



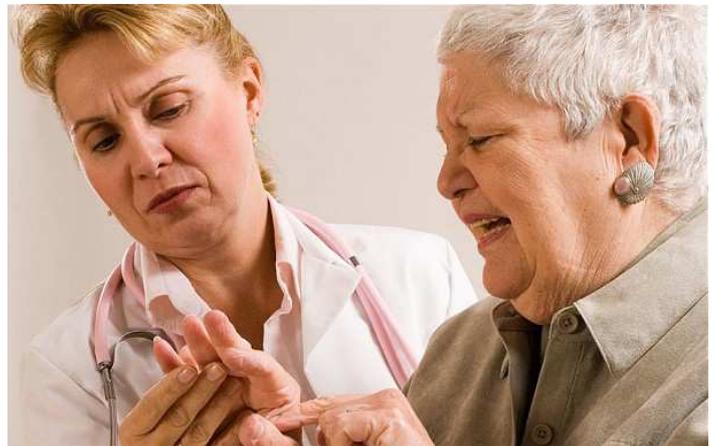
The E - Bulletin is a service provided from the in-house team of physicians (Specialists, GP's & the CEDARS Training Center) at the **CEDARS – Jebel Ali International Hospital** in order to raise awareness about health issues.

Arthritis

Arthritis is inflammation of one or more body joints. The main symptoms of arthritis are joint pain and stiffness, which typically worsen with age. The most common types of arthritis are osteoarthritis and rheumatoid arthritis though there are other types such as gout and septic arthritis.

Risk factors for arthritis include:

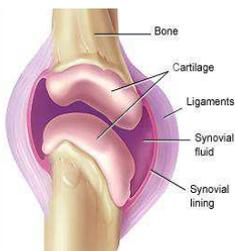
- **Family history** - Some types of arthritis run in families, so you may be more likely to develop arthritis if your parents or siblings have the disorder. Your genes can make you more susceptible to environmental factors that may trigger arthritis.
- **Age** - risk of many types of arthritis, including osteoarthritis, rheumatoid arthritis and gout increases with age.
- **Gender** - Women are more likely than are men to develop rheumatoid arthritis, while most of the people who have gout are men.
- **Previous joint injury** - People who have injured a joint, perhaps while playing a sport, are more likely to eventually develop arthritis in that joint.
- **Weight Obesity** - Obese people have a higher risk of developing arthritis. Carrying excess pounds puts stress on joints, particularly on knees, hips and spine.



Complications of Arthritis: Severe arthritis, particularly if it affects your hands or arms, can make it difficult for you to do daily tasks. Arthritis of weight-bearing joints can keep you from walking comfortably or sitting up straight. In some cases, joints may become twisted and deformed.

Osteoarthritis

The most common type of arthritis, osteoarthritis involves wear-and-tear damage to your joint's cartilage. It is caused by aging joints, injury, and obesity. Enough damage can result in bone grinding directly on bone, which causes pain and restricted movement. This wear and tear can occur over many years, or it can be hastened by a joint injury or infection. Osteoarthritis is a disease of the joints. Unlike many other forms of arthritis, such as rheumatoid arthritis and systemic lupus, osteoarthritis does not affect other organs of the body.



What Are the Symptoms of Osteoarthritis?

The most common symptom of osteoarthritis is pain in the affected joints after repetitive use. Joint pain is usually worse later in the day. There can be swelling, warmth, and creaking of the affected joints. Pain and stiffness of the joints can also occur after long periods of inactivity, for example, sitting in a theater. In severe osteoarthritis, complete loss of cartilage causes friction between bones, causing pain at rest or pain with limited motion.

Cartilage is the hard, slick coating on the ends of bones

Rheumatoid Arthritis



When two bones come together to form a joint, the scraping of the bones against each other would quickly become painful without some type of padding or lubricant. The synovial membrane provides that padding and lubricant. It is a tissue that acts as a cushion, but more importantly, the membrane secretes a lubricant that allows the two bones to move freely against each other. The synovial membrane is found only in synovial joints, such as in the knees, elbows, shoulders, wrists and hips.

In rheumatoid arthritis, the body's immune system attacks the lining of the joint capsule or synovial membrane and it becomes inflamed and swollen. The disease process can eventually destroy cartilage and bone within the joint.

The cause of rheumatoid arthritis is still unknown.

- Even though **infectious agents** such as viruses, bacteria, and fungi have long been suspected, none has been proven as the cause.
- **Environmental factors** also seem to play some role in causing rheumatoid arthritis. For example, scientists have reported that smoking tobacco, exposure to silica mineral, and chronic periodontal disease all increase the risk of developing rheumatoid arthritis.
- It is believed that the tendency to develop rheumatoid arthritis may be **genetically inherited**. Certain genes have been identified that increase the risk for rheumatoid arthritis. It is also suspected that certain infections or factors in the environment might trigger the activation of the immune system in susceptible individuals. This misdirected immune system then attacks the body's own tissues. This leads to inflammation in the joints and sometimes in various organs of the body, such as the lungs or eyes.

