



Stress and Weight Loss

*All you ever wanted to know but were too *&%"?#@ed to do anything about it.*

Stress leads to weight gain. It can also lead to weight loss. Stress causes depression. Depression can also cause stress. So depression can lead to weight gain — and to weight loss.

It's all very confusing. But that's the conclusion one comes to when reading what's been written about stress and weight control. So what is the truth? Does anyone know? And if so, how do you cut through the cortisol to find the optimal solution to obtaining the right amount of stress to manage yours, or your client's weight?

Defining 'Stress'

Stress is the body's reaction to a stressor. Sound simple? And so it is. But that's how the patron saint of stress, Hungarian born, Canadian, Dr Hans Selye defined it in his seminal book *The Adaptation Syndrome* first published in 1949.

Selye went on to consider stress as much, much more. He even said, before his death, that he may have used the wrong term. 'Stress', he suggested is a verb, explaining the pressure placed on an individual or structure. 'Strain', as

the engineers refer to it, is probably a more accurate reflection of what we feel as the outcome of stress.

In any case, everyone knows what stress is. They also know that a reasonable amount of it is the spice of life. But too much of it can be the kiss of death.

Stress and body weight

The link between stress and weight control is in one, or both of the two sides of the energy balance equation — food or exercise. In some people, stress increases binge eating and/or makes them more sedentary. Where this is the case, dealing with stress (or the depression that can come from it), can go part of the way to dealing with excess body weight.

An obvious way of doing this would be to take an anti-depressant medication. However herein lies a paradox: Some of the new generation of anti-depressants e.g. *Arapax*, *Cipramil*, have weight gain as one of their side effects. So taking these won't help the depressed eater. They're also not indicated for weight loss, and can only be used where

depression is a main indication.

Some other medications of this SSRI (Selective Serotonin Re-uptake Inhibitor) generation of drugs (notably *Prozac* and *Zoloft*) do have weight loss side effects. Hence they might help the depressed binge eater, but could have the reverse effect on someone who actually eats *less*, when depressed. Many men fall into this category (they *drink* more but eat less). So while the current kit of medications might have some benefit, it requires some skill to work out how to fit the drug to the person.

Stress and Control

A more important issue about drug use is whether it solves the problem, or just the symptoms. Presumably, if the problem is psychological, a physiological solution will only help as long as it is being used. A better alternative therefore would seem to be to use the drug as a window of opportunity (The Professor calls it a WOOPsy) to understand the basis of stress and depression and learn how to deal with this.

If there is one word that sums this up, it's 'control'. Both stress and depression come from feelings of lack of *perceived* control over one's situation — whether this is real or imaginary. Restoring a perception of control can also be summed up in one word: 'escape'.

'Escape' in this sense doesn't necessarily mean running away. It can imply psychological techniques of escaping thought processes by changing thought patterns, medication, reading, mind games etc. The range is vast (*see table this issue*) and individual preferences probably explain why no one theory of stress management fits all. In general, it could be said that some people 'escape' best physically (by

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The Professors Stressors

Stress and weight control might not seem to be an item. Yet a large part of poor weight management comes about through the inability of people to manage stress — and associated depression.

As a doyen of the stress oeuvre, the Professor knows his way around a panic attack. More importantly, he knows that what we know, is not necessarily what he knows, and what few others know, but what we all should know.

Hence, in this issue, he takes the bull by the adrenals to dissect stress, depression and weight control, and leave its meaty entrails to be put back together again by the delicatessens of clinical practice. Like it — or lump it, the one thing you should not do, is ignore it.



Step 1. Recognise that thought is not reality and is the basis of most personal unhappiness.

Thoughts are constructed in the mind, and are based on learned ways of viewing the world. They are *not* reality, as is evidenced by the different ways individuals react to the same experience. The first step then is to accept this: Thoughts are *not* reality. They are a *learned* way of interpreting a world that an individual has grown up in. If destructive thoughts can be *learned*, they can also be *unlearned*. If this is done, the driving force behind your failure to control your weight (and your life) can be removed.

