

PROFESSOR TRIM'S WAISTLINE



THE PROFESSOR'S FEATURES

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Sleeping with the enemy

Coca Cola takes a bold new approach to dealing with obesity. But will the cynics accept it?

Mahatma Ghandi once said about the opposition to social change: "First they ignore you. Then they argue against you. Then they fight you. Then you win".

It happened with smoking. It happened with asbestos. It happened with drink driving.

But is a recent step taken by the Coca Cola Company set to contradict Ghandi's dictum?

After years of apparently ignoring the problem, Coca Cola International now claims it intends to act responsibly to help reduce obesity, particularly amongst children. The corporation carried out an unprecedented survey amongst obesity experts in Australia (the Professor being humbly included amongst such company) to ascertain the likely collaboration they would get,

and a scientific snapshot of their health image.

As expected, it didn't turn out well. The company bit the bullet and took the decision to act on the findings by voluntarily developing a more socially responsible approach to marketing its product. This has served to ambush the cynics, who claim that Coca Cola and other high energy-dense soft drinks are a major cause of the problem.

Coke doesn't disagree. However at a meeting of its International Executives in London late last year, the Managing Director said while they admit they are part of the problem, Coke would genuinely like to also be part of the solution. Cynics now await the next move. In the meantime, Coke has shocked just about everyone by

taking vending machines out of primary schools around the country. They also plan to:

- Support programs to get children 5-12 years old to become more active through organised sport and physical activity;
- Develop a wider range of beverage choices, including water and low calorie variety soft drinks, and educate children and parents about how to achieve balance through choice;
- Carry out responsible, self-regulated marketing practices, such as not advertising to under 12 year olds.

Does this mean that Ghandi missed something in not also considering the dog's motto that "...if you can't lick 'em, join 'em." It's too early to tell, but it does set the stage for an interesting change in health partnerships.

The Professor Considers Bed Fellows

From his stool in the School of Fatology at the University of Gutengorge (they can't yet afford a Chair), the Professor has taken more than a fleeting interest in moves by the Coca Cola company to reduce obesity in children. While cynical colleagues remain corporately celibate, the Professor is carefully examining the risk of getting into bed with what is commonly charged as 'the enemy'. He points out in this issue that although he is prepared to wear protection, the aforementioned colleagues risk total impotence by suggesting that experts should engage in foreplay with the food industry, but avoid intercourse (or discourse) at all costs. Lessons have been learned by both sides from the tobacco epidemic and food producers know how to deal with a knock-back. For better or worse, the Professor takes the view that it is better to benefit from co-habitation while learning when to feign a headache at appropriate times, than to be screwed ignominiously. Now read on...

Cementing the Goalposts

In a comprehensive analysis of approaches to deal with childhood obesity, US obesity expert, Dr Kelly Brownell has suggested that:

"...the time has come for the (food and soft drink) industry to determine that it will be a trustworthy public health ally by adopting the following practices: (1) suspend all food advertising and marketing campaigns directed at children; (2) remove sugar-sweetened soft drinks and snack foods from vending machines in schools; (3) end sponsorship of scholastic activities and professional nutrition organizations linked to product promotion; and (4) refrain from political contributions that might influence national nutritional policy."

Could it be that Coca Cola has stolen the march from obesity experts by conforming to Brownell's suggestions? If so, what comes next and how will the 'pure' scientists react?

For reference:

Brownell KD. *Food Fight*. Contemporary Books, NY, 2004.



THE PROFESSOR'S IRONING BOARD

Obesity Report Shelved

In a report commissioned by the Federal Government to examine the best 'bang for the buck' in obesity management in children, Professor Boyd Swinburn and colleagues from Deakin university in Melbourne carried out careful mathematical modelling, that showed that the best 'bang' would come from restriction of junk food advertising to children. The report was submitted in 2003. However, in an 'about face', the Government has refused to accept the report's findings.

Faced with a potential reaction from food manufacturers and the advertising industry in an election year, the Government retreated on its earlier promises to act on obesity. Meanwhile it has been pointed out that banning of cigarette advertising was once opposed because it was thought this would bring and end to the world as we now know it. It did no such thing. Yet suggestions of a re-introduction of cigarette advertising would probably now get a Government thrown out of office.

in this issue

- Best types of exercise?
- Childhood obesity crisis
- Movement tips for weight loss
- Activity levels v food intake
- Living close to shops helps
- Fighting gestational diabetes

(Click these links to articles)

Breaking News: Is it all a big Lie?