It is not known what triggers the onset of rheumatoid arthritis. Regardless of the exact trigger, the result is an immune system that is geared up to promote inflammation in the joints and occasionally other tissues of the body. Immune cells, called lymphocytes, are activated and chemical messengers are expressed in the inflamed areas.

When the disease is active, RA symptoms can include **fatigue, loss of energy, lack of appetite, low-grade fever, muscle and joint aches, and stiffness**. Muscle and joint stiffness are usually most notable in the morning and after periods of inactivity. This is referred to as morning stiffness and post-sedentary stiffness. Arthritis is common during disease flares. Also during flares, joints frequently become warm, red, swollen, painful, and tender.

Rheumatoid arthritis usually inflames multiple joints and affects both sides of the body. In its most common form, therefore, it is referred to as a symmetric polyarthritis.

RA symptoms come and go, depending on the degree of tissue inflammation. When body tissues are inflamed, the disease is active. When tissue inflammation subsides, the disease is inactive (in remission). Remissions can occur spontaneously or with treatment and can last weeks, months, or years. During remissions, symptoms of the disease disappear, and people generally feel well. When the disease becomes active again (relapse), symptoms return. The return of disease activity and symptoms is called a flare. The course of rheumatoid arthritis varies among affected individuals, and periods of flares and remissions are typical.

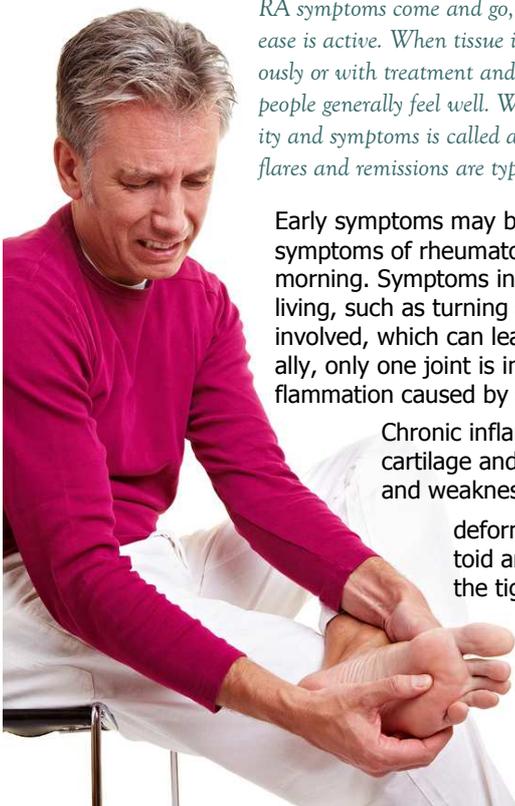
Early symptoms may be subtle. The small joints of both the hands and wrists are often involved. Early symptoms of rheumatoid arthritis can be **pain and prolonged stiffness of joints**, particularly in the morning. Symptoms in the hands with rheumatoid arthritis include difficulty with simple tasks of daily living, such as turning door knobs and opening jars. The small joints of the feet are also commonly involved, which can lead to painful walking, especially in the morning after arising from bed. Occasionally, only one joint is inflamed. When only one joint is involved, the arthritis can mimic the joint inflammation caused by other forms of arthritis, such as gout or joint infection.

Chronic inflammation can cause damage to body tissues, including cartilage and bone. This leads to a loss of cartilage and erosion and weakness of the bones as well as the muscles, resulting in joint

deformity, destruction, and loss of function. Rarely, rheumatoid arthritis can even affect the joint that is responsible for the tightening of our vocal cords to change the tone of our

voice, the cricoarytenoid joint. When this joint is inflamed, it can cause hoarseness of the voice.

Symptoms in children with rheumatoid arthritis include **limping, irritability, crying, and poor appe-**



Juvenile Rheumatoid Arthritis

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Gout



Gout is a form of arthritis marked by sudden attacks of painful, inflamed joints, usually a big toe. If it is not controlled, gout can cause severe damage to joints, tendons, and other tissues. Gout occurs more often in men than in women.

It is caused by too much uric acid in the blood. Most of the time, having too much uric acid isn't harmful. Many people with high levels in their blood never get gout. But when uric acid levels in your blood are too high, the uric acid may form hard crystals in your joints.