“We consciously and unconsciously choose to think and hence feel in certain self helping and self harming ways” (Albert Ellis, 1988)

Step 2: Understand the difference between two main types of thoughts.

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- Find your stress “red line”
- Heart attacks: real causes
- Protein problems
- Changing the stressee
- De-stressing techniques
- Drinks and calories

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The Professor's 9 Step Process for Developing Psychological Immunity to Stress

Put simply, there are two main types of thoughts; functional (or intellectual), and non functional (or emotional). *Functional* thought is required for daily living and involves no significant emotional attachment. It enables us to *perceive* the outside world. *Non-functional* thought on the other hand, is more emotional and helps us to *interpret* the outside world. It is often also egotistical or ‘me-based’ and can be either negative (‘I’m no good at anything’), or positive (‘I’m a fantastic person’). Functional thought comes and goes spontaneously and progresses to higher levels, whereas non-functional thought can become ‘cemented’ into the mind through constant recurrence, and refuses to progress.

“People are disturbed not by things, but by the views they take of them” (Epictetus, 2000BC).

Step 3: Learn to recognise destructive, non-functional (me-based) thoughts and techniques available to stop these.

In order to do something about them, it's necessary to first recognise destructive non-functional thoughts. This is done through conscious awareness in ways such as the following.

(a) *Thought watching*: Watch the thoughts that flow into your head come and go like leaves floating down a stream. Try to identify each of these as useful (functional) or negative (non-functional), and particularly ‘me-based’ thoughts.

(b) *Thought filtering*: After becoming conscious of what you are thinking, put your thoughts through a ‘thought filter’ (like a blender) as they come into your head, to differentiate the functional from the non-functional.

Step 4. Accept that the natural, inbuilt tendency of the mind is towards good mental health and that this is always the ‘default’ system when learned negative thought is overcome.

Life gets in the way of a sound *body* through germs (microbes) and destructive lifestyles. It gets in the way of a sound *mind* through learned negative and ‘me-centred’ non-functional thinking. The body's immune system is fully functional at birth and acts like a thermostat to restore good physical health in the presence of invading germs. In a similar way, the inherent tendency of a sound mind towards good psychological health is like a psychological immune system that struggles to restore a natural ‘core’ of good mental health in the light of life's experiences.

Thoughts are the germs of the mind. But like all germs, they can be healthy or unhealthy. Negative, self-obsessed, irrational, and non-functional thoughts, are like the bad bacteria that cause disease. (Depression, for example, has been described as ‘the common cold of the mind’). If negative, non-functional thoughts can be reduced, the natural ‘core’ of good psychological health becomes the default mode, just as good physical health is the default mode when the body's immune system fights off disease. If this is done often enough, the destructive ‘thought germs’ will be overcome (or thoughts ‘de-conditioned’) and the default mode of psychological well-being will take over.

“I saw that all things that I feared and which feared me had nothing good or bad about them save insofar as the mind was affected by them.” (Spinoza)

Step 5. Recognise that you have a choice in choosing your thought streams and that the damaging negative streams can be avoided by consciously not choosing them.

In becoming conscious that a thought is negative, non-functional, or 'me-based', and therefore potentially harmful, it can be consciously stopped or changed, thus reverting to the 'default' status of natural good mental health. The default state is a 'core', which can be visualised in any way you like. In essence though, it is a central light of goodness. For the religious it might be 'God'; for the follower of Eastern philosophy, 'Nirvana', or for the non-spiritual, an inner glow. However you see it, this is an inbuilt 'thermostat' for returning to a healthy mental state in the presence of countervailing thoughts developed from life events.

"Being upset by your own thoughts is similar to writing yourself a nasty letter — and then being offended by that letter!" Richard Carlson

Step 6. Choose to stop negative thoughts and return to your inner 'core' of default mental well-being for a psychological immunization 'injection'.

If it's accepted that thoughts can be chosen, it becomes possible to choose the thoughts you allow and dismiss those you don't, to try to de-condition, or unlearn, the latter.

There are a number of ways of not allowing non-functional thoughts. Some may or may not work for you and all may need to be tried at some stage.

