

KNEE OSTEOARTHRITIS

(DEGENERATIVE ARTHRITIS, ARTHRITIS, DEGENERATIVE JOINT DISEASE)

DESCRIPTION

- Articular Cartilage is the white firm, rubbery, very smooth tissue that lines the end of bones in a joint.
- Arthritis is degeneration of the articular cartilage at a joint and growth of bone “spurs” that can inflame the surrounding tissue (‘arthro’ means joint, and ‘itis’ means inflammation). It can involve all joints, but the knee is very commonly involved. It usually affects adults over 45.
- In the knee, it may involve one, 2 or all 3 compartments – where the kneecap (patellar) meets the thighbone (femur), or the inner or outer portion where the thighbone meets the leg bone (tibia).

FREQUENT SIGNS AND SYMPTOMS

- Joint stiffness and pain.
- Start up pain – pain and stiffness when first getting up to walk after prolonged sitting, standing or when first get up in the day.
- Weather changes, especially cold, damp, may increase aching.
- Loss of knee motion
- Swelling of knee joints (sometimes).
- Limping
- Crepitation (a crackling sound) or grating sounds with knee movement (sometimes)
- Weakness of the thigh muscle can result in knee cap pain – pain with sitting for prolonged periods, pain getting up from a seated position, pain kneeling, pain squatting, pain going up or down hills.

RISK INCREASES WITH

- Obesity
- Persons with occupations that stress joints, such as dancers, football players, or manual laborers.
- Stress on the joints caused by activity and aging. Almost all people over age 50 have some osteoarthritis.
- Injury to the joint lining.
- Breaking a bone in the knee joint
- Malalignment of the legs (excessive bow legged, or knock knee)
- Previous joint injury (ligament or meniscus tear, fracture, articular cartilage injury) or surgery (meniscus surgery, ligament surgery, cartilage surgery)

PREVENTIVE MEASURES

- Maintain a normal weight for your height and body structure.
- Be physically active, but avoid activities that lead to joint injury, especially after age 40
- Low impact activity like swimming, cycling, stair master and elliptical trainers are good low impact cardiovascular activities.
- Try regular stretching or yoga exercises.

EXPECTED OUTCOME

- Symptoms can usually be relieved, but joint changes are permanent. Pain may begin as a minor irritant, but it can become severe enough to interfere with daily activities and sleep
- Muscles around affected joints (particularly the thigh muscles and sometimes calf muscles) may become smaller and weaker because of decreased use due to pain.
- Loss of joint motion
- Tends to be progressive and irreversible

GENERAL TREATMENT CONSIDERATIONS

The overall treatment plan involves understanding the disorder, and treatment plan, including rehabilitation, activities of daily living and medications. Initial treatment consists of medication and ice to relieve the pain. However, using heat, especially in the morning or in cold weather, can be beneficial in relieving the stiffness and pain that often is associated with arthritis as the day begins and cold, damp weather. Avoid chilly weather – wear thermal underwear or avoid outdoor activity in cold weather. Stretching and strengthening exercises of the knee and thigh can help reduce stiffness, slow the progression of loss of joint motion, and maintain muscle strength. These all can be carried out at home, though referral to a physical therapist or athletic trainer for further evaluation and treatment may be helpful. Activity modification, such as reducing or eliminating impact activity (like running or jogging) or other activities that may stress the arthritic joint should be considered to help slow the process. Weight loss for those who are overweight can help relieve pain and slow the progression.

Occasionally, a knee sleeve or knee brace may be recommended for those with knee arthritis. In some cases, a heel wedge in the shoe may be beneficial for some forms of knee arthritis. Massaging the thigh muscles may help, but massaging the knee is usually not helpful. Rest is important during acute phases. Allow adequate time for recovery after exercises.

Acupuncture may also be of benefit. Medications, such as acetaminophen or non-steroidal anti-inflammatory medications, may be helpful for the pain and joint swelling. Injections with cortisone or hyaluronic acid may be helpful as well. When particularly severe, the use of braces, crutches or cane may be beneficial. Surgery may be helpful. Arthroscopy to wash out or clean up a joint may be helpful. Other surgical procedures include arthroplasty (joint replacement with metal and plastic) or arthrodesis (fusion, immobilization of the joint by getting the bone surfaces to heal to each other).

MEDICATION

- Non-steroidal anti-inflammatory medications such as aspirin and ibuprofen (do not take within 7 days of surgery) are used to reduce inflammation. Take these as directed by your physician. Contact your physician immediately if any bleeding, stomach upset or an allergic reaction occurs.
- Minor pain relievers, such as acetaminophen may also be used, though these help reduce pain only and not affect inflammation.
- Glucosamine with or without chondroitin may be beneficial in reducing the pain associated with arthritis. How it works is not known, but appears to provide some benefit. Take as directed.
- Pain relievers may be prescribed as necessary by your physician. Do not take prescription pain medication for longer than 4 to 7 days. Use only as directed and only as much as you need.
- Cortisone injections are often beneficial for painful stiff joints. This is particularly true if there is associated swelling of the joint. These usually provide only temporary relief.
- Hyaluronic Acid injections are often beneficial in the treatment of knee arthritis. These are usually given as a single injection, or a series of 3 – 5 injections. These provide temporary relief of symptoms without the potential side effects of cortisone injections.

HEAT AND COLD:

- Cold is used to relieve pain and reduce inflammation for acute and chronic cases. Cold should be applied for 10 - 15 minutes every 2-3 hours for inflammation and pain, and immediately after any activity which aggravates your symptoms. Use ice packs or an ice massage.
- Heat may be used in the mornings, or prior to performing stretching and strengthening activities. Apply heat to painful and stiff knee joint for 20 minutes, up to 2 – 3 times a day. Use hot towels, hot tubs, infrared lamps, heat pack, warm soak electric heating pads or deep heating ointments or lotions. Swim in a heated pool or move around in a whirlpool spa..

NOTIFY YOUR PHYSICIAN IF

- Symptoms get worse or do not improve in 2 weeks despite treatment
- The knee locks, becomes red and extremely painful
- New, unexplained symptoms develop.
- Drugs used in treatment may produce side-effects.