

# PROFESSOR TRIM'S WAISTLINE

THE PROFESSOR'S FEATURES

NO. 20; WINTER 2007

## Dairy foods and weight loss

*The nectar from the cow has gone from 'goodie' to 'baddie' – and back again.*

For those old enough to remember, Australians grew up, not on the sheep's back, but on the cow's teat. Milk was provided free for schoolchildren (provided the magpies hadn't picked the top off by the time the first teacher arrived); cheese portions were allocated by bodyweight, and cream was something under which pavlova was allocated a GPS position on the planet.

Then all that changed: Milk and cheese were seen to be the crux of the obesity epidemic and only 'Fat Bastards' dared to consume cream within the presence of a fellow consenting adult. Yoghurt of course, remained only on the menu of left-over Hippies too old or stoned to escape Nimbin with their ideals intact.

Now the wheel has turned full circle: Dairy is once again on the 'in' list of healthy foods. Surprisingly, this time it is recommended for the prevention and management of Type 2 diabetes – and even for weight loss. This has been due, in no small measure, to the ability of food technologists to make dairy products with different levels of fat – from full fat to almost no fat (skim). Even the low fat versions however are now showing their value, not only for weight loss, but for good health in general. Amongst the new found benefits:

- decreased osteoporosis
- better blood lipids
- reduced diabetes risk
- reduced body weight

### The benefits of dairy

The main problem with dairy, which caught up with it when obesity levels began to rise, was the relatively high fat (and hence 'energy') content of dairy products made from milk. It didn't take long to learn from the magpies however that cream (the main source of fat) rises to the top, and can be easily separated from the remaining milk fluid. The only

problem then was re-establishing a reputation for the good qualities of dairy.

**Calcium** content of course was one of these. As a basic mineral, it is essential for bone integrity and growth and the prevention of osteoporosis, particularly in women. Strike 1 on the come-back trail.



Dairy is also a high source of **protein**, which has had its own come-back in recent times in overtaking the low carbohydrate diet craze. While fat and carbs have increased markedly in the human diet over time, protein has remained around 15% of energy intake in the diet, where evidence suggests the human body could have evolved requiring up to 30%: Strike 2.

The combination of **calcium and protein** is now also thought to be important in reducing hunger, as well as increasing energy losses in the faeces, and hence enhancing weight loss. Danish researchers have found that up to 80 calories a day could be passed through the system (and cistern) with the right combination of protein and calcium, and this has led to certain weight loss meal replacements trying to capitalise by including such combinations in their powders: Strike 3 for dairy

Components of dairy, such as whey, are thought to be amongst the best

**'fast' proteins**, which are absorbed into the gut quickly, sending a message of satiety to the brain and hence reducing hunger and therefore adding to weight loss potential. 'Fast protein' also has benefits for people doing resistance exercise (like weight lifting) because it is taken up quickly to repair and grow muscle tissue. Strike 4.

Finally, for the above reason, and because 'fast' protein is digested more quickly than foods like meat, that have to be chewed, dairy has significant advantages for older people with dentures who need protein to prevent sarcopenia (muscle wastage) and to prevent injuries from falls. Strike 5 and dairy is back in.

Other more esoteric physiological explanations have also been given for the new-found benefits of dairy, but these are less easily proven. In any case this doesn't seem to matter, as the product seems to have found a new life of its own. Now, all the dairy farmers have to do is capture the excess methane let loose on the world's climate by flatulent cattle, and we have a closed system. Go cows!

### Take home message:

Low fat dairy products could have significant health advantages.

### For reference:

Shahar DR and others. Does dairy calcium intake enhance weight loss among overweight diabetic patients? *Diabetes Care* 2007;30:485-489.

### also in this issue

- Power from fat?
- Is it in your genes?
- Fidgeting off the weight
- Change what you can  
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# Power from the People

*With the energy crisis upon us, the Professor comes up with a unique series of solutions for the power problem.*

Anyone sitting through Al Gore's *Inconvenient Truth* about climate change, would be forgiven for thinking that *Chicken Little*, whilst admittedly a bit of a whinger, may have had a point. The sky is falling in!

