



What is arthritis?



Arthritis affects millions of people worldwide and can have a huge impact on the lives of those with the condition. In this booklet we'll explain the main types of arthritis, their causes and symptoms, as well as looking at the various treatments available. We'll also suggest where you can find out more about living with arthritis.

At the back of this booklet you'll find a brief glossary of medical words - we've underlined these when they're first used in the booklet.

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At a glance

What is arthritis?

Arthritis is a term used by doctors to describe conditions affecting the joints. In fact, there are about 200 different musculoskeletal conditions in all, which fall into five main groups:

- **Inflammatory arthritis** is a condition where the body's immune system attacks the joints and causes them to become swollen. A common example is rheumatoid arthritis, which affects around 400,000 people in the UK.
- **Degenerative or mechanical arthritis** is a group of conditions where the surface of the bones in the joints becomes damaged. Commonly called osteoarthritis, it's estimated that this affects around 8 million people in the UK.
- **Soft tissue musculoskeletal pain** is a term which covers pain felt in the muscles or soft tissues surrounding joints. An example of this type of pain is tennis elbow.
- **Back pain** is a common complaint that affects four out of five people at some time or another. It isn't usually a sign of arthritis and is often a short-term problem, although long-term back pain may have a more complex cause.

The two most common types of arthritis are osteoarthritis and rheumatoid arthritis.

- **Connective tissue disease (CTD)** affects the tissues that support or bind other body tissues and organs. This may affect the joints, but muscles, lungs, skin and kidneys may also be affected.

Who gets it?

Men and women of all ages can get arthritis; however, there are a number of factors which can make you more likely to develop arthritis, including:

- **Genetics** – many forms of arthritis run in families, although this isn't always the case.
- **Lifestyle** – physically demanding jobs can sometimes lead to osteoarthritis.
- **Trigger factors** – short-lived arthritis can be triggered by some infections or allergic reactions.

But this isn't a definitive list as there are many varied reasons why people develop arthritic conditions. For many conditions there's a strong element of chance.

What are the symptoms?

As there are many forms of arthritis, the symptoms are varied. These can range from swollen, painful joints to less obvious symptoms such as tiredness, weight loss and skin rashes. Seek advice if:

- you feel aches and pains in your joints or other tissues which aren't related to an injury, or if the pain from an injury won't subside
- a joint becomes swollen, particularly if not linked to injury
- you're unable to perform your daily tasks because of muscle or joint pains.

What treatments are there?

Treatments for arthritis are varied, but could include drug treatments, physical therapies and surgery.

Drug treatments include:

- drugs that treat the symptoms of arthritis, such as painkillers, anti-inflammatory drugs (NSAIDs) and steroids
- drugs that suppress inflammatory disease, such as biologic drugs and disease-modifying anti-rheumatic drugs (DMARDs).

Physical therapies include:

- hydrotherapy, where exercises are performed in a warm-water pool, providing support for your joints
- physiotherapy, where you'll be given advice on things like exercises specific to your condition, as well as things like massage and pain relief
- occupational therapy, where you can get help and advice about any difficulties with everyday activities.

Surgery includes:

- joint replacements for severe cases
- other pain-relieving or reconstructive operations.

How can I help myself?

Simple tips for self help and daily living that can make your arthritis more bearable:

- rest and exercise to keep the joints as mobile as possible
- keeping to a healthy diet
- stress management
- complementary medicine, such as osteopathy, chiropractic, homeopathy, acupuncture and herbalism
- food supplements.

More than 10 million adults will seek help from their GP each year with arthritis and related conditions. There are around 400,000 people with rheumatoid arthritis in the UK and over 20,000 new cases each year. It's estimated that about 8 million people in the UK have osteoarthritis.

About 15,000 children and adolescents in the UK will suffer from juvenile forms of arthritis.

What is arthritis?

Arthritis is a term used by doctors to describe inflammation within a joint, although there are several forms of the condition and each has a specific medical name. Rheumatism is a more general term that is used to describe aches and pains in or around the joints. Because there are many possible causes of these pains, doctors don't often use the term 'rheumatism' and will usually refer to these problems either by a specific diagnosis or according to the part of the body affected. Doctors sometimes use the terms 'musculoskeletal conditions' or 'the rheumatic diseases' to refer to a whole range of conditions that affect the joints.

What are the main types of musculoskeletal condition?

There are about 200 different musculoskeletal conditions, which fall into five main groups:

Inflammatory arthritis

Inflammation, or swelling, is part of your body's healing process. It normally occurs as a defence against viruses and bacteria or as a reaction to injuries such as a burn. But in people with arthritis, inflammation often occurs for no obvious reason. Instead of helping to repair the body, inflammation causes the tissues in and around the affected joints to become damaged, causing pain, stiffness and swelling.

Arthritis literally means inflammation within the joint itself, but inflammation may also affect the tendons and ligaments surrounding the joint (this is known as enthesitis). Inflammation can damage the surface of the joint and sometimes the underlying bone. Inflammatory types of arthritis often affect several joints. Rheumatoid arthritis is an example, but there are many other forms of inflammatory arthritis, including:

- reactive arthritis
- arthritis associated with colitis or psoriasis
- ankylosing spondylitis.

i See Arthritis Research UK booklets
Ankylosing spondylitis; Psoriatic arthritis; Reactive arthritis; Rheumatoid arthritis.