(a) *First 'stalk' your thoughts* as described in 3(a) above. Then after passing them through the filter (3b), ambush the negative thoughts, like a bushranger, to dispose of them.

(b) *Use a 'thought stopping' technique*, like imagining a roadside 'stop sign' in all its detail, before then allowing your consciousness to return to the 'core'.

(c) *Try to 'reframe' the infectious thought* by creating a rational alternative

to the irrational one once you've filtered this and recognised it as irrational.

(d) *Use thought replacement*, by replacing the negative thought with a more functional thought – perhaps after using thought stopping – such as imagining an ideal place of contentment for you (such as a perfect desert island).

(e) *'Escape' from the recognised negative thought* either mentally, through the above, or going back to your 'core' of good mental health in your mind, and letting this take over your defence system.

(f) *Develop a mental 'repair team'* of little men (or other beings of your own imagination), to whom you can turn to get rid of negative thoughts in a variety of different ways ie.

- a thought 'sweeper' who sweeps minor negative thoughts out past the physical edges of your consciousness, as if sweeping them over a cliff;

- a thought 'garbo' who dumps slightly more serious forms of negative thought into a garbage bin, then closes the lid and walks away;

- a thought 'policeman' (for more seriously negative thoughts), who stops these from happening by putting up his hand to stop them in their tracks

(g) *Imagine negative or 'me-based' thoughts as being sucked like a vacuum down a drain into your 'core' of*

psychological immunity, which then grows and glows as a result, while those negative thoughts disappear into a void.

"I think, therefore I am. (happy/unhappy/depressed/disturbed etc)" (Descartes)

Step 7. Help increase the immunity of your mental 'core'.

Because the 'core' is a natural tendency to return to psychological well-being, this needs to be nurtured, just as the body's physical immune system needs to be nurtured with good exercise and nutrition. The exercise of the mind is meditation, or intense concentration, which enables the 'core' to take over your mental processes naturally on a more full-time basis. This can occur through intensely focusing hobbies of any kind (particularly related to physical activity, because this has an added effect of focusing concentration).

The food of the mind is benevolence — carrying out good deeds, which help nourish core goodness and feelings of self worth. This can be through small deeds like helping a child or an old lady across the road, or big deeds by devoting yourself to a cause. Both are ways of learning 'escape' from negative

Psychological techniques for dealing with stress

They all boil down to one thing — THOUGHT

Any list of approaches for dealing with psychological issues such as stress and depression will show an underlying theme. They all relate back to thought processes as shown in the table below.

Technique	gets the patient to
Counselling	externalize thoughts in talking
Psychotherapy	realize repressed thoughts
Rational Emotive Therapy (RET)	reason with him/herself about irrational thoughts
Meditation	control thoughts by learning to focus
Cognitive Behaviour Therapy (CBT)	de-condition learned thoughts

To deal with this in a practical sense, the Professor has authored *The 9 Step Process for Developing 'Psychological Immunity'* above.

continued from previous page

thought patterns and restoring 'control' over your emotions. And it is these two words, which define psychological well-being.

"Depression is the common cold of the psyche."

Step 8: Use your default mental immunity to live in the moment

"The ancestor to every action is a thought" Ralph Waldo Emerson

Most anxiety is anticipatory. It's based about concern about what *might* happen in the future. The technique described here should be used to base yourself firmly in the here and now and avoid Mark Twain's dilemma that

"...my life has been full of catastrophes.. most of which have never happened."

In other words, consider thoughts about the future or the past in the *non-functional* category discussed above, and set about to de-condition, or decrease the frequency of these in your mind.

Step 9: Reduce the potency of ego based thoughts and actions

Ego, or 'me-based' thoughts, whether good or bad, detract from the natural 'core' of psychological immunity. They are learned, not natural ways of distracting your thinking. In order to reduce these, it may be necessary to reduce concentration on self in simple ways such as not over-using mirrors, weight scales or other ways of personally checking your physical status, talking about yourself less and listening to others more, and using the thought stopping techniques discussed above to reduce 'me-based' thoughts.

