



HOW MANY MEALS PER DAY?

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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I have heard that in order to maintain or even lose weight it is preferable to eat five or more smaller meals per day as opposed to the traditional approach of eating three square meals. Is this likely to be correct?

The answer to this question is unresolved, although there is circumstantial evidence that in at least one country, eating three meals per day may assist in maintaining appropriate weight. People who visit France for the first time are often surprised by the low number of French people who are overweight or obese, whilst people who visit the United States may be startled by the huge number of Americans who are obese. It has been suggested that specific eating patterns may have helped delay the onset of the obesity epidemic in France.

Unlike Americans (and Australians) who tend to eat small quantities of food throughout the day ('grazing') the French generally eat three discrete meals with little or no snacking. Typically, there will be only one moderately large meal, usually lunch, while breakfast is likely to be small and dinner only moderate. Wine accompanies dinner almost as a matter of course, and may be taken at lunch time as well. Little, if any food is eaten between meals. In the US (and Australia) by way of contrast, snacking on high-fat foods is common. Our shops stock a huge range of snacks that are not health-promoting if eaten in large quantities and can contribute to obesity—biscuits, cakes, donuts, chips and so on.

However, the pattern of eating in France is gradually changing—snacks are creeping in, especially among children, and the obesity level is starting to rise.

Snacking is additionally disadvantaged because it can lead to tooth decay. This is due to the fact that there is no between-meal period for teeth to undergo recovery. (It is largely while teeth are exposed to food that bacteria in plaque can produce the acid that attacks enamel, resulting in cavities). This problem can also result from sucking sweetened tablets (e.g. Vitamin C tablets), hard confectionery and even cough lollies.

However, with respect to obesity, it is still true that to put on weight your energy intake must exceed your energy expenditure; it is overall food intake that matters in the end, not whether you eat three meals or graze. It is possible that healthy snacking (on low-fat, high-carbohydrate, high-fibre foods) helps to stave off 'hunger

pangs' and therefore moderates food intake at meal times. Our shops provide the means to snack on health-promoting low-fat Australian produce (much of which is multiculturally inspired). Grazing can be a healthy way to live and to maintain or lose weight, but it depends on what and how much is eaten as snacks.

Certainly, people who are very physically active would be well-advised to make good use of high-carbohydrate between-meal snacks to ensure that a supply of carbohydrate is continually being made available to the working muscles. Many bodybuilders also like to eat a small meal shortly before going to bed because they believe that they lose muscle overnight in response to a drop in blood glucose level if they do not eat before going to sleep.

Another point to consider is that the incidence of diabetes is increasing in Australia at a near epidemic rate. For people with diabetes, a snacking pattern of eating may assist with control of blood sugar level. It has also been suggested that small, frequent meals could be protective against developing diabetes by reducing the periodic 'surges' in insulin that follow consumption of large meals. However, there is little evidence in support of these ideas, and one study actually suggested that grazing may even increase the risk of diabetes.

Many people appear to be strongly resistant to changing their eating habits—we like to do what we already do. If you are a grazer (or 'nibbler'), it may be preferable to simply reduce the intake of high-fat snacks (if excessive) and to nibble instead on fruit, low-fat health bars, sports bars and other low-fat foods that provide essential nutrients, rather than attempt to change a lifelong habit.

Another aspect of food habit is relevant here. Although they may be passionate about the quality of their food and wine, the French seem to have a far less obsessive view of eating than we do. It may be that a more relaxed attitude to eating helps to reduce fixation on food and leads to better control of food intake. If we as a nation adopted this approach to eating (which should be easier because it is a change of attitude only, not of behaviour) it is possible that the incidences of both obesity and eating disorders would be reduced.

So far, this answer has been directed towards adults. The above arguments do not all apply to children (although the dental situation is the same for everyone). Because of their fast metabolic rate and rapid rate of growth, children should snack between meals. In addition to the high-carbohydrate snacks suggested above, high-calcium foods such as milk, yoghurt and cheese (preferably of the lower-fat varieties for school-aged children) are suitable.

In summary, it is simply not known if grazing or eating only three meals a day is preferable for weight control and health of adults in general. It is clear that children and very active adults need to snack, and that many Australians would be well-advised to at least replace their current high-fat grazing with the occasional low-fat snack. It is also clear that sipping sweet and/or acidic drinks and sucking sweet tablets or confectionery is harmful to teeth. A period of at least two hours between drinks/snacks is recommended for dental health. Australians might also benefit from looking for the best quality, fresh ingredients that are available in season for home-cooked meals, eating fewer high-fat takeaways, using physical activity to help balance energy intake with energy expenditure, and enjoying our food more (rather than continually feel 'guilty' about eating).

Disclaimer: This material is provided on the basis that it constitutes advice of a general nature only. It is not intended to replace the advice of a physician or a dietitian.