This information leaflet is published by the Arthritis Foundation as part of our continuing education programme for all people suffering with arthritis.

The Bone and Joint Decade is a global campaign to improve the quality of life for people with musculoskeletal conditions and to advance understanding treatment of those conditions through research, prevention and education.
INTRODUCTION
This booklet is for anyone who wants to find out more about reactive arthritis. You may be suffering from the condition yourself, or you may be a friend, relative or partner of someone with reactive arthritis. It explains the main facts about the condition, including the main symptoms and how it is treated, and answers common questions about this type of arthritis. Words which appear in italics when they are first used are explained in the glossary at the back of the booklet.

WHAT IS REACTIVE ARTHRITIS?
The term ‘reactive arthritis’ is used to describe inflammation (heat, pain and swelling) in the joints that can develop after you have had a bacterial or viral infection somewhere else in the body. As well as causing joint pain and swelling, reactive arthritis can also be accompanied by symptoms such as red eyes (conjunctivitis), scaly skin rashes over the hands or feet, diarrhoea, mouth ulcers and inflammation of the genital tract which produces a discharge from the cervix, vagina or penis.

Reactive arthritis is also sometimes called Reiter’s syndrome, after a German army doctor in the First World War who first described the condition. Unlike rheumatoid arthritis or osteoarthritis, reactive arthritis is usually a short-lived condition that lasts for less than 6 months and, in most cases, disappears completely leaving no problems in the future.

HOW DO YOU KNOW IF YOU HAVE REACTIVE ARTHRITIS?
Pain and swelling, usually in the knees, ankles or toes, are often the first signs of reactive arthritis. Swelling may happen suddenly, or develop over a few days after an initial stiffness in the affected joints. Other joints, including fingers, wrists, elbows and the joints at the base of the spine (sacroiliac joints), can also become inflamed. In some cases, the pain can be severe enough to need time off work, bedrest or even admission to hospital. Reactive arthritis can also cause inflammation of the tendons around joints, such as the Achilles tendon at the back of the ankle. If inflammation happens in tendons and joints at the same time in the fingers or the toes it can cause a swollen or ‘sausage’ digit. Conjunctivitis, a scaly skin rash on the palms of the hand or the soles of the feet (this is called keratoderma blenorrhagica), or a sore rash over the end of the penis in men can also suggest that reactive arthritis is the cause. The main signs of the condition are summarised in the diagram below.

Inflammation of the joints similar to that seen in reactive arthritis can also occur in other conditions such as rheumatoid arthritis, psoriatic arthritis, Behçet’s syndrome or gout. Reactive arthritis can be distinguished from these conditions because people report an episode of infection that has occurred a few days or weeks before the joint swelling started. The infection seems to trigger the start of the arthritis. This infection may be food poisoning, which is usually shown by vomiting or diarrhoea, or a viral-like illness with sore throat, cough or skin rash. Some viral infections may cause only a minor illness yet still be capable of triggering reactive arthritis. Sexually-acquired genital infections which may show up as a discharge from or discomfort in the penis or vagina are also associated with the development of reactive arthritis. Examples of such infections are chlamydia and NSU. Some people with arthritis of the knees or ankles which comes on suddenly may be told by their doctor that they have reactive arthritis even when the link with an infection beforehand is unclear.

Reactive arthritis is not caused by an active infection within the joints and
is very different from *infective (septic) arthritis*. With septic arthritis there is an active infection within the joint. With reactive arthritis, the joints become inflamed because the immune system, while trying to rid the body of infection, somehow causes an inflammatory reaction in the joint lining. Recent research has suggested that scraps of dead bacteria may travel to the joints and trigger arthritis.

**WHO GETS REACTIVE ARTHRITIS?**

People of all ages, including children, can get reactive arthritis. For this reason reactive arthritis generally affects a younger average age group than rheumatoid arthritis or osteoarthritis. Between 1 and 2% of people involved in any outbreak of food poisoning may suffer joint inflammation afterwards. Often, reactive arthritis will be reported by travellers returning from a foreign holiday, following a tummy upset or diarrhoea. School outbreaks of viral illness, especially *parvovirus*, are often associated with reactive arthritis. Although there is not a family tendency to develop reactive arthritis, if you have a particular gene, *HLA-B27*, which is carried by about 1 in 14 of the general population, you probably have a greater chance of developing reactive arthritis. Whether you have this gene or not can be checked with a simple blood test, but this test is not usually needed in normal management of reactive arthritis.