*As we go to print, the popular press is indulging its love affair with the sensational by printing extracts from a newly released book called *The Obesity Myth*, by US author Paul Campos (Random House, 2004). Amongst the assertions in this book are the following:*

1. Measures of body fat (i.e. BMI) are misleading as they put Russell Crowe and George Clooney into the 'obese' category;
2. In almost all large-scale epidemiological studies, little or no correlation between weight and health can be found for a large majority of the population.
3. Studies have consistently failed to find any correlation between increasing BMI and higher mortality in people 65 and over.
4. Death rates are lower from cancer in overweight people than those of ideal weight.
5. Being overweight can't be a cause of heart disease because heart disease rates are going down while obesity is skyrocketing;
6. Diseases like emphysema, chronic obstructive pulmonary disease, TB, anaemia, peptic ulcer, chronic bronchitis, hip fracture and vertebral fracture are less common amongst heavier people.
7. Changing activity levels and dietary content are more important for reducing diabetes than losing weight for reducing diabetes incidence.

This is just a small list of the claims made by the author – many more of which are seriously in error. At least public interest in the topic shows Ghandi's dictum (*see page 1*) to be correct — now they're arguing with us!

Whilst the Professor loves a good stouch, and believes that controversy is a good thing in the early stages of an epidemic because it creates public awareness and gets people to take a stance, it would be nice to have some slightly more substantial polemic to demolish. Consider the above points in order:

1. CORRECT...but irrelevant: BMI is a poor measure of body fat at the individual level. However, obesity experts and health authorities

(at least the ones mentored by the Professor) don't use BMI for measuring an individual's body fat. Waist circumference, or percent body fat are the better measures of risk from fatness. BMI is still a good indication of the problem at the population level, however and the author has confused the issues.

2. INCORRECT: In fact there is now a multitude of good studies confirming this. However there is a very small number of overweight people for whom this may not apply (just like there are some 80 year old smokers).

3. CORRECT...but naive:...but this is probably because most of the overweight have died before age 65! In fact this is the basis of the claim.

4. CORRECT — in some cases...but misunderstood...because cancer causes body wastage. Hence the underweight (with cancer) statistically skew the results in favour of ideal weight.

5. INCORRECT: While heart disease rates from the primary risks (smoking, blood fats and hypertension) are going down, heart disease rates from secondary risks such as diabetes (and hence indirectly obesity) take longer to manifest, but are rapidly rising with obesity rates and are set to negate the downward trend in other heart disease deaths.

6. CORRECT AND INCORRECT: The one positive side of being obese is an improvement in osteoporosis (because of the hormonal and gravitational effects of weight on bone). This then reduces fractures. However the other diseases mentioned here have been consistently found to be increased with obesity.

7. CORRECT...but misleading: while it is probably true that changing diet and activity levels are more important than weight loss for reducing diabetes, these generally lead to weight loss for most people, and hence the cause is difficult to separate out.

What type of exercise is best?

Understanding the 4 S's of Fitness

When scientists discussed exercise in the past, it was mainly based around exercise for skill related fitness i.e. for increasing athletic performance. It was not until the release of the US Surgeon general's Report on physical activity in 1994 that it was realised that this might not be the whole story.

Exercise for fitness, it was discovered, is not necessarily the same as movement for fat loss. In the former case, the accent is on intensity and progression. In the latter case it has been mainly aerobic activity, or movement, at any intensity.

This is understandable as the biggest decrease in activity in recent years has been general movement from daily living. But technological change has increased the imperative for other types of activity in relation to good health; resistance for example, has decreased because we no longer have any need to lift, dig, chop or carry heavy weights. Flexibility has decreased because there is less need for bending and stretching.

Hence any initiative taken to decrease weight and/or increase fitness needs to consider health related fitness; in particular, the 4 S's shown in the figure below.

Size refers to body fatness. This is *related* to fitness, but not perfectly. It is possible to be fit AND fat and activity levels are more important than weight loss in these individuals. Fat to muscle ratio can be improved through standard weight loss practices.

Stamina is aerobic capacity. It is a measure of the body's ability to process oxygen under demand. It can be increased by increasing physical activity levels.

Strength is, as it suggests, the ability of a muscle to produce force on contraction. Strength is improved through resistance type activities.