And it's all based around energy: Too much energy use in the form of non-renewable fuels like petrol, coal and gas; too much energy taken in in the form of fattening, energy-dense food, and too little energy use by human beings to burn this up as exercise. These have caused the major problems of humanity: climate change, global warming, obesity and the lifestyle-diseases epidemic.

farming are unlimited.

Look for investment opportunities occurring very shortly (probably as a result of this article) in the following:

**1. Adipose-electricity:** Named from adipose (fat) tissue, this uses the enormous quantities of fat currently and increasingly excised in surgery around the country, which is otherwise taken to the dump. Exhibit A represents pre- and post-surgical energy reserves from one patient that could be used to power a small village. Under the professor's scheme, the energy would go to a human bio-waste generator and the proceeds would go towards surgical costs (and

adding kilowatt hours of energy to our kiddy's tummies, bicycles and treadmills hooked up to the family TV should be a compulsory item in every home. As an alternative, a pedometer could be developed with a switch to turn off electronic games if a certain amount of activity hooked up to it is not carried out.

**4. Gas power:** Rather than pointing the blame at the world's flatulent cattle, the 6.6 billion people of the world can contribute to the problem they have created through a return to home septic systems with methane extraction taken off the top to add to solar, and fat generated power. Methane-collecting



**1. Pre-surgery**



**2. Post-surgery**



**3. Post-surgery waste**

As a renowned diagonal-trapezoidal thinker (lateral thinking is now 'old hat'), the professor has come up with some new ideas to add to those on personal carbon trading discussed in last month's PTW (autographed copies of which will soon be available from selected museums around the world).

These are based on the fact that body fat is a high source of energy, with 1g proving the equivalent of 10 kwatt-hours of energy. Kinetic energy also comes from human activity, the small amount of which currently being carried out is being totally wasted. Given that a light bulb requires only 60w to light a room, the opportunities for human fat

to anticipate your concern, yes, carbon emissions are still given off but nowhere near that of non-renewable fuels).

## **2. Gym (and 'Jane') power:**

Based on the wasted kinetic reserves generated from individuals on treadmills, exercise bicycles, rowing machines and other devices, this involves hooking up gyms and fitness centres around the nation into a national power grid. Inter-gym competitions would then stimulate greater involvement by members, resulting in less body fat and reduced diabetes in the community.

**3. Kiddie power:** With passive activities like TV and electronic games

underpants – a great idea for father's day – have already been signaled by the Professor in a previous diatribe.

## **Fat today, power tomorrow.**

With obesity running rampant and with the overweight fast becoming a source of contempt, the professor's plan is aimed to turn all this around by helping the corpulent contribute to the economy, without interfering with economic growth. Admittedly, there are some minor problems to iron out – like the extra CO<sub>2</sub> given off by 6 billion exercising human – but we have 3 months before the next Waistlines to sort this out.

## The Professor's Point

Human beings have a history of innovation; of being able to get themselves out of a tight spot when necessary. And there's no time more necessary than now. For someone who sees the glass as half empty, the impending energy crisis, climate change, population explosion, and stock market crash brings a need for creative thinking. So here's the Professor's solution – fat power!

Of course the more rotund reader will say 'not before time'. But this reflects a mis-understanding of the value of adipose tissue. Energy is what it is all about – and getting that energy from the 67% of overweight Australian men and 55% of women is where future tax-payer dollars should be going. Not to some rich oil Shiek!

# Is it in your Genes?

**A simple little test may help you tell whether your weight problem comes from your family.**

It's now clear that genetics plays a certain role in body shape and body weight. But how can you know if it's your specific problem?

Generally it's obvious where overweight runs in families. However there are some instances where the problem may exist only in distant relatives. Hence, genes are a less obvious conclusion. Based on probabilities, two surgeons from the Virginia Mason Medical Centre in the US have come up with a simple pencil and paper test of genetic influences. Although not a guaranteed measure of heritability, the test, shown here, can give you an indication of whether genes influence your weight level and why weight loss may be so difficult for you.

## Testing Your Genes

Answer the following four questions to see if genetics can be blamed for your body weight. For measurement purposes here, the term 'overweight' means having a Body Mass Index or BMI (where  $BMI = \text{weight (in kg)} / \text{height (in metres)}^2$ ) over 25, 'obese' means a BMI over 30 and 'very obese' a BMI over 40.

