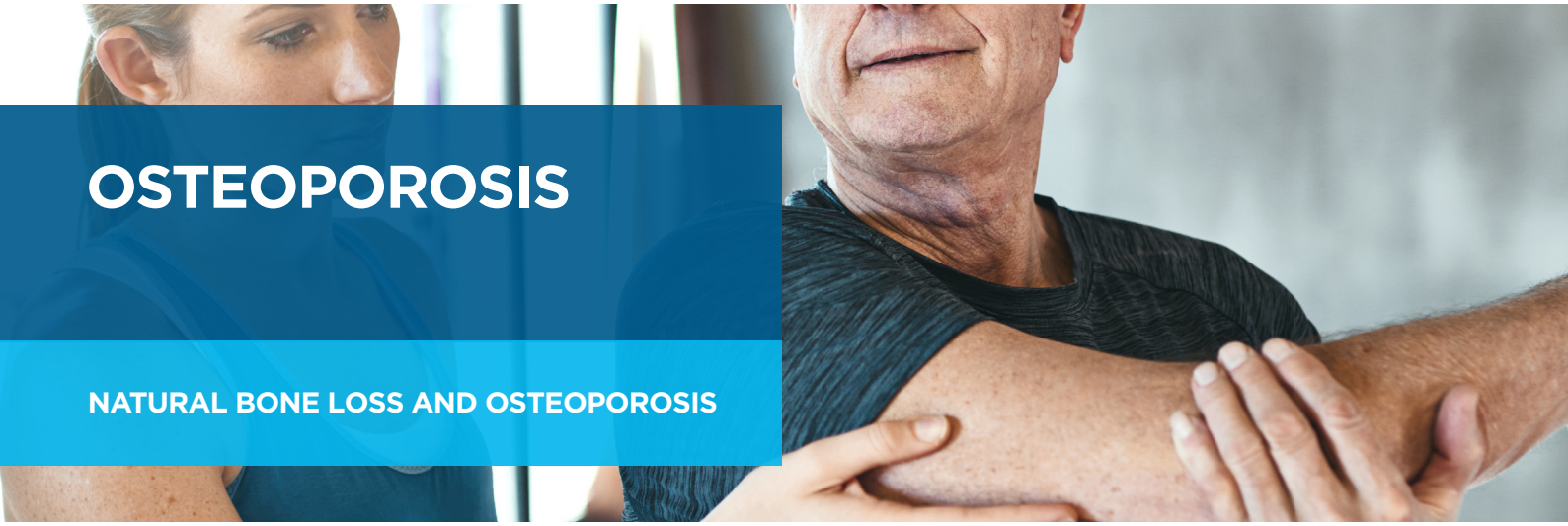
BACK PAIN



OSTEOPOROSIS

NATURAL BONE LOSS AND OSTEOPOROSIS

Introduction

Increased bone fragility and weakness is a normal part of the aging process.[1] In fact, after approximately 35 years old, the body tends to lose more bone tissue than it can produce, a natural process known as bone thinning or bone loss.[2]

Severe loss of bone density, however, may give rise to a condition known as osteoporosis. When this occurs, individuals are more vulnerable to fractures and the consequences of a fall or even a simple misstep can be serious. When osteoporosis affects the spine, there is an increased risk of painful and debilitating fractures.

In this guide...

Risk factors for osteoporosis

Although osteoporosis can affect anyone at any age, the following individuals are considered to be at greatest risk[2]:

- Women, especially after menopause
- Men over age 50
- People with a low body mass index (BMI) or body weight. This is particularly important with respect to risk of fractures due to a fall or accident.

Additional risk factors for osteoporosis

Several other factors, listed in the next page, may contribute to osteoporosis or bone fractures.[2]

For this reason, a complete clinical history and medical examination is an essential part of diagnostic testing.

