Osteoarthritis

Overview: Osteoarthritis is a disorder affecting our joints; causing pain and gradual deterioration of function. Every joint is composed of two bones with a gap between them. Lining the bone on either side of the gap is a smooth material called cartilage that allows the joint to move freely. In the gap between the two cartilage surfaces is joint fluid. Around the joint is a capsule called the synovium. It contains the joint fluid. Overlying the synovium are ligaments and muscles keeping the joint intact and the bones in place.

In osteoarthritis there is a progressive loss of the smooth cartilage, exposing the rough bone underneath. The bone will compensate by increasing its growth. This causes spur formation where the ligaments and capsule attach to the bone. This combination of exposed bone and spurs make the joint stiff and painful. The causes of osteoarthritis are:

Joint overuse
Obesity
Fractures
Trauma to the soft tissues (cartilage)
Genetics

Diagnosis: The primary symptom of osteoarthritis is joint pain and stiffness. Sometimes the pain can be directed to some other area of the body that has a nerve connection with the joint. Patients with osteoarthritis of the hip may actually feel pain in their groin or knee. Patients with osteoarthritis of the spine may feel pain in the hip. If these symptoms are present, the doctor will order an X-ray, test the joint fluid and order blood tests to make sure there is no other disease present.

Treatment: Treatment of osteoarthritis should include medications, strength training, weight loss, minimal joint impact and surgical replacement of certain joints when necessary. Strength training is extremely important in patients with osteoarthritis. Avoiding physical activity causes the muscles around the joint to decrease in size or atrophy. As the muscles atrophy, the joint becomes less stable and that can have a negative effect on osteoarthritis. It is important to keep our body weight at ideal levels. Excessive body weight puts additional stress on the joint causing more pain. Using a walker or cane can make the joint feel better.

Your doctor may prescribe certain medications. There are over 17 different drugs, called nonsteroidal anti-inflammatory agents (NSAID) that are useful in the treatment of osteoarthritis. These drugs include medications such as ibuprofen, aspirin and Naprosyn. It is important to realize these drugs have significant side effects such as ulcer formation, water retention, increased blood pressure and increased stress on the kidneys and liver. Your doctor will want to monitor your response to these drugs very closely.

Depending on the location of the arthritis, injections can sometimes be given into the joint or adjacent nerve to help relieve the pain associated with a sudden flare up. The injection may require the use of an X-ray machine for accurate placement. If the injection is painful to administer, a light intravenous sedative such as Valium can be used to make the procedure comfortable. In some patients the joint function deteriorates so badly that surgery is the best option. Surgery is commonly used to replace the joints of the knees, hips and fingers. Other

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joint replacement surgeries such as the shoulder are being developed and with time may be as successful as hip and knee replacement.

It is important to remember to stay very active despite the osteoarthritis. Non-impact exercises such as bicycling and swimming are ideal. Strength training is very beneficial when done appropriately.

Prevention:

Main ideal body weight
Low-impact activities
Proper strength training