Your chances of getting gout are higher if you are overweight, drink too much alcohol especially beer, or eat too much meat and fish that are high in chemicals called Purines.

Foods with very high Purines

- Organ meats, such as liver, kidneys, sweetbreads (Ris), and brains
- Meats, including bacon, beef, pork, and lamb
- Game meats
- Any other meats in large amounts
- Anchovies, sardines, herring, mackerel, and scallops
- Gravy



Other causes of Gout

- Medicines that may increase uric acid concentration, such as **regular use of aspirin, niacin, or diuretics**. Medicines for **chemotherapy and those that suppress immune system** such as cyclosporine also increases uric acid.
 - Major illness or certain medical conditions, such as rapid weight loss or high blood pressure
 - Surgery
 - Hereditary
 - Frequent episodes of dehydration
 - Very low-calorie diets
- Having been born with a rare condition that causes high blood uric acid levels. People with **Kelley-Seegmiller syndrome** or Lesch-Nyhan syndrome have a partial or complete deficiency in an enzyme that helps to control uric acid levels.

Attacks of gout can be unexpected and excruciatingly painful. With prompt treatment, the pain and inflammation usually disappear after a few days, but they may recur at any time.

See your doctor even if your pain from gout is gone. The build up of uric acid that led to your gout attack can still harm your joints. Your doctor will:

- Ask questions about your symptoms
- Do a physical exam
- May also do a blood test to measure the amount of uric acid in your blood.
- May also take a sample of fluid from your joint to look for uric acid crystals. This is the best way to test for gout.

To stop a gout attack, your doctor can give you a shot of corticosteroids or prescribe a large daily dose of one or more medicines. The doses will get smaller as your symptoms go away. Relief from a gout attack often begins within 24 hours if you start treatment right away.

To ease the pain during a gout attack, **rest the joint that hurts. Taking ibuprofen or another anti-inflammatory medicine can also help you feel better.** But don't take aspirin. It can make gout worse by raising the uric acid level in the blood.

To prevent future attacks, your doctor can prescribe a medicine to reduce uric acid build up in your blood.

To help control your gout:

- Limit foods that are high in purines, especially meat, seafood, and beer.
- Eat a healthy diet that provides the nutrients you need and helps you control your weight.
- Eat low-fat dairy products. This may lower your risk of gout.
- Drink plenty of water and other fluids. This can help your body get rid of uric acid.
- Maintain your ideal body weight to avoid unnecessary strain in your joints.
- Avoid alcohol.



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Septic Arthritis



It is also known as infectious arthritis, bacterial, or fungal arthritis. The condition is an inflammation of a joint that is caused by infection. Typically, septic arthritis affects one large joint in the body, such as the knee or hip. Less frequently, septic arthritis can affect multiple joints.

Causes

Septic arthritis usually is caused by bacteria that spread through the blood stream from another area of the body. It can also be caused by a bacterial infection from an open wound or

an opening from a surgical procedure, such as knee surgery.

In adults and children, common bacteria that cause acute septic arthritis include *Haemophilus influenzae*, staphylococcus, and streptococcus. These foreign invaders enter the bloodstream and infect the joint, causing inflammation and pain.

Other infections, such as those caused by viruses and fungi, can also cause arthritis. Viruses include Hepatitis A, B, and C, Parvovirus B19, Herpes viruses, HIV (AIDS virus), HTLV-1, Adenovirus, Coxsackie viruses, Mumps

Fungi that can cause arthritis include histoplasma, coccidiomyces, and blastomyces. These infections are usually less severe and slower to develop than bacterial infections.

Who is at Risk for Septic Arthritis?

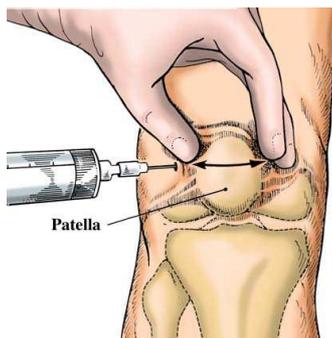
- Young children
- elderly adults
- People with open wounds
- People with a weakened immune system
- People with pre-existing conditions such as cancer, diabetes, intravenous drug abuse, and immune deficiency disorders



What Are the Symptoms of Septic Arthritis?

Symptoms of septic arthritis usually come on rapidly with intense pain, joint swelling, and fever. Septic arthritis symptoms may include:

- Chills
- Fatigue and generalized weakness
- Fever
- Inability to move the limb with the infected joint
- Severe pain in the affected joint, especially with movement
- Swelling (increased fluid within the joint)
- Warmth (the joint is red and warm to touch because of increased blood flow)



How Is Septic Arthritis Diagnosed?