Suppleness is another name for flexibility. It refers to the ability to stretch muscles through their full range. Suppleness is improved by stretching or in such activities as Yoga.

Decreasing activity in adolescence causes obesity in adulthood

Finnish researchers have found that decreases in activity levels from adolescence to adulthood could be responsible for obesity in early adulthood (*International Journal of*

Obesity, 2004; March 23). Activity levels and obesity were measured at ages 14 and 31 from a sample of Finns whose birth records were known. Becoming inactive in the transition from adolescence to adulthood increased the chances of obesity by about 50% in both males and females.

Amino acid supplements get the nod from another source

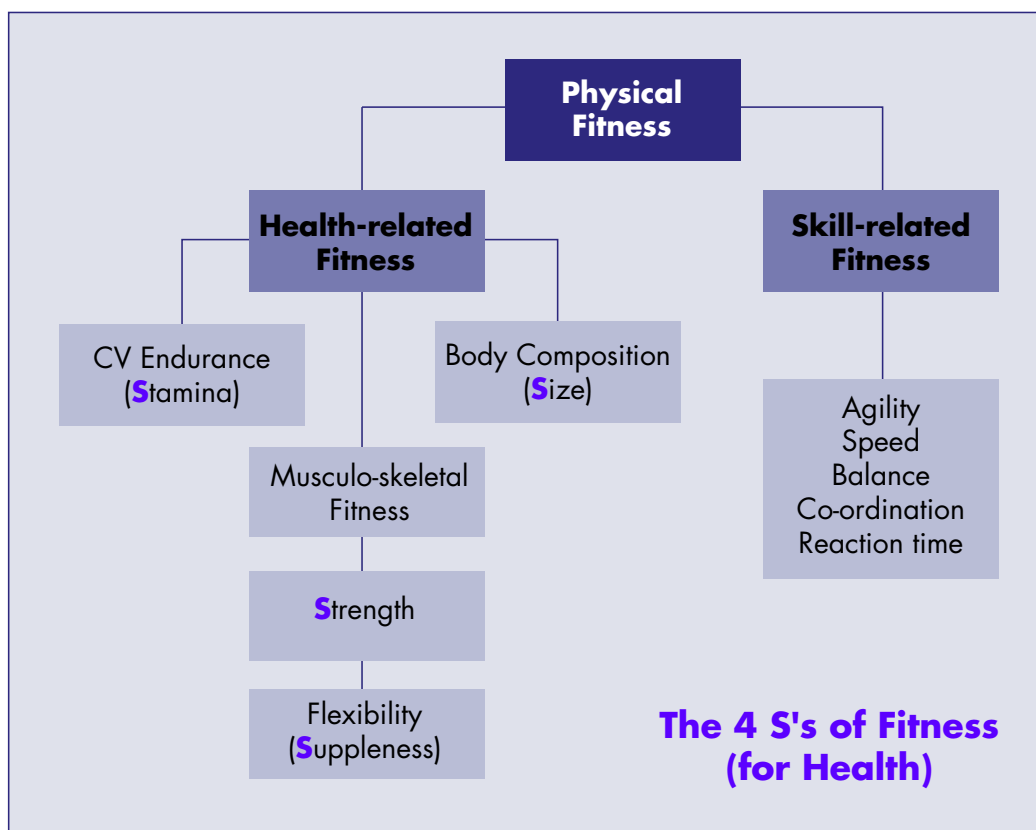
With protein supplements being the 'next big thing', more and more reports are being published to support their use. In a recent trial, scientists from Italy assessed the effects of an amino acid supplement on diabetes patients with heart disease, and in the presence of an isometric (handgrip) exercise. The study was set up to compare cardiac function, as measured by an ecocardiograph in a test and control group both at rest and during exercise. Diabetes is a pre-cursor of heart disease and is associated with a breakdown of heart muscle as reflected in amino acid loss.

Although similar at the start of the study, the researchers showed that the supplementation group had a much

less adverse cardiac reaction to isometric exercise after twelve weeks of amino acid supplementation than the control group. It's suggested that this is because the amino acid supplements reduce the breakdown of heart muscle which, in turn, reduces the pressure on the heart caused by the exercise. The findings support the use of increased protein in weight loss diets (a practice long supported by The Professor), particularly in those with a genetic predisposition to diabetes.

