

**Remember: You can live well with osteoporosis!**

## Boning Up on Exercise To Reduce Fracture Risk and Manage Osteoporosis (Issue #8 of 8)

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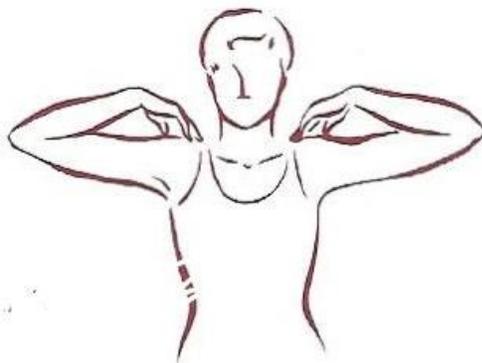
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### Bone Trivia:

If you drink a lot of milk and get plenty of sunshine, your bones can grow to be stronger than concrete.

### Flexibility Training (Stretching) and Osteoporosis



#### What is Flexibility?

Flexibility means being able to move through a wide range of motion. When joints are stiff, or hard to bend or straighten all the way, they are not very flexible. When muscles are too stiff to allow a full range of motion of a joint, they are not very flexible either. Range of motion can be limited by swelling, pain, muscle stiffness, or a problem with the joint (such as arthritis). As we age, we also lose flexibility from inactivity and poor habits and this can contribute to pain and stiffness in our joints and muscles. Pain and stiffness can result in a vicious cycle. The more pain and stiffness we experience, the less likely we are to exercise, and the more muscle and bone strength we may lose as a result. This in turn increases the risk for falls and broken bones, which in turn causes more pain and stiffness.

#### How Can I Improve my Flexibility?

You can improve your flexibility in two main ways:

- 1) By stretching your muscles. This involves moving a joint to the end of its range of motion and holding it still in that position. This helps lengthen muscles around the joint and reduces muscle stiffness.
- 2) By actively moving or rolling your joints through their range of motion which helps reduce joint stiffness.

There are many types of exercise that stretch your muscles and move your joints through their range of motion. Examples include Tai Chi and Yoga, both of which stretch muscles and take joints through a range of motion.

#### Why is Flexibility Training an Essential Component of my Exercise Routine?

Stretching and flexibility exercises help reduce muscle stiffness and improve the range of motion of our joints. Without pain and stiffness we enjoy and get much more out of our exercise routine. When we are more flexible we can exercise our bones and muscles more easily, with less risk of pain or injury. With less pain and stiffness,

we can bend, extend and rotate our body parts more fully and easily, which reduces the risk of injury from doing routine activities of daily living. Better flexibility in the shoulders, hips and chest can help improve posture in individuals who have a curved spine, or an exaggerated kyphosis.

## How Should I Do Flexibility Training?

The safest, easiest and most effective way to do stretching exercises is to do them after first warming up the muscles with other types of exercise.

Muscles that are warmed up have better blood flow and better range of motion, which makes them easier to stretch and less prone to injury. Muscles are stretched when a joint is held still in one position at the end of its range of motion. Move your joint to the end of its range of motion where you feel a stretch in the muscle, but not to the point where you feel pain. Hold each position for 30-60 seconds.

If you prefer to do active range of motion exercises, where you keep your joints moving through their range of motion, you do not need to warm up, as long as you start slowly and progressively increase the range that your joint goes through. For example, if you put your hands on your shoulders with your elbows sticking out to the sides, you might start by drawing small circles in the air with your elbows very slowly, and progressively increase the size of the circles as your shoulder muscles warm up.

Try to take your joints through range of motion exercises each day to keep them flexible. At the end of any exercise session, try to spend 5-10 minutes to stretch all of your major muscle groups and to take your joints through a range of motion. Stretching or flexibility training exercise is the one type of exercise where you must NOT push yourself. Take your time when stretching. This type of exercise should never be painful or forced. It should be done patiently and gradually, not *forcing* but *allowing* your joints to extend, flex or rotate and your muscles to stretch *naturally* as you breathe in and out slowly.

## Examples of Back and Shoulder Flexibility Training Exercise (Stretching)

- 1) Elbow circles: In the standing position, put your fingertips on your shoulders so that your elbows point out to the sides. Start drawing small circles in the air with your elbows. Gradually make the circles bigger and bigger but not so big that you experience pain. This takes your shoulder joints through a range of motion.
- 2) Supine position: In this position, which consists of simply lying down on your back, the weight of the upper body is taken off the spine. Stretches in the supine position can be done on the floor, on a mat or in bed before you get up and before you go to sleep. Below, we describe two types of stretches in the supine position.
  - a) Lie down, on your back with your knees bent and your feet flat on the floor. If you have a curved spine or an exaggerated kyphosis, put a *small* pillow under your head, making sure that you are comfortable. Rest your arms by your sides with your palms facing up. This will help relieve the loads on your spine, and can help stretch your chest and front shoulder muscles.
  - b) To do "Angels" in the supine position, sweep your arms out slowly from your sides like you are making an angel in the snow, stopping when your hands get to shoulder height. Then, stretch through your fingertips - like you are reaching for a treat just out of reach on either side. As you are sweeping your arms along the ground, if you experience any pain or your shoulders or arms start to lift off the floor, stop at that point, and return to the start position. Remember to gently tighten your abdominal muscles to prevent your pelvis and lower back from moving while you do this exercise.

