Understanding

Arthritis and Rheumatism

Doctor Jennifer G. Worrall
IMPORTANT
This book is intended not as a substitute for personal medical advice but as a supplement to that advice for the patient who wishes to understand more about his or her condition.

Before taking any form of treatment
YOU SHOULD ALWAYS CONSULT YOUR MEDICAL PRACTITIONER.

In particular (without limit) you should note that advances in medical science occur rapidly and some information about drugs and treatment contained in this booklet may very soon be out of date.

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The locomotor system

The bones, joints and muscles of the body make up the locomotor system, which enables us to move around. All sorts of problems may develop in this system, particularly as we get older. Although only 3 per cent of people under 60 years of age have joint pain or stiffness, the figure rises to almost 50 per cent of people aged over 75.

What is arthritis and rheumatism?

‘Arthritis’ refers to problems with the joints. There are many forms of arthritis, ranging from mild to serious, and not all of them get progressively worse.

‘Rheumatism’ is a vaguer term with no precise medical meaning, which refers generally to aches and pains and problems with the soft tissues, such as muscles and tendons, rather than with the joints.

The aim of this book is to help you understand how your locomotor system works, what can go wrong with it and what help is available if it does. I hope especially to show you that there is a lot that you can
The human skeleton

The human skeleton is able to move so well because it has many joints. These tend to degenerate over time and can cause pain and discomfort.

**BONES**

- Skull
- Clavicle (collar bone)
- Scapula (shoulder blade)
- Ribs
- Sternum (breast bone)
- Humerus
- Vertebrae
- Radius
- Ulna
- Hip bone
- Bones of the wrist and hand
- Femur (thigh bone)
- Patella (kneecap)
- Tibia
- Fibula
- Bones of the foot

**ARTHRITIS AND RHEUMATISM**

To help yourself, both to treat problems when they arise and to prevent them.

The problems of arthritis and rheumatism are not confined to older people – many common conditions affect people of all ages. Even people who do not have problems can learn to look after their joints better and so avoid problems in the future. So I hope that you will find something of interest to you whatever your age and whether or not you have arthritis. On page 112, you will find a list of addresses for further information.

**How your joints work**

**Synovial joints**

Joints hold the bones together and generally allow movement. Some joints, such as those in the pelvis, do not move very much and those in your skull do not move at all. But many joints can move freely and those that do are called ‘synovial joints’. All of the most important joints in the body are of this type and have the same basic structure (see below). They are capable of a wide range of movement and come in many different shapes and sizes – compare the joints in your finger with those in your knees, for example; the joints look different but are made up of the same basic elements.

The ends of the two bones forming the joint are covered by cartilage. This is a gristly material which acts as a shock absorber and helps the bones to move smoothly over each other. The bones are held together by very strong ligaments and the whole joint is contained in a bag called a ‘capsule’. The inside of the capsule is covered with a lining called ‘synovium’ (hence the name ‘synovial joint’) which forms a slippery surface and so allows the joint to move easily. The joint capsule contains a small amount of...
Synovial joints
Although the synovial joints in your body come in a wide range of shapes and sizes, they are nevertheless made up of the same basic elements.

- Bone – hard framework that supports and protects tissues
- Ligaments – hold the bones together and form the capsule
- Synovium – secretes the synovial fluid
- Cartilage – protects the ends of the bones
- Synovial fluid – lubricates the joint capsule

Lubricating liquid, called ‘synovial fluid’, which is produced by the synovium.

When a joint moves, the muscles and tendons around it need to slide easily over each other and this smooth action is helped by structures called ‘bursas’. A bursa is a flattened sac, rather like a balloon before it has been blown up. It contains a small amount of synovial fluid, which makes the internal surfaces slippery and allows them to slide over each other. Many tendons run in lubricated sheaths, also lined by synovium (see diagram on page 6).

Smooth joint movement: bursas and synovial fluid
Left knee, seen from the left side. Bursas are flattened sacs, containing synovial fluid which makes them slippery, allowing the muscles and tendons to slide easily over each other when the joint moves.

Case history: Alan
Alan went to his GP because he started feeling a pain in his groin whenever he walked any distance, and thought he might have developed a hernia. After examining him, Alan’s doctor found that his right hip was rather stiff and sent him for an X-ray. This showed that, at 70, Alan had mild osteoarthritis in his right hip joint. His GP advised him to take simple pain-killers when necessary but stressed the importance of
was taking her an hour and a half to get going in the morning, and this was a problem as she needed to get her children off to school. She saw her GP and eventually investigations revealed that she had rheumatoid arthritis. Cathy was referred to hospital where the consultant started her on drugs to ease the pain and swelling and to slow the progress of her condition. Cathy saw a physiotherapist, who advised her on suitable exercise to keep her joints working, and she saw an occupational therapist, who advised her on ways of doing her daily tasks to limit the strain on her joints. She had to attend the outpatient clinic regularly for monitoring and, after a few weeks, her symptoms were far less of a problem than before.

**Case history: Cathy**

Cathy was just 35 when she noticed that her hands were becoming swollen and painful. She also felt tired and under the weather and very stiff all over her body first thing in the morning. After about six weeks, it

keeping active and taking regular exercise. Alan joined an over-50s swimming group at his local leisure centre and, after a few weeks of regular sessions, he found the groin pain much less troublesome.