For reference:

Scognamiglio R and others. Effects of oral amino acid supplementation on myocardial function in patients with type 2 diabetes mellitus. *American Heart Journal*; 2004; 147(6):1106-12.



Childhood obesity catches on

At least 155 million school-age children worldwide are overweight or obese, according to a major new report from the International Obesity Task Force (IOTF). IOTF says that one in 10 children is overweight and around 30-45 million of the 155 million total are classified as obese — accounting for 2-3% of the world's children aged 5-17. A further 22 million younger children are also affected, according to previous IOTF global estimates based on WHO data for under fives.

The report, "Obesity in children and young people: A crisis in public health", was delivered to the World Health Organization on the eve of a critical decision by government ministers in Geneva on adopting a global strategy on diet, activity and health. It warns that childhood obesity is increasing in both developed and developing countries, with significantly increased risks that children may develop Type 2 diabetes, heart disease and a variety of other co-morbidities.

In Europe, childhood obesity has increased steadily with the highest prevalence in southern European countries. Between 20-35% of children in Southern Europe are overweight compared with 10-20% in northern Europe. Recent surveys found that 36% of 9-year-olds in mainland Italy and Sicily are overweight or obese, while in Greece the prevalence is 26% in boys and 19% in girls aged 6-17 years. In Spain, 27% of children and adolescents are affected while in Crete 39% of children aged 12 were found to be overweight. In the UK the figure reached 20% of children in 1998.

The report identifies a number of worrying trends for future obesity:

- Increases in the use of motorized transport, e.g. to school.
- A fall in opportunities for recreational physical activity.
- Increased sedentary recreation.
- Multiple TV channels around the clock.
- Greater quantities and variety of available energy-dense foods.
- Rising levels of marketing and promotion of energy-dense foods.
- More frequent and widespread food purchasing opportunities.
- More use of restaurants and fast food stores
- Larger portions of food offering better

'value' for money.

- Increased frequency of occasions for eating.
- Rising use of soft drinks to replace water, e.g. in schools.

The report concludes that the domination of "obesogenic" or obesity-promoting environmental factors means that treatment is unlikely to succeed without strategies to deal with the prevailing environment through a broad-based, public health programme, and urges policy-makers to develop strong policies to stem the rising problem.

"It must be concluded that interventions at the family or school level will need to be matched by changes in the social and cultural context so that the benefits can be sustained and enhanced. Such prevention strategies will require a co-ordinated effort between the medical community, health administrators, teachers, parents, food producers and processors, retailers and caterers, advertisers and the media, recreation and sport planners, urban architects, city planners, politicians and legislators," the report states.

Calling on the WHO to help countries develop National Obesity Action Plans with a high priority for tackling the prevention of childhood obesity, the report says action is needed to:

- provide clear and consistent consumer information, e.g. on food labels;
- encourage food companies to provide lower energy, more nutritious food choices for children;
- develop criteria for advertising that promotes healthier eating;
- improve maternal nutrition and encourage breast-feeding of infants;
- design secure play facilities and safe local neighbourhoods;
- encourage schools to enact coherent food, nutrition and physical activity policies;
- encourage medical and health professionals to participate in the development of public health programs.

For reference:

International Obesity Task Force, Childhood Report, 231 North Gower Street, London NW1 2NS

More on the hysterectomy issue — and more pie eating for the Professor

(see last issue)

The story so far: After a report in issue No 7 re hysterectomy and the effects on weight gain, Dr Ian Traise from Alstonville explained that hysterectomy alone is unlikely to cause weight gain in women. Now read on...

Dear Professor Trim,

I have another slant on the post hysterectomy issue. I think the problem is very similar to anyone experiencing forced inactivity and boredom.

After hysterectomy, women spend several days in hospital and are moderately inactive for 6-8 weeks. While hospitalised, there is little to do except eat the goodies given by well wishing friends and relatives. Once home, you are instructed to stay home for the first week and forbidden to do housework and drive the car for about 2 weeks. It takes another 4 weeks or so to regain the stamina enjoyed pre operatively. By the time all has returned to normal, the pre operative activity habit has disappeared.

I talk to my patients about these very human aspects of hysterectomy related weight gain before they have their operation. Prevention is better than cure.

