

South Australian Department of Health Working Party on Vitamin D, Falls and Hip Fractures

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Further documentation

Further documentation is available on
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Government
of South Australia
Department of Health

Calcium Vitamin D Osteoporosis & Fractures



Normal



Osteoporotic

What is Osteoporosis?

Bone is rather like Swiss cheese, but stronger. In other words, it is a solid material with holes in it. As we get older, the holes get bigger and so our bones get weaker and fracture more easily. That is Osteoporosis.

The role of Calcium

Calcium is an essential nutrient not only for bones and teeth but also for most of the chemical processes that go on in the body. The skeleton is the storehouse for calcium and when the body needs more calcium, it robs the bones. The need for calcium rises at the menopause; if it is not provided in the diet or not absorbed from the stomach, it is taken from the skeleton. Sooner or later this process leads to Osteoporosis. Of course there are other rarer causes of Osteoporosis but this is probably the most common form of the disease, particularly in postmenopausal women. However, as people age an additional problem arises, namely vitamin D deficiency.

Why do older people lack vitamin D?

Vitamin D is made in the skin under the influence of sunlight. As we get older, our skin gets thinner and less able to make vitamin D.

Also, older people get less sun exposure because they go out less, and even when outside they tend to avoid the sun for fear of skin cancer. The fall in vitamin D levels weakens the muscles (and so increases the risk of falling) and also weakens the bones. People in aged care homes are particularly liable to vitamin D deficiency because the most useful part of the sun's rays do not penetrate glass.

What are the consequences?

The consequence of Osteoporosis is fracture. After the menopause, the commonest fracture is at the wrist from falling on the outstretched arm but any bone can be involved. The most serious is the hip fracture which occurs late in life in people who are deficient in vitamin D as well as calcium. There are 2,000 of these cases every year in South Australia. They are particularly common in aged-care homes and very disabling.

Can anything be done?

Yes. Calcium supplementation is always useful but hip fracture prevention needs vitamin D as well. Vitamin D (1000 units daily) with calcium (1200 mg daily) given to women in aged care homes has been shown to halve the hip fracture rate within two years. This information comes from a large study in France which we are now applying in South Australia.

The plan

The South Australian Department of Health recommends that everyone in residential care should receive 1,000 units of vitamin D with supplementary calcium every day. We encourage doctors to prescribe this and we expect your doctor will recommend it to you or your relative in care. Two tablets of "Ostelin Vitamin D and Calcium" costing about \$15.00 a month will provide 1,000 units of vitamin D and 1200 mg of calcium. An alternative is to take two tablets of "Citracal +D" which delivers the same amount of vitamin D with less calcium (630 mg) but the calcium may be better absorbed. This second option is a little cheaper (about \$12 a month) but has not been proven to prevent hip fractures.

If you are living in the community and are over 65 years old, we advise you to ask your doctor to measure the level of your vitamin D in your blood and follow his/her advice if it is low.

We hope you will understand the importance of this initiative and that there will soon be fewer hip fractures in South Australia. We also hope that this programme will benefit you or your family member and improve your quality of life.