PROFESSOR TRIM'S WAISTLINE

THE PROFESSOR'S FEATURES

SUMMER 2005

Sarcopenic Obesity: Now here's something (not) to look forward to...

We tend to think that diseases are finite; that there has always been a set number and that this will remain so until brilliant medical researchers come up with a solution to defeat them, one by one.

But here's the bad news: Not only are we failing to eradicate many long-term scourges of humanity, new problems are continuing to arise. Remember when the 'metabolic syndrome' was thought to come with model train sets? And AIDS was something given to overseas countries?

Sarcopenic obesity is another case in point. Made up of one natural process (sarcopenia) and a common symptom of modern living (obesity), the confluence of the two is predicted to cause major ramification to world health systems over the coming decade.

Fat gain, muscle loss

Obesity of course, is well known. Although it has been confined to the extremely rich, or genetically predisposed throughout human evolution, it was estimated to exist in over 15% of the world's population at the turn of the millennium.

Sarcopenia is the term given to muscle wastage. It comes from the Greek for "poverty of the flesh", and generally describes the decrease in muscle mass that occurs with ageing, as early as the fourth of fifth decade of life.

Together, the increase in body fat and decrease in muscle mass characterising sarcopenic obesity, can have important effects on body composition, sickness and mortality. It results in the development of a "fat frail" population who have the worst of both worlds as they age – increased weakness due to sarcopenia, and a need to carry greater weight due to obesity.

To put some figures on this – recent findings have shown that the average Australian female will gain an average of 12kg, and male 8kg, in the two decades between 35 and 55 years of life. Although a small proportion of this will be muscle (albeit not very efficient), the decrease in muscle mass between 30 and 60 years can be as much as 30%. Combining an increase in fat, which is metabolically inactive, with a loss of metabolically active muscle, leads to a downward spiral which results in more gain in fat and more loss of muscle, until a threshold is crossed at which functional consequences such as disability and illnesses such as diabetes and heart disease occur.

Testing the theory

In a study comparing obese elderly adults with non-obese frail adults and non-obese, non-frail individuals of the same age and sex, one group of American researchers has found that the obese had lower muscle mass and quality than the non-obese, and that their performance was as severely reduced as the frail non-obese elders.

With the rapid ageing of the population, *sarcopenic obesity* is set to become a modern medical expression. Steps now need to be taken to prevent it from becoming the confluence of two epidemics.

...unless...

Both obesity and sarcopenia are unusual diseases. Unlike just about any other health problem, these feedback on themselves, making the problem worse once you have it. And this is likely to be at an accelerating pace. Obesity leads to greater obesity because of a series of 'vicious cycles' like sore joints and back which make exercising painful. Sarcopenia leads to an increase in insulin resistance which causes increased fatness and further muscle wastage.

So, given that one is a natural function of ageing, and the other a process of modern living, how can they be avoided – if at all?

The answer seems to lie in the perennial lifestyle favourites; diet and exercise. But while both are important for reducing obesity, exercise is likely to be the best way of staving of sarcopenia, particularly resistance exercise such as weight lifting. By preventing the natural catabolism (breakdown) of muscle tissue with age, resistance exercise can help maintain muscle mass in older people. Unlike early in life where this is likely to lead to muscle growth (anabolism), as occurs with bodybuilders, maintenance is all that's required in older age.

Aerobic exercise can add to this by helping to reduce body fatness and preventing obesity. The right type of hypo-caloric diet will do the rest. But older people should be aware that a reduced energy diet needs to be significantly less (eg. at least 10% less) calories than 2-3 decades earlier in life, to reduce fat gain.

Take home message:

Fat gain and muscle loss can be a consequence of ageing in the modern world.

For reference:

Rubenoff R. Sarcopenic Obesity: The confluence of two epidemics. *Obesity Research*, 2004;12(6):887-888.

Seeing is believing (you're hungry)

In a test of whether eating is really based on hunger or other cues, researchers reporting in the journal *Appetite*, tempted 40 overweight secretaries with jars of chocolates presented in different ways. They placed 30 chocolates in either a clear or opaque jar (which they couldn't see into), either on the secretary's desk or at a distance they had to get up to walk to. At the end of each day, they counted the chocolates eaten, and replaced these for the next day. At the end of the experiment, they found that the secretaries consumed:

- over 100% more chocolates when they were in clear containers on the desk (an average of 7.7 per day), compared to when they were in opaque jars walking distance away (3.1 per day).
- less chocolates when they were in opaque jars on the desk (4.6) than in clear jars walking distance away (5.6)

This suggests that hunger is not necessarily the driving force in food intake. Tempting foods like chocolate are more likely to be chosen when they can be seen and are close handy. Whether good foods would be chosen more under these circumstances is not clear, but the simple take home message is not to leave tempting foods exposed and within easy reach.

