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# Hip protectors and osteoporosis

## What is osteoporosis?

Osteoporosis literally means 'porous bones'. It occurs when the struts which make up the mesh-like structure within bones become thin causing bones to become fragile and break easily following a minor bump or fall. These broken bones are often referred to as fragility fractures. The terms 'fractures' and 'broken bones' mean the same thing. Although fractures can occur in different parts of the body, the wrists, hips and spine are most commonly affected. It is these broken bones or fractures which can lead to the pain associated with osteoporosis. Spinal fractures can also cause loss of height and curvature of the spine.



**Strong  
dense  
bone**



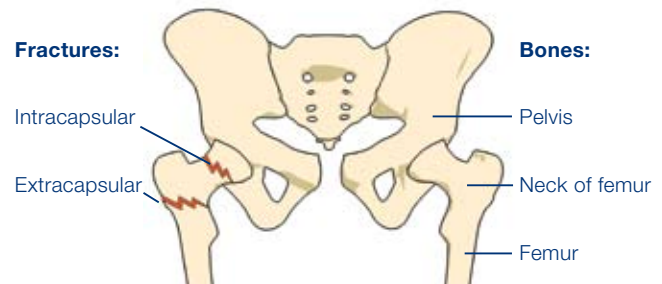
**Fragile  
osteoporotic  
bone**

This leaflet covers specific information on hip protectors. If you would like more general information on osteoporosis, please ask us for a copy of our publication *All About Osteoporosis*.

## What is a broken hip (hip fracture)?

A broken hip is a break at the top of the thigh bone (femur) where it joins the hip joint (pelvis). A number of factors can increase the risk of a broken hip (hip fracture), including falling on a hard surface, falling directly onto the hip and a person's age. Broken hips are much more common in older age when the risk of osteoporosis increases as part of the ageing process and slower reflexes mean people fall directly onto their hip. Women are at a greater risk of falling when they become older due to a loss in muscle size and strength, which leads to poor balance and co-ordination. When someone breaks their hip, they usually need an operation to mend it. This will either pin or screw the femur together or replace the top of the femur, known as a hip replacement. The course of action will depend on the site of the fracture.

### Where do hip fractures occur?



## What are hip protectors?

Hip protectors are either padded or plastic devices which are fitted into special underwear and sit over the hip joint. They have been used widely in the past to help prevent broken hips in older people who may break their hip by falling sideways onto the area known as the greater trochanter in the hip. The greater trochanter is a large bump which juts outward from the top of the femur (thigh bone) next to the neck of the femur. This is where most broken hips occur, particularly if the person has osteoporosis.



## How might hip protectors prevent hip fractures?

Padded hip protectors are designed to absorb the energy of a fall, while semi-rigid plastic protectors work by diverting the impact away from the greater trochanter in the hip.

The pads are mostly held in position by being incorporated into the underwear in a pocket which aims to keep the pad in place. It is important that the hip protector sits over the greater trochanter to offer the best chance of protecting you from a broken hip if you fall.

## Do hip protectors prevent broken hips?

On the basis of the early research, hip protectors were thought to be effective in reducing the number of broken hips. Consequently, hospitals and nursing homes started to use them widely.

In light of more recent studies, the latest evidence suggests that hip protectors do not reduce the rate of broken hips for people still living at home. We cannot be sure that all the people in the research were actually wearing the hip protectors when they broke their hip or whether the hip protectors were properly fitted. However, it may be that older people willing to wear them at all times may benefit.

It has been suggested that only those people at highest risk of hip fracture who live in nursing homes are likely to benefit. This is because staff, who will have received training about comfort and fitting, could encourage their use but more research will need to be done to confirm this.

## **Are there any problems connected to wearing hip protectors?**

The biggest issue with hip protectors has been comfort and fit. Many people who were given them in the past had not been measured or given information on how to ensure the pads sit in the correct position. Hip protectors need to be worn whenever the person is at risk of falling in order to be effective and, for some people, this would mean wearing them at night.

People who have continence problems, and especially an urgency to pass urine, may find that hip protectors are a hindrance to staying dry because they can be difficult to get off in a hurry. Hip protectors are fully washable, although more than one pair may be required while drying takes place. This will of course be more costly.