Dr Rosemary Vandenberg



The Professor's Tips for movement to lose weight



It's a basic tenet that to lose weight you need to eat differently (not necessarily less) and move (not necessarily 'exercise') more. Eating differently means changing foods to reduce the 'volume' or total calories consumed, generally by decreasing energy density. Moving more however is a little more complicated (but probably also more definite). Put into objective terms, the following are the Professor's tips for movement, based on an update of recent scientific information.

Basic principles:

- Any activity program should be combined with a hypocaloric diet.
- Some form of 'planned' activity is probably necessary for most people in today's society
- increases in 'incidental' activity are also advisable

For preventing weight gain:

- Accumulate at least 30 mins a day of added activity (ie. added to normal daily activities), or a total of 7,500 steps or more, as measured on a pedometer.

For weight loss:

- Accumulate 30-60 minutes a day of added activity or 10,000 steps or more.

For weight loss maintenance (if post-obese):

- Accumulate 60-90 minutes a day of added activity, or 12,500 steps or more;
- Alternatively; Measure baseline activity on a pedometer and progressively increase the current daily rate by 30% until this is accomplished comfortably.

For weight loss without changing diet:

- Accumulate at least 4,200kcal of activity per week, or 15,000 steps per day.

Defining terms

When it comes to exercise for weight loss, terminology is often more confusing than what to do. To help clear the decks, the Professor offers his own definition of exercise terms, ranging from the modest to the extreme:

Movement: Any musculo-skeletal activity of a person

Physical Activity: Any musculo-skeletal activity that involves significant movement of body or limbs

Exercise: A type of physical activity defined as a planned, structured and repetitive bodily movement done to improve or maintain physical fitness

Fitness: The capacity of the heart and lungs to pump blood to the working muscles, and for the muscles to use this oxygen supply to carry out work.

Health: Metabolic well-being as reflected in low risk levels of blood fats, blood pressure and body weight.

Reducing activity levels doesn't reduce food intake

One of the possible explanations for why human obesity has become such an issue in recent years has been the declining levels of physical activity in modern societies. Increases in technology have meant a huge increase in the numbers and type of 'effort-saving' machines. This has increased leisure time, during which it was thought, humans may make up for declining daily activity levels by increasing leisure time activity.

Several studies have now shown that this is not the case. Activity levels have declined by as much as 60%, leaving a deficit of around 1,000 kcal/d (4,200kJ) in energy balance. In other words, humans in the year 2000 would have to eat roughly 1,000 kcal of food less per day to stay the same weight (ie. lean) as humans around 1900. The question then remains whether a decline in activity of this much would lead to a compensatory decline in food intake.

Research by one of Scotland's leading

energy researchers suggests that this is not the case. By keeping a small group of six, non-overweight men in a 'metabolic chamber' for two lots of seven days, Dr James Stubbs has shown that humans are not good at adapting food intake to energy expenditure.

A metabolic chamber is a small, fully enclosed and air-tight room within which oxygen and carbon dioxide can be measured, enabling scientists to accurately assess the amount of energy used over any particular period of time. Dr Stubbs and his team measured the men under two conditions over 2x7 day periods; one where they were sedentary and a second where they were more active. They were able to accurately assess the active stage as using, on average, around 30% more energy than the sedentary stage.

Each man was given a free choice of foods over the 7 day period and allowed to eat as much, or as little

as he felt like. Surprisingly, there was no difference in food intake over the two seven day periods. There were also no differences in measures of hunger, appetite or body weight. This suggests that, at least over a short period such as this, there is no compensation in food intake for a decline in physical activity when free food is available.

Implications:

Modern humans, living in a world of freely available foods and declining activity levels, may not automatically reduce food intake to equate with energy balance and hence would be likely to gain increasing weight.

For reference:

Stubbs J, and others. A decrease in physical activity affects appetite, energy, and nutrient balance in lean men feeding ad-libitum. *American Journal of Clinical Nutrition*, 2004;79:62-9.



