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Health guidelines call for daily dairy consumption

Standard government advice to aim for two to three servings a day of milk products, such as yogurt, is based on hard scientific evidence showing this amount provides a wealth of nutrients plus a range of health benefits.

Some 23 countries around the world have set daily targets for dairy intake of two to three servings a day as part of their national dietary guidelines.

The guidelines have been developed in response to the discovery that many people's diets fall short of certain food groups, including fruit, vegetables, and dairy products. As a result, adults and children commonly lack essential nutrients to protect against long term health problems.

'Diets low in dairy tends to be poor in calcium, potassium, vitamin D and many other nutrients,' said Dr Connie Weaver, Professor and Head of the Department of Nutrition Science at Purdue University, West Lafayette, Indiana, USA.

Bone disease, diabetes and stroke are all more likely to develop among people who haven't eaten sufficient dairy products than those who have, said Dr Weaver.

In the USA, where people are urged to consume three servings a day of milk products, the main reason for introducing the guidelines was concern over bone health.

'You need to build bone before the peak in late adolescence and there's moderately strong evidence supporting the relationship of dairy in the diet and bone growth early in life,' explained Dr Weaver.

But most Americans – young and old - don't have enough dairy products, and the situation is similar in many other countries. 'The only group that gets close to the recommended intake is adolescent boys,' said Dr Weaver. 'Most concerning are adolescent girls who tend to build a lower peak bone mass than boys and this puts them more at risk of fracture.' They are only getting half of the recommended intakes in these critical years of growth – and this is reflected in the fact that 80% of hip fractures later in life are among women.

Rich package of nutrients

She added that the three servings a day of dairy products requirement also provide a rich package of nutrients, specifically 50% of a person's protein needs, one-third of the necessary riboflavin, 28% of their required potassium intake, and 25% of the magnesium they need.

'Potassium was another driver for setting the daily targets at three servings a day,' said Dr Weaver. 'A person wouldn't be able to get close to the daily recommended intake of potassium without drinking milk or a dairy equivalent.

'It's a fact that if you consume around three servings a day of dairy, you are much more likely to meet the nutritional guidelines for calcium and potassium. Dairy is simply the best and most economical source of these nutrients.'

These nutrients also act as a marker for diet quality – diets low in dairy tend to be low in other nutrients as well, said Dr Weaver.

Milk, cheese, and yogurt all improve diet quality

The different types of dairy products – milk, yogurt, cheese – are equally good sources of calcium and other nutrients when it comes to absorption from the gut.

The benefits of yogurt were studied as part of the landmark Framingham Heart Study which found that people who ate yogurt showed a significantly better diet quality than those who didn't.

Among yogurt-consumers, there were far fewer people who were below the estimated average requirement for nutrients compared with non-consumers.

Supplements don't fill the gap

Dr Weaver said that supplements are not as beneficial as natural calcium-rich sources.

In particular, dairy as a source of calcium during growth results in bigger, denser, stronger bones than calcium supplements and protects against calcium deficiency later in life, said Dr Weaver.

She referred to a recent study carried out by her research group, in which baby rats fed calcium supplements did not thrive as well as those fed on milk.

'All the rats consumed the same amount of calcium, but from different sources. Those fed milk grew better, with bigger, wider, longer, and denser bones than those raised on calcium supplements.' The substantial benefit to the rats from milk over supplements during their growth also helped protect against calcium deficit later in life.

These benefits of milk products over supplements have been reflected by further studies in people.

Among children, it has been shown that those who avoid milk have a higher risk of breaking a bone than those who drink milk. Similarly in adults, lactose-intolerant milk-avoiders have a higher risk of bone fracture than those who drink milk, said Dr Weaver.

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