For reference:

Carlson, M. *Stop Thinking and Start Living*, Pan Books, New York, 2003.

continued from page 1

running long distances, sport, going to the gym, paddling a canoe or riding a bike). Others do it best mentally (by meditation, cognitive behaviour therapy, prayer, or eastern techniques like Yoga or Tai Chi, or through distraction, such as reading or watching movies).

In some cases stress is caused by an obvious external stressor, in which case the solution is simple (at least in theory) — 'flight' or 'fight'. More commonly however, it comes from within the stessee, and is related to the way we think. As Shakespeare once summed it up: 'Things are neither good nor bad, but thinking makes it so.'

Dealing with thinking processes then becomes a key weapon in dealing with the large number of overweight or obese people for whom stress and/or depression are causes of their problem. It expands the causality of weight problems from simple explanations of gluttony or sloth, to something much more complicated, making the treatment more difficult, but at least less condemnatory.

Changing the Stressee

There's no single way — but there are lots of alternatives.

While different people seek to manage stress by restoring 'control' in different ways, the alternatives have always been classified under two main categories; 'flight' and 'fight'. Within these, there are physical and mental ways of 'escape' that can lead to restoration of control. And while the possibilities are endless, the table below gives an indication of the types of alternatives that might be tried.

FLIGHT

Physical

Exercise
Sport
Warm baths
Holidays
Mini breaks
Hobbies
Games
Yoga
Tai Chi
Breathing
Massage
Sex

Mental

Meditation
Muscle relaxation
Pause/prayer
Concentration
Counting to 10
Art
Mind games
Music
Creativity
Reading
Trance
Biofeedback

FIGHT

Physical

Negotiation
Confrontation
Challenge
Preparation
Social Engineering
Sleep
Nutrition
Direct action
Expression
Talking
Meeting

Mental

Cognitive re-structuring
RET
Assertiveness
Psychotherapy
Planning
Mind Control
Financial control
Positive self talk
Rehearsal
Thought stopping
Brainstorming

Finding Your Stress 'Red Line'

Kitchens and heat have something to tell us about stress management

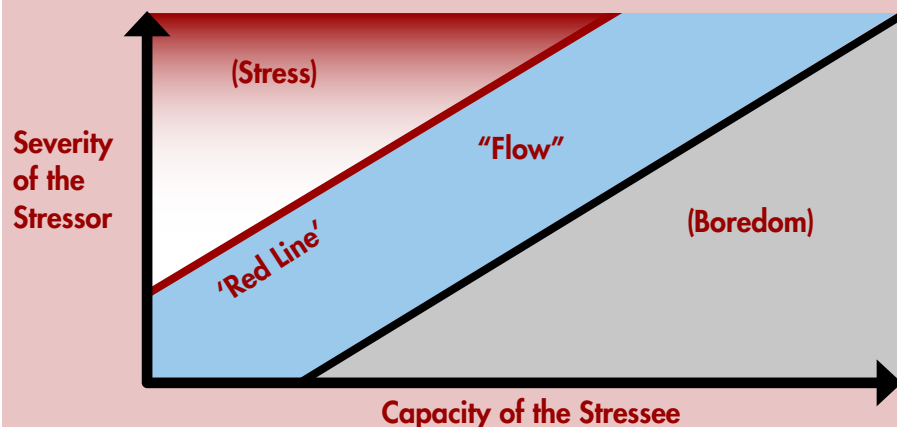
As explained above, stress is the body's reaction to a stressor. But it's not usually the stressor that's the problem. It's the reaction of the 'stressee' (you). Some people can put up with extreme stressors without difficulty, whereas others crumble at the slightest pressure.

Stress is important in weight control because it can result in failure to stick to a program. The first thing therefore is to realise your own 'red line'; to know where your capability meets the severity of the stressor (*see graph*). Recognising this may help you to avoid those stressful situations.

If stress is an ongoing and serious problem you may wish to talk to your doctor about medication to deal with this. Some stress medications can actually help weight loss (*see page 1*).

For reference:

Csikszentmihalyi.M. *Flow: The Psychology of Happiness*, Rider, NY, 2002.