- Certain medications
- An underlying medical condition
- A family history of osteoporosis or bone fractures
- Having already suffered a bone fracture
- for women, undergoing menopause at a youung age (less than 45 years old)

Lifestyle risk factors for osteoporosis[3]

- **Poor vitamin D and calcium intake**. Vitamin D is necessary in order for the body to absorb the calcium it requires for building and maintaining strong and healthy bones.
- **Tobacco use.** Smoking has been associated with a lower body weight, earlier menopause, and impairment of the body's ability to create bone
- **Excess alcohol consumption**. Alcohol is believed to interfere with the bone building process, and it can also contribute to unsteadiness, injury, and the likelihood of a fall.

Symptoms of osteoporosis

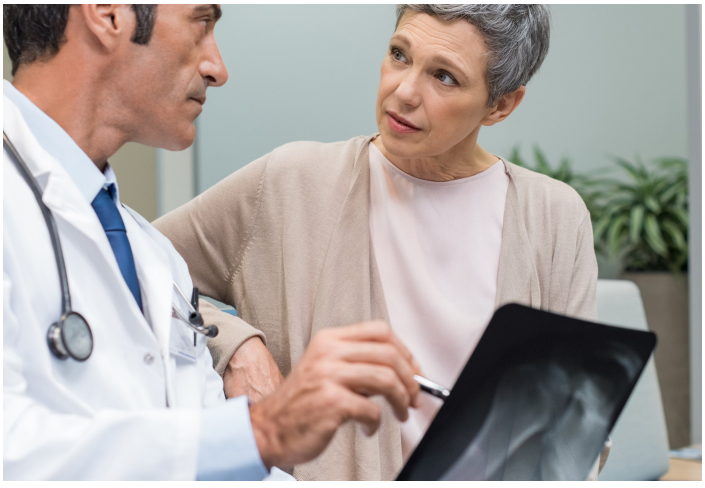
It is possible that individuals with osteoporosis have no symptoms at all until they suffer their first fracture. However, the following symptoms are also possible.[3]

- Backache
- Previous fractures in the spine, wrist, or hip
- Gradual loss of height
- Stooped posture

Consequences of osteoporosis

Although osteoporosis might not have any visible symptoms, it can have severe consequences for an individual.[4]

The loss of bone and weakened bone quality caused by osteoporosis can lead to so-called "fragility fractures", most commonly in the wrists and hips.[2] When osteoporosis affects the spinal column in particular, a person can be at greater risk of a compression fracture, or collapse in one of the vertebrae or bones in the spine.[5] A compression fracture can occur even without an injury, accident, or trauma.[6]



Wherever they occur in the body, all fractures are not only painful but also require treatment such as surgery.

Both fractures and the complications that may arise in their treatment can result in lifelong complications, restricted mobility, and reduced quality of life.[1]

Diagnosing osteoporosis

By detecting osteoporosis early on, individuals can begin treatment and take fracture prevention measures that can make a significant difference on future quality of life and prevent existing cases of osteoporosis from worsening.[4]

In addition to a full clinical history, medical review, and physical examination, diagnostic testing for osteoporosis is normally done with a bone mineral density test (BMD).

This is also known as a bone-density scan, DXA test, DEXA test, or densitometry.[2,4] Other testing might include dental x-rays, blood tests, or urine tests.[3]

