



Osteoporosis Canada

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ACTIVITY FOR HEALTHY BONES

Physical activity is an important component in the risk reduction and treatment of osteoporosis. Physical activity assists in building and maintaining healthy bones. It improves muscle strength, posture, balance and coordination, thus reducing the risk of falls and broken bones (fractures).

PHYSICAL ACTIVITY AND BONE

To achieve the greatest peak bone mass during youth, we need to have an adequate intake of calcium and vitamin D and be physically active. Just as “loading” our muscles makes and keeps them stronger, so “loading” bone through physical activity encourages the formation and maintenance of good strong bones.

The type and level of physical activity depends upon age and the state of bone health. Up until age 20, we want activity to help build the greatest bone mass possible. During our mid-adult years we want to maintain that mass. If a diagnosis of low bone density (osteopenia) or osteoporosis has been made or if there has been a fracture related to osteoporosis, then physical activity is still important but needs to be adjusted to take these conditions into account.

WHAT KIND OF ACTIVITY IS BEST?

FOR BUILDING BONE MASS

During youth and adolescence, we build the bones to last a lifetime. Peak bone mass is achieved by age 16 in girls, 20 in young men; around puberty 40% of lifetime bone is laid down. The greater



the bone mass achieved at this time, the less likely that bone loss will be sufficient to cause fractures in later years. The best type of activity for building bone mass is weight-bearing activity.

A weight-bearing exercise or activity is one where our feet and legs carry our weight. Activities like walking, running, skipping, jumping, dancing and sports such as soccer, volleyball, skiing, tennis and hockey are all examples of weight-bearing exercise.

FOR BUILDING MUSCLE STRENGTH

Resistance exercise that uses our own body weight or external weights such as bar bells or exercise bands encourages increased muscle mass, which in turn helps to build increased bone mass. Examples of resistance exercise include squats, wall push-ups, pull-downs on an exercise machine and pulling up or down with exercise bands.

Strengthening the muscles around the hip and along the spine will help decrease the risk of fracture in these areas. This can also help improve balance, which will decrease the risk of a fall. Muscles tend to get weaker and balance becomes harder if we don't remain active.

TO IMPROVE BALANCE AND COORDINATION

Exercises to strengthen the hips, pelvis, lower back and legs will improve stability. Exercises that challenge balance and teach recovery from imbalance are important in preventing falls and the associated risk of fracture. Examples of balance activities are single leg standing, Tai Chi and the use of tilt boards.

Improving balance and coordination helps us to handle situations we are faced with every day that can result in a fall - for example, walking on a slippery surface or catching a falling object. It is never too late to increase strength and improve your balance to reduce your chances of falling.

TO IMPROVE POSTURE

Postural awareness and exercises to maintain a good upright posture are important to permit good weight bearing through the spine at all ages. Bad postural habits developed as a young adult can persist as one ages. Weak bones can cause the spine to collapse. After a diagnosis of osteoporosis, it is very important to strengthen the muscles that support the spine to avoid the rounded back and sloping shoulders that can come after a spinal fracture. Examples of postural exercise include back extension, shoulder, abdominal and core strengthening.

GENERAL GUIDELINES FOR PHYSICAL ACTIVITY

FREQUENCY

Moderate activity such as walking on a level surface can be done daily. Exercise that involves weight training or aerobic activity should be done, as a minimum, three times a week. It is important to include time for rest and recovery. Start where you are, not where you want to be, and gradually increase the number of repetitions, duration of routine and the resistance being used.

DURATION

The time spent on an exercise program will be dependent on one's age, the type of activity, intensity of activity, general level of fitness and the status of one's bone health. Aim for a minimum of 30 minutes a day, which can include everyday activities such as walking to the store, stair climbing or moving from sitting to standing five times every time you get up. You can break your activity into as little as 5 - 10 minute segments and still get benefit from the activity.

PRECAUTIONS

Learn to listen to your body. There is a difference between a mild ache caused by a workout and pain caused by an injury. Pain can be an indication of a mild muscle strain or a warning sign of a serious injury. Ease up until the pain is gone. If it persists go to a professional for diagnosis.

If you have been diagnosed with osteoporosis or low bone mass (osteopenia), consult a physiotherapist before you begin an exercise program. If you are planning to join an exercise class, ask if the instructor has been

trained to teach exercise to people with osteoporosis. If you have recently had an osteoporotic fracture, a physiotherapist can help you develop an exercise and rehabilitation plan.

Be cautious of exercises or activities that require bending forward or to the side from any position (sitting, standing or lying). Be careful of activities that require twisting, bouncing or jerky movements. Hold weights close to your body and use light weights and more repetitions to increase strength. You may have to modify activities such as tennis, yoga or golf because they involve twisting and bending movements. Avoid sit-ups and crunches, toe touching and prolonged overhead work.

Consult an occupational or physical therapist to teach you how to safely do everyday activities such as laundry, getting in and out of a vehicle and reaching into cupboards.

PHYSICAL ACTIVITY FOR PEOPLE WITH PHYSICAL CHALLENGES

Although individuals with physical challenges may be limited in the type of activity they can do, it is still an important part of a healthy lifestyle. Adapting the activity, using an assistive device or equipment can ensure that bone and muscle strength are maintained.

KEY MESSAGES

Physical activity is important at all ages and stages to build and maintain bone mass, muscle strength and coordination. Physical activity needs to be appropriate to one's general health status as well as to bone health status. If you have health complications or have been diagnosed with low bone mass or osteoporosis, consult an expert when starting an exercise program.

Choose an activity that you like, that is appropriate for your age and stage, and enjoy!

ADDITIONAL RESOURCES

More information on osteoporosis is available from Osteoporosis Canada. Call 1-800-463-6842 or visit www.osteoporosis.ca

Physical Activity Guide to Healthy Active Living for Older Adults.

A handbook with hints on how to make physical activity a part of every day. Free. Available from Health Canada, 1-888-334-9769 or www.phac-aspc.gc.ca/hp-ps/hl-mvs/pag-gap/pdf/guide-older-eng.pdf



Osteoporosis Canada

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We're here to help you!

Osteoporosis Canada is the only national organization serving people who have or are at risk for osteoporosis. To join Osteoporosis Canada, please contact us at:

1090 Don Mills Road, Suite 301
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Tel: (416) 696-2663
Fax: (416) 696-2673
1-800-463-6842 (M-F, 10-4 EST)

The information contained in this fact sheet is not intended to replace medical advice. Readers are advised to discuss their individual circumstances with their physician.

Research in osteoporosis is ongoing. Consult our website and click on Osteoporosis & you for the most up-to-date information.

www.osteoporosis.ca