PROFESSOR TRIM'S TIT BITS

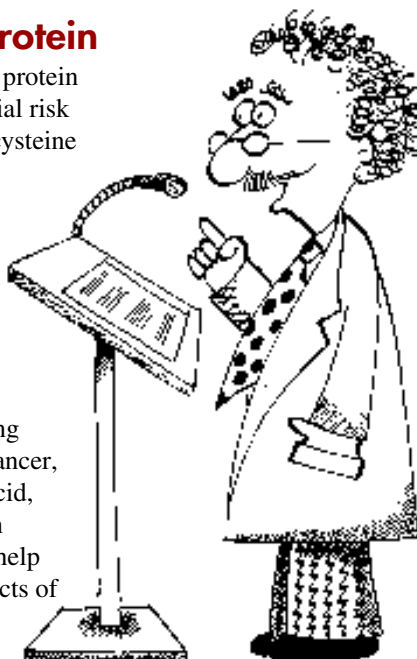
Instant heart attacks

A heart attack can occur almost overnight as it takes years for plaque to build up to 30-40% blockage of a coronary artery, but then 1-2 days for it to completely block. Furthermore, 30% of heart attacks result in instant death.

Potential problems of high protein

In all the discussion of low-carbohydrate, high protein diets, little attention has been given to a potential risk that has previously gone unrecognized. Homocysteine is a destructive amino acid that is created by the body as it breaks down protein. Too much homocysteine is directly linked to a higher risk of coronary heart disease, stroke and peripheral vascular disease (*Annals of Internal Medicine*, 2004;140(2):I31).

High protein diets create elevated levels of homocysteine in the blood, increasing the risk for a multitude of health problems including Alzheimer's disease, cardiovascular disease, cancer, and depression. Insufficient amounts of folic acid, B6 and B12 can hamper the natural breakdown of homocysteine, and while supplements may help alleviate the problem, there could be other effects of this type of restrictive diet which might also be problematic.



Heart attacks, the psychosocial link

It's now official. Stress does play a part.

Noting our emphasis on stress in this issue, it's interesting to see the breakdown of psychosocial factors shown to be linked with heart attacks in the INTERHEART study reported on page 6.

While stress has been thought to be associated with heart disease for many years, measures of stress have generally been inadequate to pick this up. The INTERHEART study used simple questionnaire measures of stress which may not be expected to provide accurate information. However, their findings indicate a strong link between self reported levels of stress and those who had suffered a heart attack.

In general, the relative risk of psychosocial factors being associated with heart disease was 2.67 times that of no psychosocial factors (see above). This was the third highest risk factor measured in this study. Individual types of psychosocial factors and their RR's are shown in the table below.

Risk factor	Relative Risk
Permanent work stress	2.14
Permanent home stress	2.12
Permanent general stress	1.84
Depression	1.55
Stressful, recent life events	1.48
Severe financial stress	1.33

Implication:

Stress and life events do have a role in heart disease, despite the difficulty in measuring these.

For reference:

Rosengren A and others. Association of psychosocial risk factors with risk of acute myocardial infarction in 11 119 cases and 13 648 controls from 52 countries (the INTERHEART study): case-control study. Published online, Sept 3., 2004:<http://image.thelancet.com/extras/04art8002web.pdf>.

What (really) causes heart attacks

Nine factors account for 90% of all cases

While many of the risk factors for heart disease, such as hypertension, smoking, blood fats and obesity, are well known, these still only account for a small percentage of total modifiable heart disease. Specialists are baffled about what makes up the remaining risk.

To study this, an international panel of heart disease epidemiologists set up one of the biggest studies in the world, recruiting people from 52 countries who had been admitted to hospital with a heart attack and examining their measurable risks and asking detailed questions about their lifestyle. The results, known as the INTERHEART study have now been reported and show some interesting and unexpected findings related to heart disease risk.

Although there were some minor differences between countries and ethnic groups, a total of 9 risk factors were found to account for between 90-94% of all cases. This is much higher than has previously been found. The nine factors are shown in the table below. Relative risks (RR) indicate the severity of the risk compared to 1.00. RRs above 1.00 indicate a positive association with the disease and those below 1.00 a negative association.

