New thinking on weight management

- High protein, low glycemic index the key to success -

A summary of the Diogenes study findings by Professor Jennie Brand-Miller

Introduction

It’s a sad fact that Australia is now one of the fattest nations in the developed world, with around two thirds of the adult population overweight or obese.

While energy restricted diets may work in the short term, few people are able to keep the weight off in the long term. This causes problems with patient motivation but can also adversely impact other health measures such as blood pressure, glycemic control and blood lipid levels.

Health care professionals constantly struggle with overcoming the psychological and physiological barriers that hamper successful and sustained weight loss. A major international dietary study suggests that the answer may lie in small and easy-to-make changes to the composition of the diet

Macronutrients and weight management

We’ve known for a while that protein has a positive effect on satiety and can help with short-term weight loss. In addition, protein can also lower the glycemic response to carbohydrates when they are eaten together. However, we still don’t know the right level of protein to recommend for sustainable weight maintenance.

The effectiveness of low glycemic index (GI) diets on weight loss has until now been less conclusive, although it seems that low GI meals may promote metabolic changes that reduce hunger and energy intake and may also prevent the decline in energy expenditure associated with dietary restriction.

The evolving role of GI

The term Glycemic Index (GI) was introduced in 1981 by Canadian researchers who tested a large range of foods to determine which were best for people with diabetes. They made the surprising discovery that some ‘complex’ carbohydrate-containing foods produced more rapid rises in blood glucose than those containing ‘simple’ carbohydrates, challenging popular belief that the opposite was true.

This ground-breaking research remained controversial for many years until enough evidence had accumulated around the world to show that not only was GI reproducible in tests, but it could also affect weight control, diabetes and cardiovascular disease.

From the late 1990s the concept of GI started to become more accepted in the Australian scientific community – recognised for its significant contribution to our current understanding of GI – while other parts of the world were slower to adopt this ‘Glucose Revolution’.
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The Diogenes study design
A major step forward in this discussion was taken by scientists from the Diet, Obesity and Genes (Diogenes) Project who set out to shed some light on the importance of diet composition in the prevention and management of obesity in a large scale international study.

After initially losing at least 8% of their body weight on a very low calorie diet, 773 participants from eight European countries were randomly assigned to one of five diets for 26 weeks:

- Low protein (13% of total energy), low GI
- Low protein, high GI
- High protein (25% of total energy), low GI
- High protein, high GI
- Control diet (following dietary guidelines of each country)

All diets had a moderate fat content (25-30% of total energy) and there were no restrictions on energy intake. Dietary counselling, including a points system to help achieve the desired macronutrient levels, took place fortnightly for 6 weeks and monthly after that.

Participants were told to maintain their weight loss although further weight loss was allowed.

Effects on body weight
The findings from this study are particularly interesting and raise some very new considerations around the role of GI and protein in effective weight maintenance.

Firstly, the high protein, low GI diet had the best effect on weight maintenance. In fact, this was the only group that continued to lose weight during the course of the study (see figure from publication), even though they were free to eat as much as they wanted.

When looking at the specific effect of protein or GI on weight maintenance, it was found that subjects in the high protein groups were more able to maintain their previous weight loss during the 26 week study, gaining an average of 0.93kg less than those in the low protein groups. Similarly, those on the low GI diets gained 0.95kg less than those on the high GI diets. But it was the combination of high protein, low GI that tended to enable them to maintain their weight loss most effectively.

Another interesting point to note was that the results were found with only moderate differences in the protein and GI levels. While the researchers had intended for there to be a 12% difference in contribution of protein to total energy intake between the high and low protein diets, in practice it was just 5.4%. Similarly the actual difference of five glycemic index units between the
Conclusions

The Diogenes study shows that even a modest increase in protein and reduction in GI can minimise weight regain for up to 6 months after a period of weight loss, and may even lead to further weight loss. This type of dietary modification also proved the most acceptable to the participants, increasing their chances of success.

Follow-up studies on the long term effects of a high protein, low GI diet on weight maintenance are required, and 12 and 24 month follow-up results from the Diogenes study group will provide even more insights into weight maintenance.

Diogenes in practice

The key take-outs from this study are that a low GI, high protein diet can be easily adhered to, it is satisfying and even small changes can have a significant impact on weight loss maintenance.

The extensive testing of foods widely available in Australian supermarkets, has clearly demonstrated that the GI of a food cannot be ‘guestimated’ from appearance, ingredients or nutrient composition. While the science behind the GI can be quite complex, putting it into practice is relatively simple.

Small differences can be achieved by swapping a high GI carbohydrate food for low GI alternatives at each meal, for example choosing the right cereal at breakfast, a low GI bread at lunch and swapping pasta for rice at dinner. The protein component can be taken care of by ensuring a lean protein source is incorporated into every meal.

The University of Sydney’s extensive database of Australian foods classified according to their GI is available at www.glycemicindex.com.

The impact of high GI foods can also be reduced by combining them with low GI foods in a meal, such as rice with beans or lentils, rather than demonising high GI foods altogether.

References


...even a modest increase in protein and reduction in GI can minimise weight regain for up to 6 months after a period of weight loss, and may even lead to further weight loss. 
Suggest your clients start the day with a high protein, low GI breakfast with Special K® Original.

Help your clients manage their weight by recommending they choose a low GI, high protein diet. The world’s largest diet study - Diogenes1 - has shown that a diet that’s both low GI and high in protein is an effective way to help with weight management and help prevent weight regain.

What’s more, with a lower drop out rate, the low GI, high protein diet appeared to be the easiest to stick with, which is also key for your clients managing their weight.

Choosing foods, like Special K® Original, that are high in protein and low GI can help your clients achieve a high protein, low GI diet.

Special K® Original...

- has a GI value of 53²
- is one of the highest protein cereals available
- provides 5.9g of protein per 30g serve, and that’s before you add the milk
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