For reference:

Painter, J. and others. How visibility and convenience influence candy consumption. *Appetite*, 2002; 38(3): 237-238.

The Professor pitches to men — from a brewery

November 2005 saw what is undoubtedly a first; the launch of a men's weight loss program in a brewery.

Professor Trim's was officially delivered to the world from the Malt-Shovel brewery in Sydney, the home of boutique beers produced by master brewer Dr Chuck Hahn. The venue was chosen to point out to men that the finer things in life need not be avoided to get weight loss (for more specific detail on alcohol and weight loss see Autumn 2005 *Waistline*).

This was verified by one of four of the Professor's Professors who presented at the opening. Professor Boyd Swinburn, an International expert on obesity prevention pointed out that alcohol, per se, is not fattening, but only becomes so when combined with a high energy-dense food intake.

Other speakers included Professor Jenny Brand-Miller, one of the world's experts on glycemic index (GI) and weight control, Professor Ian Caterson, a council member of the International Association for the Scientific Study of Obesity (IASSO), and that association's past president, Professor Stephan Rossner, from Sweden.

Alcohol and GI

Professor Brand-Miller hit the headlines with her findings that alcohol may be beneficial to health because it decreases the rise in blood sugars from a subsequent meal. Studies carried out in her laboratory at Sydney University have shown that a pre-dinner drink could reduce this usual post dinner rise, which has been associated with the development of Type 2 diabetes.

The Professor's Professors at launch: (left to right): Boyd Swinburn, Ian Caterson, Stephan Rossner, Garry Egger, Jenny Brand-Miller.

A summary of alcohol effects on body weight

Following our last foray into alcohol and body weight (Winter 2005), there is a need for the Professor to simplify the issue. The following is based strictly on scientific evidence and has nothing to do with the fact that beers were provided free by the delightful Dr Hahn at the recent Prof Trim launch.

- Alcohol DOES provide calories to a diet and therefore has the potential to add energy;
- Because alcohol is potentially toxic to the body, it has to dispose of this quickly, and hence it is lost from the body as a first source of energy as well as heat loss;
- Because most of the calories in an alcoholic drink are in the alcohol, these are usually 'burned off' quickly;
- If the diet accompanying alcohol is not higher in energy than that expended (through exercise and metabolism), alcohol will not contribute to weight gain.
- If a high energy diet accompanies alcohol, the alcohol will 'spare' the calories from food for storage as fat;
- Heavy drinking alcoholics are even more influenced by this system (ie. burn off alcohol more efficiently)
- Regular drinkers dispose of alcohol more efficiently than irregular drinkers. See, easy isn't it?

—The Professor.

also in this issue

(click titles for article links)

PROFESSOR TRIM'S PRACTICE

Medicines and body fat

While the search is on for drugs to reduce obesity, many existing medications can actually cause the problem

We typically look to drugs for a solution to common health problems. Hence, the massive drive to find a drug-based solution to the world's biggest epidemic – obesity. But all drugs are known to have side effects. Some even cause weight gain. So how can we know if the pill we are popping for high blood pressure isn't causing a rise in body weight, which, in turn, is known to cause high blood pressure?

There are a number of different drug categories that are notorious for weight gain: Historically, the anti-psychotics, used to treat mental health problems, have been amongst the worst. Hence, there has been a push to come up with non-fattening alternatives in many drug categories.

Curing and causing the problem

The irony of this is that many medications, which help cure the problem can have long-term side effects of weight gain which can help make it worse. Type 2 diabetes for example, is known to be caused by increased body weight. Yet almost all anti-diabetic medications (with the exception of metformin, used early in the disease), are known to be fattening. Insulin, which is used when diabetes has fully progressed, has a major impact on hunger and hence is highly 'obesogenic'. Reducing body weight (and hence the impact of the disease) is thus dependent on reducing insulin requirements, which can be done by increasing exercise levels.