TRIM'S TABLE TALK

SPINACH TRIANGLES

(serves 6)

1 large onion or 7 whole shallots
1 clove garlic
1/4 teaspoon nutmeg
1 tablespoons fresh chopped parsley
1 tablespoons fresh chopped chives
1 bunch spinach
250g Low fat Greek style Fetta cheese
125g Parmesan or Pecorino cheese
250g Low fat Ricotta cheese
2 eggs
Olive oil
Filo pastry sheets (1 packet at least)
Butter
Poppy seeds

1. Heat together in a pan or wok first six ingredients until onions are clear
2. Steam spinach gently and then chop finely

3. Mix the cheeses and the eggs together cold
4. Mix all ingredients together once cooked (*The ingredient mix can be kept for up to a week in a refrigerator*)
5. Stir well before spooning onto sheets.
6. Oil the filo pastry sheets (*doing every second sheet reduces fat content*)
7. Cut into strips dependent on size of triangles (*half a sheet lengthwise main course size; six strips lengthwise for nibbles size*)
8. Spoon mixture onto cut sheets
9. Fold into triangle shapes
10. Lightly brush with butter on the top side and sprinkle with poppy seeds
11. The triangles can be kept in a refrigerator for a day or two covered with a tea-towel
12. Cook for 10–15 minutes in a preheated moderate oven
5 grams fat per serve

LENTIL AND CHILLI PATTIES

(serves 6)

1/2kg brown lentils
2 strips kombu (available from Asian supermarkets)
1 large onion
1 tablespoons marjoram
1 tablespoons thyme
1 tablespoons rosemary
5g black pepper
1/2kg cabbage

1/2kg potato
1/4kg carrot
1/4kg pumpkin
Wholemeal breadcrumbs as required

1. Soak lentils overnight in cold water. Drain water in morning and replace with fresh cold water. Cook with kombu strips (if available) for added flavour. Bring to the boil and cook until soft but not over done. Remove the kombu for reuse later.
2. **Quick method** — *Soak lentils for 20 minutes in warm water, drain water, cover with new water and boil until soft but not over done. Cook with kombu strips if available.*
3. Steam potato, carrot and pumpkin until soft. Mash with a little water.
4. Meanwhile, in a large wok sauté onion, herbs and seasoning until onion clear, then add cabbage. Cook until soft al dente.
5. Mash all together. Then mash in lentils (removing kombu first if used).
6. Allow to cool.
7. Make into patties and roll in wholemeal breadcrumbs.
8. Pan fry in very small amount of oil, or bake in moderate to hot oven (covered for first 10 minutes) for 20 minutes.
9. Serve with chilli sauce and salad
10. Garnish with fresh parsley for display.
2 grams fat per serve

FLUORIDE and weight loss: What's the connection?

Most people are aware of fluoride and its beneficial effects on teeth. The term has become synonymous with prevention. But what's a leading US obesity expert doing talking about 'The Fluoride Hypothesis' in connection with obesity and changes in food intake? Dr George Bray has been one of the leading lights in obesity research for many years. His views have sometimes been controversial, always interesting, and usually worthy of a second look. In 2002 for example, he blamed the obesity epidemic in the US on the use of high fructose corn syrups (HFCS) as a sweetener in American foods and soft drinks. The start of the rise in obesity he said, can be directly correlated with the introduction of HFCSs around 1980.

Following an initial chortle about this amongst academic researchers, it was found that HFCS may have specific effects on parts of the brain associated with eating and hence weight gain. The sweetener is now being examined more closely as a cause of other problems.

Dr Bray is also well known for his use of the acronym. Amongst others, he has talked about the MONA LISA theory (Most Obesities kNown Are Low In Sympathetic Activity). But even this pales against the subtlety of the FLUORIDE hypothesis. Long an exponent of clinical treatment as being the best form of dealing with obesity, Bray has now come around to the belief that For Lowering Universal Obesity Rates Implement ideas that Don't demand Effort (or, the

acronym... FLUORIDE).

The Fluoride Hypothesis for obesity proposes that environmental changes can be made that will reduce the epidemic of obesity, in much the same way as fluoride reduced the incidence of dental disease. Fluoride-like strategies can work without the personal effort required by changes in lifestyle. It's the 'passive' changes, or 'making healthy choices easy choices' that health promotion experts have been advocating for years. FLUORIDE might bring it more to the expert's attention.

For reference:

Bray GA. The epidemic of obesity and changes in food intake: the Fluoride Hypothesis. *Physiology and Behaviour*. 2004; 82(1):115-21.

GEOGRAPHY AND OBESITY

Where you live and how you get around could be killing you

One of the main goals of humans throughout evolution has been to have food on the table at the end of the day without having to expend too much energy getting it.

It's one of our greatest successes. We've arrived. The goal has become reality.

However, now we have to look at the downside. Is this all positive, or is there a hidden cost, of which we were not aware?

