

Too Fit to Fracture, Part 1

New tools to help aging bones

by Lora Giangregorio, PhD

After the age of 40, we lose 0.5% to 1% of the bone mass in our skeleton each year. A diagnosis of osteoporosis means that bones have weakened to the point where they could break from a simple fall.

Osteoporosis affects about 1.4 million Canadians. One in three women and one in five men over the age of 50 will have a fracture due to osteoporosis at some point, often caused by a fall. Fractures can lead to other health problems and loss of function, or independence.

Building muscle and maintaining bone health

As a bone health researcher, I know that everyone loses bone mass and muscle strength as they age, starting as early as their 30s or 40s. By the time we get to an age when we start to notice, or have health problems, it is harder to gain the muscle or bone back. We are not even sure that it is possible to replace lost bone with exercise once it is gone. We do know that it is possible to build muscle size and strength, even if we start later in life. And certain types of exercise have been shown to prevent falls by up to 40%. That's why everyone should do some strength training a few times a week, and challenge their balance every day.

Getting started

Each of us is different. We each need to choose an exercise program that fits our needs, our lifestyle, and our abilities. Start by talking with a health care provider, such as a certified exercise physiologist.

Bone Fit™ is an exercise training workshop designed for physical therapists, kinesiologists and community exercise professionals. They learn effective and appropriate exercises for people with osteoporosis. You can find a [Bone Fit-trained physiotherapist or kinesiologist here](#).

Too Fit to Fall or Fracture

Strength Training At least 2 days/week

- ▶ Exercises for legs, arms, chest, shoulders, back
- ▶ Use body weight against gravity, bands, or weights*
- ▶ 8 - 12 repetitions per exercise

Try these to get started:

- Classes at YMCA/community centre
- Consult a physical therapist/kinesiologist
- Contact Osteoporosis Canada



Balance Exercises Every day

- ▶ Tai Chi, dancing, walking on your toes or heels
- ▶ Have a sturdy chair, counter, or wall nearby, and try (from easier to harder): shift weight from heels to toes while standing; stand heel to toe; stand on one foot; walk on a pretend line



Posture Awareness Every day

- ▶ Gently tuck your chin in and draw your chest up slightly
- ▶ Imagine your collarbones are wings - spread your wings slightly without pulling your shoulders back



Aerobic Physical Activity At least 150 mins/week

Examples:

- Brisk walking

New resources from Osteoporosis Canada

I've been working with Osteoporosis Canada and a team of talented students at the University of Waterloo to create a set of free educational tools called "Too Fit to Fracture." The tools can help you develop an exercise program. They include:

- a one-page [quick reference guide](#) available in [several languages](#)
- an in-depth [booklet](#)
- an engaging [video series](#) telling stories of five very different people, and demonstrating their exercises.

About the author

Dr. Lora Giangregorio is an Associate Professor of Kinesiology at the University of Waterloo. She is also the Schlegel Research Chair in Mobility and Aging. Her research program focuses on strategies to reduce the risk of fracture, and increase physical activity and mobility in older adults. Lora translates her research into practice by working with government and non-profit organizations and linking with community-based programs. She collaborated with Osteoporosis Canada to develop the *Too Fit to Fracture* exercise recommendations.