

Medicine for Managers

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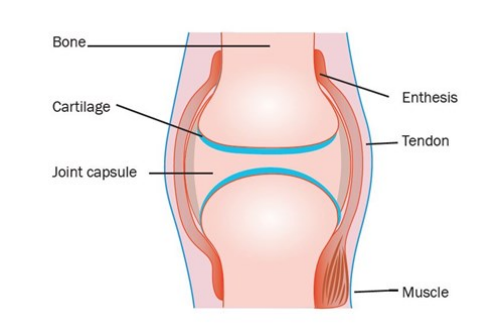
Arthritis

Arthritis is a term used to describe a group of diseases with different features and characteristics, which all affect the joints and lead to varying degrees of disability. They cause pain and inflammation and make activity more difficult. Each type of arthritis may cause different symptoms and may need different treatment. The disease is more common with advancing age and can affect men, women and children.

Simply, arthritis affects joints (where bones meet and move) usually producing inflammation, degeneration of the joint involved and pain when moving the joint. Stiffness is also common. The pattern of symptoms varies according to the type of arthritis involved.

The Parts of A Joint



The illustration is of a simple joint. The bones which form the joint are connected by a capsule and are cushioned and supported by soft tissue which prevents the bones rubbing against each other. The bone ends are covered in ***articular cartilage*** which helps the joint move smoothly. Many joints are supported by ***tendons*** and ***ligaments***. Tendons connect muscles to bones; ligaments connect bones to other bones

There are dozens of different types of arthritis. The type of arthritis can often be identified by taking a careful history and noting the types of joint involved, time of day when symptoms are most troublesome, the degree of stiffness and the presence of other associated features. The most common forms are ***osteoarthritis*** and ***rheumatoid arthritis***, but other forms include gout, ankylosing spondylitis, septic arthritis, psoriatic arthritis and juvenile arthritis.

Although the type of symptoms will vary according to the cause, most sufferers will have some or all of:

- Pain
- Redness (inflammation)
- Stiffness
- Swelling
- Tenderness
- Warmth of the joint
- Deformity

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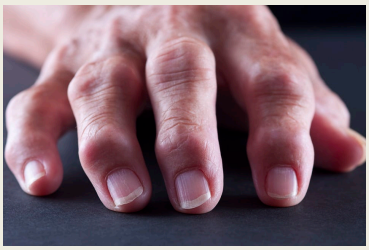

Arthritis is extremely common and most people have one or more arthritic joints which cause one or more of the characteristic symptoms.

Osteoarthritis is a condition which involves deterioration and destruction of joints through breakdown of the bone and the articular cartilage.

It is believed to be due to wear and tear but its occurrence in members of the same family suggests that there is a hereditary element. The principal symptoms are pain and stiffness, though joints may also crack on movement and become swollen.

Generally they are least troublesome after a night's rest, steadily worsening as the day progresses. The disease generally affects the large weight-bearing joints such as the hips, knees and spine although other joints may be involved. 80% of the population have X-ray evidence of osteoarthritis by the age of 65 and almost everyone suffers some sort of joint pains.

Rheumatoid arthritis is a systemic inflammatory disease associated with invasion of the joints by cells from the immune system, which produces destruction and distortion of joints and which may result in ankylosis (immobility) as an end result.

Rheumatoid arthritis commonly affects the small joints, typically of the fingers and hands. It is thought that about 1.5 men and 3.0 women in every 10,000 develop the disease each year and the overall incidence in the population is 1-2%. In general the age of onset is younger than for osteoarthritis. Pain and stiffness are often most severe at the beginning of the day.

Gout involves episodes of acute arthritis usually affecting isolated joints intermittently and is the result of the presence in the blood of high levels of uric acid which crystallises within the affected joint(s).

It is characterised by attacks of excruciating pain starting suddenly with reddening and some swelling of the joint. Without treatment a typical attack lasts around ten days. The classic affected joint is the big toe, but other joints are also often involved.

Ankylosing Spondylitis affects the spine and pelvis and the degeneration produced ultimately results in fusion of the spine making it immobile (a bamboo spine). It starts in young people and is usually inexorably progressive. It has a genetic basis.

Septic Arthritis is the result of an infection affecting one or more joints and is characterised by acute inflammation involving pain, swelling and redness of the joint, usually occurring rapidly. Common infecting organisms are staphylococcus, streptococcus, gonococcus and tuberculosis, although many other organisms have been implicated.

Psoriatic Arthritis is a type of arthritis causing inflammatory joint changes in patients with psoriasis. It occurs when the body's immune system attacks healthy cells and tissue. The immune response causes the inflammation in the joints as well as the overproduction of skin

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cells. It seems likely that both genetic and environmental factors play a role in the immune system response.

Juvenile Arthritis, formerly known as juvenile rheumatoid arthritis, is the most common type of arthritic disorder occurring in children under the age of 16. It may also be called idiopathic arthritis because the cause is unclear.

The disorder can cause persistent joint pain, swelling and stiffness. The symptoms may persist for just a few months or for many years. Some types of juvenile arthritis can cause serious complications such as joint damage and eye inflammation. Treatment is focused on controlling the pain, reducing the inflammation, improving joint function and minimising any joint damage.

Diagnosis depends on careful history and examination. The type of disease may be elucidated by X-rays of the affected joints and blood tests will usually establish a diagnosis of rheumatoid arthritis (by identification of rheumatoid factor) or the presence of a particular infection in a septic arthritis. Uric acid levels will confirm gout and genetic studies are valuable in ankylosing spondylitis.

Treatment of arthritis depends on the type of disease. Symptom relief is vital and simple measures such as weight loss and regular exercise are important. Medication includes simple pain relief, such as paracetamol, non-steroidal anti-inflammatory drugs such as ibuprofen, and in more severe cases, narcotics either alone or in combination such as codeine, dihydrocodeine, fentanyl and even morphine.

Glucosamine is often advocated but its efficacy is still a matter of debate. Acupuncture is sometimes helpful. For rheumatoid arthritis, steroid therapy is often useful, either orally or injected into the affected joints, but control of symptoms sometimes needs more aggressive therapy with drugs which stop the invasion of the joints by cells from the immune system.

Such drugs include methotrexate, azothiaprine, gold and other DMARDs (Disease Modifying Anti-Rheumatic Drugs). More recently anti-TNF drugs such as Adalimumab have become available. If inflammation is present Tumour Necrosis Factor (TNF) is overproduced in the body causing damage to bones, cartilage and tissue. Anti-TNF blocks TNF. It is used after other treatments in rheumatoid arthritis, psoriatic arthritis and ankylosing spondylitis, but only if the disease is active.

Treatment of septic arthritis involves treating the infection. Gout requires vigorous anti-inflammatory therapy and, usually, medication to lower the level of uric acid, together with plentiful fluids. Treatment of ankylosing spondylitis is often disappointing. All the arthritides may benefit from physiotherapy and exercise regimes.

Arthritis is distressing and a high proportion of consultations in general practice involve joint pain and damage. Even today, treatment is often disappointing and, for particular joints, only joint replacement offers effective relief of pain.

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