1. As far as you know, were either or both of your parents overweight, or very overweight for most of their lives?

|                           | <b>Obese</b> | <b>Very Obese</b> |
|---------------------------|--------------|-------------------|
| Neither / don't know / no | 0            | 0                 |
| Yes, one parent           | 7            | 14                |
| Yes, both parents         | 14           | 28                |

2. Do you have any first degree relatives who have been obese for most of their lives? (Score 2 points for every obese first degree relative up to a maximum of 10 points.)

3. How would you describe the average BMI of your siblings?

|                 |             |                  |
|-----------------|-------------|------------------|
| Not obese (<30) | Obese (>30) | Very Obese (>40) |
| 0               | 6           | 12               |

4. When did you first become overweight and/or obese?

|               | <b>Overweight</b> | <b>Obese</b> |
|---------------|-------------------|--------------|
| Never         | 0                 | 0            |
| Before age 10 | 20                | 30           |
| Before age 20 | 10                | 20           |
| Before age 30 | 5                 | 10           |

## Scores:

**<20:** Your weight problem does not appear to be significantly genetically related. This means it is related to lifestyle and therefore should be quite easy to solve if you are committed to do so.

**20-50:** There appears to be a moderate hereditary component to your weight problem. This means you may find it a little harder to lose fat than some of your friends. You may need help from a dietitian but your problems should not be too difficult to overcome.

**30-100:** There appears to be a significant hereditary component to your weight problem. This means you may need special help and closer attention from a dietitian. With the proper approach and a long range plan, you should be able to overcome your bad start.

## For reference:

Thirlby RC, Randall J. A genetic "obesity risk index" for patients with morbid obesity. *Obesity Surgery* 2002 Feb;12(1):25-9.

# Fidgeting off weight

**If you can do nothing else, this might help**

The human body burns energy through three known processes 1. Metabolism, 2. Thermogenesis (heat loss) and 3. Physical activity. Yet these three processes are not as clear-cut as it once may have seemed.

Researchers at Pittsburgh University have isolated a gene that they call NEAT (for Non Exercise Activity Thermogenesis). They showed this is responsible for energy loss in some humans as a result of heat loss from activity, which is hardly perceptible. Fidgeting, in particular, was thought to be associated with this gene, hence possibly explaining why some people who are big fidgets, are also usually quite lean.

## How much is enough?

How much fidgeting contributes to energy loss was not determined. But a study by scientists at the Mayo clinic in Boston have made some estimates of this. Energy expenditure was measured in a number of men and women both while not fidgeting and after they were asked to fidget.

Compared to resting metabolic rate (ie. lying down), sitting still burned an average of an extra 3 kcals/hr. Fidgeting while seated, burned an extra 40kcals/ hr. Standing motionless requires an extra 10 kcals/hr, but fidgeting while standing burned up an extra 70 kcals or a net increase of 60kcals/hr over just standing. The researchers also studied energy use of low level walking (1-3mph) and found an increase of 119-229kcals over resting energy expenditure.

As the WHO advocates an extra 200kcals a day energy expenditure for good health, this could be achieved by increased fidgeting and walking approximately 2 hours a day.

More to the point, fidgeting may be all that's recommended for the obese who find it painful to do anything active.

## Take home message:

Where extreme obesity limits movement, fidgeting may be helpful for getting started.

## For reference:

Levine J, Kuecker S, Jensen M  
The energy expenditure of fidgeting. *Obesity Research* 1999; 7(1): 096.

## TALKING TURKEY WITH TRIM



help maintain metabolic rate while your total body mass decreases (through decreased body fat).

Hence you maintain muscle while losing fat.

So, while resistance training may not be recommended while you are still big (you'll want to lose total mass as well as fat), your instructor might be providing some useful advice to get you to try some resistance work as you start to slim down. It can

also make you stronger, which may be of value in normal daily living.

**Q. While I regularly go for a walk, and even sometimes go the gym for a light aerobics class, my gym instructor keeps trying to talk me into lifting weights. Is there any real reason why I should do this when all I'm after is some weight loss.**

**A.** Sounds like you might already be doing the weight lifting, with the extra weight you've been carrying around (no offence meant). However, putting that aside for a minute, let's look at any possible advantages you may get from doing resistance training (which, incidentally, doesn't have to mean lifting weights).

