Knee Problems and Injuries - Topic Overview

Most people have had a minor knee problem at one time or another. Most of the time our body movements do not cause problems, but it's not surprising that symptoms develop from everyday wear and tear, overuse, or injury. Knee problems and injuries most often occur during sports or recreational activities, work-related tasks, or home projects.

The knee is the largest joint in the body. The upper and lower bones of the knee are separated by two discs (menisci). The upper leg bone (femur) and the lower leg bones (tibia and fibula) are connected by ligaments, tendons, and muscles. The surface of the bones inside the knee joint is covered by articular cartilage, which absorbs shock and provides a smooth, gliding surface for joint movement. See a picture of the structures of the knee.

Although a knee problem is often caused by an injury to one or more of these structures, it may have another cause. Some people are more likely to develop knee problems than others. Many jobs, sports and recreation activities, getting older, or having a disease such as osteoporosis or arthritis increase your chances of having problems with your knees.

Sudden (acute) injuries

Injuries are the most common cause of knee problems. Sudden (acute) injuries may be caused by a direct blow to the knee or from abnormal twisting, bending the knee, or falling on the knee. Pain, bruising, or swelling may be severe and develop within minutes of the injury. Nerves or blood vessels may be pinched or damaged during the injury. The knee or lower leg may feel numb, weak, or cold; tingle; or look pale or blue. Acute injuries include:

- Sprains, strains, or other injuries to the ligaments and tendons that connect and support the kneecap.
- A tear in the rubbery cushions of the knee joint (meniscus).
- Ligament tears, such as the anterior cruciate ligament (ACL). The medial collateral ligament (MCL) is the most commonly injured ligament of the knee.
- Breaks (fracture) of the kneecap, lower portion of the femur, or upper part of the tibia or fibula. Knee fractures are most commonly caused by abnormal force, such as a falling on the knee, a severe twisting motion, severe force that bends the knee, or when the knee forcefully hits an object.
- Kneecap dislocation. This type of dislocation occurs more frequently in 12- to 18-year-old girls.
Knee joint dislocation. This is a rare injury that requires great force. It is a serious injury and requires immediate medical care.

Overuse injuries

Overuse injuries occur with repetitive activities or repeated or prolonged pressure on the knee. Activities such as stair climbing, bicycle riding, jogging, or jumping stress joints and other tissues and can lead to irritation and inflammation. Overuse injuries include:

- Inflammation of the small sacs of fluid that cushion and lubricate the knee (bursitis).
- Inflammation of the tendons (tendinitis) or small tears in the tendons (tendinosis).
- Thickening or folding of the knee ligaments (plica syndrome).
- Pain in the front of the knee from overuse, injury, excess weight, or problems in the kneecap (patellofemoral pain syndrome).
- Irritation and inflammation of the band of fibrous tissue that runs down the outside of the thigh (iliotibial band syndrome).

Conditions that may cause knee problems

Problems not directly related to an injury or overuse may occur in or around the knee.

- Osteoarthritis (degenerative joint disease) may cause knee pain that is worse in the morning and improves during the day. It often develops at the site of a previous injury. Other types of arthritis, such as rheumatoid arthritis, gout, and lupus, also can cause knee pain, swelling, and stiffness.
- Osgood-Schlatter disease causes pain, swelling, and tenderness in the front of the knee below the kneecap. It is especially common in boys ages 11 to 15.
- A popliteal (or Baker's) cyst causes swelling in the back of the knee.
- Infection in the skin (cellulitis), joint (infectious arthritis), bone (osteomyelitis), or bursa (septic bursitis) can cause pain and decreased knee movement.
- A problem elsewhere in the body, such as a pinched nerve or a problem in the hip, can sometimes cause knee pain.
- Osteochondritis dissecans causes pain and decreased movement when a piece of bone or cartilage or both inside the knee joint loses blood supply and dies.
Treatment for a knee problem or injury may include first aid measures, rest, bracing, physical therapy, medicine, and, in some cases, surgery. Treatment depends on the location, type, and severity of the injury as well as your age, health condition, and activity level (such as work, sports, or hobbies).

Check your symptoms to decide if and when you should see a doctor.

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