

# Pilates Osteoporosis Notes

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## What is osteoporosis?

Osteoporosis literally means 'porous bones'. It occurs when the struts which make up the mesh-like structure within bones become thin. This causes them to become fragile so that they are more likely to break, usually after a minor bump or fall.

## Who does osteoporosis affect?

It affects around three million people in the UK. 1 in 2 women and 1 in 5 men over the age of 50 will break a bone as a result of osteoporosis. Most susceptible are those with:

- a family history of osteoporosis
- a low body mass index (BMI is a measure of weight in relation to height)
- certain medical conditions such as malabsorption problems
- long-term use of certain medications
- heavy drinking and smoking

## How do I know if I have osteoporosis?

Osteoporosis is most often diagnosed after the weakening of the bones has led to a fragility fracture, usually in the hip, wrist or spine. A bone density (DXA) scan can also be used. Scan results include a T-score which is a measure of how your bone density compares with the normal average for young, healthy adults. If it is:

- between 0 and -1 this is considered to be **normal**
- between -1 and -2.5 this is termed **osteopenia**
- below -2.5 this is classed as **osteoporosis**

You can work out if you're at risk of developing osteoporosis and breaking a bone in the next 10 years using an online Fracture Risk Assessment Tool (FRAX) at [www.shef.ac.uk/FRAX/tool.aspx](http://www.shef.ac.uk/FRAX/tool.aspx).

## What should I do if I have been diagnosed with osteopenia or osteoporosis?

If you have been diagnosed with or are at risk of developing osteoporosis, you can make these **lifestyle changes** to help keep your bones healthy:

- take regular exercise
- eat a well-balanced diet with foods rich in calcium and vitamin D
- take a daily 10mcg vitamin D supplement – in the summer months you can also boost your vitamin D from sunlight, by spending time outside
- avoid smoking
- keep alcohol consumption within the recommended limits

## What exercises may help?

Physical activity and exercise has an important role in the management of osteoporosis by promoting bone strength, reducing falls risk and managing symptoms. The benefits of physical activity and exercise outweigh the risks. Fractures are rarely caused by exercise.

### *Strong, Steady and Straight*

The Royal Osteoporosis revised their exercises guidelines in spring 2019 for those with low bone density along the principles of:

**Strong**      weight bearing/impact and muscle resistance exercises to promote bone strength

**Steady**      balance and muscle strength exercises to prevent falls

**Straight**      back muscle strength exercises to improve posture and relieve pain

Whilst the strong, steady and straight exercises are helpful for all those with osteoporosis, the priority for exercises within each category differs by individual.

## How can Pilates help?

Pilates offers exercises within each of the above categories:

- **Weight-bearing exercises** where your body supports your weight, e.g. four-point kneeling,
- **Resistance exercises** which use muscle strength, where the action of the tendons pulling on the bones boosts bone strength, e.g. using weights or resistance bands.
- **Falls prevention** exercises which challenge your balance, e.g. standing on one leg.
- **Posture exercises** which strengthen your back muscles, e.g. back bends.

In private sessions in the studio, you benefit from the use of the large equipment, which has springs to provide resistance and the exercises are tailored to your needs.

In mat classes, you must avoid some exercises to minimise the risk of fracture from repetitive movements using vulnerable areas of your body. Avoid those with unsupported flexion, lateral flexion or rotation of your spine (forward and side bends or twists). Some people should also avoid exercises with both legs lifted or those with hip adduction (where your leg crosses your body). Your teacher should offer you alternatives.

If you have been diagnosed with osteoporosis or osteopenia and have had a fracture, please get medical permission before starting Pilates.

## Where can I get more information?

For osteoporosis information and support contact the Royal Osteoporosis Society helpline 0808 800 0035 or visit their website [theros.org.uk](https://theros.org.uk).

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