Degenerative or mechanical arthritis

This is a group of conditions where the main problem is damage to the cartilage which covers the ends of the bones. Normally the smooth, slippery cartilage helps the joint to move smoothly. In this type of arthritis the cartilage becomes thinner and rougher, and the bone underneath then tries to repair this damage but sometimes overgrows, altering the shape of the joint. This is generally known as osteoarthritis. It's more common in older people and particularly affects the joints that get heavy use (e.g. hips and knees). Osteoarthritis can also result from

damage to the joint, for example a fracture or previous inflammation in that joint (see Figure 1).

i See Arthritis Research UK booklets

Osteoarthritis; Osteoarthritis of the knee.

Soft tissue musculoskeletal pain

Soft tissue musculoskeletal pain is often felt in tissues other than your bones and joints. Typically it'll come from the muscles or soft tissues supporting the joints, including the [bursa](#). You may find this type of pain is localised to one particular part of the body following an injury or overuse. You might find that the pain is more widespread and, if associated with other symptoms, a diagnosis of fibromyalgia may be made. Often the causes of these symptoms are not fully understood.

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Fibromyalgia; Neck pain; Shoulder pain; Work-related joint disorders.

Back pain

Back pain is a very common problem that has a number of different causes. Pain can arise from muscles, discs, ligaments, bones and joints. It may even be caused by problems with other organs inside the body (this is known as 'referred pain'). Sometimes there's a specific cause such as the degenerative condition osteoarthritis, (often referred to as [spondylosis](#) when it occurs in the spine).

Sometimes back pain may be caused by a slipped disc (the disc itself doesn't really slip; the central part of the disc bulges through the outer ring) but this more commonly causes pain in a limb. [Osteoporosis](#) (thinning of the bones) can cause sudden back pain if one of the bones in the spine crunches down. In the majority of cases it isn't possible to identify the exact cause of the pain, and doctors often describe this as non-specific or simple back pain.

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Back pain; Osteoporosis.

Connective tissue disease (CTD)

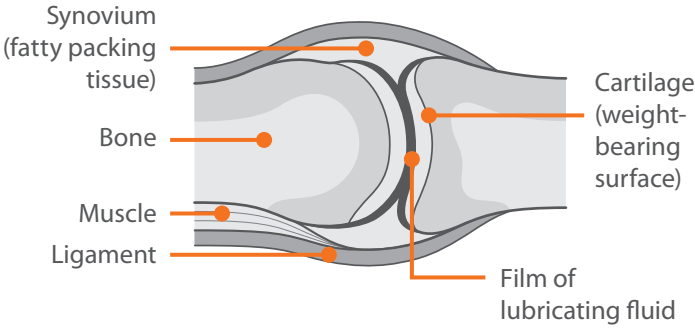
Connective tissues are tissues that support, bind together or separate other body tissues and organs. They include tendons, ligaments and cartilage. Joints are usually involved in CTD, but there may also be inflammation in other tissues such as your skin, muscles, lungs and kidneys, so you may feel a range of other symptoms besides painful joints. Examples of this type of disease include systemic lupus erythematosus (SLE or lupus), scleroderma and dermatomyositis. Your healthcare team will often include different specialists along with your GP because these diseases often affect many organs.

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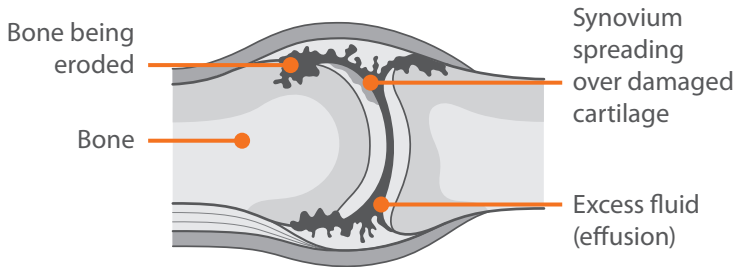
Lupus (SLE); Polymyositis and dermatomyositis; Scleroderma.

Figure 1
Normal and
arthritic joints

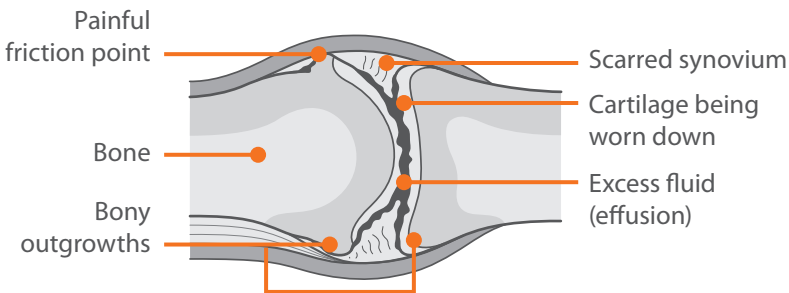
(a) A normal joint



(b) A joint affected by rheumatoid arthritis



(c) A joint affected by osteoarthritis



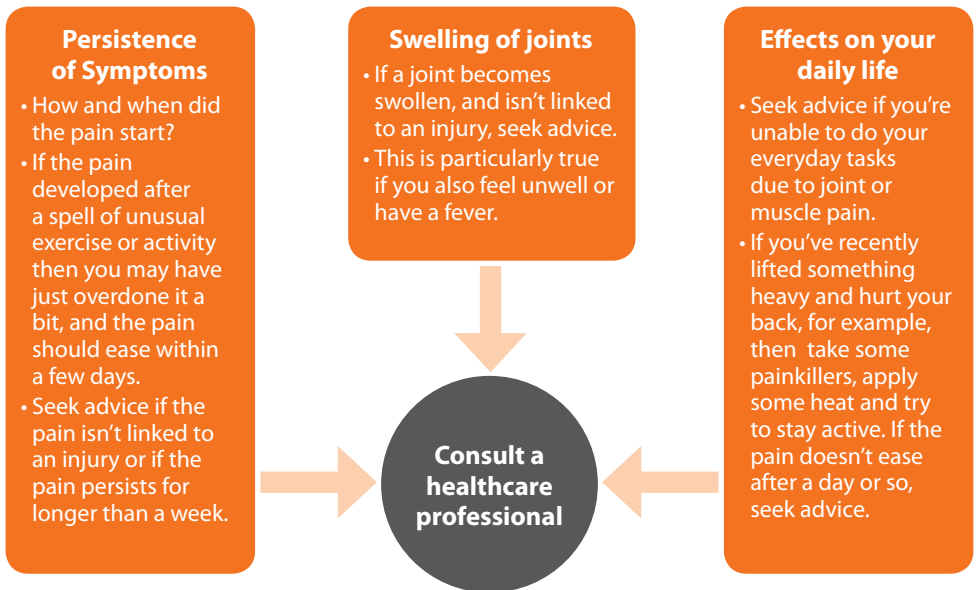
What are the symptoms of arthritis?

