



Paget's Disease of Bone and Osteoarthritis: Different Yet Related

National Institutes of Health Osteoporosis and Related Bone Diseases National Resource Center

2 AMS Circle
Bethesda, MD 20892-3676

Phone: 202-223-0344
Toll free: 800-624-BONE
TTY: 202-466-4315
Fax: 202-293-2356

Website: <https://www.bones.nih.gov>
Email: [NIHBoneInfo@
mail.nih.gov](mailto:NIHBoneInfo@mail.nih.gov)

The NIH Osteoporosis and Related Bone Diseases National Resource Center is supported by the National Institute of Arthritis and Musculoskeletal and Skin Diseases with contributions from the National Institute on Aging, the National Institute of Diabetes and Digestive and Kidney Diseases, and the NIH Office of Research on Women's Health.

The National Institutes of Health (NIH) is a component of the U.S. Department of Health and Human Services (HHS).

December 2018

Paget's disease and osteoarthritis are different disorders that share some of the same symptoms; namely, joint and bone pain. This fact sheet describes the differences between Paget's disease of bone and osteoarthritis, the similarities in their symptoms, how Paget's disease can cause osteoarthritis, and issues related to diagnosis and treatment.

What is Paget's disease?

Paget's disease is a chronic disorder that can result in enlarged and misshapen bones. The excessive breakdown and formation of bone tissue causes affected bone to weaken, resulting in pain, misshapen bones, fractures, and other bone and joint problems, including osteoarthritis. Paget's disease typically is localized, affecting just one or a few bones, as opposed to osteoporosis, for example, which affects all the bones in the body. Scientists do not know for sure what causes Paget's disease.

What is osteoarthritis?

Osteoarthritis is a condition that causes changes in cartilage, the elastic tissue that cushions the joints. Healthy cartilage allows bones to glide over one another, while absorbing energy from the shock of physical movement. In osteoarthritis, the surface layer of cartilage breaks down and wears away. This allows bones under the cartilage to rub together, causing pain, swelling, and loss of motion of the joint.

Distinguishing between Paget's disease and osteoarthritis

Not everyone with Paget's disease will develop osteoarthritis. Among those who have both, some may have osteoarthritis caused by the Paget's disease while others will simply have two unrelated conditions.

Both Paget's disease and osteoarthritis can cause joint and bone pain. In people with both conditions, joint and bone pain can occur in the same areas of the body. This can sometimes make it difficult for doctors to tell which condition is causing the pain.

No single test can diagnose osteoarthritis. The diagnosis of osteoarthritis in a person with Paget's disease may involve blood tests, x-ray images, or the examination of fluid drawn from the joint. Blood and urine tests may also be used to help find out if something other than Paget's disease is causing the arthritis.

The bone changes revealed by x-ray images help doctors diagnose both osteoarthritis and Paget's disease. However, in people who have both conditions in the same area of the body, it is often difficult to distinguish between the two. For this reason, the judgment of the patient's doctor is critically important for accurate diagnosis and effective treatment.

How does Paget's disease cause osteoarthritis?

Although they are different conditions, there is a link between Paget's disease and osteoarthritis. The changes that occur in bones affected by Paget's disease can also affect the function of nearby joints. As a result, people with Paget's disease frequently have osteoarthritis. Paget's disease can cause osteoarthritis when it:

- Changes the shape of bones under the cartilage of the joint.
- Causes long bones (such as the thigh or leg) to bow and bend, placing excess stress on the joints.
- Causes changes in the normal curvature of the spine.
- Softens the pelvis, affecting the hip joint.

What are the available treatments?

The treatment strategies for Paget's disease and osteoarthritis are quite different, so it is important to distinguish between the two when making therapy-related decisions. For example, people with both disorders who get good results from their Paget's disease treatment may continue to experience osteoarthritis-related pain. Correctly identifying osteoarthritis as the source of pain is critical to the selection of effective treatments.

The goal of osteoarthritis therapy is to improve joint function and control pain and swelling. Treatment approaches include exercise, weight control, rest,

medicines, pain relief techniques, and complementary therapies such as tai chi and nutritional supplements. In certain cases, surgery on the affected joint may be needed.

The goal of Paget's disease therapy is to relieve pain and control the progress of the disorder. Treatment strategies include the use of prescription medications approved for Paget's disease, over-the-counter pain medications, appropriate forms of exercise, and, in some cases, surgery on the affected bone or joint.

Because effective therapies are available for both Paget's disease and osteoarthritis, the results of the combination of the two disorders need not be severe. This is particularly true when treatment for Paget's disease begins before major complications have developed.

Resources

For more information on osteoarthritis, contact the: **National Institute of Arthritis and Musculoskeletal and Skin Diseases**

Website: <https://www.niams.nih.gov>

For more information about Paget's disease, contact the:

NIH Osteoporosis and Related Bone Diseases National Resource Center

Website: <https://www.bones.nih.gov>

If you need more information about available resources in your language or another language, please visit our website or contact the NIH Osteoporosis and Related Bone Diseases ~ National Resource Center.

For your information

For updates and for any questions about any medications you are taking, please contact the U.S. Food and Drug Administration toll free at 888-INFO-FDA (463-6332) or visit its website at <https://www.fda.gov>. For additional information on specific medications, visit Drugs@FDA at <https://www.accessdata.fda.gov/scripts/cder/daf>. Drugs@FDA is a searchable catalog of FDA-approved drug products.

NIH Publication No. 18-7919