**Osteoarthritis  (OA)**: (More than 10 million cases per year)

Animation Video explanation:

<https://youtu.be/41IMR_Dp5bs>:

(notes)

* + - * Bone spurs(boney projections) are formed once cartilage wears off. This causes swelling
      * Braces are worn to support the joints.
      * Lubricating fluids are injected into the joints to free the movements.
  + Osteoarthritis is the **most common form** of arthritis, affecting millions of people worldwide
  + occurs when the protective cartilage that cushions the ends of your bones **wears** down over time, **bone will rub on bone**.
  + osteoarthritis **affects the entire joint**. It causes changes in the bone and deterioration of the connective tissues that hold the joint together and attach muscle to bone. It also causes inflammation of the joint lining.
  + most commonly affects joints in your **hands, knees, hips and spine**.
  + the damage to joints **can't be reversed**.
  + **Pain, stiffness, Swelling are symptoms.**
  + **Cause is unknown**

**Factors that can increase your risk of osteoarthritis include:**

* **Older age.**
* **Sex.** Women are more likely to develop osteoarthritis.
* **Obesity.** fat tissue produces proteins that can cause harmful inflammation in and around your joints.
* **Joint injuries**
* **Repeated stress on the joint.**
* **Genetics.**
* **Bone deformities.** Some people are born with malformed joints or defective cartilage.
* **Certain metabolic diseases.** These include **diabetes** and a condition in which your body has **too much iron** (hemochromatosis).

**Diagnosis:**

* MRI
* X-Rays
* **Blood tests**
* **Joint fluid tests**

**Treatments:**

Treatments can reduce pain and help you move better.

### **Medications:**

Medications that can help relieve osteoarthritis symptoms, primarily pain, include:

* **Acetaminophen**
* **Nonsteroidal anti-inflammatory drugs (NSAIDs) (has many side effects)**
* **Duloxetine**

**Therapy:**

* **Physical therapy. A physical therapist can show you exercises to strengthen the muscles around your joint, increase your flexibility and reduce pain**. Regular gentle exercise that you do on your own, such as swimming or walking, can be equally effective.
* **Occupational therapy.** An occupational therapist can help you discover ways to do everyday tasks without putting extra stress on your already painful joint. For instance, a toothbrush with a large grip could make brushing your teeth easier if you have osteoarthritis in your hands. A bench in your shower could help relieve the pain of standing if you have knee osteoarthritis.

If conservative treatments don't help, you may want to consider procedures such as:

* **Cortisone injections.** Injections of corticosteroid medications may relieve pain in your joint. During this procedure your doctor numbs the area around your joint, then places a needle into the space within your joint and injects medication. The number of cortisone injections you can receive each year is generally limited to three or four injections, because the medication can worsen joint damage over time.
* **Lubrication injections.** Injections of hyaluronic acid may offer pain relief by providing some cushioning in your knee, though some research suggests these injections offer no more relief than a placebo. Hyaluronic acid is similar to a component normally found in your joint fluid.
* **Realigning bones.** If osteoarthritis has damaged one side of your knee more than the other, an **osteotomy** might be helpful. In a knee osteotomy, a surgeon cuts across the bone either above or below the knee, and then removes or adds a wedge of bone. This shifts your body weight away from the worn-out part of your knee.
* **Joint replacement.** In joint replacement surgery (arthroplasty), your surgeon removes your damaged joint surfaces and replaces them with **plastic and metal parts**. Surgical risks include infections and blood clots. Artificial joints can wear out or come loose and may need to eventually be replaced.