As there are many types of arthritis, there's also a wide range of symptoms. With inflammatory arthritis there's likely to be more swelling of the joints and more variation in the pain (which cannot be explained simply by the level of physical activity). Other symptoms of a rheumatic disease can include tiredness, a general feeling of being unwell, weight loss, mild fevers or night sweats, and skin rashes. But remember these symptoms aren't specific to arthritis and can be caused by other illnesses.

It's common to experience aches and pains in your muscles and joints from time to time, particularly if you take part in unusual or particularly strenuous physical activities. So how can you distinguish the early signs of arthritis from normal pain and stiffness? And how do you know when you should see your doctor about your symptoms? (see Figure 2).

! If you experience swelling, stiffness or a painful squeeze in your joints, you need to consult your doctor. The earlier you get diagnosed the better the outcome.

Figure 2 Factors you should consider before seeing a healthcare professional



Who gets arthritis?

Arthritis and other types of musculoskeletal pain are common, worldwide problems. They affect people regardless of age, sex, race, class or country.

Millions of people in the UK alone will experience some form of muscle or joint pain during the course of a year, although many people won't have persistent or severe symptoms.

Around 10 million people will seek help from their family doctor each year with arthritis or related conditions. There are around 400,000 people in the UK with rheumatoid arthritis and around 20,000 new cases each year. It's estimated that around 8 million people in the UK have osteoarthritis. Others will have localised musculoskeletal pain, back pain or osteoporosis. Some people will have one of the less common conditions and about 15,000 children and adolescents will suffer from juvenile forms of arthritis (see Figure 3).

Figure 3 Approximate numbers of people affected by some of the rheumatic diseases. This is based on those seeking treatment from their doctor.

Rheumatic disease	People affected
Osteoarthritis	8 million (estimate)
Rheumatoid arthritis	over 400,000
Gout	250,000
Ankylosing spondylitis	30,000
Juvenile idiopathic arthritis	15,000
Systemic lupus erythematosus	10,000

What causes arthritis?

There isn't a single answer to this question, as there are many different forms of arthritis to be considered.

Most types of arthritis are caused by several factors acting together. You may be naturally more likely to develop certain disorders as a result of your genetic make-up (see section on genetics and family risks) and a variety of external factors may increase the risk further if you're susceptible to the condition in question. These include environmental factors – e.g. previous injury, infection, smoking, and occupations which are very physically demanding (see section on lifestyle and trigger factors). For many conditions there's also a major element of chance.



Genetics and family risks

Most forms of arthritis run in families to a small extent. The way your body is made (based on the genes passed on from your parents) makes you more or less likely to develop the disease in question. Arthritis Research UK supports research that's helping us to understand the genetic side of arthritis. We believe this could eventually lead to our being able to prevent some forms of arthritis.

Lifestyle and trigger factors

Arthritis can start suddenly without any obvious cause, and at any age. Sometimes something in your lifestyle or medical history – or a combination of these – could be responsible. For example, if you have a physically demanding job you may be at greater risk of developing osteoarthritis, particularly if the job involves repetitive activity. Also, a previous injury can increase the likelihood of osteoarthritis.

Infections or an allergic reaction can cause short-lived arthritis. It's been thought that rheumatoid arthritis may be triggered by infections, but there's no direct evidence for this. Some foods may appear to make your arthritis worse, but diet and food intolerance are unlikely to cause long-term arthritis.

What is the outlook?

The symptoms of musculoskeletal problems tend to vary from day to day and from week to week. Many problems will get better by themselves, including such things as sprains. Episodes of backache or painful flare-ups of rheumatoid arthritis are also often short-lived even though the underlying cause hasn't changed. Other conditions, including gout, can often be controlled by treatment.

Many types of arthritis, including rheumatoid arthritis and osteoarthritis, are long-term conditions, where the disease cannot be cured. The symptoms of these conditions tend to vary over time. Often your symptoms may go into remission for quite some time, but then there will be period where your symptoms become worse for a while. Although these flare-ups may be related to things like viral infections, they will often happen for no apparent reason. The aim of treatment is to keep you in remission for as much of the time as possible, so that you can get on with your life as normally as you can, while minimising any progression of the disease.

Arthritis can affect people in different ways and this makes it difficult for doctors to predict a clear outcome for any one patient. However, most people with arthritis don't have major mobility problems, and effective treatment will help reduce the risk of disability or joint damage, even in more severe cases.



How is arthritis diagnosed?

Your doctor will diagnose your arthritis by asking you about your symptoms and how they've developed (your history); examining you (physical examination); and possibly arranging for tests to be done (investigations).

1. Symptoms

Your doctor will need to know the site of your pain (whether in the joint or between the joints) and which joints are involved.

