



OPTIFORD
Vitamin D fortification

Every 30 seconds someone in the EU suffers a fracture as a result of osteoporosis

Vitamin D is essential for proper bone mineralisation.

OPTIFORD – Optimal Strategy for Vitamin D Fortification – is a European research project involving five countries. The aim is to determine if fortification of foods with vitamin D is a feasible strategy in the prevention of osteoporosis.



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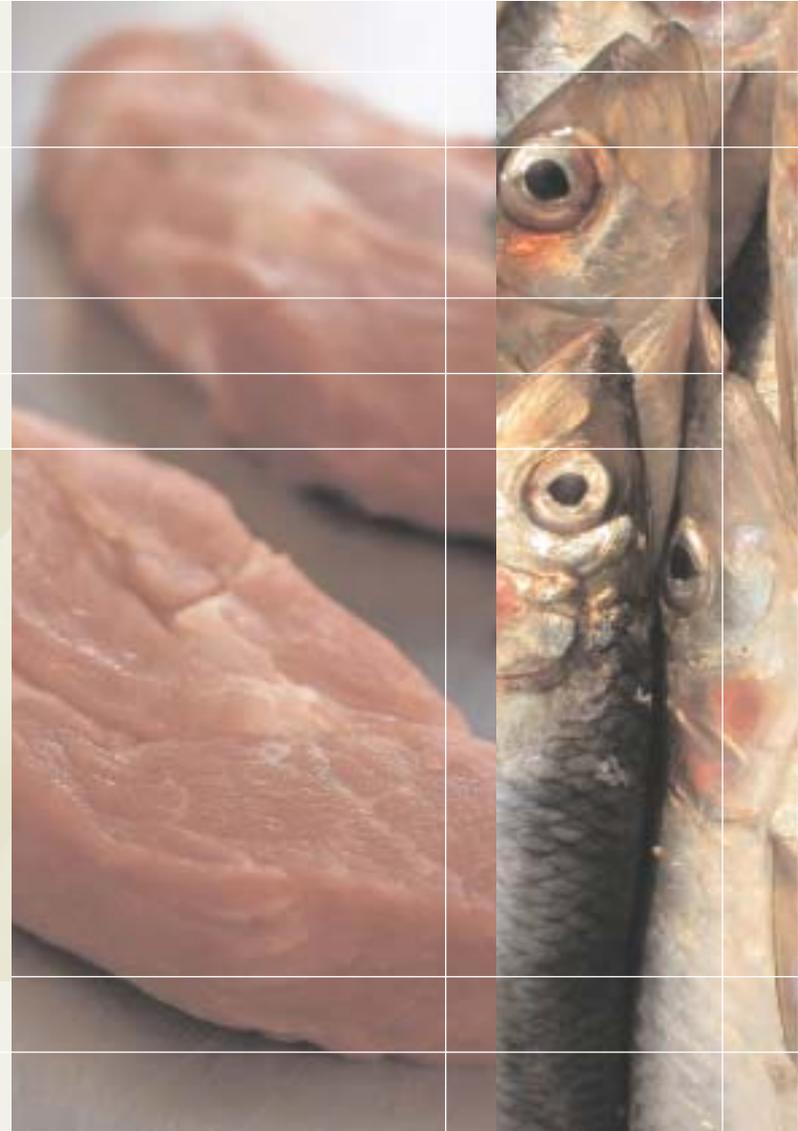
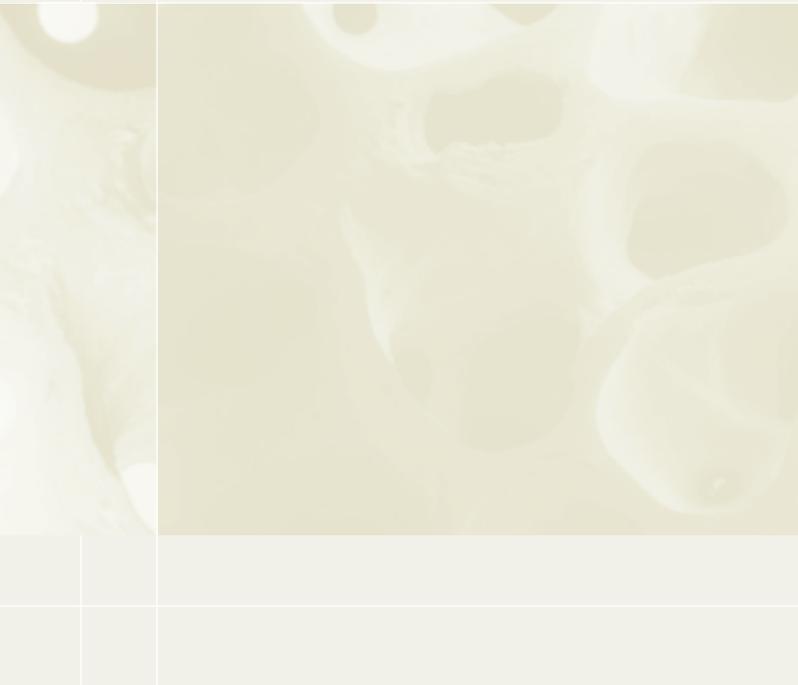




Osteoporosis and Vitamin D

Health professionals across Europe observe more and more cases of osteoporosis. Increasing the amount of vitamin D in food could be one way of tackling this problem.

OPTIFORD is a European research project that over a period of three years will, among other things, examine new ways to fortify foods with vitamin D.