Interestingly, cholesterol and even the fractions of cholesterol thought to be 'good' (HDL) or 'bad' (LDL) did not score on the chart. A ratio of measures within each of these and part representative of 'good' or 'bad' cholesterol (eg. The Apo's A and B), scored the most highly.

Risk factor Relative Risk

A. Positive Risks

Apo B/Apo A ratio	3.25
Smoking	2.87
Psychosocial factors	2.67
Diabetes	2.37
Hypertension	1.91
Abdominal obesity	1.12

B. Negative Risks

Alcohol consumption	0.91
Physical activity	0.86
Fruit and vegetable consumption	0.70

Most protective from this study was fruit and vegetable consumption, although the results were unable to statistically differentiate between this, physical activity and alcohol use.

Implication:

A small number of modifiable risks accounts for a large proportion of heart attacks.

For reference:

Yusef S and others. Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries (the INTERHEART study): case-control study. Published online, Sept 3, 2004:<http://image.thelancet.com/extras/04art8001web.pdf>

What's the biggest source of calories in your diet?

Fluid may have taken over from food

There are many forms of fattening foods in modern society – spreads, pastries, cakes, biscuits, full-cream dairy products etc. From time to time, each has been touted as the main cause of obesity in countries like Australia. However recent data from the US suggests the biggest source of calories may not be from a food at all, but from sugar-sweetened drinks. These supplied just over 7% of the calories consumed in the US last year.

During the 1990s, the soft-drink industry was able to capitalise on their carbohydrate content, while the obesity spotlight was turned on fat. Reductions of fat in a normal diet will normally result in a reduction in total energy because fat is the most energy-dense nutrient (9 cal/g). However if too much energy is consumed in total, a reduction of fat will not be enough to lead to weight loss.

Soft drink is an easy form of 'passive' calorie consumption. Because there is little satiation with soft drink (in contrast to food), it's possible to take in excessive amounts, and hence easily build up an excess of calories which can lead to fat. Children are particularly vulnerable here and the big increase in obesity in this group is being blamed partly on soft drink consumption.

In another recent study it was shown that women who drink more soft drink have a greater chance of contracting type 2 diabetes.

The solution? Some soft drink manufacturers have seen the writing on the wall (see last issue of Waistline) and are moving to diversify to water and other low calorie soft drinks. They admit however that there will always be a market for full strength sugared drinks.

The professor's Solution: Slowly, and without publicity, decrease the allowable sugar content of all soft drinks by 10% (as was done with salt in vegemite). This would have a small weight loss effect in a large population, rather than vice versa and hence contribute significantly to lowering obesity.

For reference:

Spurgeon, D. Sweetened drinks increase women's chances of having diabetes. *British Medical Journal*, 2004; 329:530.

TRIMLINES



Liposuction may help you look better, but will it help other health problems?

In weight loss, everyone is looking for the quick fix. Tablets and over-the-counter 'miracle' cures offer the cheapest, most risk-free quick fixes, but other techniques, such as liposuction, provide an alternative for those prepared to outlay real money — if only to look better.

Liposuction is an aspiration technique where a small 'vacuum cleaner' type tube is moved around under the skin to suck up subcutaneous fat. It's a no-effort solution offered generally by cosmetic surgeons at considerable price. Some surgeons claim it has benefit, not just in weight loss, but for the health benefits that also go with weight loss. However, whether these benefits come from a 'passive' approach to weight loss is not clear.

Researchers in Italy have recently tested the idea with 15 women who had up to 10 kg of fat removed from the subcutaneous abdominal area. Some of the women already had diabetes, with a significant impact on the disease. Other women were non-diabetic, but were measured before and after surgery on the metabolic

measures that are relevant to diabetes eg. blood sugars and blood insulin.

Surprisingly, the loss of fat by liposuction, had no effect on health parameters. There were no differences in insulin sensitivity of muscle, liver or fat tissue, no changes in artery 'stiffness' as measured by C-Reactive Protein (CRP), and no changes in other risk factors like blood pressure, blood sugars and blood fats) up to 10-weeks after surgery.