Separating inflammatory arthritis from degenerative is important. To do so your doctor will look for any swelling

in or around your joints, as this is a symptom of inflammatory arthritis.

Arthritic conditions can affect other organs in your body, so your doctor will ask about other aspects of your health.

2. Examination

Your doctor will be able to tell a lot from examining you. For example:

- Inflammatory arthritis is likely to cause swelling in the joints.
- Degenerative arthritis will usually cause pain and restricted movement, but with less swelling, and often a grating feeling (crepitus).
- Soft tissue disease will usually cause tenderness and pain.
- Because some forms of arthritis have other signs and symptoms (e.g. a rash or mouth ulcers), your doctor may need to examine other parts of your body.

3. Tests

Tests may be carried out to help confirm the diagnosis, to rule out other possible causes or assess the severity of your condition:

- Blood tests help make a diagnosis, and monitor your condition or drug treatments.
- X-rays show bone abnormalities or damage, but aren't very good for detecting early signs of arthritis.
- MRI scans show soft tissues, detect early problems and show inflammation.
- Computerised tomography (CT) records 'slices' of the body to give detailed pictures of the skeleton and other tissues.
- Ultrasound can detect a build-up of fluid around joints (synovitis).
- Synovial fluid analysis looks at the lubricating fluid from joints. It can help to diagnose inflammation, infection and gout.
- A biopsy is when a small amount of tissue is removed and analysed. It's only done when absolutely necessary.
- Urine tests help with a diagnosis and monitor drug treatments.

Figure 4 Some drugs are used in all types of arthritis, while others are only used in certain types of disease. Many people may benefit from a combination of drug treatments.

Drugs that treat the symptoms		
Type	Examples	Used for
Analgesics	<ul style="list-style-type: none"> • paracetamol • co-codamol • tramadol 	all types of arthritis
Non-steroidal anti-inflammatory drugs (NSAIDs)	<p>Standard NSAIDs:</p> <ul style="list-style-type: none"> • aspirin • ibuprofen • indometacin • diclofenac <p>COX-2 NSAIDs:</p> <ul style="list-style-type: none"> • celecoxib • etoricoxib 	all types of arthritis (including osteoarthritis if there is inflammation)
Steroids	<ul style="list-style-type: none"> • prednisolone, tablets or injections 	given as tablets in inflammatory arthritis or connective tissue disease; may be given as an injection into any swollen, painful joint

Drugs that suppress the disease		
Type	Examples	Used for
Disease-modifying anti-rheumatic drugs (DMARDs)	<ul style="list-style-type: none"> • methotrexate • sulfasalazine • leflunomide • hydroxychloroquine • azathioprine 	inflammatory arthritis, some connective tissue diseases
Biological therapies	<p>anti-TNF:</p> <ul style="list-style-type: none"> • etanercept • infliximab • adalimumab • abatacept • certolizumab pegol 	rheumatoid arthritis, psoriatic arthritis, ankylosing spondylitis
	<p>B-cell depletion:</p> <ul style="list-style-type: none"> • rituximab 	severe rheumatoid arthritis

What treatments are there for arthritis?

Just as there's no simple answer to the cause of most forms of arthritis, there is – as yet – no single cure for most rheumatic diseases. For some diseases there are drugs that will correct the problem, but for most rheumatic diseases this isn't the case. But with modern treatment the symptoms can be effectively controlled. Research has led to great improvements in this area.

Treatment has to be tailored to the needs of each individual, because the severity, impact and type of arthritis is different from person to person. You and your healthcare professionals will need to balance the risks and benefits of each treatment, based on your personal needs and circumstances.

Drugs

Drug therapies are designed to help your arthritis. In the case of inflammatory arthritis, it's important to start them quickly because the sooner treatment is begun the more effective it's likely to be (see Figure 4).

Drug therapy can be divided into two main groups:

- drugs that treat the symptoms of arthritis (e.g. pain and stiffness)
- treatments that suppress inflammatory disease and may improve the outcome.

Drugs may be available under different names. Each drug will have an approved (scientific) name – these are the names

used in this booklet. But different manufacturers may give their own brand name or trade name to a drug – for example, Voltarol and Diclomax are both brand names for diclofenac.

It's important to understand that there's no effective treatment that doesn't occasionally cause side-effects. Minor side-effects aren't uncommon, but fortunately serious side-effects are rare. These problems can be minimised by following your doctor's advice.

Drugs that treat the symptoms

Analgesics (painkillers), such as paracetamol, reduce pain. These can be used for all types of arthritis. It's best to take them before an activity that is likely to aggravate the pain rather than wait until your pain is very bad.

Anti-inflammatory drugs (NSAIDs)

reduce stiffness and swelling, as well as relieving pain. They reduce inflammation, but they can also be helpful in types of arthritis where inflammation isn't the main problem (e.g. osteoarthritis). They can be used for short spells when your symptoms flare up, and in combination with analgesics if you need extra pain relief. You should take the lowest dose of anti-inflammatory that controls your symptoms, and for the shortest possible time. Your doctor may advise you to use them for short spells rather than taking them all the time. Sometimes you may be given an NSAID cream to rub on the affected joint – this reduces the risk of side-effects.

Many people with arthritis may benefit from a combination of drug treatments.

! Like all drugs, NSAIDs can sometimes have side-effects, but your doctor will take precautions to reduce the risk of these side-effects – for example, by prescribing the lowest effective dose for the shortest possible period of time.

NSAIDs can cause digestive problems (stomach upsets, indigestion, or damage to the lining of the stomach) so in most cases NSAIDs will be prescribed along with a drug called a proton pump inhibitor (PPI), which will help to protect the stomach.

