



# Too few vitamins and too little fibre

The body needs a range of materials to remain healthy. However, if some vital ingredient is missing, poor health and even death can result.

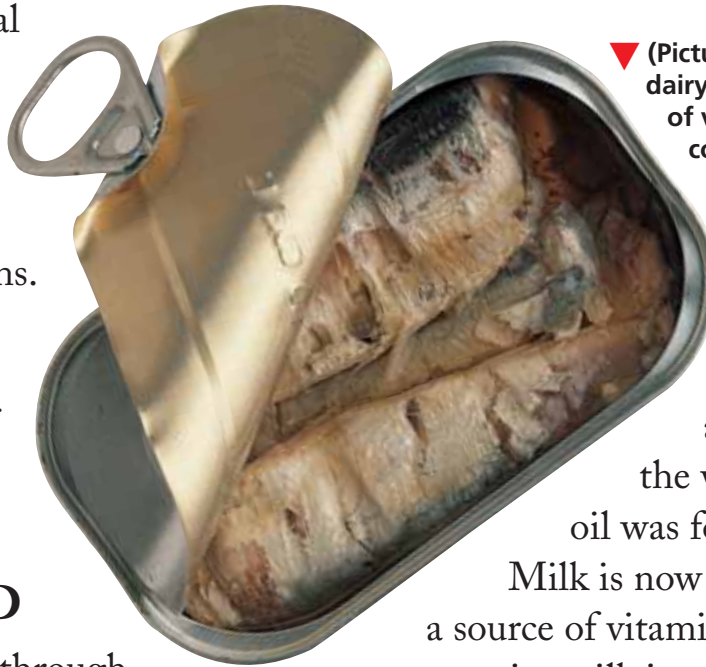
Some of the most vital substances for healthy living are needed in only tiny amounts. These substances are vitamins. Here are just two examples of what happens when one of these vitamins is in short supply.

## Lack of vitamin D

Vitamin D is carried through the blood and helps control the level of calcium in bones.

When vitamin D is in short supply, there is nothing to instruct the body to keep sending calcium to the bones. As a result, bones become soft. Leg bones, for example, do not harden properly and sometimes bend under the weight of the body, giving bow legs. This disease is called rickets.

The body can make vitamin D from sunlight, but fish oils can also supply vitamin D (Picture 1). As a result, fish oils were prescribed as early as the 18th century. However, it was only



▼ (Picture 1) Fish oils, milk and other dairy products are a good source of vitamin D. Other foods that contain lots of vitamin D are liver, eggs and cereals.

after experiments on animals in 1918 that the vital ingredient in fish oil was found to be vitamin D.

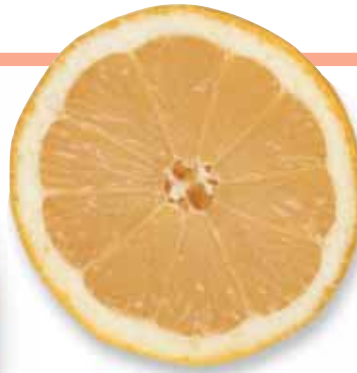
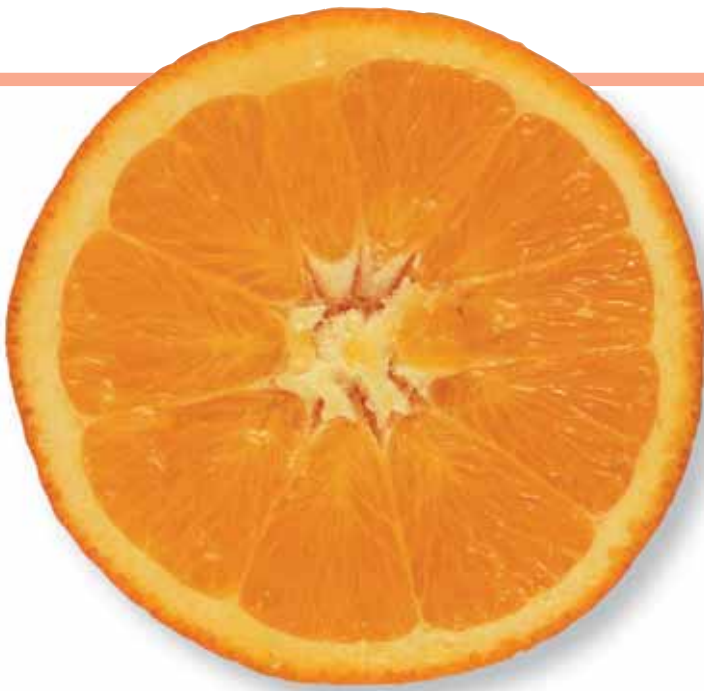
Milk is now also known to be a source of vitamin D, and in many countries milk is enriched with extra vitamin D by law.