There's little doubt that the best type of exercise for long-term weight loss is endurance (aerobic) exercise. This is where most fat energy is likely to be burned over the least amount of time. Endurance exercise where you are carrying your own body weight (such as walking), is also better than that where the body weight is supported (such as swimming or cycling). However, once you get to a certain level, it may be appropriate to look to something different.

Put it this way: Let's say you start at around 100kg and walk for 1km. You might burn up let's say 100kcal of energy doing this. If you do it daily for several weeks, your weight might begin to drop, for example to down around 90kg. Now, not only because you are lighter, but because you are fitter, it takes less effort to carry your body frame over the said 1km. In fact it may only require 80kcal, making the energy loss disproportionate to the effort involved. You would then plateau and stop losing weight.

You can do a number of things to break through this: You can go back up to 100kg by carrying a 10kg back pack, adding more energy to the effort. Or, you might change the type of activity to introduce some resistance exercise. This not only changes the effort, but can

**Q. While I'd love to become a bit more active, I have troubles with knees and hips hurting. I've heard that glucosamine is good for arthritis and friends that say they have been helped by this. Is this true or is it all in the mind?**

**A.** Putting one's facetious hat on, one would say 'who cares if it is all in the mind – provided it works'. But then that might be an expensive lesson. Now putting back the professorial hat, I can state the facts as they are now known:

Glucosamine has been found in some studies to have a better effect than placebo in reducing joint pain from arthritis. This has led medical practitioners working in the area from having a healthy scepticism, to actively promoting the product. However, since that happened, there has been one major meta-analysis (a combination of all the major studies done on the topic), to show that it may not be as successful as is often proposed. It is possible though that this is because of a wide variation in effect between different individuals.

The bottom line that comes out of this is that some individuals may, and do, indeed get significant relief from arthritis and joint pain from the use of glucosamine. Variations in the active ingredient in different formulations may make comparisons odious, so potential users are advised to seek reputable manufacturers. The combination of glucosamine and chondroitin is also thought to provide best benefits.

Another over-the-counter preparation with published benefits for joint pain, is a substance known as SAME (s-adenosyl methionine). This is promoted more as a mood enhancing substance – for which it also has some evidence – and is sold in products with names like 'Mood Enhancer' and 'Mood Lift'. Again however, while there is reputable

published support for SAME, the results may be in the eye (or knee, or hip) of the beholder.

**Q. I was told by a friend that people who are overweight can lose their teeth, and hence should be advised to chew gum. Is this good advice?**

**A.** It's confusing, and may be half right. But it also shows the way in which the truth can be distorted by more than 1 degree of separation.

It is true for example that the risk of tooth loss (and dental disease such as periodontitis) increases with increased body weight. However, this is not so much to do with the weight *per se*, but with the metabolic effects of being overweight. Obesity causes Type 2 diabetes (T2D) and T2D is characterised by the fact that energy, in the form of blood glucose, has difficulty in getting to the small blood vessels of the body that are usually in the extremities – hands feet, eyes, kidneys and even gums. This can cause disease in the ligamentous-type tissue that holds teeth in the mouth (periodontitis), leading to tooth loss. This usually only occurs however with advanced stages of T2D, not just small gains in body weight.

The effects of chewing gum are a different issue. There's little doubt now that (sugarless) gum, chewed for about 20 minutes after a meal, can help neutralise the acids from foods (particularly soft drinks and fruit juice) that can cause tooth erosion, by stimulating saliva production. To that extent gum may be beneficial for teeth. However, there is no evidence that this can stop the dental disease resulting from diabetes and indirectly from increasing obesity - except to the extent that it may help counteract acidic foods from a bad diet.

**Q. My physiotherapist uses different coloured rubber bands to treat injuries by getting me to exercise against the resistance. She says these are also good for developing strength in non-injured people and is suggesting I use them. Is this a legitimate way of getting a resistance workout?**

**A.** Yes. The different colour bands reflect the different level of resistance. Hence these can be just as effective as weights (and easier to carry in your lunch bag).