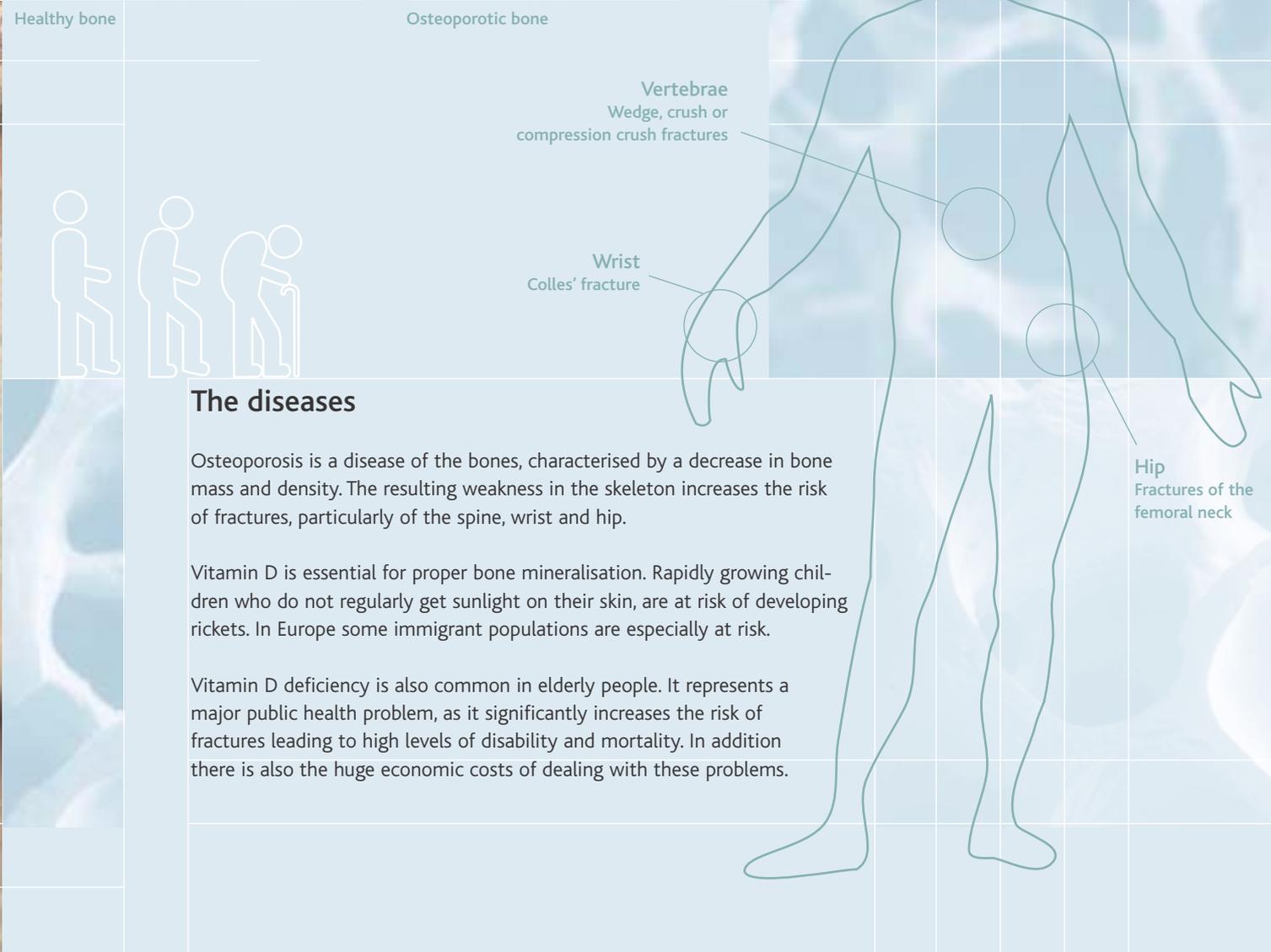


Healthy bone



Osteoporotic bone

Courtesy of MSD



The diseases

Osteoporosis is a disease of the bones, characterised by a decrease in bone mass and density. The resulting weakness in the skeleton increases the risk of fractures, particularly of the spine, wrist and hip.

Vitamin D is essential for proper bone mineralisation. Rapidly growing children who do not regularly get sunlight on their skin, are at risk of developing rickets. In Europe some immigrant populations are especially at risk.

Vitamin D deficiency is also common in elderly people. It represents a major public health problem, as it significantly increases the risk of fractures leading to high levels of disability and mortality. In addition there is also the huge economic costs of dealing with these problems.



Sunlight and food

There are two sources of vitamin D: sunlight and food. For most people the main source of vitamin D comes through exposure to sunlight. Vitamin D is produced in the skin when it is exposed to UV radiation. During the winter period most people in Europe rely on the stores built up in the body during the previous summer and dietary intake.

Diet is a secondary source of vitamin D, as only a few foods, including fish, meat, eggs and in many countries fortified milk and margarine, contribute with small amounts of vitamin D. In general, dietary intake of vitamin D is normally well below the recommended level.





Osteoporosis costs

"Osteoporosis patients currently occupy more than 500,000 hospital bed nights per year in the European Community. The disease affects one in three women in Europe and one in eight men. Osteoporosis costs national treasuries over € 3,500 million annually in hospital healthcare alone."

Note: Osteoporosis in the European Community: A Call to Action

The project

The main purpose of OPTIFORD is to determine whether fortification of food with vitamin D is a feasible strategy to improve the vitamin D status of the European population.

The project will provide new knowledge, scientific information, data and methodologies to optimise fortification strategies by:

- Determining the lowest effective dose of vitamin D that beneficially affects calcium metabolism.
- Assessing the impact of increased vitamin D intake on bone mass in adolescent girls, elderly people and certain immigrant groups.
- Evaluating the relative impact of sun exposure and dietary intake on seasonal variation of vitamin D status across Europe.
- Developing a new low-fat food fortified with vitamin D.
- Establishing a European-wide recommended level of fortification with or supplement of vitamin D.



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