## Lack of vitamin C

People who have a lack of vitamin C get a disease called scurvy in which the body slowly falls apart. The first signs are bleeding gums and loose teeth, but in severe cases people die.

The reason for this is that vitamin C (Picture 2) is vital in making sure the tissues that hold the body together remain healthy.

The relationship between scurvy and vitamin C was an early medical success. In 1753, Scottish naval surgeon James



◀▶ (Picture 2) Vitamin C is found in fruits and vegetables, but particularly in limes, oranges, lemons and the other citrus fruits. Other foods that contain a lot of vitamin C include redcurrants, strawberries, lettuce, spinach, potatoes, green peppers and citrus drinks.

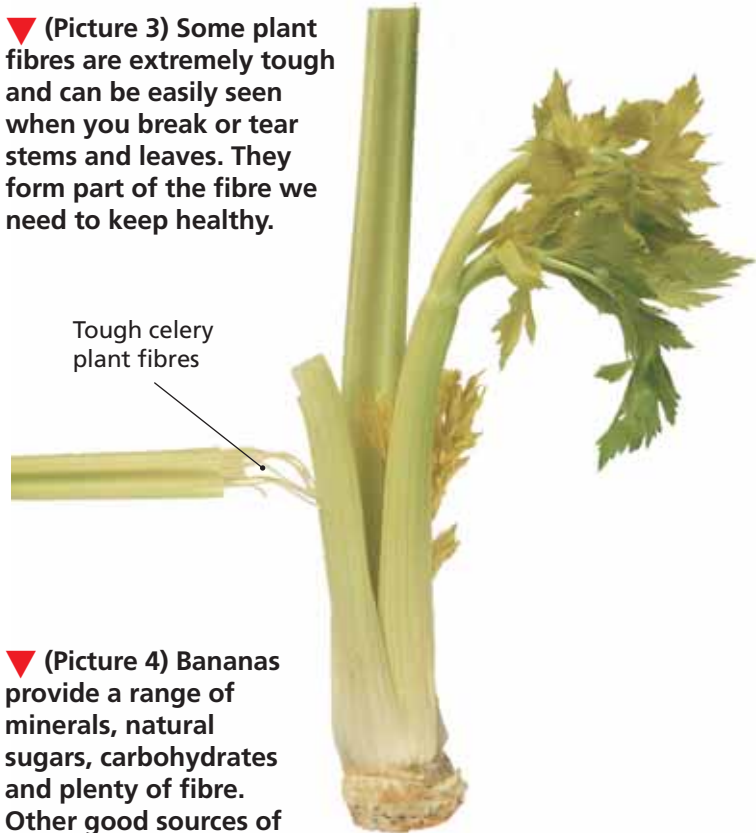
Lind showed that scurvy could be cured and prevented by eating fresh oranges, lemons or limes. Eating citrus fruit became compulsory on all British ships. When other sailors saw the British eating limes they gave them the nickname of limeys.

## Fibre

Fibre, or roughage, is the part of a plant that we cannot digest (Pictures 3 and 4). It keeps the other food we haven't digested bulky and moist so that it can be easily carried through our gut. This flushes out poisonous substances and reduces the chance of diseases developing in the lower part of our digestive system.

▼ (Picture 3) Some plant fibres are extremely tough and can be easily seen when you break or tear stems and leaves. They form part of the fibre we need to keep healthy.

Tough celery plant fibres



▼ (Picture 4) Bananas provide a range of minerals, natural sugars, carbohydrates and plenty of fibre. Other good sources of fibre include bran, dried apricots and prunes, peas, beans and bread.



### Summary

- Vitamins are needed for helping the body work well.
- Fibre is needed to carry waste materials through our bodies.
- We can be healthy only if we have enough vitamins and fibre in our diets.