Research carried out in Canada suggests there are costs and that these are centred around the built environment — where and how we live, and how we move around. The study is one of the first to look at the link between environment and obesity.

“...people who lived less than 1 km from shops were 7% less likely to be obese than their counterparts who had to drive.”

Also a first is the fact that this research was carried out within Schools of Geography and Community and Regional Planning, reflecting the recognition that obesity is a bigger problem than can be simply dealt with by the medical sciences. Researchers tracked participant's travel behaviour as well as land use mix, residential density and connectivity of streets in a neighbourhood. Urban design was then associated with obesity and transportation-related activities.

Time and (lack of) motion

The results showed that the amount of time people spend in their cars was found to influence their weight - more so than their income, education, gender or ethnicity. Each additional hour spent in a car per day was associated with a 6% increase in the likelihood of obesity. On the other hand, each additional kilometre walked per day was associated with a 5% decrease in the likelihood of obesity. In addition, people who lived less than 1 km from shops were 7% less likely to be obese than their counterparts who had to drive. This is because distances longer than this usually lead people to drive instead of walk. Possibly for this reason, those who live in the suburbs are more likely to be fat (about 4kg more) than those who live in dense urban areas.

Implications:

Where you live can be affecting your weight. Living close to resources (shops etc), increases walking.

For reference:

Frank LD and others. Obesity relationships with community design, physical activity, and time spent in cars. *Preventive Medicine*, 2004;27(2):87-96.

GOING AGAINST THE GRAIN

Resistance training in pregnancy reduces gestational diabetes

Like type 2 diabetes, gestational diabetes is increasing in prevalence. The causes for this are unclear, but again, like the type 2 version, it appears that genetics, lifestyle, and the interaction between the two play a major role.

Gestational Diabetes Mellitus (GDM) occurs in a small number (ie. around 5%) of women during pregnancy. Many overcome this after delivery, but around 50% are at risk of developing full type 2 diabetes at some later stage. GDM is more common amongst those who (a) have a genetic history of diabetes (b) are overweight going into pregnancy, and (c) are inactive both before and during pregnancy. Because GDM is almost unheard of in native women living a subsistence existence, many experts feel it is related to food and activity levels. Several studies have now supported this by showing that women with a high fat intake and low physical activity levels are most at risk.

Reversing the risk

The obvious next question is whether changes in these behaviours can reverse the situation. One recent study has looked at recreational activity levels in American women both before and during pregnancy and found that women who engage in physical activity during both time periods had almost a 2/3 reduced risk of contracting GDM than women who were recreationally inactive.

More tellingly, a second study carried out in Canada has shown that increasing activity through resistance training — even at 26 weeks of pregnancy - can reduce prevalence and duration of, and need for, GDM medication in a group of pregnant women. Previous research has shown the benefits of aerobic exercise (eg. walking), for this purpose, but this is the first study of its kind using resistance exercise.

For safety purposes, the type of resistance studied was not weights, but rubber bands. All exercises were specifically designed to minimise danger to the foetus while requiring muscle exertion and energy use amongst women. The results showed a drop in all measures of GDM in women using resistance exercise plus diet, compared to a diet alone.

Implications:

Decreases in activity levels, including resistance exercise, in modern societies may be increasing the prevalence of gestational diabetes in women. Conversely, exercise programs may help reduce GDM in women at-risk of the disease.

For reference:

1. Dempsey JC and others. Prospective Study of Gestational Diabetes Mellitus Risk in Relation to Maternal Recreational Physical Activity before and during Pregnancy. *American Journal of Epidemiology*, 2004;159(7):663-70.
2. Brankston GN and others. Resistance exercise decreases the need for insulin in overweight women with gestational diabetes mellitus. *American Journal of Obstetrics and Gynecology*, 2004; 190(1):188-93.

PROFESSOR TRIM'S REAR END



Going soft could mean ... not going hard

As the professor has advised before, erectile dysfunction (ED) is associated with lifestyle in men, and hence is often present in the obese. For this reason a study of 110 obese Italian men was recently designed to test the effects of a weight loss program aimed to achieve a loss of 10% or more by decreasing food intake and increasing activity levels, on measures of ED. Men were divided into an intervention and a control group (even though it might be difficult to imagine how a group of impotent Italian men could be controlled!) and studied over 2 years.

