



Pilates ABC

WHAT IS OSTEOPOROSIS?

Osteoporosis is the “gradual and silent loss of bone...with a consequential increase in bone fragility and susceptibility to fracture”. NOF 2005. It is often called the silent disease, many people not realising they have the condition until they suffer a fracture.

Imagine an “old worn wicker chair with its fibres brittle and full of holes” and this will give you an idea of what has happened to Osteoporotic bones. Now compare healthy bones which are like a new wicker chair with its strong woven framework.

- An estimated 3 million people suffer from Osteoporosis in the UK.
- 1 in 3 women and 1 in 5 men over the age of 50 suffer from Osteoporosis in the UK (2003)
- Younger people also suffer from Osteoporosis

The likely fractures areas include the wrist, spine and hips.

HOW PILATES CAN HELP

Body Control Pilates ® qualified Bone Health instructors offer specialised exercises for those diagnosed with Osteoporosis, Osteopenia and for those with a family history of the disease, together with everyday living advice to help support the condition safely, including posture and

sleep guidance. Daily exercise routines are also offered. The instructors’ course is based on up-to-date research from leading authorities on the disease.

BONE BANK

Bone is alive and constantly changing. It is dependent on the presence of hormones, oestrogen (women) and testosterone (men) which promote the activity of bone building cells. Old worn out bone is broken down by osteoclast cells and replaced by osteoblasts.

- Children – osteoblasts work at their fastest, enabling the skeleton to increase in bone mass and strength.
- Adolescence up to 16 -18 – bones stop growing in length about this age. Bone mass continues to increase into the mid twenties.
- Mid 20s – early 30s – bone mass stabilises
- Late 30s on – bone loss begins as part of the natural ageing process
- Menopause and post-menopause
 - Bone loss is rapid in the first few years following the menopause (the ovaries stop producing oestrogen so the bone calcium levels decrease.



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BONE BANK cont....

- All women will lose bone mass following the menopause. "In first 5 – 7 years after the menopause women ...maylose up to 20% bone mass" (Chopra 2002).
- Bone loss slows after this
- 65 – 70 – both men and women lose bone at the same rate (NIA 2000)

It is important to encourage children and young adult to be active and to carry out weight-bearing activities to build up the "bone bank" or bone density for now and for the future.

BONE DENSITY TESTS

The most common test is the Dual X-Ray Absorptiometry DXA, a quick, precise, pain free scan using low radiation to measure bone density using two scores: the T score (comparing bone mass density or BMD to that of the optimal BMD of a 30 year old) and the Z score (relates your results to others in your age group)

Osteoporosis has a BMD of -2.5 or more

Osteopenia has a BMD of -1 to -2.5

Although X-ray results can show up bone loss the results have been found to be unreliable hence the use of the Dual X-Ray Absorptiometry DXA.

MAIN RISK FACTORS

- Menopause, especially before 45
- Women who have had a hysterectomy before 45
- Female athletes or dancers with loss of menstruation
- Eating disorders
- Low calcium intake
- Smoking
- High caffeine
- Sedentary lifestyle
- Genetics (Caucasian and Asian women have high incidence rates)
- Heavy drinking
- Low body weight/low body mass index
- Small thin frame and wrists
- Men with low testosterone levels
- Prolonged use of steroids for arthritis and asthma
- Use of other drugs eg dilantin, Phenobarbital, thyroid hormones



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MAIN RISK FACTORS cont...

- Other metabolic and gastrointestinal disorders eg Crohn's disease, Celiac disease or ulcerative colitis
- Depression
- Stress
- High protein diets such as the Atkins diet which cause body to excrete calcium

ORGANISATIONS:

UK National Osteoporosis Society
Helpline: 0845 4500230

www.nos.org.uk