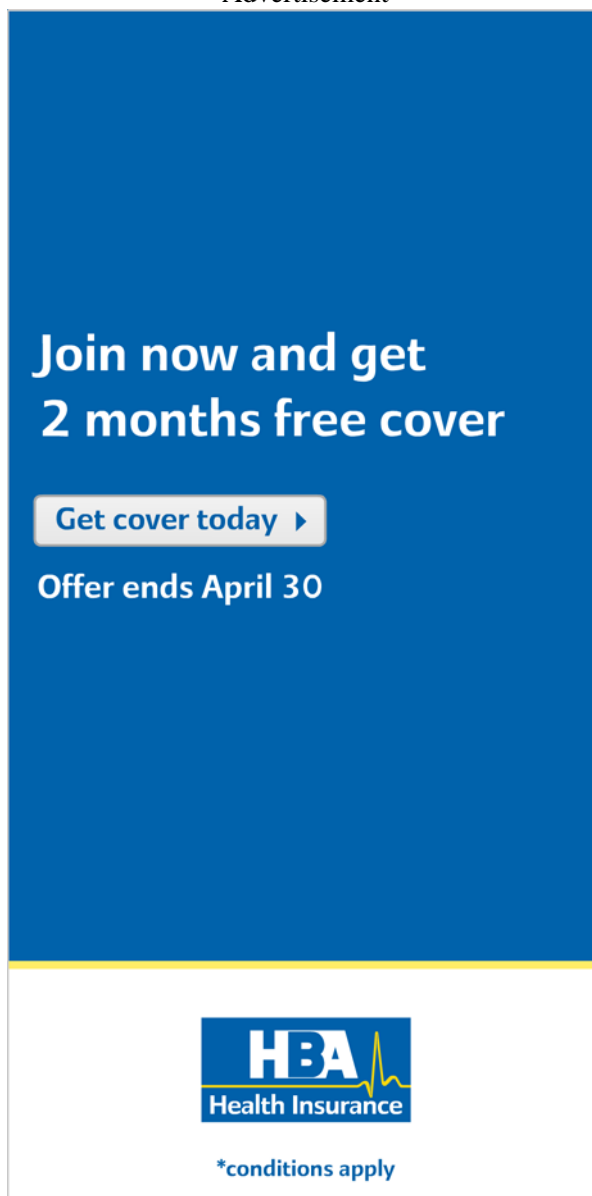


## Surgery will do more than education to fix the obesity epidemic

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THE Prime Minister and the Victorian Premier have both declared obesity a priority area for government assault this year. This is good news. The obesity epidemic is one of the most serious health problems in human history and is a factor in many millions of deaths around the world each year.

In Australia, the economic costs of obesity have been estimated at \$21 billion a year. Some experts say the present generation of young children may be the first to suffer a decline in lifespan because of obesity and the associated problems of diabetes, cardiovascular disease, kidney disease and a host of other complications.

But there is also new optimism that with this political will we can show the world how to conquer obesity, just as Australia

did with seat belts and the road toll. And Australia led the way with some of the world's most successful public health programs against smoking and AIDS, all based on public education and legislation.

There are calls for massive public education programs on obesity, bans on junk food, restrictions on advertising and food-label reforms. No doubt some of these proposals and more will get an airing at April's 2020 Ideas Summit.

But, sorry, none of them will work. The eat less/exercise more mantra has been around for 50 years and this period coincides with an explosion in rates of obesity, the biggest increases in history. I am all in favour of promoting the message that people should eat less and exercise more. There are many important health benefits from this course and it will help slightly overweight people get back to normal weight. But it will not cure obesity, no matter how much money is spent on advertising or education programs.

The money would be better spent on funding obesity surgery or appropriate drugs to suppress appetite, and on basic research to find out what is making a significant proportion of our people eat themselves to death.

Eating is one of the strongest basic human instincts, stronger than sex. We have been genetically programmed to search for food from the time we were single-celled organisms swimming in the primordial swamp. Our bodies trained themselves to store surplus energy from food, in fat cells, for use in times of food shortage.

But in the last 100 years, we have switched from food shortage to food abundance, and our bodies are still stacking up surplus spare energy in the form of belly fat and other spare tyres. Even before that, humans switched from being a species that walked many kilometres for a feed to people who walk 10 metres to the refrigerator for as much food as we desire.

But there is something else at work because not everyone becomes obese and the vast majority of obese people fail to achieve long-term weight loss even when they exercise and diet.

There is growing evidence that genetic influences, including chemical action on genes, are responsible for perhaps 75% of obesity. Studies of identical twins reared apart suggest that their body weight is overwhelmingly determined by their genetic make-up. Studies of adopted children show that their body weight resembles their biological parents rather than their adopted parents regardless of diet and exercise habits.

We have known for some time that the hypothalamus located at the base of the brain and the hormone leptin have a powerful impact on appetite and hunger control. There is a notable case of a British child born without a leptin supply who became morbidly obese by the time he was three years old and then was back to normal weight by the age of seven after being treated with leptin. But this appears to be only the beginning of a complex and powerful web of genetic and chemical control on body weight. There is evidence that a pregnant mother's eating habits during the first semester may control the body weight of her baby; if she starves herself, her baby is more likely to grow up to be an obese adult.

There are credible suggestions in the scientific literature that there may be substances added to our diet in the past 50 years that are triggering chemical changes to our genes, altering their function. Fructose has been mentioned as a possible culprit, but there is no proof yet. Interestingly, a recent study in the US suggested that people who drank even diet soft drink regularly were more likely to be obese and suffer other metabolic disorders.

Science is also closer to solving the puzzle of why most dieters fail to maintain weight loss and end up heavier than they started. It appears that weight loss triggers an adaptive hormonal reaction that makes us hungrier and therefore we eat more. Thus, the body defends itself against weight loss.

Recent research shows that there may even be an effect on appetite and hunger in the success of gastric lap-band surgery, previously thought to be a physical solution that shrank the size of the stomach to make people full before they ate too much. Now there is evidence that the device may cause the stomach to send a nerve signal to the brain to suppress appetite.

The more we learn about obesity, the more we learn that the solutions are not simple or one-size fits all. Of course, diet and exercise are part of the answer, but we would be foolish to put all our public health response into that basket.

A sensible and strategic approach to obesity would be multi-pronged and open to the reality that surgical and pharmaceutical solutions are perhaps the most important part of the mix. The best advertising jingle in the world doesn't stand a chance against the most powerful urge on earth. Our legislators must resist the temptation to throw money at high-profile advertising campaigns and get on with the real job of supporting basic research to find the real answers.

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*This story was found at: <http://www.theage.com.au/articles/2008/02/18/1203190737640.html>*