NSAIDs also carry an increased risk of heart attack or stroke. Although the increased risk is small, your doctor will be cautious about prescribing NSAIDs if there are other factors that may increase your overall risk – for example, smoking, circulation problems, high blood pressure, high cholesterol or diabetes.

Steroids are powerful, natural anti-inflammatory agents, which can be injected into painful joints or into the muscles. They can also be used in tablet form. They may also have some effect on the way the disease progresses.

Steroids are most commonly used to treat inflammatory arthritis and connective tissue diseases, but they can be used in treating osteoarthritis. This is usually done as a joint injection to ease a flare-up in a single joint.

! Steroids can have side-effects – especially if used for a long time – as well as great benefits. One of the possible side-effects of steroid treatment is osteoporosis. Because of this, steroids are commonly used only for short periods. If you do need steroid treatment on a long-term basis you may be given other tablets with them to protect against osteoporosis. You mustn't stop using steroids without discussing it with your doctor.

Drugs that suppress inflammatory disease

Disease-modifying anti-rheumatic drugs (DMARDs) suppress inflammation. These drugs are used to treat inflammatory types of arthritis and occasionally some types of connective tissue disease. It may be several weeks before they have any effect so anti-inflammatory drugs are often used alongside them. It's usual to have regular blood tests while you're on disease-modifying drugs, and your blood pressure and urine may also be checked regularly. These drugs can be stopped for short periods without harm, for example if you're on a course of antibiotics for an infection (see Figure 4).





Biological therapies are a new class of drug. They're used in treating rheumatoid arthritis and in some other types of inflammatory arthritis when other types of disease-modifying drugs haven't been effective. They're unique in the way they work, as they were made specifically to block messages between the white blood cells that cause inflammation. Some biological therapies are classified as anti-TNF drugs. Anti-TNF drugs target a protein called tumour necrosis factor, which increases inflammation when excess amounts are present in the blood or joints. Other biological therapies, such as B-cell depletors, target different proteins (see Figure 4).

! Drugs are often beneficial, but they need to be used carefully, according to your doctor's instructions. If you're worried, or think that they may be causing side-effects, consult your doctor.

i See Arthritis Research UK individual drug leaflets

Physical therapies

Often your doctor will recommend a course of physical therapies to help you overcome some of the symptoms of your arthritis.

i See Arthritis Research UK booklets
Hydrotherapy and arthritis;
Occupational therapy and arthritis;
Physiotherapy and arthritis.

Hydrotherapy involves special exercises that take place in a warm-water pool, usually within a hospital physiotherapy department. If you have arthritis in several joints then hydrotherapy may benefit you. This is because all your joints can be easily exercised in the warm water, which supports your weight and puts less pressure on your muscles.

Physiotherapy helps to improve your general fitness and muscle strength, helps to manage your pain and restore the function of parts of your body affected by arthritis.

A course of physiotherapy may include specific exercises tailored to suit your needs, and general advice about your activity level and how to avoid injuries. You may also be given pain relief treatments such as ice or heat packs and massage. Your physiotherapist can also provide you with appropriate aids, such as a walking stick.

Occupational therapy will help if you have difficulty with everyday activities due to your arthritis. Your occupational therapist will assess your condition and offer you practical advice on overcoming everyday difficulties, such as household tasks, driving, and washing or dressing. By analysing how you go about your day-to-day tasks, your therapist may be able to suggest ways of making them more manageable. This may include advice on how to position yourself more comfortably, introducing specialist equipment and mobility aids, and providing splints to rest or support your joints.

Surgery

Surgery may be necessary and advisable if the damage to a joint is severe enough to cause difficulties with everyday life, and when other treatment isn't reducing the pain. Joint replacements are now very sophisticated and successful. Many different joints, including hips, knees, shoulder and elbow joints, are routinely replaced in people with advanced arthritis. There are also a number of other pain-relieving or reconstructive operations which are sometimes helpful (see Figure 5).

i See Arthritis Research UK booklets

Hand and wrist surgery; Hip replacement; Knee replacement; Shoulder and elbow joint replacement.

Who will be involved in my treatment?

Go to your own doctor's surgery first. They can often provide all the help you'll need. If necessary you may be referred to hospital to see a specialist such as a rheumatologist or an orthopaedic surgeon. Your doctor or specialist may suggest you see other professionals such as specialist nurses, physiotherapists, occupational therapists or podiatrists.

GPs:

- will refer you to your local rheumatology department if a rheumatological disease is suspected

- will be involved in prescribing repeat prescriptions for medications
- may be involved in blood tests for monitoring.

Consultant rheumatologists:

- will usually determine your diagnosis
- will provide you with advice about the likely effects of a condition and prescribe the relevant treatments
- will monitor your condition and oversee your treatment
- work closely with orthopaedic surgeons if you require surgery.

Hospital doctors (registrars, SHOs):

- will work alongside your consultant and rheumatology team.

