

# OSTEOPOROSIS

## Fact sheet

### WHAT IS OSTEOPOROSIS?

The word 'osteoporosis' actually means porous bones. It is a disease characterised by a thinning and weakening of the bones. Osteoporosis affects many more women than men and is a particularly distressing problem for older people. This condition causes the bones to become fragile and be easily fractured. It can lead to back pain, humped shoulders, difficulty in walking and a shrinking in height. It is estimated that one in four women will suffer from osteoporosis after the age of sixty, and one in five women will be hospitalised for a hip fracture at some stage of life. Most people know that children need plenty of calcium to build strong bones and teeth. However, few people realise that calcium is essential for everybody - throughout life - to maintain strong bones.

### WHAT CAUSES OSTEOPOROSIS?

Osteoporosis is an irreversible, but often, preventable condition. It is caused by a loss of calcium from the bones. To understand how this happens we need to look at the role and delicate balance of calcium in our bodies:

- ◆ 99% of your body's calcium is stored in bones and teeth, which are your storehouses for calcium. To maintain these 'storehouses' you need to eat calcium rich foods every day.
- ◆ 1% of calcium is dispersed in your body fluids, where it plays a crucial role in the clotting of blood and the functioning of nerves and muscles.
- ◆ The calcium concentration of the body fluids must be kept constant. When the calcium concentration in the body fluids falls too low and not enough is gained from food, it is withdrawn out of the bones. A small bone loss of calcium over many years can lead to osteoporosis.

The risk to women of developing osteoporosis increases once they reach menopause. This is because they lose the protective effect of the hormone oestrogen. The drop in the level of oestrogen results in a greater rate of loss of calcium from the bones.

### HOW CAN YOU REDUCE YOUR RISK?

The more dense your bones are to begin with, the less your chances are of developing osteoporosis. It is important, especially for women, to build up sufficient calcium in their bones by mid-life. You can minimise the likelihood of osteoporosis by following these guidelines:

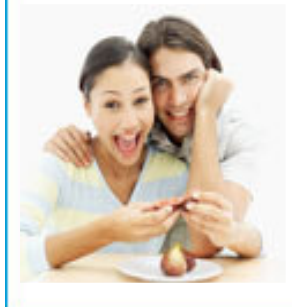
#### 1. Eat calcium-containing foods.

The Recommended Dietary Intake (RDI) of calcium for women and men has been set at 1000mg. Pregnant women and women who are breast-feeding need 1300mg. After menopause women also need 1300mg each day.

The richest sources of calcium are dairy foods such as milk, yoghurt and cheese. Calcium is also found in fortified breakfast cereals, fortified soy products (beverages, tofu and yoghurt), canned fish with bones, such as salmon and sardines, nuts, dried figs, dried apricots and dark green leafy vegetables.

#### 2. Get the maximum calcium possible from your food.

There are factors that can interfere with calcium absorption, so care should be taken in the consumption of these foods to ensure that your body gets the maximum calcium possible. These factors include: exceeding your recommended dietary intakes (RDI's) of protein, sodium and phosphorus; consumption of too much caffeine from tea and coffee and cola drinks; smoking; aluminium from antacids and exceeding recommended consumption levels of alcohol.



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# OSTEOPOROSIS (continued)

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The Australian National Health and Medical Research Council promote responsible drinking with guidelines for men and women. They recommend for men not to exceed 4 standard drinks per day and 28 per week and women, 2 standard drinks per day and 14 per week, with at least 2 alcohol free days per week. Also, oxalates (present in tea, chocolate, spinach, asparagus, and rhubarb) and phytates (found in bran and wholegrain cereals) reduce the absorption of calcium. However, these factors are not significant if the foods eaten contain enough calcium.

Vitamin D helps calcium absorption so we all need to get some sunshine everyday!

For information regarding specific Recommended Dietary Intakes visit the NHMRC web site: [www.health.gov.au/nhmrc/publicat/diet/n6-p1.htm](http://www.health.gov.au/nhmrc/publicat/diet/n6-p1.htm) and [www.health.gov.au/nhmrc/publicat/diet/n6-p2.htm](http://www.health.gov.au/nhmrc/publicat/diet/n6-p2.htm)

### 3. Do more weight bearing exercise.

Another way to protect against Osteoporosis is to exercise regularly. Just as using muscles strengthens them, our bones become denser and stronger in response to mechanical stress. This stress primarily comes from weight-bearing exercise (in which your legs support your body) and strength-building exercise (such as weight lifting). For example, if you walk frequently your leg bones will respond by growing stronger. If you play tennis often, your arm bones will respond by increasing their mass.

Make weight-bearing exercise a priority in your daily life. Try activities like walking, running, cycling, golf, basketball, cricket, netball, aerobics, and hockey. Even housework and mowing the lawn count.

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### SOURCES OF CALCIUM

Food	Calcium (mg)	Food	Calcium (mg)
Milk, reduced fat (200ml)	280	Almonds (30g)	70
Skim Milk (200ml)	240	Uncle Tobys Plus (Sports Plus) (45g)	200
Whole Milk (200ml)	230	Soya Beans, cooked (150g)	90
Yoghurt (200g)	300	Tofu, fortified (130g)	130
Canned Salmon, with bones (100g)	185	Uncle Tobys Bran Plus (40g)	225
Canned Sardines (50g)	150	Cheese (30g)	240
Uncle Tobys Plus (Lite Start) (45g)	200	Cottage Cheese (30g)	25
Dried figs (30g)	60	Dried Apricots (30g)	20

The best protection against osteoporosis is to build strong healthy bones from infancy through to your mid twenties, and then maintain them through adulthood by getting adequate calcium everyday.

You can do a lot now to prevent osteoporosis - for a stronger and healthier tomorrow.

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