A procedure called **arthrocentesis** is commonly used to make an accurate diagnosis of septic arthritis. This procedure involves a surgical puncture of the joint to draw a sample of the joint fluid, known as synovial fluid. Normally, this fluid is sterile and acts as a lubricant. During arthrocentesis, a needle is inserted into the affected joint to collect fluid from the joint. The fluid sample is sent to a lab for evaluation. The lab will perform a white cell count on the fluid, which will usually very high. The lab will also try to culture bacteria or other organisms. This will help the doctor determine if an infection is present and which organism is causing it.

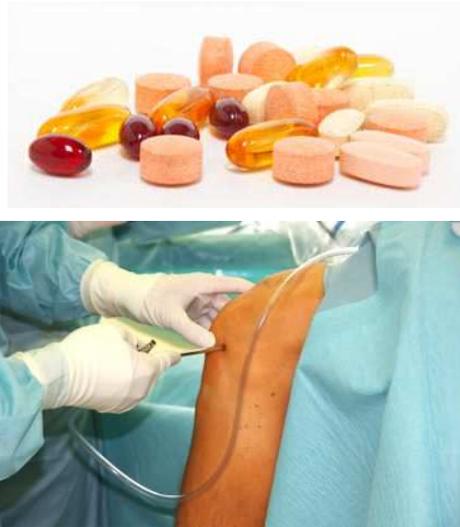
X-rays are typically done to look for joint damage. Blood tests can also be used to monitor inflammation. MRI scanning is sensitive in evaluating joint destruction but is less useful in the early stages. Blood tests can also be taken to detect and monitor inflammation.

What's the Treatment for Septic Arthritis?

Septic arthritis treatments include using a combination of powerful antibiotics as well as draining the infected synovial fluid from the joint. It's likely that antibiotics will be administered immediately to avoid the spread of the infection. Intravenous (IV) antibiotics are given, usually requiring admission to the hospital for initial treatment. The treatment, however, may be continued on an outpatient basis at home with the assistance of a home



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health nursing service. Initially, empiric antibiotics are chosen to cover a wide range of infections. If the bacteria can be identified, antibiotics specific to that organism are used. It may take four to six weeks of treatment with antibiotics to ensure complete eradication of the infectious agents.

Is the Infected Fluid Drained?

Drainage of the infected area is critical for rapid clearing of the infection. Drainage is performed by removing the fluid with a needle and syringe. Often the draining occurs daily or with multiple surgical procedures. The exact method depends on the location of the joint. Elevation of the limb and bed rest may be necessary.

Using **arthroscopy**, your doctor can irrigate the joint and remove the infected tissue. If drainage cannot be accomplished with joint aspirations or arthroscopy, open joint surgery is often necessary to drain the joint. If the fluid buildup is significant, the drains are left in place to remove excess fluid that may build up after the surgery.

Medical Consultant for February 2015



Dr. Farzad Ravari
Specialist Orthopedic Surgeon

Dr. Farzad Ravari, Specialist Orthopedic Surgeon, specializes in Traumatology (fracture & dislocation) by advanced techniques of AO. sports medicine, knee arthroscopic surgery, hip & knee joint replacement (arthroplasty), congenital deformity of upper & lower extremities, and spine surgery.

He graduated from Shahid Beheshti University of Tehran in September 1998 and later worked as Chief of the Orthopedic Surgery Department in Mofateh Hospital, a hospital affiliated with the university.

From 1998-2004 he was Chief of Orthopedic Surgery Department of Torfeh Hospital, another hospital affiliated with Shahid Beheshti University. He was the attending orthopedic surgeon & consultant at Azadi Hospital from 2004-2009.

He worked in the capacity of Specialist Orthopedic Surgeon in Arya Clinic, Dubai for 10 years before joining the CEDARS team as Specialist Orthopedic Surgeon.

About CEDARS - Jebel Ali International Hospital

Established in 1999, CEDARS – Jebel Ali International Hospital was the only full-fledged 24-hour medical center in the Jebel Ali area and it was upgraded into a hospital in August 2004. Today it is a full-fledged multi-specialty hospital offering services ranging from Pediatrics to Occupational Health, Laparoscopic Surgery to Internal Medicine. The Hospital is equipped with ICU for medical and surgical emergencies, with two major and one minor operation theatres as well as with fully equipped Laboratory and Radiology departments. The CEDARS Training Center is offering classes in basic life support and advanced cardiac life support through an alliance with the American Heart Association (AHA). Further attached to the hospital are 24-hour -pharmacy and Dr. Adnan Kaddaha Clinic. Projects to expand the hospital structure and add more services that enable CEDARS Jebel Ali International Hospital to become a comprehensive tertiary care healthcare provider are under way. The hospital has successfully achieved JCI accreditation in June 2012.

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