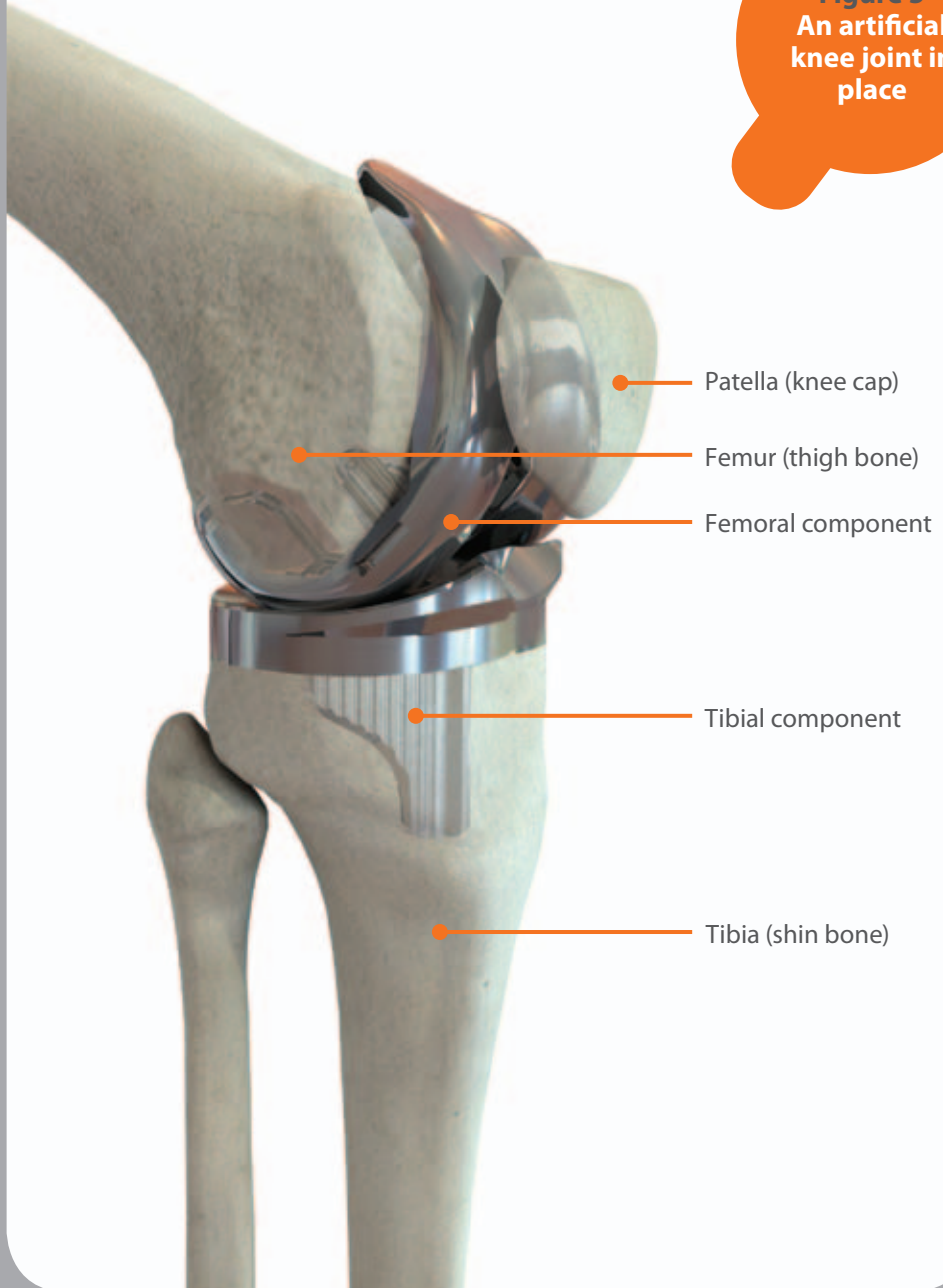
Specialist rheumatology nurses:

- provide you with information about your condition and its treatment
- provide you with advice about any changes to your lifestyle
- will help to monitor the safety and effectiveness of your drugs.

Physiotherapists:

- will teach you exercises to help improve your movement and reduce pain
- help you improve your fitness
- can help with pain relief through massage or splints
- help with choosing things like walking aids.

Figure 5
An artificial
knee joint in
place



Occupational therapists:

- can advise you on how to protect and reduce the strain on painful joints
- help you find ways of carrying out everyday tasks
- can advise you on personal or sensitive activities or concerns such as hygiene needs or relationship issues.

Podiatrists:

- offer expert advice on feet and footwear
- can also help with foot or nail care if your arthritis makes this difficult.

Orthotists:

- specialise in the use of appliances to support weakened joints
- will recommend specialist shoes or insoles for problems in the feet or legs, and splints for hands and wrists
- specialist orthotists can assist with custom-made devices.

Help is also available from a variety of other sources, for example, pain clinics, social services and voluntary sector organisations such as Arthritis Care. If you're having difficulty at work, help will be available from the Employment Medical Advisory Service and the local Disability Employment Adviser (See 'Where can I find out more?').

i See Arthritis Research UK booklets

Caring for a person with arthritis; Feet, footwear and arthritis; Looking after your joints when you have arthritis; Meet the rheumatology team; Sex and arthritis; Work and arthritis.

- ! There are many treatments and therapies available which can help with your arthritis. Make sure to seek professional advice and be prepared to follow it.

How can I help myself?

There are many ways that you can help yourself if you have arthritis. Some of these are described below, and further information can be found in the Arthritis Research UK booklets and leaflets referred to.

Rest and exercise

It's important to keep your joints moving and your muscles strong – whether you have arthritis or not. It's generally true that the stronger the muscles which support a joint, the less pain you'll experience in that joint.

If a joint is very inflamed, a short period of rest may help the inflammation to settle down. You should also protect inflamed or damaged joints. It's better to use them little but often rather than persisting with activities that afterwards cause lasting pain. But it's also important not to rest the joints too much.

Make sure you put your joints through a full range of motion at least once a day, to prevent them stiffening up. In every case, keeping active is good for your general health. If you have a flare-up of your arthritis, which may occur as a result of overdoing it, applying ice to the painful joints may help to reduce the inflammation

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(but make sure the ice pack is wrapped in a damp towel to protect your skin).

Specific exercises may be helpful, but these will depend on the type of arthritis and the joints affected. A physiotherapist will be able to advise you on this.

i See Arthritis Research UK booklets

Keep moving; Physiotherapy and arthritis.