**Key points**

- Arthritis is very common and there are many different types
- There is a lot of help – including self-help – available for arthritis sufferers
- All joints that move freely have the same basic structure
- The soft tissues making up a joint – ligaments, cartilage, capsule and the lining of the joint or synovium – are just as important as the bones
Getting a diagnosis

What are the symptoms?
When your locomotor system goes wrong, you feel pain and stiffness and you may notice swelling of your joints. Symptoms can be very troublesome, even disabling, and can sometimes be out of all proportion to the seriousness of the condition.

Pain, in particular, is a complex symptom and can be made much worse by stress, anxiety or depression. It is important to recognise these influences and not just assume that your arthritis must be getting worse.

Expectations can also play a part here. If you had watched an older relative gradually become disabled by painful arthritis, perhaps in the days before we had effective treatments, then, at the first sign of the inevitable aches and pains of middle age, you might become worried and upset that the same fate awaits you. Your anxiety and distress would make your pain much worse, and pain is by far the most disabling symptom – joints that are structurally sound may be almost useless if every movement causes severe pain.

Fortunately, we now understand a great deal about joint symptoms and arthritis, and we have lots of treatments and advice to help sufferers lead normal lives.

When you go to your doctor with pain, stiffness or swelling of a joint, your doctor will need quite a lot of information from you and may order various tests to establish the cause of the problem. Pain in or around a joint (known medically as ‘arthralgia’) doesn’t necessarily mean that you have arthritis. Other diseases can produce this kind of symptom. Flu, for example, can cause severe aching pain in the joints and muscles but the pain disappears as you recover.

Seeing the doctor
Taking your history
When you first talk to a doctor about your problems, he or she will check your symptoms and your past record of health. This is called ‘taking your history’.

Your doctor will also want to know whether any close relatives have arthritis. Your family history is relevant because some people inherit a genetic susceptibility to some forms of arthritis. You should also tell your doctor if you have had any past injury to the joint, because this may cause problems to develop later on.

Certain other conditions may be associated with the onset of arthritis, such as the skin disease psoriasis or the bowel condition ulcerative colitis. Sometimes, arthritis can follow an infection – when it is called ‘reactive arthritis’ – so it is important to mention any recent foreign travel in case you may have picked up an infection that could account for your symptoms.

Try to be as exact as you can when describing your symptoms – when they began, whether anything triggered them, whether they are constant or intermittent, whether anything makes them better or
worse, what treatment you have tried so far and what effect it had, including side effects.

**Physical examination**
Your doctor may need to examine you thoroughly, even if you have only a single painful joint, because other joints may be similarly affected, even if they are not painful at the moment. Sometimes, a problem in one joint can cause strain in nearby joints.

Although these joints are normal, they become painful. For example, shoulder pain may be caused by a problem in the neck, back pain can arise from knee or hip problems, which are affecting the way you walk, and your knee may hurt even though the real problem is actually in your hip joint.

During the examination, your doctor will be looking for swelling, tenderness, stiffness of the joint and whether the joint is stable, which involves checking the muscles and ligaments that hold the joint in position. Your doctor may also take the opportunity to do other routine checks, such as measuring your blood pressure.

**Tests and investigations**
Very often, your doctor will be able to identify your problem without the need for any tests, especially if only one joint is painful or if the diagnosis is obvious and straightforward. Otherwise, the tests that you have will depend on individual circumstances, but may include some or all of the following.

**Blood tests**

**Full blood count**
A machine counts the number of red and white blood cells and platelets in a cubic millimetre of blood.

The haemoglobin level in the red blood cells is also measured. This shows whether you are anaemic, as can happen in rheumatoid arthritis. Anaemia is a disorder in which haemoglobin (the oxygen-carrying component of red blood cells) is deficient or abnormal. A full blood count also measures the number of white cells in the blood, which can be increased in infection.

**Erythrocyte sedimentation rate (ESR)**
Blood consists of cells and fluid (plasma). The most numerous blood cells are red blood cells which transport oxygen round the body. The ESR measures the stickiness of the red blood cells. A raised ESR suggests that inflammation is present, although it gives no indication as to the cause. The ESR is raised in those
Reduced joint space
The space between the bones of the joint is normally filled with cartilage, which cannot be seen on an X-ray. In many forms of arthritis, but especially in osteoarthritis, the cartilage becomes thinner and the joint space becomes narrower.

Erosions
These are holes in the bones of the joint and they occur in advanced arthritis. Erosions can occur in rheumatoid arthritis and other forms of arthritis where the joints are severely inflamed. They are very unusual in osteoarthritis.
How common is osteoarthritis?
Osteoarthritis is very common and affects most of us as we get older. It is the most common form of arthritis in people over the age of 65. Men are more likely to be affected than women before they reach 45, but, in the over-55s, the balance shifts so that more women are affected.

Osteoarthritis is sometimes called ‘wear-and-tear arthritis’ and ‘degenerative arthritis’, but wear and tear and degeneration are not the whole story. Lots of people who have done heavy work all their lives do not develop osteoarthritis and it is not confined to older people.

Does it run in families?
Osteoarthritis can run in families and, if your parents had it, you have a slightly greater chance of developing it too. It can also develop early in any joint that has previously been seriously injured. Footballers, for instance, often suffer repeated cartilage injuries and may develop osteoarthritis in their knees. Besides the