Studies looking at whether or not people continue to wear hip protectors suggest that more work needs to be done to improve comfort and fit and encourage their use in the long-term.

## **Which hip protector should I use?**

The majority of studies measuring the number of broken hips prevented by hip protectors have used hard shell hip protectors. There is less evidence for other types of hip protectors, although some studies examining their user-friendliness reported that soft padded versions were more comfortable and, therefore, more likely to be worn.

A hip protector that carries a CE Mark awarded by the Medicines and Healthcare Products Regulatory Agency (MHRA) demonstrates that the protector pants have undergone rigorous testing or clinical evaluation for safety. It does not prove it will prevent your hip from breaking.

## Useful contacts

### How else can you avoid breaking a hip?

Reducing the risk of falling may reduce the risk of broken hips for many people. Regular physical activity can help to improve mobility, balance and muscle strength, which all contribute to preventing falls. The National Osteoporosis Society has a range of information about exercise for bone health for people with varying levels of ability.

Many older people have low vitamin D levels and there is evidence to suggest that a supplement of this vitamin with calcium may reduce fracture rates in older, frailer people. There are also osteoporosis drug treatments available that reduce the risk of broken hips. Practical measures to reduce your risk of falling include wearing flat, well-fitting shoes, avoiding mats on polished floors and making sure your glasses are kept clean and you regularly see an optician.

Further advice on preventing falls can be obtained from your GP, practice nurse or health visitor.

### **National Institute for Health and Clinical Excellence (NICE)**

**Tel: 020 7067 5800**  
**[www.nice.org.uk](http://www.nice.org.uk)**

### **Royal Society for the Prevention of Accidents (RoSPA)**

Head Office  
Edgbaston Park  
353 Bristol Road  
Birmingham B5 7ST

**Tel: 0121 248 2000**  
**[www.rosipa.com](http://www.rosipa.com)**

### **RoSPA in Scotland**

**Tel: 0131 449 9379**

### **RoSPA in Wales**

**Tel: 02920 250600**

### **RoSPA in Northern Ireland**

**Tel: 02890 501160**

### **Age Concern England**

Astral House  
1268 London Road  
London SW16 4ER

**Tel: 0800 009966**  
**[www.ageconcern.org.uk](http://www.ageconcern.org.uk)**

### **Age Concern Scotland**

**Tel: 0845 125 9732**

**[www.ageconcernscotland.org.uk](http://www.ageconcernscotland.org.uk)**

### **Age Concern Cymru**

**Tel: 02920 431555**

**[www.accymru.org.uk](http://www.accymru.org.uk)**

### **Age Concern Northern Ireland**

**Tel: 02890 245729**

**[www.ageconcernni.org](http://www.ageconcernni.org)**

### **Help the Aged**

207/221 Pentonville Road,  
London N1 9UZ

**Tel: 020 7278 1114**

**[www.helptheaged.org.uk](http://www.helptheaged.org.uk)**

### **Help the Aged Wales**

**Tel: 02920 346 550**

### **Help the Aged Scotland**

**Tel: 0131 551 6331**

### **Help the Aged Northern Ireland**

**Tel: 02890 230666**

For hard shell hip protectors contact:

### **Robinson Healthcare**

**Tel: 01909 735000**

**[www.robinsoncare.com](http://www.robinsoncare.com)**

For padded hip protectors contact:

### **Win Health Ltd**

**Tel: 01835 864866**

**[www.winhealth.co.uk](http://www.winhealth.co.uk)**

Factors which can help to maintain healthy bones are a well-balanced diet with adequate calcium-rich foods; regular weight-bearing exercise; avoiding smoking and keeping alcohol consumption within the recommended limits.

## **Join the National Osteoporosis Society today**

Become a member and support the only UK-wide charity dedicated to improving the diagnosis, prevention and treatment of osteoporosis.

You can join today for just £15.

Either call us or visit our website:



**01761 473119**



**[www.nos.org.uk](http://www.nos.org.uk)**

## **Our publications are free of charge but we would welcome a donation**

You can support the work of the National Osteoporosis Society by making a single or regular donation:



**01761 473138**



**[www.nos.org.uk](http://www.nos.org.uk)**