## The Professor's Playtime

For those seeking motivation to help deconstruct the garage over the toolshed, look no further than the inspiration gained from the first Professor Trim's 'Club GutLess' Inmate's Activity – a 6-day walk along the Larapinta Trail in Central Australia in May of this year. Punctuated by lifestyle lectures around the campfire at night, an informative discussion on 'inserted foreign bodies removed from the rectum' by one of our surgeon compatriots, and a 'Hypotheticals' by Sydney Barrister Steve Russell, the week was not only physical but (almost) intellectual. The attached photo shows a couple of said intellectuals pausing between drinks.

The next venture, planned for October 2007 is a 4-day, 3-night kayak trip down the magnificent Great Lakes of NSW from Forster to Nelson's Bay. For further information send an e-mail to [admin@professortrim.com](mailto:admin@professortrim.com) with 'Great Lakes' in the subject area. A walk up the east coast of Tasmania then follows in May of 2008 (subject space – Tasmania Walk).



## PROFESSOR TRIM'S TABLE TALK



### GINGERED BEEF AND PINEAPPLE

(serves 4)

*4 grams fat per serve*

*1kg yearling topside steak  
Olive oil  
1 clove garlic (or 1 tsp. crushed)  
4 onions sliced  
2 Tbs. anchovy paste  
1 Tbs. green ginger  
finely chopped  
2 tsp. lemon rind (finely grated)  
1 Tbs. sugar  
2 tsp. coriander  
1 teaspoons turmeric  
2½ cups water  
1 x 410g tin pineapple pieces  
1 red capsicum diced  
1 cup celery pieces  
1/2 cup shallots*

1. Slice steak very thinly with a sharp knife (tip: freezing first makes the job much easier).
2. In a wok or pan put oil, meat, garlic and onions, tossing until well browned.
3. Add next 8 ingredients and simmer uncovered until meat is tender and liquid is reduced by half. Stir to prevent sticking.
4. Add remaining ingredients and simmer for a further 10 minutes.
5. Serve with couscous (or rice).

## THE PROFESSOR'S POETRY

### TED

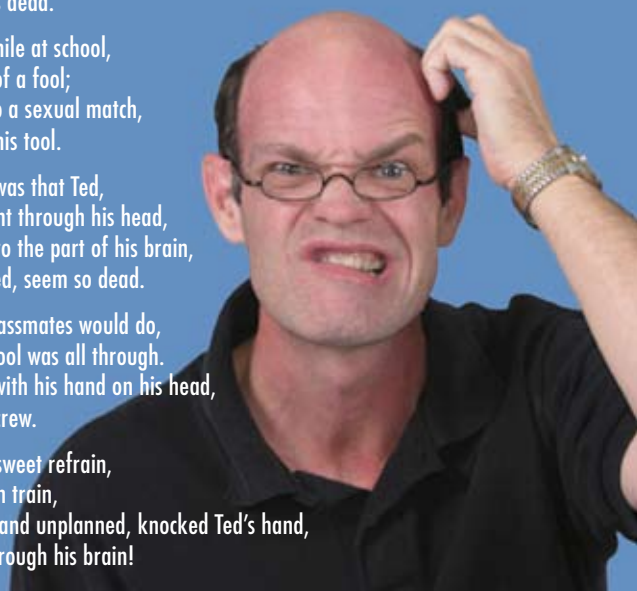
There was nothing that strange about Ted,  
'cept he used to like scratching his head,  
It was something he'd liked, nearly all of his life,  
And he'd like it until he was dead.

All the kids that he knew while at school,  
Thought that Ted was a bit of a fool;  
For he favoured a scratch to a sexual match,  
Or to handicraft work with his tool.

But what they didn't know was that Ted,  
Having scratched a hole right through his head,  
Now his finger could train, to the part of his brain,  
That made 'head' from a bed, seem so dead.

Thus he spurned what his classmates would do,  
When the day's work at school was all through.  
He'd just sit down instead, with his hand on his head,  
And engage in a climactic screw.

But the end came for Ted's sweet refrain,  
On a crowded late afternoon train,  
When a man lost his stand, and unplanned, knocked Ted's hand,  
And his finger went right through his brain!



# Accepting what is: change the things you can, but accept the things you can't

*For many people, acceptance of what they can achieve may be half the battle won.*

In previous issues of PTW, different individual's reactions to weight loss have been discussed. One type of person is called an OBMNI, or Obese, But Metabolically Normal Individual. It has been shown that these people do not have a health issue with their

extra weight and therefore should perhaps not be pressured to try to achieve unrealistic weight loss goals. Accepting what can be changed, as well as what can't, may thus be a first step in assisting the overweight. The table below lists these factors for consideration.