After 2 years, body weight dropped significantly more in the test group than the control group and this was accompanied by improvements in blood measures of inflammation of the arteries and immune reaction. More importantly, measures on a test of ED showed an improvement in sexual function in about 1/3 of the test group, while there was no improvement in the control group. Authorities are now looking for a group of men reported pinching bottoms while running and not eating through the streets of Rome.

For reference:

Esposito K, and others. Effect of lifestyle changes on erectile dysfunction in obese men: a randomized controlled trial. *Journal of the American Medical Association*, 2004; 291(24):2978-84.

Does stretching work?

There is currently much confusion about whether there's any value in stretching muscles before exercise to prevent injury. Some studies say yes. Some say no. Belgian scientists have tried to put the argument to rest by suggesting that sports involving a high intensity of stretch-shortening cycles (SSC's) in the muscle need stretching to get a compliant store and release of elastic energy in muscle-

tendon units. In contrast, where sports involve low intensity or limited SSCs (eg. walking, running, cycling, swimming), there's probably little advantage in stretching before exercise. However stretching after exercise might prevent chronic muscle tightening, and hence later problems. So....that seems to put that argument to bed.

For reference:

Witvrouw E and others Stretching and injury prevention: an obscure relationship. *Sports Medicine*. 2004;34(7):443-9.

US Medicare Redefines Obesity As An Illness

In contrast to Australia, Medicare in the US as of July 2004 now recognizes obesity as an illness, a change in policy that may allow millions of overweight Americans to make medical claims for treatments such as stomach surgery and diet programs.

With the removal of language in Medicare policy that said obesity is not an illness, beneficiaries will be able to request a government review of medical evidence to determine whether certain treatments for obesity can be covered.

Though Medicare and Medicaid programs cover sicknesses caused by obesity — including type 2 diabetes, cardiovascular disease, several types of cancer and gallbladder disease — the previous policy meant that weight-loss therapies have often been denied coverage.

Officials said the policy change is not expected to immediately alter Medicare coverage, and no figures were provided on potential costs to taxpayers. The Medicare agency said it may meet this autumn to review scientific evidence on various surgical procedures related.

Fat Pill — or not?

In a show of how quick the popular media are to jump on the obesity cure bandwagon, research from St Vincent's Institute in Melbourne, has been inappropriately labelled the "fat pill" solution. Reports in Sydney and Melbourne media claim that researchers at St Vincent's have discovered a pill that burns off fat by wasting energy, without any need for diet and exercise, through an enzyme known as AMP kinase (AMPK).

If the reports were to be believed it would seem that the battle against obesity is all but over. However according to Professor Bruce Kemp, the biochemist from St Vincents who has spent years researching AMP kinase, and who is regarded as perhaps the world's

foremost expert on the topic, a potential pill is probably 3 years away and availability on the market up to a decade away — even if it is shown to work!

Professor Kemp says that AMPK plays a significant role in energy expenditure, in ways that are only partially understood. A severe limitation at the moment however, is research that shows that the enzyme operates differently in different parts of the body. AMPK in the brain for example can increase appetite and therefore potentially increase obesity.

One of the big problems then will be to develop a drug to specifically target obese tissue. The area is no doubt an exciting one, and one in which Australia, and Professor Kemp, are up there with the best. However, it would help if media analysts would talk properly to scientists involved, before charging off with unsupported promises.

Balanced Funding

In an example of slightly distorted political thinking, the Federal government has allocated \$40 million to research into an ailment called 'Farbry's disease', which is suffered by an estimated 40 people in Australia (a politician's relative obviously being one of these). In contrast, obesity was directly given nothing; not a sausage; the hole in the doughnut; bummer all!

Why, you may ask? In fairness to the most maligned profession in the country, let it be said that the public is probably prepared to accept legislation, environmental and policy changes when threatened by the imminent 'nastiness' of a virulent infection, like SARS or Avian Influenza. However restricting the individual's right to yummy foods and a leisurely lifestyle — the main causes of obesity — is not something designed to instantly return a politician to office. Expect little such interest, at least until the epidemic begins producing infertility amongst the kiddies. The spectre of a breakdown in the biological imperative of passing on one's genes is about the only thing that would compete with the hip pocket nerve in the democratic voting stakes.

Costs of obesity to industry

Medical costs for obese employees are 77 percent more than for normal-sized workers, according to the RAND consulting firm in the US. Other studies show that obese people are twice as likely to be absent 14 or more days a year, which effects overall productivity and may negatively impact workers' morale.