

## KNEE PAIN

The knee is the largest joint in the body and supports nearly the full weight of the body. The pain can be a dull ache, a sharp or stabbing pain, and may be accompanied by stiffness, inflammation and knee swelling. Knee pain can be temporary or chronic. Temporary knee pain is usually due to an injury or accident. Chronic knee pain is often the result of several causes or conditions.

### Causes of knee pain

Common causes include:

- **osteoarthritis**- degeneration of the joint due to breakdown of the cartilage between joints
- **tendinitis**: inflammation of a tendon, the thick fibrous cords that attach muscle to bone
- **bursitis**: inflammation of fluid sac between joints
- **gout**: buildup of uric acid between joints
- **rheumatoid arthritis**: an autoimmune disease where the body's own immune system attacks the joints
- **kneecap dislocation** : trauma resulting in a dislocated kneecap
- **meniscus tear**: a tear in the cartilage that cushions the knee
- **torn ligament**: a tear in one of the ligaments in the knee



### Risk factors of knee pain

- Being overweight or obese
- Overuse or repeated injury of the knee
- Improper warm up, cool down, or stretching before and after exercise
- Aging

### Diagnosis of knee pain

Diagnostic tests may include blood work, physical exam, imaging tests such as X-ray, CT scan, or MRI.

### Treatment of knee pain

The goal of treatment is to ease pain and inflammation. Treatment may include:

1. Rest
2. Weight loss
3. Cold or heat therapy (limit to 20 minutes)
  - for acute pain, apply ice pack (wrapped in towel) or a cold compress to reduce inflammation
  - for chronic pain, apply a warm compress or heating pad for a soothing relief
4. Elastic stocking
  - wearing elastic stockings help to reduce swelling
5. Oral pain relief medications
  - nonsteroidal anti-inflammatory drugs (NSAIDs)
  - corticosteroids
  - disease-modifying anti-rheumatic drugs
  - gout medications
6. Injections given directly into the knee joint
  - Hyaluronic acid injection- hyaluronic acid is a naturally occurring lubricant in the joint
  - Corticosteroid injection- corticosteroids are powerful steroid hormones that quickly reduces pain and swelling but carry some health risks

## 7. Surgery

- Arthroscopy- a lighted scope and thin instruments are inserted through small incisions in the skin over the knee to remove, trim or repair the damaged parts of the knee.
- Total knee replacement- the damaged joint is removed and replaced with an artificial joint made of metal, ceramic and/or plastic.
- Osteotomy- the shinbone or thighbone is reshaped and repositioned to relieve pressure on the knee joint.
- Practice range of motion exercises for the knee (ask a physical therapist for instructions)
- Rest in between activity and change posture from time to time
- Wear flat, cushioned, and anti-slip shoes
- Use a cane or knee brace for support
- Avoid heavy loads or sudden movement when carrying heavy objects
- Avoid prolonged sitting or standing , sitting on low chair, sitting with legs bent or crossed, sitting on floor, squatting, kneeling, going up and down stairs repeatedly

### Care of the knees

- Do exercises to strengthen muscles in the front of the thigh (quadriceps) that support the knee joint
- Include moderate physical activities to improve flexibility, for example Tai Chi

### References:

- <https://www.arthritis.org/about-arthritis/where-it-hurts/knee-pain/causes/>
- <https://www.healthline.com/health/chronic-knee-pain>