This is surprising given that a 5-10% decrease in body weight through natural means is normally enough to create a 30% reduction in other health risks. In this case the reduction of body weight was considerably more than 10%, and reduction of abdominal fat averaged 44%. It does suggest that artificial fat removal does have its limitations.

Implication:

Fat loss through artificial means (liposuction), does not seem to have the same health benefits as fat loss through other, more standard approaches.

For reference:

Klein S and others. Absence of an effect of liposuction on insulin action and risk factors for coronary heart disease. *New England Journal of Medicine*, 2004;350(25):2549-57.

Intermittent exercise may be enough...at least for weight loss.

Intermittent exercise may be just as effective at lowering artery-blocking fat in the bloodstream than continuous exercise when exercising just for 30 minutes, according to new research from the University of Missouri-Columbia (*Medicine & Science in Sports & Exercise*, Aug., 2004)

Researchers examined triglyceride (Tg) levels following

meals in inactive subjects after performing three different exercise protocols on different days. On the control day, subjects ate a high-fat meal only. On a second visit, the subjects ate a high-fat meal after a session of continuous exercise. On another visit, the subjects ate a high-fat meal after a session of 3 bouts of 10-minute periods separated by 20-minute rests.

The results showed that Tg levels in the people who carried out intermittent exercise before eating a high-fat meal were reduced by 27%. Those who carried out continuous exercise reduced their Tg levels by 15%. Hence there was no difference between either intermittent or continuous exercise.

The researchers suggested that exercising before eating was crucial for fat clearing. A large dinner at night therefore might best be 'cleared' by an early morning exercise session, the time between allowing enough time for the benefits of exercise.

Having babies doesn't make you fat...but certain other factors don't help

For many women, childbirth is the turning point between youth and spunkdom, and age and fatdom. In a desperate bid to find rationality, they turn to hormonal explanations — something during childbirth must have changed the way their body stores fat. But is weight gain a natural progression after childbirth? And if not, what are the factors that lead to greater gains in some women compared to others?

Researchers in Alabama tested this by measuring over 2000 women of a similar age and following them for up to 10 years, checking changes in weight with childbirths and relating this to a number of

factors including race (black vs white women), whether they had had babies before (parous), or not (nulliparous) and baseline body weight. The women were all measured 5 times over a 10-year period.

The results showed that the biggest weight gains were amongst black women and those who had had short pregnancies, had given birth to more than 1 child, and who were already overweight before becoming pregnant. Among normal weight nulliparas, excess gains in weight (about 1 kg) and waist circumference (WC=2-3 cm) were associated with follow-up birth(s). Among women parous at baseline, no excess weight gains were found, but excess WC gains (2-4 cm) were associated with follow-up births.

The good news is that increases in weight did not increase with increased babies after the first. The bad news is that waist circumference did, suggesting a decrease in muscle mass and an increase in fat mass — probably due to a decrease in physical activity.

The researchers suggest that interventions to prevent obesity should be aimed at women who are overweight before becoming pregnant. The impact on the health of mothers of increases in waist circumference with increasing childbirths needs to be considered more closely.

Implication:

Childbirth is a risk factor for weight gain — particularly in women who are overweight before pregnancy.

For reference:

Gunderson EP and others. Excess gains in weight and waist circumference associated with childbearing: The Coronary Artery Risk Development in Young Adults Study (CARDIA). *International Journal of Obesity*, 2004 Apr;28(4):525-35.

PROFESSOR TRIM'S REAR END



The rising costs of obesity

The costs of obesity to the health system are unknown, but the rising costs of obesity related diseases such as diabetes, hyperlipidaemia (eg. cholesterol and blood fats) and heart disease, suggest that it is likely to be considerable. Estimates in a number of different countries put it at between 5-10% of the total health budget.

Using figures from National Medical Expenditure surveys in the US (which are not available to other countries because of nationalised health programs), health workers at the University of Alabama, have now calculated how these costs have been growing over time. Taking people's own estimates of height and weight from survey data, they have been able to estimate the extra medical payments made by those who are overweight or obese, compared to those of normal weight or underweight.

