Osteoporosis & Physical Activity

Osteoporosis is characterised by low bone density. People with osteoporosis are at greater risk of sustaining a major fracture because there is loss of bone material. The loss of bone density is actually a natural process but can be slowed down by regular weight bearing physical activities, such as walking or jogging. Bone remodels constantly throughout life and it is vital that new bone tissue, which is made as a response to weight bearing activity load, replaces that which is lost.

Reduced muscle strength, balance and coordination are risk factors for falls. Training these functions through physical activity will reduce falls and so decrease the chance of sustaining a major fracture. Hip fracture risk is seen to be reduced by up to 68% in people that are regularly active.1

Remember that by being active you are preventing and treating other conditions such as diabetes and cardiovascular disease.

Regular physical activity also gives you more energy, builds confidence and can help you to sleep more soundly at night. You can combine your activity time with family and friends or use it as an opportunity to reflect on things and listen to your favourite music.

Physical Activity Recommendations for currently inactive adults with osteoporosis

Aim to do the following three types of activity:

- **Aerobic activity** at relative moderate intensity for at least 150 minutes (2 hours and 30 minutes) a week – one way to approach this is to do 30 minutes on at least five days each week.

- **Muscle strengthening activity** on two or more days a week which work all major muscles groups (legs, hips, back, abdomen, chest, shoulder and arms)

- **Flexibility exercises** on a daily basis

Do not worry if you struggle to meet the recommendations, because by trying to become more active, you are still gaining some health benefits.
Aerobic activity

Aerobic activity, also known as endurance activity, is when large muscle movements, maintained over a period of time, make the heart and lungs work harder.

Activity Type? – Any type that you can maintain comfortably is ideal. Choose something that is enjoyable. Weight bearing exercises such as walking or stair climbing is recommended. A variety of exercises are better for people with osteoporosis as they create a variety of bone stresses which are good for bone strength. Yoga, Pilates, Tai Chi, bowels, and dancing are some activities that can help you improve balance to prevent you from falling.

How long (duration)? – One approach to meet the recommendations is to do at least 30 minutes per day. You can split your sessions to a minimum of 10 minutes to reach your total. If you have been inactive for a long time, start with short sessions and increase the time as your body allows and you feel more confident. Remember not to sit for hours. A regular break from sitting every hour is healthy.

How hard (intensity)? - Try to progress gradually over time to a relatively moderate-intensity activity. Doing moderate intensity activity means that you feel warm, mildly out of breath and mildly sweaty. The ‘talk test’ is a simple way to measure moderate intensity. Whilst you are working, you can still talk, but not sing, during the activity.

How often (frequency)? – if you aim to do 30 minutes per day then do this at least 5 times per week so that you can reach a total of 150 mins a week. Distribute sessions over the week and aim to have no more than 2 consecutive days without physical activity. When you start any new activity, make sure you give your body enough time to recover and adapt between sessions.

Muscle Strengthening and Flexibility

Activities that promote strengthening and flexibility are vital for a complete physical activity programme. Being stronger and more flexible makes it easier to carry out aerobic activities, such as brisk walking or swimming. Balance training in Tai Chi, yoga and pilates can also boost your confidence and reduce your risk of falls. Visit the ‘Strength and flexibility’ section at www.prescription4exercise.com for some simple video exercises that you can do at home.

Safety considerations

- If you have led a very sedentary lifestyle, begin by doing low intensity exercise of short duration, e.g. 10 minutes. Increase your level of activity gradually to avoid injury.
- Stop exercising if you feel dizzy, sick, unwell or very tired.
- See a doctor if you are having chest pain, black outs or breathlessness on mild exertion.
- If you have severe osteoporosis, support from a physiotherapist may help.
- If you have vertebral fractures or severe osteoporosis, choose an activity that does not focus on too much bone load e.g. weight training. Low impact aerobic activities, such as walking or swimming, and activities that help with balance, such as yoga, Pilates or tai chi, are preferred.
- Try to avoid unstable surfaces and use a balance support like a chair or wall to reduce the risk of falls.
- Do not use additional weights if you have difficulty moving a joint in its full range.

If you have any other long term health conditions ask your healthcare professional and/or visit www.prescription4exercise for additional useful safety considerations.

References

1. Start Active, Stay Active - a report on physical activity for health from the four home countries ' Chief Medical Officers. UK Department of Health, July 2011.

Further reading


Visit www.prescription4exercise to learn more about physical activity and how it can prevent and treat many long term conditions.