



Zoe Birch is a Chartered Physiotherapist and founder of PhysioMotion, which operate four London clinics as well as providing physiotherapy at home. We are very grateful to Zoe for contributing to the magazine and in her latest article for **SEBRA NEWS W2**, she writes about osteoporosis.

**W**hen taking my patients' medical history osteoporosis is commonly on it and they are mostly treated with medication or supplements, but is there more to it than just treating it as a medical disease?

### WHAT IS OSTEOPOROSIS?

Your bones are made up in a matrix which makes it strong to all the stresses that you put it under. Osteoporosis changes the bone structure causing the bone density to decrease. This makes you more vulnerable to fractures either by falling directly onto the limb or stress related actions such as sneezing or coughing. Your bone density will not deteriorate suddenly or quickly and there are different stages that you will go through with osteoporosis. The stages are normal bone, osteopenic bone and osteoporotic bone and they can be measured using bone density scans. A Rheumatologist is normally the person that will diagnosis and manage the diagnosis for you in collaboration with your GP, Physiotherapist, and Dietician or Nutritionist.

Osteoporosis is when the bone matrix reduce in number and increase in size causing the bone to weaken.

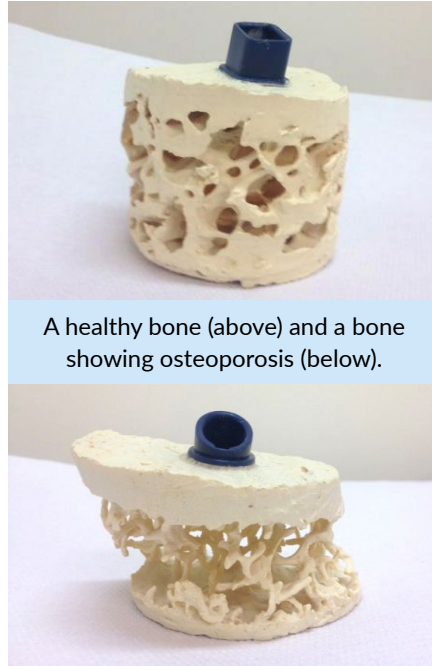
### WHAT CAN CAUSE OSTEOPOROSIS?

Bone health is maintained by the body constantly refreshing old bone with new bone by a process called bony remodelling which is completed every ten years by osteocyte cells.

Factors that can affect bony remodelling resulting in osteoporosis are:

- **Age** - As we get older the bodily processes slow down
- **Gender** - Females are more at risk due to statistically lower bone density
- **Diet** - Lack of Vitamin D and Calcium that are required in bony remodelling

- **Exercise** - More sedentary lifestyle or lack of exercise that is an high impact activity
- **Hormone levels** - Reduction in sex hormone (Oestrogen in females and Testosterone in males)
- **Medical conditions** - Cancer, Hyperthyroidism, Liver disease



A healthy bone (above) and a bone showing osteoporosis (below).

### WHAT CAN YOU DO TO REDUCE RISK OR REVERSE OSTEOPOROSIS?

It is wise to have certain tests performed to understand whether you have osteoporosis and also the degree of osteoporosis, especially if you have sustained a fracture with little to moderate force. These include bone density scans and blood tests that will be evaluated by a Rheumatologist or a doctor specialising in osteoporosis.

Bone health should be something that we should be concerned about from childhood, as it can affect us later in life.

Typically things that you can do to reduce the risk, reverse or slow down the process of osteoporosis are:

- **Ensure you have enough vitamin D and calcium in your diet**
- **Expose yourself to adequate unprotected sunlight without increasing risk of skin cancer**
- **Weight bearing and high impact exercises for the whole body such as, walking, running, jumping, planks and press ups**

- **Discuss with treating consultant regarding treatments to help with bone health during cancer, liver and hyperthyroidism treatment, and women in menopause**

### HOW CAN PHYSIOTHERAPY HELP OSTEOPOROSIS?

At PhysioMotion, we work closely with a rheumatologist that specialises in osteoporosis and we are often asked to see their patients to prescribe an exercise programme to help improve bone density and maintain improvements as they are at early stages of osteoporotic changes.

We are also referred people that have had osteoporotic related fractures and we treat them to help with fracture healing and their returning to normal activity levels, but then we will provide them with a progressive loading programme to help gradually expose their bones to stress without causing further fractures.

This will be alongside the treatment provided by the Rheumatologists. We might also advise the patient to see a Dietician and Nutritionist, and female patients to speak to a Gynaecologist.

Therefore with a condition like osteoporosis, preventative action is a better option than treatment but it is never too late to start making changes to your lifestyle to make positive changes to your bone health.

Exercise and sunshine!



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