. Use a fibre supplement like Metamusil. Increase fibre content of the diet.

Fatigue: Try some gentle aerobic exercise (eg. walking) in the mornings and increase the duration and intensity as this becomes more tolerated.

Insomnia: Do some endurance or resistance exercise in early or mid afternoon. Don't exercise before bedtime.

Lower back pain: Get an exercise specialist to prescribe resistance exercises to strengthen back extensor, abdominal and hip and knee extensor muscle groups. Use walking poles.

Chafing: Use Vaseline or bike shorts if this is on the inner thighs.

Itchiness under the feet: Avoid synthetic socks and leather shoes; lose weight.

Weakness and muscle loss (sarcopenia): Learn moderate and high intensity resistance training (preferably with weights) for all muscle groups. Increase protein content of the diet.

PROFESSOR TRIM'S TABLE TALK

SEAFOOD SALAD

Serves 4

8 x scallops
8 x shelled prawns (tail end intact)
240gm salmon fillets (4x pieces)
Mignonette lettuce
1 x medium capsicum
1 x medium yellow capsicum
8 x asparagus spears, blanched
½ medium avocado
4 x button mushrooms, sliced

MARINADE

2 tbsp freshly chopped coriander
Lemon juice x 2 lemons
100ml balsamic vinegar
1 teaspoon fresh ginger
Lime juice x 2 limes

METHOD

1. Marinade all seafood in lemon and lime juice, coriander and ginger, along with a dash of salt and pepper.
2. Place seafood onto a hot BBQ grill and drizzle over marinade.
3. Cook for approximately 2 minutes and then turn. Drizzle marinade and cook for a further 2 – 3 minutes.

SALAD

1. Arrange 3 – 4 lettuce leaves onto each plate.
2. Arrange prawns, scallops and salmon over lettuce.
3. Decorate with capsicum, mushrooms, asparagus and avodado.
4. Drizzle over dressing and serve immediately.

DRESSING

50ml white wine vinegar
10ml olive oil
50ml lemon juice
salt and pepper to taste

FAT = 6.2gm / serve

TRIM BITS

Quotable Quotes

Can you imagine a world without men? No crime and lots of happy, fat women. — Anon

Beauty is in the eye of the beholder. But sometimes it requires giving the beholder a bloodied nose to help him recognise this. — Miss Piggy

Trim Tattle Tales

There are two possible people to blame for the current worldwide obesity problem; Ronald McDonald, and Bill Gates. And while it's the former who usually cops most of the blame, the influence of the latter – or at least his partners in technology development in general – is evident from an experience in the Professor Trim program. One man, we'll call him Fred Nerk, used to use his mobile phone in the lounge room to ring Ms Nerk in the kitchen to find out what was for dinner! Apart from the effect on his belly, we wonder about his longevity once the female brethren find out.

Walking adds life to your years

Also from www.diabetesincontrol.com: A moderate level of physical activity, such as walking 30 minutes a day, can lengthen life by 1.3 years and add 1.1 more years without cardiovascular disease, compared with those with low activity levels. Those who chose a high physical activity level in a study published in the Archives of Internal Medicine (Nov 14, 2005) gained 3.7 years of life and added 3.3 more years without cardiovascular disease. An editorial in the *Washington Post* did the math – invest 30 minutes of walking a day and you'll spend 49 days of the next 12 years of your life walking to gain 1.3 healthy years.

THE PROFESSOR'S POETRY

Ode to a Weight Lifter

For years he'd worked out in the gym
For fear of ever being thin
At night he'd wake his heart arace
With dreams of sand kicked in his face.

And so he lifted monstrous weights
To grow much bigger that his mates
Because he knew that girls had qualms
About a man with skinny arms.

And grew he did and grew immense,
'Till soon his clothes were circus tents
His biceps bulged like huge great lumps
His quadriceps were like tree stumps.

Pectoralis engulfed his heart 'n
Would have flattered Dolly Parton
Triceps too did bulge but more so
Did the ripples round his torso.

Then he met her. This was neat.
She came to him like dogs to meat.
He flexed his deltoid good and hard
She looked at him and 'oohed' and 'aahed'.

He took her home. He'd waited long
She stroked his quads and came on strong
But then things changed. And for the worse
She took her clothes. She took her purse.

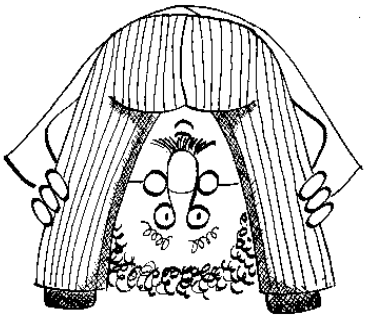
She said to him "the time has come.
But time looks like the only one.
Now I can't wait till I get hot
'Cause there's one muscle you forgot."

He lay there limp with firm resolve
His problem keen was he to solve
For all the inches he had gained
Had come from parts where none remained.

Now he frequents gyms no more
His body's like a flattened straw
His only exercise now planned
Is daily use of his right hand.

It goes to show you just can't win
'Cause if you're fat or if you're thin
The morals true for every male
You can't use a hammer
if you don't have a nail.