Anti-depressants – another commonly used medication amongst the overweight – are highly variable in their effect on body weight. Some (eg. Prozac, Zoloft) are thought to reduce weight, while others (eg. Aropax, Efexor) are thought to increase it. This is complicated by the fact that some people eat more when they are depressed and some eat less. Hence the action of the drug could vary between individuals.

Developing weight neutral medications

In an era of steady weight gain in the population, medications that have weight gain as a side-effect have obvious limitations. This has forced drug researchers to look to new, weight loss neutral medications as an alternative. Some are already available and hence a doctor can be asked for an alternative. In other cases, special care needs to be taken with diet and exercise if a drug is necessary for treating a medical problem. In any case, an awareness of the potential effects can help in managing the problem. The table below gives an example of drug categories and some common specific drugs that can cause the problem.

Take home message

Many common medications can cause weight gain.

For reference:

Ness-Abramof R, Apovian CM. Drug-induced weight gain. *Drugs Today* (Barc). 2005 Aug;41(8):547-55.

Common medications that can have weight gain as a side effect.

Category	Use	Generic name	Brand name
Benzodiazapines	Reducing anxiety	Alprozolam Chlordiazepoxide Diazepam Oxazepam Nitrazepam	Xanax Librium Valium Serapax Mogadon
Corticosteroids	Anti-allergy; anti inflammatory	Betamethasone Dexamethasone Methylprednisolone Predisolone Prednisone Triamcilone	Celestone Decadron Medrol Delta-Cortef Deltasone Aristocort
Anti-Diabetics	Reduce blood sugars/insulin resistance	(a) Insulin (b) Sulfonylureas	Actrapid; Humolin Velosulin; Promatime Diabinese; Minidiab; Rastinon
Phenothiazenes	Anti-psychotics	Chlorpromazine Prochlorperazine	Largactil Stemetil
Tricyclic anti-depressants	Reduce depression		Prozac Zoloft
SSRIs / SNRIs	Reduce depression		Prozac Zoloft
Oral contraceptives	Contraception	Microgynon 30 Microgynon 50 Biphasil	Microgynon; Brevnor; Modicon; Nordette; Neogynon; Ovulen; Synphasic; Triquilar

TRIM'S TRIVIA

Doggy Do

In a strange but true story from the US, inventors are working on a robot dog to help people to watch their weight. It will be connected (wireless) to their owner's pedometer to keep track of their activity and will also connect to an electronic food diary (which the owner can keep on computer or other device). It will then calculate if they are eating the right calories for their activity. It will also use data from bathroom scales to 'tell' someone how they are doing. The dog won't talk, it will instead exhibit relevant behaviour (when asked 'How am I?") – for example if the person has done well it will jump up and down, wag its tail and play lively music! (yeah, but can it kick a footy????)

Fat costs

In a new study documenting the costs associated with specific levels of obesity in the American workplace, researchers have found that the average annual per capita increase in medical expenditures and absenteeism associated with obesity ranges between $450 and $2,500 per obese employee, with costs increasing as BMI increases. (*American Journal of Health Promotion*, Sep/Oct-2005)

Diabetes deaths

Diabetes may have killed nearly 3 million people in 2000, making it the world's No. 5 cause of death, by a new estimate. The numbers, published in Sept, 2005 *Diabetes Care*, come from researchers, including the World Health Organization.

Some work is a health hazard…

Software engineers and call centre employees face a higher risk of diabetes. This is primarily because of their erratic sleep patterns and work style, according to a recent study, titled CURES (Chennai Urban Rural Epidemiology Study). Researchers say that owing to night shifts and work till late hours, the sleep patterns of young software engineers and call centre workers get affected. Such stress, results in the release of hormones in excessive amounts, which oppose the action of insulin, causing blood glucose levels to escalate. The study showed that 3 per cent of subjects aged 20-25 years, have either diabetes or pre-diabetes. The increasing prevalence of diabetes at younger ages is being attributed to a combination of genetic and environmental factors.

…some health is a work hazard

It's taken time to prove that obesity in the workforce can affect the bottom line, But new figures from the Australian Institute of Health and Welfare (AIHW), in a report entitled 'Obesity and Workplace Absenteeism Among Older Australians', (www.AIHW.gov.au) show that in general, obese workers are 17% more likely to be absent from work than non-obese workers over any two week period. They are also likely to be away for a longer time when they are absent (4 days compared to 3). Interestingly, obese people were 8% more likely not to be in the workforce than non-obese people and this appears to get worse with age, rising to 20% in 45-64 year olds. These figures should now stimulate an employer friendly government to do something to help reduce these avoidable workplace expenses.

