



# Nutritional Nirvana - A Pill For Every Ill?

Do we need supplements?

For most of us, a balanced and varied diet provides us with all the nutrients we need for good health. However, if you do choose to take a supplement, this fact sheet provides advice on how to use them safely and effectively.

Who should take supplements?

For some people there are occasions when higher doses of certain nutrients might be of benefit. These include:

- ❑ A folic acid supplement of 400 micrograms (mcg) daily taken before and until week 12 of pregnancy to prevent neural tube defects (spina bifida type disorders)
- ❑ Calcium supplements (together with at least 10mcg of Vitamin D daily) for people at risk of osteoporosis
- ❑ Vitamin D for breastfeeding women and infants under two years old
- ❑ Vitamin B12 for strict vegans

Other areas of supplementation may be beneficial, for example niacin (nicotinic acid) and B group vitamins in heart disease; and B6 and/or magnesium in pre-menstrual tension. Research is underway in these areas.

'Natural' vitamins

The descriptions 'natural' or 'food state' vitamins are marketing rather than nutritional terms. They are not absorbed any better than the comparable 'synthetic' versions.

'Timed Release' Vitamins

'Timed release' or 'sustained release' vitamins are absorbed less efficiently than standard versions. Each nutrient is absorbed within a specific area of the gut, and so sustained release versions may 'miss' their 'doorway' across the gut wall into the body.

Supplements with added enzymes

Supplements with added enzymes are not better utilised. The enzymes are destroyed by stomach acid and so have no effect.



Are supplements safe?

There are adverse effects associated with taking mega doses of some supplements, for example:

- ❑ Excess intakes of vitamin A can cause liver and bone damage, hair loss, double vision, vomiting and headaches. It can also lead to in teratogenicity (limb defects) of the foetus in pregnancy. Women who are, or who may become, pregnant are advised to take only vitamin A supplements within a pregnancy-formulated supplement.
- ❑ Excess intakes of vitamin B6 can cause neurological symptoms; these symptoms are reversed when the supplements are halted.
- ❑ Excess intakes of folic acid can mask a deficiency of vitamin B12 and so can be associated with neurological damage. Extensive deficiency of vitamin B12 can cause permanent neurological deficit.

Other concerns about supplements

High dose supplements (those providing more than 200-300% of the EC Recommended Daily Allowance) are not natural extensions of the diet. Nor do they have additional health benefits - once your body is 'saturated' with a nutrient, excess is lost - often within an hour or so of intake.

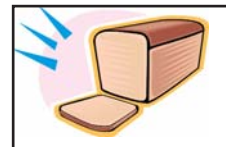
Although diets rich in antioxidant nutrients such as selenium, beta carotene and vitamins C and E have been shown to reduce risk of cancer, research into high-dose antioxidant supplements consistently shows either no benefit or an adverse effect. For example, an increase in lung cancer has been found in those taking beta-carotene supplements. High-dose antioxidant supplements are not recommended, especially in smokers.

High doses of some nutrients may inhibit the absorption of other nutrients, for example high intakes of calcium can inhibit iron absorption and excess zinc intakes can reduce copper absorption. This is another reason why high doses of single nutrients are not desirable.

New Regulations for Supplements

The Food Supplements (England) Regulations 2003 and identical regulations in Scotland, Wales and Northern Ireland were introduced on 1 August 2005. Dietitians are keen to support legislative

clarity in the control of food supplements, and hope that the new regulations and guidance will contribute to the protection of consumer health.



In practice, there are not likely to be any major changes in the near future to the vitamin and mineral forms available for product formulation. Future planned discussions on the legislative controls of dosage levels may have a more considerable impact on the formulation of products freely available, and dietitians support a full debate of all the legislative options that support the protection of consumer health.



### Conclusion

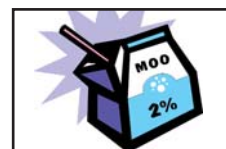
Nutrient imbalances and toxicities are much less likely to occur when we get our nutrients from eating real food. For this reason the British Dietetic Association recommends a balanced diet including the following foods:



- Bread, potatoes and other cereals
- Fruits and vegetables
- Lean meat, fish and alternatives such as pulses and nuts
- Dairy products, preferably low fat
- Healthy fats such as MUFAs and omega-3s.



For those who wish to take a supplement as an “insurance policy” to ensure they are getting all the nutrients they need, choose a general multi-vitamin/mineral supplement that provides at least 15 nutrients at levels at or below 150% EC Recommended Daily Amount.



You should avoid taking several single dose supplements alongside a multi-vitamin/mineral complex as you may be at risk of excessive intakes.

*By Catherine Collins RD*