Comparing two time periods, 1987 and 2001, the researchers found that there was a 10% increase in obesity in the American population. The increased proportion of spending on obese people, relative to that of normal weight accounts for 27% of the rise in inflation adjusted spending per head from 1987-2001. Spending for diabetes increased by 38%, heart disease 41% and hyperlipidaemia 22%. Increases in obesity prevalence alone accounted for 12% of the growth in health spending suggesting an accelerating cost for treating obesity related problems.

Implication:

Obesity is not only a considerable cost drain on the health system but accounts for an increasing proportion of costs.

For reference:

Thorpe KE and others. The impact of obesity on rising medical spending. *Health Tracking*, Oct 20; 2004.

Clothes fatteneth the man — and woman

Wearing formal clothes to work can mean being less active, according to an American Council on Exercise (ACE) study of how clothing affects physical activity levels.

The study, lead by researchers from the University of Wisconsin, examined 53 healthy men and women with an average age of 42. Each participant was asked to wear a pedometer each day for two weeks, dressed on alternate days in either formal business attire or jeans.

The results showed that physical activity levels increased marginally when casual clothing was worn. Specifically, study participants took an average of nearly 8% more steps (~500 steps) on the days they wore casual clothing than on the days on which they wore normal business attire. Because around 20 steps in a 75kg person amounts to around 1 calorie of energy, this means an extra 25 additional calories a day was expended when wearing casual clothing. Over a year of work-days, this would amount to an extra 5-6,000 calories, or the equivalent (at least theoretically) of over 0.5kg of body fat.

(The Professor's note: As Australians in general are gaining around 0.5kg per year, this could be the explanation — a suit-lead obesity epidemic!!!).

According to Dr Cedric Bryant, Chief Scientist for ACE, the findings from this are not unexpected.

"Over the last 25 years, advances in technology combined with our hectic lifestyles have help to virtually eliminate physical activity from our daily routines," he said. "Wearing casual, comfortable clothes to work may be an

easy way to encourage us to put physical activity back into our daily lives."

Implication:

Even small things like formality of clothing could have an effect on body weight in modern society.

For reference:

ACE (The American Council on Exercise Fitness Matters) magazine, July/August 2004.

After dinner munchies? Cereal could do the trick.

For many people, post dinner snacking can make up a considerable part of the daily food intake. Because this is also followed by sleep, and hence a decreased period of digestion, it could make a significant contribution to body fatness. The question is how could this be decreased?

One suggestion is that if snacking can be structured and low energy-dense, the problem could be minimised. Researchers in Detroit and San Antonio in the US tested this out in a group of night snacking adults by providing ready made breakfast cereal with low fat milk, 90 minutes after their main evening meal for a four week period. Their total energy intake was then compared with a control group who were allowed to continue eating their night-time snacks ad libitum.

After 4 weeks, those on the cereal lost around 0.75kg of weight, whereas those who continued to snack actually gained about 0.2kg. By snacking on cereal, the test group reduced their total calorie intake from a baseline measure by an average of almost 400kcalories a day, whereas there was no decrease in the control group. Interestingly, the reduction in post dinner calorie intake in the cereal group was only around 140kcal, suggesting that cereal at night meant that they actually ate less food during the following days.

Whether this is because of a conscious awareness of reduced post meal snacking is not known — but hey, who cares!

Implication:

A post evening meal snack of breakfast cereal could reduce total food intake and help weight loss.

For reference:

Waller, SM and others. Evening ready-to-eat cereal consumption contributes to weight management. *Journal of the American College of Nutrition*. 2004;23(4):316-21.

Full Frontal Fat Loss

With the evidence clearly showing that casual dressing could help the obesity epidemic, the Professor has gone the next step by suggesting that nudity should be promoted as a weight loss technique, beginning in schools and continuing throughout life into senior citizen's homes. If it's done in the family and involves sex and saving on clothes it automatically meets the current affairs TV programs criteria for support of the four F's: Fatness, Family, Finance and F..... If nothing else, nudity in the work place will stop stressed male executives, in particular, having to purchase worry beads to play with.