…and work health costs

So what does the above mean in costs to the employer. Although this couldn't be calculated from the AIHW data, a new US study with over 25,000 workers (*American Journal of Health Promotion*, 2005; 20(1):45-51) has been able to put a dollar figure on different levels of obesity (grades I, II or II). These range from $US174 per year in overweight men to $US2475 for grade II obese females. The costs of obesity (excluding overweight) in a corporation of 1000 people are estimated to be $US 285,000 per year. Approximately 30% of these costs come from absenteeism, and although grade III obese are only 3% of the working population, they account for 21% of the costs due to obesity. These costs do not include reductions in productivity.

Weight loss – who cares?

A recent study published in *Diabetes Care* (2005) investigated the health benefits of following a resistance-training program twice a week in Type 2 Diabetic men, without following a weight loss diet. In 16 weeks, the men in the study showed improvements in their body's response to insulin, resting sugar levels and total health. What is important to note is that the favourable changes in the men's health occurred without modifying their diet, proving that exercise is an extremely powerful health modulator when carried out at regular intervals. Modifying the diets of the participants with a larger quantity of fruits, vegetables, whole grains and lean protein would have probably contributed to weight loss and even further gains in health.

Do fat people have bigger stomach pouches?

There's a common belief that stomach size is influenced by obesity levels, or obesity can be caused by having a larger stomach size and volume. Yet this theory has never been put to the test - until now. South American researchers looked at the length, breadth and total volume of the stomach of 30 morbidly obese patients waiting for gastric surgery (*Obesity Surgery*, 2005 Sep;15(8):1133-6).They compared this with a group of 20 non-obese controls who had died no longer than one day before testing. Surprising, they found no differences in stomach size or volume. If anything, the obese group had slightly smaller total stomach volumes, suggesting that this is not a potential excuse for weight gain.

A 'sweet tooth' – or a 'fat tongue'?

It's typically been thought that the taste buds on the tongue can only pick up four basic flavours – sweet, sour, salty and bitter. But French researchers have recently identified a new receptor on the tongue that appears to detect fat (*Journal of Clnical Investigation*, 2005; 115: 3177 - 3184.). They suggest this may help explain why fat, more than sweet foods are selected by (at least) some people who have a weight problem. The receptor, a protein called CD36, is already known to exist in many tissues and is involved in fat storage, among other jobs. It also goes by the name of fatty acid transporter, or FAT.

To see whether CD36 might be the tongue's fat detector, researchers at the University of Bourgogne studied rats and mice that were either normal or had the gene for CD36 "knocked out," inactivating the protein. They found that while the genetically normal animals naturally opted for fattier fare when given the choice, the CD36-deficient mice had no such preference. And when the researchers put fatty acids on the tongues of the normal animals, this alone triggered a release of fat-processing substances from the digestive organs. Again, the same was not true of mice lacking CD36 activity.

Stand by for the new tongue deadening anti-CD36 fat loss spray/tablet/lozenger. Coming soon to a Chemist near you!

TALKING TURKEY WITH TRIM

Q. Is there any extra advantage in exercising vigorously to lose weight rather than just doing it for a longer period?

A. This is a question that has been pondered for some time with an answer only now beginning to emerge. As you may imagine, exercising vigorously takes less time to do the same amount of work, than exercising moderately. In other words, you may be able to run a marathon in 4 hours, but it could take 8 hours to walk it. Hence, if you are working at a rate of eg. 10 Calories a minute jogging, and 5 Cals a minute walking, the amount of energy burned during the event is similar (eg. 2,400 Cals). However after running the event, there is an extra 4 hours during which energy is being burned even during rest at eg. 2 Cals per minute, which means that the runner will burn an extra 480 Cals during the total 8 hour time period – useful, but hardly worth busting a gut over.

The other question is whether the rate of burning energy after the event is higher for vigorous exercise than non-vigorous. If this was the case, a measure might need to be taken over 24 or 48 hours to compare the actual benefit of either. Previous research has shown that metabolic rate spikes higher after vigorous exercise, but drops more quickly to below that after moderate exercise, hence equilibrating the excess post-exercise oxygen consumption (EPOC) effect. And in fact this has been recently proven by researchers in Holland (*International Journal of Obesity*, 2004 Jun;28(6):759-65).