## What about Yoga?

Yoga may improve flexibility and posture, and reduce stress. However, there are many different types of Yoga practice as well as different individual teaching philosophies, so it is difficult to make general recommendations about Yoga. Furthermore, **many Yoga postures emphasize twisting and forward or backward bending, and these activities are not advisable for someone with a spine fracture or who is at high risk of a spine fracture.** Balance postures are also a part of some Yoga practices, and these, too, should be done cautiously by individuals who have a moderate or high risk of fracture. Individuals with osteoporosis who wish to do Yoga should consult a professional who has special training in osteoporosis and who knows how to modify these exercises so that they can be done safely.

## Safety

When trying to improve your flexibility by doing muscle stretching or joint range of motion exercises, remember not to push yourself. Flexibility comes with practice, and the improvements you make will be gradual, but noticeable.

Anyone who is not accustomed to exercise, **or has recently broken a bone**, is advised to consult a doctor or physical therapist *before* starting any type of exercise program. You are encouraged to start slowly and build up gradually under the guidance of a physical therapist or kinesiologist who is knowledgeable about your bone health – if you progress too quickly you may increase your risk of injury.

Not all stretching exercises are for everyone. The safety of each type of stretch will depend on your fracture risk. **Individuals with spine fractures or those at high risk of developing a spine fracture should do modified stretches specifically avoiding forward reaching, excess forward bending or twisting of the spine.** Individuals who have a moderate risk of fracture should also follow these precautions and should not proceed further without approval from a doctor or physical therapist.



This concludes our newsletter series on Exercise and Osteoporosis. We hope that you enjoyed reading about how you can “bone up on exercise” and that this series has helped demystify some of the questions you may have had about exercise and osteoporosis. If you have not yet done so, we also hope to have convinced you to see your doctor about a “bone health check-up” and that this series on exercise has inspired you to join the ranks of thousands of Canadians who, thanks to regular exercise and other lifestyle measures (such as not smoking, a healthy diet, and adequate vitamin D supplementation), are living well with osteoporosis.

*The Boning Up on Exercise articles come from a collaboration of experts. Initiated by a contribution of material from Jo-Ann James, a Certified Medical Exercise Specialist who is Bone Fit™ trained, an impressive team of dedicated volunteers from COPN and the Scientific Advisory Council and OC staff further developed the material into a comprehensive series of eight articles that are all being published for the first time here in COPING !*

**FUNNY BONE:** 7/5<sup>th</sup> of all people do not understand fractions.



**Bone Fit™** is the name of Osteoporosis Canada's specialized non-profit training program that is taken by health and fitness professionals who want to learn effective and appropriate exercises for people with osteoporosis. The training provides knowledge and practical skills to prescribe exercise and adapt safe exercise programs to reduce the risk of fractures. Are you looking for an exercise professional to teach you the right exercises for osteoporosis? BoneFit™ is a growing program that now has trained professionals in seven provinces. Find a BoneFit™ trained professional in your area with our BoneFit™ locator at: [www.bonefit.ca/locator/](http://www.bonefit.ca/locator/)

## A Recipe from our Sponsor



### Cranberry Maple Lemon Rice Pudding

Rice pudding has been a Milk Calendar favourite since it first appeared in 1986. Now with Italian Arborio rice, pure maple syrup, cranberries and lemon - a creamy, decadent rice pudding is quick and easy to make any night of the week.

Course: *Desserts & Sweets*

Preparation Time: *5 mins*

Cooking Time: *35 mins*

Yields : *4 to 6 servings*

*3/4 milk product serving(s) per person*

#### Preparation

1/2 cup (125 ml) Arborio (short-grain Italian) rice

3 cups (750 ml) **milk (approx.)**

3 tbsp (45 ml) pure maple syrup

1/4 cup (50 ml) dried cranberries, cherries or blueberries, (or a mixture, chopped if large)

Grated zest of 1 lemon or small orange

Ground cinnamon

#### Instructions

In a heavy saucepan, bring rice, milk and syrup to a simmer over medium heat, stirring often.

Reduce heat to low, cover and simmer, stirring occasionally, for 20 min. Stir in cranberries and half of the zest; cover and simmer for 5 to 10 min longer or until rice is very soft and pudding is slightly thickened (it will thicken considerably upon cooling). Serve hot, warm or cold, stirring in more milk as necessary to thin. Sprinkle each serving with cinnamon and remaining zest.

#### Tips

Use 2% or whole milk for the best texture in this pudding.

Spoon portions of rice pudding into small airtight containers and pack for breakfast or lunch along with some fresh fruit.

For a Chocolate Rice Pudding, omit cranberries and lemon zest; simmer the pudding for 25 to 30 min until rice is soft; remove from heat and stir in 1/2 cup (125 mL) semisweet chocolate chips until melted.

#### For more information about this recipe:

<http://www.dairygoodness.ca/getenough/recipes/cranberry-maple-lemon-rice-pudding/>

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