## Factors influencing body fat levels:

| Things that can be changed |                           |                | Things that can't be changed |                   |
|----------------------------|---------------------------|----------------|------------------------------|-------------------|
|                            |                           |                |                              |                   |
| Food                       | Fat                       | Energy Density | Genetics                     | Fat / lean        |
|                            | Sugar                     |                |                              | Active / inactive |
|                            | Alcohol                   |                |                              | Lean              |
|                            |                           |                |                              |                   |
| Drink                      | Soft drink                |                | Level of Obesity             | Overweight        |
|                            | Fruit juice               |                |                              | Obese             |
|                            |                           |                |                              |                   |
| Movement                   | Work                      |                | Age                          | Young             |
|                            | Leisure                   |                |                              | Middle aged       |
|                            | Recreation                |                |                              | Old               |
|                            |                           |                |                              |                   |
| Metabolism                 | Through physical activity |                | Gender                       | Male              |
|                            |                           |                |                              | Female            |
| Habits                     |                           |                |                              |                   |
|                            |                           |                |                              |                   |

Even within those things that can't be changed, there are different levels of success for different individuals. Genetic differences in hunger for example, can make it much harder for one person to resist food than another. Some of this may be genetically determined (which puts them amongst those things that can't

be changed — at least as yet), some may be behaviourally determined, and so are able to be modified. The importance of individual differences however is now being much more appreciated at the scientific level. It gives a hint to people that they're not always to blame for their own excess fat.

## For pain after exercise – a good strong coffee before

For many people who exercise, pain following this is often an inhibiting factor. Pain killers though, like non-steroidal anti-inflammatory drugs (NSAIDS) can increase the risk of erectile dysfunction in some men, and hence are not the first choice of many. But there may be an alternative. University of Georgia researchers have found that a caffeine supplement, equivalent to about two strong cups of coffee, taken an hour before exercise, can reduce delayed onset muscle pain – and it may be more effective than an NSAID (*Journal of Pain*, 2006.08.006).

There is also robust research to show that caffeine before an endurance event can increase performance, because of the earlier release of free fatty acids from fat cells into the energy cycle. A good stiff cup, and a good long walk therefore might be just what the doctor ordered.

## TRIM'S TUMMY TICKLERS



MOSES TRIPS AND LOSES THE ELEVENTH COMMANDMENT.

## TAUGHT N' TRIM

### 'Real' and 'unreal' expectations of weight loss

There's a common belief amongst many people aiming to lose weight that any amount can be lost down to an imagined 'ideal', if you try hard enough. Obese people typically claim they would like to lose an average of 35% of their existing body weight. However, of all the weight loss techniques available (diet, exercise, behaviour therapy, drugs, surgery etc), only surgery has been shown to result in this amount of weight loss over the long-term. Even then, it needs to be combined with other lifestyle changes. Losses of 5-10% are typical with other weight loss programs and most modern 'diets' result in quick weight regain.

Psychologists therefore now warn that creating unrealistic expectations of weight loss can be counter-productive. When people fail to reach this goal they become disillusioned and regain the weight – with interest. It then becomes even more difficult to lose on subsequent occasions. One piece of good news is that research has now shown clearly that even a 5-10% weight loss can lead to big health improvements. In fact, an increase in physical activity without any weight loss may be one way of avoiding chronic diseases such as diabetes. Hence, a change in expectations may be the first stage of any good weight loss program.

#### Take home message:

Expect a 5-10% long-term weight loss and ensure that expectations don't exceed this.

#### For reference:

Egger G, Binns A, Rossner S. *Lifestyle Medicine*. McGraw-Hill, Sydney (in press)

### Losing height with age in diabetics could indicate heart disease

We know that we shrink naturally with age, but a report in the *Archives of Internal Medicine* (2006;166:2546-2552) shows that diabetic men who lose 3 centimeters or more of height as they age, have an increased risk of heart disease. University College, London researchers found that when they divided men into 4 groups based on the amount of height they had lost in the 20 years of a study taking them to age 69,



those in the highest height loss group were 64% more likely to die from a heart attack than those in the least height loss group.