The upshot of all this is that 1. Yes, you may get more benefit for weight loss doing it vigorously rather than moderately, 2. The extra benefit is mainly in time saved, but otherwise hardly worth the effort, 3. Vigorous exercise does provide added benefits for the heart, but 4. For those who are overweight (and potentially unfit) vigorous exercise could be dangerous. The conclusion? Slow down and take a little longer for best long-term effects. You'll also be more likely to stick with this approach.

Q. Some of your previous answers indicate there are benefits from sex in weight loss. Does this apply to masturbation?

A. Let's get our sexual positions clear from the start. Whilst sexual activity does require some physical effort (more for some than others – and not necessarily for women who are just thinking of England), this is usually minimal. Think about it. The most energy is burned (and hence weight lost) when the *large* muscles of the body are involved in *aerobic* (extended) activity at an elevated heart rate. And while the raised heart rate side of this may be true with sex, it's even more likely to occur with an unfamiliar partner, (hence the well publicized deaths of some prominent public figures). The majority of suburban (using the literal meaning of this word) sex is infrequent, short and unenergetic (or so I am lead to believe), and is thus unlikely to change the size of anything above or below the groin. The same could be said of auto-eroticism. There will undoubtedly be a short rise in heart rate and metabolism, but this is little more than would occur in response to a big dog snapping at your heels. It's unlikely to balance that extra teaspoon of sugar added to your tea. Mind, you, that is not to berate or even judge the past-time, if it is a way you have chosen to fill in time. As further proof of the negative position however, it should be stated that there are still a lot of big, fat wankers out there!

Q. I am not really overweight but have quite a flabby neck. Are there specific exercises I can do for this?

If you mean neck exercises, the answer is no. And the reason is simple. Exercise requires muscular contraction. Contraction of the relatively small muscles of the neck use blood sugars as their source of fuel. It's only when muscles are used for extended periods of contraction that they start to also use substantial amounts of fat as the fuel source, and even then the fat that is used does not necessarily come from the immediate surrounding area. Aerobic exercises like walking or jogging for example use predominantly the leg muscles, but walkers and runners don't always have slim legs. In fact, these types of exercise are probably the best for reducing waist size as the fat stored around the waist is one of the most mobile sources on the body.

Typically, if you are genetically prone to store fat around the chin, and this is one of the last places you have done so, gross aerobic exercise may help you to reduce this. 'Spot reduction', as you have suggested however, does not work, as can be evidenced by the fact that not all gum chewers have skinny faces, and not all men (or at least the type asking the question above) have skinny right arms.

There is one other possibility: Overlapping of fat and skin cells around the neck (giving the 'more chins than a Chinese telephone book' look), can be exacerbated by excessive drying of the skin. As this part of the body is exposed, a hot dry climate can help create the turkey-neck look, even in the absence of excess flab. One possible way of reducing this is to apply a standard moisturiser daily to that part of the body, thereby acting like a skin polish and reducing the effects of drying.

Q. My wife and I have both been long distance runners for many years. As we age however, she is concerned about excessive wrinkling on the face. Can this be due to the running?

A. A nice segue from the previous question (thanks Ed). The first thing to understand is that women carry more overall body fat than men. A second thing is that this is all over, and even on the face (hence the soft feminine look prized by female models). A third thing is that running is a very good way of reducing fat from all over the body – the further you run, the more energy burned and hence the more fat lost. And while this is usually a good thing, the fifth thing is that when fat cells on the face are diminished, the skin tends to fold over on itself, hence causing a wrinkling effect. Drying of the skin from a harsh climate (see answer above) can add to this, and hence the even greater need for the use of a simple moisturizer, such as sorbolene cream. Because runners are more exposed and typically use up more cell fluid, the need is even greater. Restoring a bit of body fat (which will probably happen naturally when your wife reaches middle age) is probably no disadvantage here either.

TAUGHT N' TRIM

Yoghurt could help weight loss

Low fat dairy products have been touted for some time as having beneficial effects on weight loss. A number of mechanisms have been proposed for this, and one particular study group headed by Dr Michael Zemel, from the University of Tennessee, has staked their reputation on this. As part of a recent project, they placed two groups of 16 overweight individuals on a 500 kcal a day deficit diet made up of low calcium foods, or yoghurt for 12 weeks. At the end of the trial, those on the yoghurt had lost almost twice as much weight (4.4kg compared to 2.7kg) as those on the low calcium diet. They also had a much greater reduction in waist circumference (4cm compared to 0.6cm, suggesting that the weight loss was mostly fat and not muscle.