PROFESSOR TRIM'S REAR END



To reduce childhood obesity – eat more meals!

It may seem paradoxical, but you can actually lose weight by eating more often! This has been shown to be the case even in children in Germany where researchers set out to find the risk factors for childhood obesity in a sample of over 4,000 kids aged 5-6 (*Obesity Research*, 2005; 13(11):1932-8). From a questionnaire with their parents it was found that the prevalence of obesity decreased by the number of daily meals eaten. Of those who had three or fewer meals a day 4.2% were classified as obese; for those eating 4 meals, the figure was 2.8% and for those eating 5 or more meals it went down to 1.7%. How could this happen, you may ask? It seems regular eating can keep down the total number of calories eaten in a day, possibly because the foods that are eaten when one is not so hungry are likely to be less energy-dense than when hunger starts to build up. Who can resist a big hunk of cake or chocolate when they're starving? But this isn't so hard if hunger isn't on the menu.

Amount, not intensity of exercise is more important

According to the Professor, he's told youse this several times before. But here it is again in another form – it's the *volume* of exercise stupid, not the intensity, that's important for weight loss and good health.

To stress the point the Professor reminds you of his own "volumonics" formula (where weight = *volume* of energy in minus *volume* of energy expended). Volume in relation to physical activity is determined by: (F) Frequency (how often) x (D) Duration (how long) x (I) Intensity (how hard). In other words, if you're overweight and unfit, you'll need to decrease I and increase F and/or D. If and when you start to get fit and lose a bit however, you can increase I and economise on time by cutting back on F and D.

More Proof Positive

If you don't believe this is the case, you might be interested in a new study published in the heart disease journal *CHEST* (October 2005 issue), which shows that adults who participate in mild exercise, such as walking briskly for 12 miles or exercising for 125 to 200 minutes a week (less than 30 minutes a day) at moderate intensity can significantly improve their aerobic fitness and reduce their risk of cardiovascular disease.

Researchers from Duke University Medical Center examined the effects of different exercise training regimens on 133 sedentary, overweight, nonsmoking patients, ages 40-65 years, who had abnormal levels of fat in their blood. They were tested over 7-9 months. Patients were divided into four exercise groups:

1. *high-amount / high-intensity* (HAHI), the equivalent of jogging 20 miles per week at 65 to 80 percent maximum capacity;
2. *low-amount / high-intensity* (LAHI), the equivalent of jogging/walking up an inclined treadmill approximately 12 miles per week at 65 to 80 percent max;
3. *low-amount / moderate intensity* (LAMI), the equivalent of walking approximately 12 miles per week at 40 to 55 percent max; and a control group of non-exercising patients.

All exercise groups improved their fitness. Although the HAHI group showed the greatest improvements in peak fitness overall, increasing exercise intensity from 40 to 55 percent to 65 to 80 percent (at a controlled amount of 12 miles/week) did not significantly improve fitness, but increasing the amount of exercise did produce improvements. The results suggest that walking briskly for 20km per week or approximately 2-3 hours per week is enough to improve health. Intensity is not the issue.

Walnuts can help your cholesterol level

It wasn't that long ago that people with high levels of 'bad' LDL cholesterol were advised against eating nuts. This was because these are known to be high in fat, which is also a potential problem for weight gain.

Now research is proving that the 'good' type of mono-unsaturated fats contained in certain nuts such as walnuts, is effective in lowering cholesterol and decreasing the risk of heart disease. This is provided that intake is not too high, and exercise levels are maintained to keep weight gain down.

Research at Wollongong University (*Diabetes Care*. 2004;27:2777-2783) tested daily intake of walnuts and fish on the cholesterol levels of diabetic patients as part of a diet increased in poly-unsaturated fatty acids (PUFA). These were compared with two other groups who received similar fat intakes but less PUFA through walnuts. The walnut based PUFA group had significant increases in 'good' HDL cholesterol and decreases in LDL cholesterol over and above those eating fish and other vegetables. This was related to the 30g of walnuts taken in the diet daily. Changes in body weight were similar in the three groups and hence it seems a 30g/day increase is not enough to cause weight problems. If cholesterol is an issue it may widen the scope for improvements.

ED could be a sign that things are a little RS

Erectile Dysfunction (ED) is a worrying little problem for many men. It sometimes has organic causes, but is also associated with weight gain and a deterioration in health status. Now health workers are suggesting it may be the 'tip of the iceberg' of problems associated with heart disease and should be viewed as a warning sign that things are not as well as they could be.

Italian researchers (it would be them wouldn't it!) have studied men with ED and compared them with those without of a similar race and age, all with equivalent risk factors for heart disease. None had any symptoms though.

The men with erectile dysfunction had higher levels of C-reactive protein (an emerging coronary risk factor), they were more likely to have abnormal blood vessel responses to changes in blood flow, and more of them had coronary artery calcifications detected on coronary CT scans. According to one of the researchers, Dr Emilio Chiurlia, from the University of Modena (*Journal of the American College of Cardiology*, Oct. 18, 2005), the smaller penile arteries suffer obstruction from plaque burden earlier than the larger coronary arteries, hence ED may begin before a coronary event.