Because diabetes is exacerbated by lack of physical activity however, and because height loss has been shown to be reduced in physically active people, the effect may come down to a decrease in exercise levels rather than a decrease in height *per se*.

Research has previously shown that an average man will lose around 6cm from 20-80 years of age, but active men, on average will lose less than 2cm (see box this page).

### GERD in obesity: another factor limiting results

GERD is the acronym for gastro-esophageal reflux disease. It's sometimes better known as 'heartburn', and it's common in a significant proportion of the population. Until recently however, it was not known that GERD is more common (ie. the risk is up to 3 times higher) in people who are overweight. In fact obesity is now known to be the strongest of all risk factors for GERD. For an increase of 5kg in weight, the risk of GERD rises to 1.22 times normal.

Constant heartburn is likely to have a negative effect on motivation to do those things that will help reduce body weight. In a review of the topic by scientists at the University of Chicago, it was found that there are numerous factors important in the development of GERD and that drug treatments for the problem (ie. *cimetidine* and *ranitidine*) need to be prescribed on the basis of ideal weight rather than existing weight in obese patients.

Some operations for obesity, such as lap banding may actually make the problem worse, whereas some gastric bi-pass surgery can help improve it. Because diet is also important in both causing weight gain and GERD, a diet rich in fruits and vegetables and low in red meat, has been suggested as a form of treatment. In the meantime, we are set to see an increase in GERD as obesity increases in the community. Yet another complication caused by an 'obesogenic' environment.

#### Take home message:

Patients with reflux, should look to

reducing body weight and changing diet as a first course of action.

#### For reference:

Harbella FA and others. Gastroesophageal reflux disease and obesity. Pathophysiology and implications for treatment. *Journal of Gastrointestinal Surgery* 2007;11(3):286-90.

## Height, ageing and maternal relationships

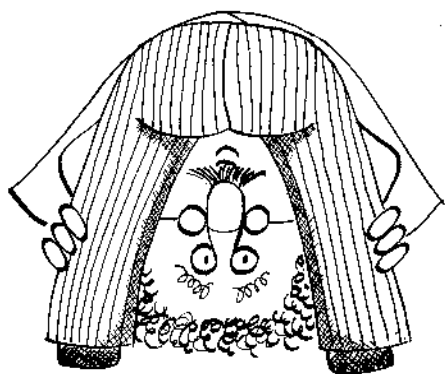
Height, unlike weight, is something that we usually consider can't be changed. And while this is generally true in relation to increasing height in adulthood, it's not necessarily so when it comes to shrinking.

Two longitudinal studies have now shown that an average man will lose around 10cm from 20-80 years of age, whereas an average woman will lose around 6cm. For a man however, height loss is dependent on starting height, such that taller men will lose more than shorter men over a lifetime (good to know that if you're small and you live long enough, you'll end up looking that big bully from school in the eye!). But women lose the same, irrespective of starting height.

Now the Professor has a theory, yet to be disproven, that men are always taller than their mothers. This means that jockeys, who are very short men, must have even shorter mothers, who must almost disappear in old age!

PS. Incidentally, for those health professionals amongst PTW readers, trying to keep records of height and weight, it's relevant to know that while women usually under-estimate (lie about?) their weight ('...your scales measure differently to mine at home'!!!), men generally over-estimate (lie about) their height. This is partly because of shrinkage with age, of which men are not aware, but also because there are ego pressures for men to be tall. The implication is, measure a man's height (and a woman's weight). Don't take their word for it.

## PROFESSOR TRIM'S REAR END



### Diabetes and Sexual Potency in Men — like firing blanks from a rubber revolver!

If political correctness is your bent, you might want to skip over this piece, which is designed to frighten readers to avoid the consequences of the Type 2 diabetes (T2D) that can come from being overweight. As well as losing 8 years of life at age 50, recent research has shown that there is DNA damage in the sperm of diabetic men, which could be a sign of reduced fertility (*J Human Reproduction*, May 3, 2007). The chances of erectile dysfunction (ED) are also increased with increasing waist size while testosterone levels go down as the belly goes up. Diabetes also increases the risk of heart disease, amputation of the legs, kidney problems, blindness and loss of teeth.