Given that both groups had an equal calorie reduction, the question is, how could this happen. Increasingly it is becoming recognised that a calorie is not necessarily a calorie when it is inside a human being. The authors here suggest that calcium in the diet is the influencing factor, causing a decrease in fat storage in the fat cell through a circuitous physiological process.

While not all the evidence on dairy products supports the weight loss benefits of calcium, there are now enough good studies around to suggest there may be something in this. The mechanisms however could be many and varied. It's also wise to keep in mind that this applies specifically to low-fat dairy products. The use of full cream dairy products is likely to negate the effects by providing more calories in the form of fat.

Take home message:

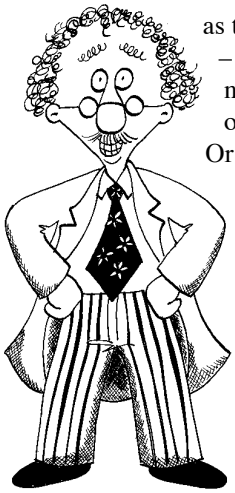
Low fat yoghurts could help weight loss.

For reference:

Zemel MB, and others. Dairy (yogurt) augmentation of total and central fat loss in obese subjects. *International Journal of Obesity*, 2005;29:388-390, 391-397.

Why low carbohydrate diets work

They used to be the flavour of the month. Now Americans are tiring of low carbohydrate diets like the Atkins plan. And this coincides with findings



as to why these diets work – at least for a while. It's not because people tire of eating bacon and eggs. Or because their bodies flush out water. Carefully controlled research in a hospital setting – where all calories could be accurately counted – shows that it's simply because they eat less on a high protein diet.

On average, people on a low carb diet cut out 1,000 calories a day when restricted to birdlike portions of carbohydrates, and start eating calories appropriate for their height according to Dr. Guenther Boden, lead author of the study and endocrinology chief at Temple University's School of Medicine in the US. Dr Boden claims carbohydrates clearly stimulate excessive appetites in some people. The message then, is not necessarily to cut carbohydrates out entirely, but to cut them back.

STOP PRESS

In a new study — still in print at the time of going to press — French scientists have pin-pointed a mechanism for reduced hunger from high protein intake. Working with rats, researchers at Lyon University found that high levels of protein are converted to glucose in the intestine and then absorbed into the portal circulation to the liver, where a connection with the brain's satiety centre signals fullness (*Cell Metabolism*, 2005;2(5):321-329)

Previously, this process, known as intestinal gluconeogenesis, has not been well understood. Researchers have been looking for changes in hunger related hormones following protein ingestion. Glucose (from carbohydrate), is absorbed in the stomach and is known to affect these hormones, hence steering research in the wrong direction.

If you're a carbohydrate craver, this could help

A recent trend in weight control management is individualising treatment. This is based on the fact that not all people get fat for the same reason and hence not all will lose it because of the same type of program. This may also explain the popularity of different diets with different people.

One group that is standing out is 'carbohydrate cravers' ie. those who tend to gain by over-consumption of carbohydrate. There's now little doubt that this type of person does exist and that s/he may be the main beneficiary of a low carbohydrate diet such as Atkins.

Another way of dealing with the problem has been hinted at by research in overweight, depressed individuals. A study published in the *Journal of Psychiatric Practice*, has shown that supplements of chromium picolinate may help reduce carbohydrate cravings, at least in those being treated for depression. Chromium picolinate, is a quickly digested form of chromium which is known to be associated with insulin in metabolising carbohydrates. Research on its value as a weight loss supplement have been inconclusive, but this may be due to its selective effects on those who are particularly prone to over-use of carbohydrate.

While more work is needed, there could be some benefit, with few known side effects, from the use of a chromium picolinate supplement. In those with diabetes, or pre-diabetes, the benefit could be even greater.

For reference:

Docherty JP and others. A Double-Blind, Placebo-Controlled, Exploratory Trial of Chromium Picolinate in Atypical Depression: Effect on Carbohydrate Craving. *Journal of Psychiatric Practice*. 11(5):302-314.

