

## RHEUMATOID ARTHRITIS & OSTEOPOROSIS



## WHAT IS **OSTEOPOROSIS**

Osteoporosis is a condition in which bones become thinner and more fragile, making them more likely to break (fracture).

Rheumatoid arthritis is a recognized risk factor for osteoporosis and people with the disease are at significantly higher risk of suffering a fragility fracture. There are three key reasons why osteoporosis risk is increased. These include the use of glucocorticoids, inflammation, and lower levels of physical activity. Taking early action to protect bone health is recommended for all patients with rheumatoid arthritis.







**Broken bone** 

## WHAT IS **RHEUMATOID ARTHRITIS?**

Rheumatoid Arthritis (RA) is a chronic inflammatory autoimmune disease in which the membranes around the joints become inflamed and release cytokines that cause the surrounding cartilage to wear away and bone loss adjacent to the affected joint. RA is most common in older adults, although children and younger adults can also be affected. The disease affects two to three times as many women as men.

People with RA will often experience pain, swelling and stiffness, as well as limited motion, in the affected joints. This can severely impact on the ability to carry out daily tasks. If left untreated, RA may result in permanent joint damage.

# THE LINK BETWEEN RHEUMATOID ARTHRITIS & OSTEOPOROSIS

RA speeds up the process of bone loss and is therefore a recognized risk factor for osteoporosis. As a result people with the disease have a 1.5 fold increased risk of suffering fragility fractures compared to the general population. The more severe the RA, the more bone is affected. It is important to note that in contrast to RA, osteoarthritis (the more common form of arthritis) is not associated with higher osteoporosis risk.

THE PRIMARY REASONS WHY PEOPLE WITH RA ARE AT HIGHER RISK OF OSTEOPOROSIS AND FRACTURES ARE THE FOLLOWING:

#### 1. USE OF STEROIDS (GLUCOCORTICOSTEROIDS)

Glucocorticosteroids (such as prednisone/ prednisolone), are commonly used to reduce the pain and swelling in RA. Longer term use of these medications leads to bone loss, which is most rapid in the first 3-6 months of treatment. This results in increased risk of fracture, with the greatest increase seen for fractures of the spine. Increased fracture risk occurs even with low doses (2.5-7.5 mg prednisone per day). Intermittent courses of oral glucocorticoids and intravenous injections, if given frequently and in high doses, cause bone loss. Injections of glucocorticosteroids into the joints are not thought to affect bones.

#### 2. INFLAMMATION

In RA the body's own immune system attacks the joints which become inflamed in response. The resulting damage triggers a cycle of more inflammation and damage to other areas of the body, including bone. The bone surrounding the inflamed joints is most affected - as is often visible on X-rays.

#### 3. INACTIVITY

The pain and difficulty in moving that results from RA makes it difficult for sufferers to stay active. Because bones need regular exercise to remain strong, over time the lack of exercise may cause bones to weaken, raising osteoporosis and fracture risk.

#### STRATEGIES TO PROTECT YOUR BONE HEALTH

If you have RA you must be proactive in protecting your bone health. As is the case for anyone at risk of osteoporosis, early detection and taking various preventive measures are the key to slowing down bone loss and preventing osteoporosis-related fractures. The following is recommended:

## ASSESS YOUR BONE HEALTH STATUS

Ask your doctor for a bone health assessment which will likely include a risk assessment (e.g. FRAX) and a DXA (Dual-energy X-ray Absorptiometry) scan to measure your bone mineral density. As well as RA, you may have other risk factors (for example a prior fracture, or a family history of osteoporosis) that further increases your risk of osteoporosis and fractures.

#### **GET ENOUGH CALCIUM**

Women aged 19 to 50 should aim for 1,000 milligrams (mg) of calcium per day, and women older than 50 should increase intake to around 1,200 to 1,500 mg per day. By ensuring that you are eating plenty of calcium-rich foods, you should be able to reach these targets. However, if your diet alone does not provide you with the recommended intake, ask your doctor whether a calcium supplement is required.

## EARLY IDENTIFICATION AND TREATMENT OF RHEUMATOID ARTHRITIS

Treating RA as soon as possible is the first and most important measure to protect against osteoporosis, as maintaining mobility is the best way to preserve bone integrity. RA is diagnosed first by blood test, to identify markers of inflammation. Some options for the treatment of RA, if used early in the course of the disease, have been

reported to be more effective in rapidly achieving a low level of inflammation and halting the progressive loss of bone. Biological agents also preserve bone health in patients with RA by blocking cytokines which enhance bone resorption. You should discuss with your doctor which of the treatment options suitable for you are less damaging to bone.

#### **GET ENOUGH VITAMIN D**

Vitamin D is needed to absorb calcium. Most of our vitamin D is obtained by exposure of the skin to sunlight. Only a small group of foods (e.g. oily fish, egg yolks, liver) are naturally rich in vitamin D, and, in some countries, margarine, milk and breakfast cereals are fortified with vitamin D. Your healthcare provider may need to prescribe additional supplements to ensure that you are getting what you need. The International Osteoporosis Foundation recommends that seniors aged 60 years and over take a Vitamin D supplement at a dose of 800–1000 IU/day. Vitamin D supplementation at these levels has been shown to reduce the risk of falls and fractures.

### AVOID SMOKING AND EXCESSIVE ALCOHOL INTAKE

There is a link between bone loss and both cigarette smoking and excessive alcohol intake. If you're a smoker, quitting can reduce your risk of osteoporosis. Limiting alcohol intake to no more than two units per day is also beneficial.

#### **PREVENT FALLS**

If your bones are weak fractures can occur after minor slips or falls from standing height. Taking measures to make your home environment slipproof, and wearing slip-proof shoes, are a first step in preventing falls.

## MAINTAIN A HEALTHY BALANCED DIET AND NORMAL BODY WEIGHT

A healthy, balanced diet should include sufficient protein and plenty of fruits and vegetables. This will help ensure an adequate intake of the many different micronutrients that also contribute to bone health. Maintaining a normal body weight is important. Both obesity and, in particular, being underweight, has a negative impact on bone as well as on falls and fracture risk.

#### TRY TO STAY PHYSICALLY ACTIVE

Regular weight-bearing and muscle-strengthening exercise, such as walking, climbing stairs, and weight training, benefits your bone health. At least thirty minutes per day is recommended. As exercise may be difficult if you have RA, and to avoid injury, you may want to discuss with your healthcare provider which types of exercise are suitable for you.

## TAKE DRUG TREATMENT IF PRESCRIBED

Depending on the results of your bone health assessment – which will determine how weak your bones are and how high your fracture risk is - your doctor may recommend drug treatment to protect your bones against fractures. There are a number of different effective treatments which can considerably reduce your risk of suffering a fracture.

The IOF vision is a world without fragility fracture in which healthy mobility is a reality for all.

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