! Try to keep your joints moving and your muscles strong. Get as much exercise as you can but don't overdo the activities which cause pain.

Diet

We all need to be sensible about what we eat or drink. For people with arthritis it's important to avoid being overweight, as this puts extra strain on the joints.

If you're very overweight, losing 2 stone (about 13 kg) can reduce pain in the knee by 50 per cent. A good diet with plenty of fruit and fibre, avoiding too much meat or animal fat, is good for your general health.

Special diets rarely make a great deal of difference if you have arthritis, although many people feel better when they start eating a healthy diet. You may find that a diet which replaces animal fat with vegetable or fish oils may reduce joint inflammation a little.

It's rare for alcohol to affect arthritis. It's important to remember, however, that certain drugs can interact with alcohol. If you're prescribed drugs for your arthritis you may need to avoid alcohol or

limit the amount you drink. If you're in any doubt, check with your doctor.

Be wary of the many books, articles and advice about diets that claim to cure arthritis. Many of them recommend quite different things, and most people don't benefit from them. In fact, an unusual diet may do you more harm than good.

i See Arthritis Research UK booklet

Diet and arthritis.

Stress

Chronic arthritis can get you down, and constant pain may lead to anxiety and depression. Counselling from your doctor, or from someone they recommend, may help. You may find that sharing the problem with friends and others who are affected can also be helpful. You may also be able to learn useful relaxation techniques with the help of a physiotherapist or occupational therapist.



! Stress doesn't cause arthritis, but it can make it feel worse. Try to find ways of dealing with any anxiety that your condition causes.

Complementary medicine

Complementary therapies such as osteopathy and chiropractic can help in some arthritic conditions, especially back pain. There is a huge range of other therapies, e.g. homoeopathy and herbalism, and a range of food supplements that you may be tempted to try. Most of these are harmless, but if in doubt you should ask your doctor. If you decide to try therapies or supplements, you should be critical of what they're doing for you, and base your decision to continue on whether you notice any improvement. You may find that changing only one thing at a time helps you to tell which therapies are having an effect.

Glucosamine and chondroitin are food supplements that do have some evidence of effectiveness for osteoarthritis, although there hasn't been enough research to date for them to be licensed for use as drugs in the UK. They're available from health food shops and chemists. Many brands of glucosamine and chondroitin are made from shellfish, but vegetarian or shellfish-free types are also available – so look for these if you have an allergy to shellfish.

i See Arthritis Research UK booklet

Complementary and alternative medicine for arthritis.

Will moving to a warmer climate help?

Many people with arthritis feel that changes in the weather affect the level of pain they feel. Most people prefer hot, dry climates, but some people feel better in the cold and damp. The weather will probably make a difference to how you feel – warmth and sunshine tend to lift your spirits. However, arthritis and musculoskeletal pain occur in all climates, and although the weather may affect the symptoms of your arthritis or the way you feel, it won't cause the condition or affect the way it develops.

Research and new developments

Arthritis Research UK aims to be at the forefront of international efforts to develop new treatments for arthritis. By funding world-class research into developing treatments that accurately target arthritis, patients should be able to experience reduced pain, increased mobility and a normal quality of life.

Even though there isn't yet a cure for arthritis, there's still a great deal that can be done to relieve the symptoms and help you to get on with your life. In most cases, the sooner the treatment begins the more effective it'll be, so don't hesitate to consult your doctor if your symptoms persist for more than a few days.

Glossary

Bursa – a small pouch of fibrous tissue lined (like a joint) with a synovial membrane. Bursae help to reduce friction; they occur where parts move over one another e.g. where tendons or ligaments pass over bones. Others, however, form in response to unusual pressure or friction.

Cartilage – a tough, slippery tissue which covers the bone ends. It acts as a shock absorber and allows smooth movement between bones.

Computerised tomography (CT) scan – a type of scan that records images of sections or ‘slices’ of the body using x-rays. These images are then transformed by a computer into cross-sectional pictures.

Ligaments – tough, fibrous bands which hold two bones together in a joint.

MRI (Magnetic Resonance Imaging) – a type of scan which uses radio waves in a strong magnetic field to build up pictures of the inside of the body. It works by detecting water molecules in the body tissues which give out a particular signal in the magnetic field.

Osteoporosis – a condition where bones become less dense and more fragile, which means they break or fracture more easily.

Spondylosis – the term is used to describe the x-ray appearance of mechanical or degenerative changes of the small joints in the neck and back. Commonly present in all of us, often without causing any symptoms.

Tendons – strong fibrous cords that connect muscles to bones.

Ultrasound – a type of scan which uses high-frequency sound waves to build up pictures of the inside of the body.

Where can I find out more?

You can download all of our booklets and leaflets from our website or order them by contacting:

Arthritis Research UK

PO Box 177
Chesterfield
Derbyshire S41 7TQ
Phone: 0300 790 0400
www.arthritisresearchuk.org

Related organisations

The following organisations may be able to provide additional advice and information:

Arthritis Care

18 Stephenson Way
London NW1 2HD
Phone: 020 7380 6500
Helpline: 0808 800 4050
www.arthritiscare.org.uk

Disability Information & Advice Lines (DIAL UK)

St Catherine's
Tickhill Road
Doncaster
South Yorkshire DN4 8QN
Phone: 01302 310123
www.dialuk.info/

Arthritis Research UK

What is arthritis?

Disabled Living Foundation (DLF)

380–384 Harrow Road
London W9 2HU
Phone: 020 7289 6111
Helpline: 0845 130 9177
www.dlf.org.uk

Employment/benefits

Your Jobcentre Plus office can put you in touch with your local Disability Employment Adviser. For information on benefits you can contact the Benefit Enquiry Line on 0800 882200.