Individual responses

Although not shown in this study, it's also quite possible that carbohydrates have a more appetite stimulating effect in some people than in others. Sugar cravers, whether conditioned or genetically predisposed, could wind up eating more when given free access to carbohydrate. This could also explain why a low carbohydrate approach like Atkins works well for some people – at least over the short term – but not necessarily for others. Beyond six months, the results are less likely to be sustained, and this may explain the regular findings of only short-term effects with low carb programs.

Take home message:

It's not the carb stoopid. It's how much you eat!

For reference:

Boden, G and others..Effect of a Low-Carbohydrate Diet on Appetite, Blood Glucose Levels, and Insulin Resistance in Obese Patients with Type 2 Diabetes. *Annals of Internal Medicine*, 2005;142(6):403-411.

TRIMLINES

Marriage: a weight hazard?

It might be a time of bliss and happiness, but marriage can also signal the start of a more serious problem – significant weight gain. Scottish researchers have proven this by following 22 young couples three months prior to cohabitation, and then three months after the moving in date (*Appetite*, 2004;43(3):327-329). They found that cohabitation meant an increase in shared meal occasions, the increased likelihood of including alcohol with meals and increased potential for dietary temptations. As a result, body weight increased by about 1.4kg in women and almost 2kg in men in the six month period.

Ex-obese could be hungrier

Is a thin person who has always been thin the same as a thin person who was once fat? Apparently not, according to a study on hunger levels carried out on 17 thin and nine ex-obese individuals at the University of Colorado (*Appetite*, 2005;43(3);253-259). Both groups were overfed by 50% for 3 days and measured on hunger levels at the time as well as their change in food intake after the over-feeding period. Both thin men and women felt fuller after the over-feeding meals than the ex-obese, and thin people tended to cut down on their food intake after the trial, with women reducing this more than men. The ex-obese therefore seem to have their genuine hunger senses dulled by having once been overweight.

Drinking AND eating

Does having a full strength drink with your meal mean you'll take in more calories in the overall meal than drinking a diet, or reduced fat drink. Nutritionists looked at this by testing the effects of 360 g of water, diet cola, regular cola, orange juice, and 1% milk on the total amount of food eaten in a laboratory setting (*Appetite*, 2005, 44(2):187-19). They found that adding a drink containing 156 kcalories meant consuming an extra 104kcals at a meal compared to having a diet drink or water with that meal. The moral is, cut out the full strength drinks at all time.

PROFESSOR TRIM'S TABLE TALK

CRAB CAKES

(Makes 4 crab cakes)

2 tablespoons chopped green onion
1 cup bread crumbs
1 egg lightly beaten
1/2 pound flaked crab meat
1/2 cup minced celery
1 tablespoon Dijon-style mustard
1 tablespoon lemon juice
2 tablespoons chopped parsley

Preheat oven to 220 degrees. Spray a roasting pan generously with non-stick spray. In a large mixing bowl, combine all of the ingredients except the crab meat. Mix in the crab meat, shape into 4 balls and flatten. Place the crab cakes on the prepared roasting pan and bake for 5 minutes, turn cakes over and bake another 5 to 8 minutes or until crisp and browned. Serve with a wedge of lemon.

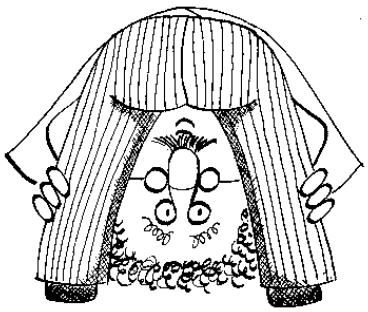
Note: To save calories, these crab cakes are baked, rather than fried. To make Cajun-style crab cakes, all of the following spices may be added:

1 teaspoon Worcestershire sauce
1/2 teaspoon cayenne pepper
1/8 teaspoon dried dill
1/8 teaspoon ground coriander
1/8 teaspoon ground allspice
1/8 teaspoon black pepper.

The spices will add negligible calories. You may also substitute imitation flaked crab for real crab.

TRIM'S TUMMY TICKLERS

PROFESSOR TRIM'S REAR END



Gain new hip, gain new weight

Requirements for knee and hip replacements are common in overweight individuals due to the mechanical effort on the joints of carrying extra weight. Hence obesity workers are often told that "if you fix my hip doc, I'll be able to exercise and lose weight."

But does this happen in reality? Research carried out in Scotland with obese and non-obese patients going through hip replacements suggests not. Of 59 obese patients undergoing surgery, 75% gained an average of 6.8kg and only 19% lost an average of 4.8kg. Comparing this with a group of non-obese patients, 60% gained an average of 4.2kg and 31% lost an average of 4.7kg.