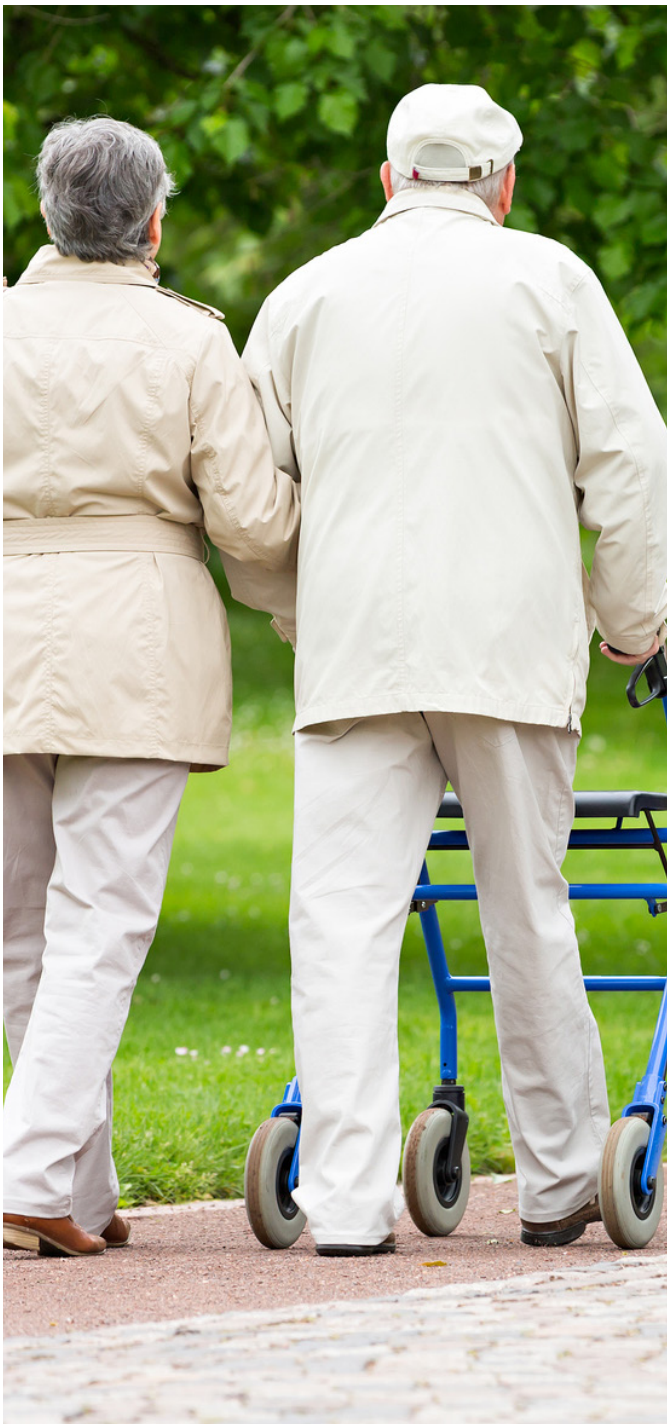
Treatment of osteoporosis

Osteoporosis cannot be cured. However, certain osteoporosis medications may make it possible to improve bone density and reverse the condition to a certain extent.[7]

In addition, intake of vitamin D and calcium can play a strong supporting role in prevention and maintaining bone health.

Please note that not all medications may be available locally or covered by your insurance.

- **Sex**. Depending on the country, certain medications may only available for either women or men.
- **Age (women)**. In general, osteoporosis medication is not recommended for premenopausal women. In older women, different drugs may be more suitable for either menopausal or postmenopausal women.
- **Severity.** Depending on how much bone loss has already occurred, one type of medication may be preferable over another.
- **Other medical conditions**. Potentially harmful interactions or side effects may occur with some osteoporosis medications. It is very important to provide a complete medical history and list of any medications you are currently taking or treatments you have been exposed to, such as radiation.



Osteoporosis medications

There are two main types of medications used to treat osteoporosis. Some work by slowing down the process by which cells break down bone in the body ("antiresorptive" drugs), while others work to stimulate the process of bone-building itself ("anabolic" drugs). The goal of both types is the same: increased bone strength and prevention of fracture.[6] However, both types have side effects and particular instructions for use which need to be understood before they are used.

Questions about your diagnosis?

Unsure which treatment is right for you?

Did you know you have access to a free, independent and confidential decision support service?

Discuss your concerns and have your case reviewed by a specialist in your condition.

The decision is yours. And we're with you all the way.

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5. Compression fracture. Columbia University Department of Neurological Surgery website. http://columbiaspine.org/condition/compression-fracture Accessed September 6, 2017
6. Treatment Options. National Osteoporosis Society website. https://nos.org.uk/about-osteoporosis/treating-osteoporosis Accessed September 11, 2017.
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