ANTIRHEUMATIC DRUGS

These drugs are used in the treatment of various rheumatic disorders, the most crippling and deforming being rheumatoid arthritis, an autoimmune disease in which the body's mechanism for fighting infection contributes to the damage of its own joint tissue. There is pain, stiffness, and swelling of the joints that, over many months, can lead to deformity. Flare-ups of rheumatoid arthritis also cause a general feeling of being unwell, fatigue, and loss of appetite.

Treatments for rheumatoid arthritis include drugs, rest, physiotherapy, changes in diet, and immobilization of joints. The disorder cannot yet be cured, but in many cases it does not progress to permanent disability. It also sometimes subsides spontaneously for prolonged periods.

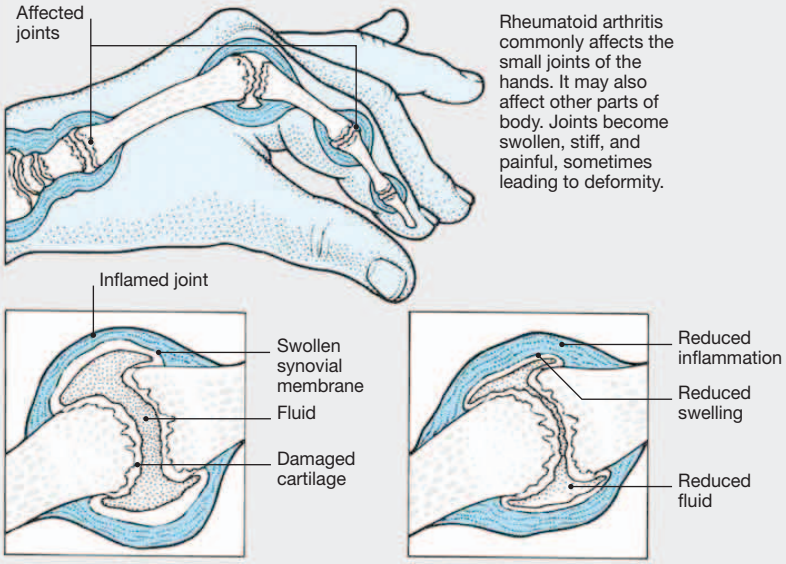
Why they are used

The aim of drug treatment is to relieve the symptoms of pain and stiffness, maintain mobility, and prevent deformity. Drugs for rheumatoid arthritis fall into two main categories: those that alleviate symptoms, and those that modify, halt, or slow the underlying disease process. Drugs in the first category include aspirin (p.162) and other non-steroidal anti-inflammatory drugs (NSAIDs, facing page). These drugs are usually prescribed as a first treatment.

Drugs in the second category are known collectively as disease-modifying antirheumatic drugs (DMARDs). They may be given if the rheumatoid arthritis is severe or if initial drug treatment has proved to be ineffective. DMARDs may prevent further joint damage and disability, but they are not prescribed routinely because the disease may stop spontaneously and because they have potentially severe adverse effects (see Some types of Disease- Modifying Antirheumatic Drug, below, for further information on individual drugs).

Corticosteroids (p.99) are sometimes used in the treatment of rheumatoid arthritis, but are used only for limited periods because they depress the immune system, increasing susceptibility to infection.

THE EFFECTS OF ANTIRHEUMATIC DRUGS



Before treatment
The synovial membrane surrounding the joint is inflamed and thickened, producing increased fluid within the joint. The surrounding tissue is inflamed and joint cartilage damaged.

After treatment
Treatment with antirheumatic drugs relieves pain, swelling, and inflammation. Damage to cartilage and bone may be halted so that further deformity is minimized.

How they work

It is not known precisely how most DMARDs stop or slow the disease process. Some may reduce the body's immune response, which is thought to be partly responsible for the disease (see also Immunosuppressant drugs, p.115). Monoclonal antibodies such as infliximab combine with a body protein known as tumour necrosis factor alpha (TNF), which is overactive in rheumatoid arthritis. By reducing the level of TNF activity, they can improve the arthritis. When effective, DMARDs prevent damage to the cartilage and bone, thereby reducing progressive deformity and disability. The effectiveness of each drug varies depending on individual response.

How they affect you

DMARDs are generally slow acting; it may be four to six months before benefit is noticed. So, treatment with aspirin or other NSAIDs is usually continued until remission occurs. Prolonged treatment with DMARDs can markedly improve symptoms. Arthritic pain is relieved, joint mobility increased, and general ymptoms of ill health fade. Side effects (which vary between individual drugs) may be noticed before beneficial effects, so patience is required. Regular monitoring of the kidneys, liver and bone marrow are needed. Severe adverse effects may require treatment to be abandoned.

SOME TYPES OF DISEASE-MODIFYING ANTIRHEUMATIC DRUG

Chloroquine was originally developed to treat malaria (see p.95). It and related drugs are less effective than penicillamine or gold. Since prolonged use may cause eye damage, regular eye checks are needed.

Immunosuppressants such as methotrexate (p.314) are given if other drugs do not provide relief and if rheumatoid arthritis is severe and disabling. Regular observation and blood tests must be carried out because these drugs can cause severe complications.

Sulfasalazine is used mainly for ulcerative colitis (p.70), but was originally introduced to treat mild to moderate rheumatoid arthritis. It slows the disease's progress in some cases and has a low risk of serious adverse effects.

Gold-based drugs are believed to be the most effective and may be given orally or by injection for many years. Side effects can include a rash and digestive disturbances. Gold may sometimes damage the kidneys, which recover on stopping treatment; regular urine tests are usually carried out. It can also suppress blood cell production in bone marrow, so periodic blood tests are also carried out.

Monoclonal antibodies such as infliximab (p.276) target a particular body protein that is responsible for rheumatoid arthritis. Monoclonal antibodies often cause allergy-type reactions, especially at the start of treatment. Infections, especially of the upper respiratory and urinary tracts, are common.

COMMON DRUGS

Immunosuppressants
Azathioprine ✻
Ciclosporin ✻
Cyclophosphamide ✻
Leflunomide
Methotrexate ✻

NSAIDs
(see facing page)

✻ See Part 3

DMARDs
Adalimumab
Chloroquine ✻
Etanercept ✻
Hydroxychloroquine
Infliximab ✻
Penicillamine
Sulfasalazine ✻
Sodium aurothiomalate