HIGH PROTEIN DIETS

This information is brought to you by many of the Australian nutrition professionals who regularly contribute to the Nutritionists Network ('Nut-Net'), a nutrition email discussion group.

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The most popular high protein diets are 'Atkins Diet', the 'Zone Diet', and 'Sugar Busters!'. Another eating plan that has been given some exposure on Australian TV is the 'Slim Forever' diet. The inventors of these diets make different claims about their effects on health, ranging from weight loss to massive reduction in disease risk and vastly increased life expectancy. The concept that it may be healthier to eat more high-protein foods such as meat, fish and eggs—at the expense of fruits, vegetables, potatoes, pasta and rice—has a high level of appeal to many people. But just how strong is the nutritional and medical evidence that these diets are safe and healthy in the long term?

A common feature of these diets is that they are likely to lead to some weight loss in the very short term (the first week or so). This is because, on a low-carbohydrate diet (and all the diets considered here are low in carbohydrate), the body is forced to use some of its glycogen (the form in which carbohydrate is stored in the liver and muscles) to maintain a normal blood sugar level. Some water that was stored with the glycogen is also released and excreted, adding to short-term 'weight' loss (but note that this is not 'fat' loss).

**Slim Forever (Dr Robert Harris)**

Dr Harris believes that we should be eating an amount of protein equal to about 0.75% of our body weight each day. This is approximately six to eight times the amount of protein that we currently consume. The major problem with this idea is that increasing protein intake leads to greater production of nitrogen waste (particularly urea), increasing the load on the kidneys.

Additionally, high protein intake leads to her levels of uric acid in the blood which can increase the risk of gout. High protein intake also has the potential to exacerbate 'osteoporosis' (chalkiness of the bones) through interference with calcium metabolism. The quantity of protein that Dr Harris recommends is a potentially dangerous level, and the Slim Forever diet can therefore not be considered appropriate or health promoting.

**The Atkins Diet (Dr Robert Atkins)**

The Atkins diet is high in protein and fat, and low in carbohydrate foods such as potatoes, fruit, bread, rice, pasta and other cereal products. Dr Atkins believed that because low carbohydrate intake leads to 'ketosis' (the production of ketone bodies...
that replace glucose in the blood when carbohydrate intake is low), restricting carbohydrate intake will cause appetite to decrease, leading to lower food intake and loss of body fat. Because ketones are derived from the body's fat stores, ketone production is claimed to contribute even further to body fat loss.

The recommended fat intake in the Atkins diet is very high—more than half the total kilojoule intake, and Dr Atkins claims that you can "eat all of the meat, cheese, eggs, fats (like butter and oils)". Most of these foods are high in saturated fat. Protein intake on the Dr Atkins Diet plan is also very high. However, the main concern regarding the Atkins Diet is the very low recommendation for carbohydrate foods.

Undoubtedly, strictly following the Dr Atkins Diet plan would result in ketosis, which would reduce food intake. In fact, several recent studies have indicated that, at least in the short term, and in the small number of subjects studied, the Atkins Diet appears to be fairly effective at reducing weight. From these same studies it also appears to be reasonably safe in the short term, at least in terms of effects on risk factors for heart disease.

**The Zone Diet (Dr Barry Sears)**

The Zone Diet is probably relatively harmless in the short term, but it doesn't have much to commend it, either. It may be effective in encouraging weight loss, at least partly because it is low in kilojoules. Its safety has not been demonstrated in the long term, so it is not recommended as the lifelong diet. Although it is also not inherently dangerous in the short term, the Zone diet places excessive emphasis on reducing carbohydrate intake, and is not recommended for long-term use.

**Sugar Busters! (Dr Samuel Andrews, Dr Morrison Bethea, Dr Luis Balart and Leighton Steward)**

As applies with all low carbohydrate diets, the Sugar Busters! program may assist in weight loss (partly through the effects of ketosis on appetite) but it is deficient in carbohydrate foods and dietary fibre. It is not recommended as a long term eating plan.

**The Total Wellbeing Diet (CSIRO)**

This higher-protein, low-fat diet does show promise as a possible alternative means for some people to safely and effectively lose weight. The Total Wellbeing Diet has been shown in a small study to be as effective as the current orthodox high-carbohydrate, low-fat diet at reducing weight in the short term. It also led to greater reduction of abdominal fat (above the stomach) in women (but not in men) and to greater reductions in both men and women in blood 'triglycerides', compounds associated with increased risk of heart disease.

Because it promotes the intake of nutritious carbohydrate foods and is low in fat, the Total Wellbeing Diet may be a suitable alternative for some people to the more usual high-carbohydrate, low-fat approach to safely and effectively losing weight.
Weight gain

Some people—such as body builders and weight lifters—adopt high protein diets based on the theory that muscle consists of protein, and that high protein intake will lead to greater muscularity. This argument is analogous to the belief that if a little vitamin A is good for you, a lot of vitamin A is even better. In fact, high doses of vitamin A are toxic (for example, excessive vitamin A intake has led to deaths in stranded Antarctic explorers who ate the livers of their husky dogs).

Similarly, protein intake above about 1.5-1.7 grams per kilogram of body weight is not only pointless, but potentially harmful.

Carbohydrates are important!

Carbohydrate is the most direct and preferred source of the glucose that not only powers our muscles, but provides fuel for the brain. This means that high-protein/low carbohydrate diets have the potential to interfere with efficiency of both mental and physical work. Carbohydrate foods such as grain foods, fruits and vegetables are the major sources of glucose, fibre, and many vitamins and minerals in the diet.

None of the high-protein diets considered here should be regarded as appropriate substitutes for the diet that Australians will obtain if they base their lifetime food intake on cereal foods (preferably whole grain), fruits and vegetables (including legumes), lean meat, fish and dairy products (preferably low- or reduced-fat), and avoid high intakes of foods rich in saturated fat, salt and added sugar.

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