Employment Medical Advisory Service (EMAS)

To find your local office, see the telephone directory under 'Health & Safety Executive'. The address and phone number should also be available in all workplaces. Alternatively, you can get this information from:

HSE Infoline: 0845 345 0055
www.hse.gov.uk/contact/index.htm

National Rheumatoid Arthritis Society (NRAS)

Unit B4 Westacott Business Centre
Westacott Way, Littlewick Green
Maidenhead SL6 3RT
Phone: 0845 458 3969
Helpline: 0800 298 7650
www.rheumatoid.org

Royal Association for Disability & Rehabilitation (RADAR)

12 City Forum
250 City Road
London EC1V 8AF
Phone: 020 7250 3222
www.radar.org.uk

Relate

See the telephone directory under 'Relate' or the Yellow Pages under 'Counselling and Advice' for your local Relate centre. Or Relate Head Office can be contacted at:

Premier House
Carolina Court
Lakeside
Doncaster DN4 5RA
Phone: 0300 100 1234
www.relate.org.uk

Arthritis Research UK

Providing answers today and tomorrow



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calls charged at standard rate

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ΙΩΑΝΝΗΣ Γ. ΡΟΥΤΣΙΑΣ

ΜΙΚΡΟΒΙΟΛΟΓΙΚΟ
ΔΙΑΓΝΩΣΤΙΚΟ
& ΕΡΕΥΝΗΤΙΚΟ
ΕΡΓΑΣΤΗΡΙΟ



ΜΙΚΡΟΒΙΟΛΟΓΙΚΟ
ΔΙΑΓΝΩΣΤΙΚΟ
ΙΑΤΡΕΙΟ



Το εργαστήριο μας αποτελεί ένα διαγνωστικό εργαστήριο αναφοράς, για την πραγματοποίηση μικροβιολογικών, βιοχημικών, αιματολογικών, ανοσολογικών και ορμονολογικών εξετάσεων. Στο εργαστήριο μας επίσης εκτελούνται και πιο εξειδικευμένες εξετάσεις όπως μοριακός έλεγχος με PCR (πχ για την μέτρηση ιικού φορτίου, έλεγχος θρομβοφιλίας κλπ), ανοσολογικός έλεγχος δυσανεξίας σε διατροφικούς παράγοντες και μέτρηση Τ-λεμφοκυτταρικής ανοσολογικής απάντησης. Τέλος, εκτελούνται ερευνητικά πρωτόκολλα που περιλαμβάνουν ανάλυση βιολογικών δειγμάτων, στατιστική επεξεργασία αποτελεσμάτων και ανάπτυξη "in house" διαγνωστικών μεθόδων, όπως ELISA με "custom peptides" κλπ

Επιστημονικός υπεύθυνος του εργαστηρίου είναι ο Δρ Ιωάννης Ρούτσιος. Είναι Χημικός και Ιατρός Βιοπαθολόγος - Μικροβιολόγος με διδακτορικό δίπλωμα στην Ανοσολογία. Το ερευνητικό του έργο είναι σημαντικό (συνολικό Impact Factor διεθνών δημοσιεύσεων = 242) και διεθνώς αναγνωρισμένο (H-index = 18), έτυχε δε δέκατριων ελληνικών και διεθνών βραβείων και διακρίσεων. Αριστούχος υπότροφος Χημικός, εισήχθη και φοίτησε εν συνεχεία στην Ιατρική Σχολή του Πανεπιστημίου Ιωαννίνων (1992-1997) όπου και εκπόνησε και την διδακτορική του διατριβή με υποτροφία (ΕΜΥ). Ελαβε την ειδικότητα Μικροβιολογίας στην Αθήνα (Νοσ Παίδων Π&Α Κυριακού) και υπήρξε Λέκτορας "Ιατρικής Ανοσοχημείας" στο Χ.Π.Α.

(2003-2004), ενώ από το 2004 έως το 2011 είναι Λέκτορας Ανοσολογίας/Μικροβιολογίας στην Ιατρική σχολή του Πανεπιστημίου Αθηνών. Είναι συντάκτης-κριτής σε 12 διεθνή περιοδικά, έχει δημοσιεύσει 50 άρθρα σε διεθνή περιοδικά (μεσος IF/αρθρο=4.8) με > 900 βιβλιογραφικές αναφορές (citations). Έχει επιβλέψει 12 διατριβές, έχει διδάξει 10 διαφορετικά αντικείμενα (μαθήματα) σε 6 τμήματα (Ιατρική, Οδοντιατρική, Φαρμακευτική, τμήμα Διαιτολογίας, Χημικό, ΠΣΕ Βιοχημείας) και έχει 146 ανακοινώσεις σε συνέδρια (Ελληνικά: 53, Διεθνή: 93). Τέλος έχει γράψει κεφάλαια σε 6 διεθνή και 7 ελληνικά βιβλία και είναι μέλος σε 6 επιστημονικές εταιρίες και συλλόγους.

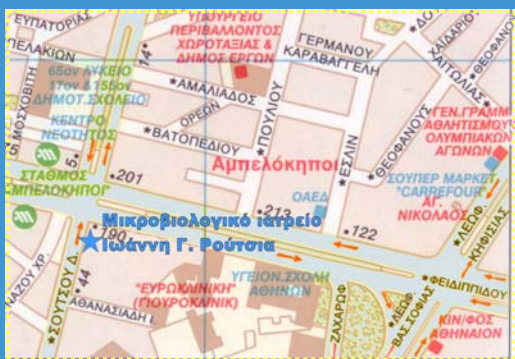


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