This suggests that not only is weight gain more common than weight loss in those undergoing total hip replacement, but that those needing the replacement most, in order to try to manage their weight, are least likely to benefit in this respect.

Take home message:

A hip replacement won't guarantee weight loss

For reference:

Aderinto J, Brenkel IJ, Chan P. Weight change following total hip replacement: a comparison of obese and non-obese patients. *Surgeon*. 2005 Aug;3(4):269-72, 305.

Forget the cholesterol — just exercise

In a study of 19,000 men followed up over 10 years, Canadian researchers have found that men who are actively involved in exercise have a 50% greater reduction in death rate from heart disease than men with a similar level of cholesterol who did little or no exercise.

This is a surprising finding given that cholesterol is one of the major risk factors for heart disease that has stood the test of time. Men with high cholesterol have a seven times greater risk of heart disease than those with low cholesterol.

This is complicated however by new biochemical techniques that have enabled a greater identification of different types of cholesterol. Total cholesterol levels are now not thought to be as predictive as measures such as LDL and Apo B cholesterols and even greater refinements are still being identified.

"It shouldn't be called 'metabolic syndrome'. It should be called physical inactivity syndrome."

Dr Timothy Church, Cooper Institute, Texas.

In the meantime there is little to stop the promotion of exercise as a protective factor in heart disease even in the absence of cholesterol reduction.

Take home message:

Exercise is good for the heart – even if cholesterol isn't reduced.

For reference:

Ardern, CI and others. Revised Adult Treatment Panel III Guidelines and Cardiovascular Disease Mortality in Men Attending a Preventive Medical Clinic. *Circulation*, 2005;112:1478 - 1485.

Is poultry still healthy?

Chicken has become the meat of choice for many people because they believe it's lower in fat that other meats. Hence, in the 1980s, poultry farming started to take over from beef farming in dollar value and to meet the rising demand, new methods of intensive poultry production were introduced by poultry farmers.

Has this resulted in changes to the body composition of poultry that now makes it less healthy?

According to the authoritative nutrition newsletter, (www.healthyeating.org), this could be the case. They quote a study from the Institute of Brain Chemistry and Human Nutrition at London Metropolitan University, which recently looked at changes in the body composition of poultry. They reported that:

- poultry intake has increased more than 25 times during 1950 to 2000 in the UK
- the fat calorie content of broiler chicken has increased to about 4 times greater than that of protein
- chicken now has 100 more calories/ 100g and 4 fold calorie fat to protein ratio as compared to 3 decades ago
- omega 3 fatty acid (the 'good fats) has decreased and been replaced by omega 6 fatty acid (less 'good' in large amounts) due to cereal feeds.
- UK poultry consumption in 50 years has resulted in increased fat calories by up to 41 times.
- Eating the same weight of chicken today compared to 30 years ago means you eat 100 more calories and 3-8 times less omega 3 fats.

Take home message:

What may have been good for you once, can change over time – if the dollars are big enough.

Big thighs are good for your health

Despite their unsightly appearance, and the desire of most women to be rid of them, big thighs have now been proven to be a positive sign for good health. Having big thighs and a small waist is an even better prognosis, according to research carried out at the University of Colorado. This shows that leg fat is protective against risk factors related to heart disease.

Researchers are not sure exactly why this is so, but this latest study complements the growing understanding that all fat is not alike. At least three Scandinavian studies have now shown a negative correlation between thigh fat and heart disease, giving heart to those millions of women who despair over their 'saddle-bag' thighs. One theory on its benefits is that thigh fat acts as a kind of 'metabolic sink', clearing triglycerides and other harmful compounds from the blood.

In recent years it has become clear that 'visceral fat,' which wraps around organs and swells waistlines, poses the greatest health danger, while 'peripheral fat' on arms and legs is more benign and, according to recent research, may even be helpful. This doesn't mean that it is healthy to gain or retain excess weight, because there is no way to gain thigh fat without also increasing visceral fat stores.

Take home message:

Despite their obvious lack of appeal, big thighs in women can mean a low heart disease risk.

For reference:

Van Pelt RE, and others. Lower-Body Adiposity and Metabolic Protection in Postmenopausal Women. *Journal of Clinical Endocrinology and Metabolism. 2005; 90: 4573-4578.*