

Arthritis



The two most common forms of arthritis are osteoarthritis and rheumatoid arthritis. Osteoarthritis (OA) otherwise known as degenerative joint disease, is often referred to as the everybody disease, since almost everyone will develop some osteoarthritis as they age. OA involves the deterioration of the cartilage and other joint tissues. The cartilage is a tough, elastic, spongy tissue that provides a smooth, slippery surfaces on the ends of the bones, where they make contact with one another.

Healthy cartilage, allows the bones to glide against one another as they move, with nearly frictionless motion. Most of our joints are some variation a ball and socket arrangement. (figure #1) The end of one bone is usually round in shape and fits perfectly into a matching socket shape on the other bone. All joints rely primarily on the muscles to hold them together.

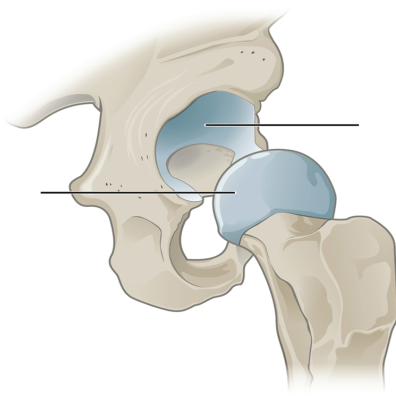
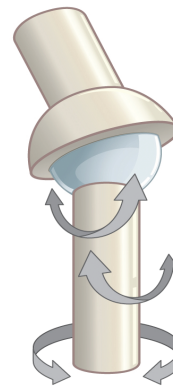


Figure 1



Inactivity is a major risk factor for developing OA, since it starves the cartilage of needed nutrients and causes muscle weakening. With muscle weakness, the joint becomes loose, allowing more wear and tear within the joint. Weakening also lowers the "breaking point" of the joint, making it more vulnerable to injury,

Essential for keeping cartilage healthy is providing it with the nutrients it needs. Cartilage is a spongy material with very poor blood supply. It gets its nutrients from the synovial fluid that surrounds the joint. Exercise produces a rhythmic compression of the cartilage that actually pushes the synovial fluid in

and out of the cartilage, delivering these essential nutrients.

Aerobic exercise like walking on a treadmill or using the EFX or AMT machines, provides the rhythmic on and off pressure that is ideal for suppling the knee cartilage with nutrients. While strengthening exercise like the X-Force, MedX or free weights strengthen the muscles surrounding the joint to provide joint support. Contrary to long standing beliefs recent studies have discovered that strengthening exercise can also thicken and rebuild the cartilage.

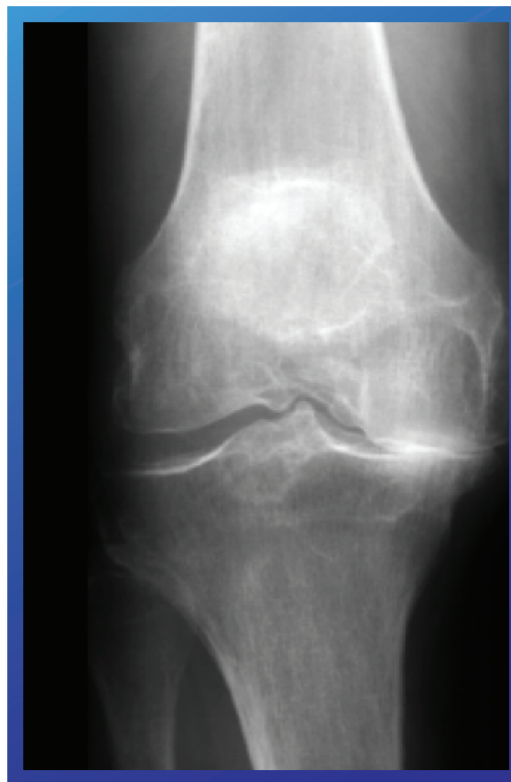
According to Dr. Arthur Graysville, a consultant to the Arthritis Foundation. "A strengthening program is now totally established as part of rehabilitation of a person with arthritis. Regardless of age, the results demonstrate that a person is never too old to become stronger".

"An exercise regime is critical for osteoarthritis patients" to Dr. Mark Hogberg head of the division of rheumatology and clinical immunology at the University of Maryland Baltimore. "The stronger the muscles and the tissue are around your joints, the better they will be able to support and protect the joints, even those that are weak and damaged from arthritis.

With advanced OA the cartilage can wear through until the joint is "bone on bone". It's commonly believed that the only choice at this point is radical need replacement.

However new options have emerged. Dr. Harry Lodge, a nationally known gerontologist told me, "I have patients who come to me all the time, who have been told by their orthopedic surgeon that they are "bone on bone" and must have a knee replacement. I have them do the leg extension machine and the leg curl machine and 60% of the time the pain goes away and they never have the knee replacement".

Strengthening exercise is needed for cartilage growth since it is the best way to increase muscle strength. As muscles surrounding a joint become



stronger so does all the other joint tissue including the cartilage. Aerobic exercise increases muscle endurance and has proven helpful for reducing OA pain but for building cartilage, strength exercises are more effective.

Fortunately muscle strength is largely under our control and can be substantially increased at any age. In a landmark Tuft's University Study, a group of 85 to 99-year-old nursing home patients were put on a strengthening program and most double the strength in 10 weeks.

What about glucosamine sulfate? According to an article in Physician and Sports Medicine, glucosamine and chondroitin occur naturally in cartilage. "glucosamine has been found to stimulate cartilage growth and oral glucosamine has been shown in animal study studies to decrease inflammation and arthritis symptoms".

Rheumatoid arthritis (RA) is the second most common Arthritis. It is an autoimmune disease involving chronic inflammation. The body's immune system attacks its' own tissue, particularly in the joints. It causes pain, stiffness, warmth, redness and swelling in the joints. According the Arthritis Foundation "exercising regularly is extremely important when you have rheumatoid arthritis. Exercise helps keep your joints flexible; strengthens the muscles that helps you keep your joints stable".

- Mike Arteaga

Owner, founder (1973), health and fitness consultant