However if you are a bit on the portly side and don't want to be a blind, toothless, impotent, one-legged man on dialysis with a pacemaker, there is some good news. An extra 30 minutes of walking a day can lead to a 40% reduction in erectile dysfunction and help restore sexual function. The extra you may put in may mean the extra you may be able to put in – if you get the drift!

### Hair loss in men could be similar to Polycystic Ovaries in women

PCOS, or polycystic ovaries is a debilitating condition in women, restricting fertility and causing significant pain. While there is a genetic component to it, the main cause is put down to hormonal changes resulting from increases in obesity.

Being without such organs as ovaries, men have been thought to have escaped a similar fate, as a result of their weight gain. However a new hypothesis (*Medical Hypotheses*, Nov,

2006), suggests this may not be the case. University of Texas scientists have reacted to a study coming from eastern Europe, which suggests that androgenic alopecia, or sudden hair loss in men, may be the equivalent of PCOS in women and may foretell of an existing Type 2 diabetes risk.

The complex of symptoms in women has been called the Stein-Leventhal syndrome. This has typically been restricted to women with insulin resistance, excessive hair growth and PCOS. The Texan researchers suggest it also exists in first-degree male relatives of these women and is also indicated by insulin resistance and diabetes, but includes rapid hair loss. They suggest early measurement for diabetes in male relatives of female PCOS sufferers.

### Waist circumference now gaining scientific respectability

The Professor has been doing it since 1990. Obesity researchers have recommended it since the 1950s, when French endocrinologist Jean Vague showed that it was important. Still, it's only now that renowned health groups have taken up the cudgel in promoting waist circumference (WC) as a measure of ill-health. Obesity, Diabetes and Nutrition Societies in the US have at last come together to issue a consensus statement on the use of 'waist circumference and cardio-metabolic risk' (*American Journal of Clinical Nutrition*, 2007;85:1197-1202).

Yet whilst the group has agreed on the value of WC, and the importance of getting regular measures, there is confusion about how the results are interpreted. Some non-government health agencies are still insisting on the measure of BMI to accompany WC, despite the evidence that this adds little to the outcome, and can discriminate against certain 'mesomorphic' individuals, like sporting males. Cut-off levels for different ethnic groups are also still to be determined, but amongst Caucasians, three levels have been recommended; Above 102cm for men and 94cm for women body fat should be reduced; between 94cm – 102cm for men and 88cm-94cm for women the recommendation is not to gain weight; and below 94cm for men and 88cm for women no action is required.

Two problems remain: In the first place the values are difficult for most people to remember and there is little lost by making one single cut-off of

100cm for Caucasian men and 90cm for women, so this can be built into the patient psyche. Secondly, some groups (ie. the National Heart Foundation) have chosen the lower levels (94cm for men and 88cm for women) to target, making the goal (like the previously used and aforementioned BMI) unrealistic for most people. As increased risk is minimal in the range 94-100cm for men and 88-94cm for women, before rising exponentially after this, the higher cut-offs of 100cm and 90cm would be of better practical use for health promotion purposes.

### Are sports drinks better than water?

The huge rise in popularity of sport's drinks on the commercial market begs the question: 'How did we survive without them?' The answer, if anyone is interested, seems to be 'quite well'. And this is reinforced by research comparing the hydration effects of three popular sports drinks with water (*Journal of Science and Medicine in Sport*, May 31, 2007).

Fluid replacement of course is important in human health in general, and after physical exertion in particular. However, how much is necessary is a point of conjecture. Common belief is that humans need 8 x 8oz glasses of water per day for good health. But hydration experts have failed to find where this belief comes from. There is no published research to support it and indeed, it appears facile because the needs for fluid are higher on a hot, dry day, higher with age, lower with cold and inactivity etc. The general consensus is that humans need between 1.5 – 4L of fluid per day – depending on conditions!

So what type of fluid is best? After physical activity, it would seem logical that fluid that is rapidly ingested is likely to help re-hydrate the body more quickly and thus lead to improved sports performance. This was the theory behind research from the University of Queensland, which used a minute dose of radioactive material with water and sports drinks to test how quickly this appeared in saliva, as an indication of speed of absorption. Comparing this at rest and after an hour of exercise on an exercise bicycle, the researchers found no differences between water and sports drinks.

Because sports drinks are high in carbohydrates and relatively energy dense, there seems little advantage in their use for hydration.