**WHAT INVESTIGATIONS ARE USED IN REACTIVE ARTHRITIS?**

Although there is no single specific test for reactive arthritis, you may be asked to provide a stool sample, have a swab taken from the throat or be examined by a genito-urinary specialist and have swabs taken from the penis or vagina. These can be tested for indicators of inflammation or infection. Blood tests may be carried out to examine the amount of inflammation and to check that gout is not the cause. Or, blood tests can be carried out for genetic analysis (tests for the HLA-B27 gene) or for antibodies associated with other forms of arthritis (rheumatoid factor, anti-nuclear antibody). X-rays are rarely useful. If you have sore red eyes you may be examined by an eye doctor in order to check that it is not a more serious inflammation of the eye called iritis.

**WHAT TREATMENTS ARE THERE?**

Treatment for reactive arthritis can be divided into three:

- firstly, antibiotics to treat the initial triggering infection, if it persists
- secondly, treatment to help the joint pain and swelling
- thirdly, drugs to tackle persistent arthritis.

**Treating the infection**

If you are found to have a bowel infection, a bacterial throat infection or genital tract infection you will
probably be given antibiotics by mouth. This will help to eliminate the organism which is causing the infection. If it is a viral infection, unfortunately these cannot be helped by antibiotics. Conjunctivitis is often treated with eye drops or ointment. More severe eye inflammation may need steroid eye drops.

**Treating the joint pain and swelling**

Joint inflammation is treated according to severity. Mild to moderate arthritis may be relieved with non-steroidal anti-inflammatory tablets (NSAIDs) such as ibuprofen, indomethacin or diclofenac. With non-steroidal anti-inflammatory drugs it is important not to take them on an empty stomach as they may cause indigestion or heartburn. For more severe inflammation, resting wrist splints, heel and shoe pads and sometimes bedrest may be helpful in the short term.

**Diet and complementary therapies**

There are no proven diets to help with this disorder although certain dietary supplements may help reduce the inflammation. Complementary and alternative therapies may have a role to play in the control of individual joint symptoms.

**Exercise**

It is important that you try to keep your joints moving and try to maintain muscle strength. You may be advised by a physiotherapist or occupational therapist to do particular exercises, while at the same time avoiding excessive activity that might put too much strain on inflamed joints. Ice packs and heat pads can both help relieve joint pain and swelling. When the joint inflammation is active, it may make you feel tired and produce a general feeling of being unwell. Rest and early nights can play an important role in recovery in the early stages of reactive arthritis.

**More severe arthritis**

More severe arthritis may need joint injection to remove fluid ('aspiration') and to put local steroid into the inflamed joint. Occasionally, severe arthritis may even need treatment with intramuscular or intravenous injections of steroids or short courses of steroid tablets in low doses. Steroid treatment given like this is both safe and often very effective in the short term. Cases of reactive arthritis lasting over 6 months may need disease-modifying drugs, such as sulphasalazine and, occasionally, methotrexate or azathioprine.

**DOES REACTIVE ARTHRITIS ALWAYS RECOVER WITHIN 6 MONTHS?**

For the majority of people, reactive arthritis disappears completely within 6 months. During this time, it often runs a fluctuating course, with better and worse days. Gradually, as the arthritis subsides there are more better than worse days. In 10–20% of people, symptoms last for longer than 6 months and only a small number of people go on to develop a persistent arthritis that requires longer-term treatment. Some unlucky people have bouts of reactive arthritis which come back at intervals of months or years in response to further triggering infections. When this happens it is described as 'recurrent'. These people should take precautions to avoid exposure to sexually transmitted infections and take especial care to avoid food poisoning.
DOES HAVING REACTIVE ARTHRITIS LEAD TO PROBLEMS LATER IN LIFE?

Under normal circumstances, when reactive arthritis disappears, the joints make a full recovery and there are no long-term problems as a result. A child with reactive arthritis does not stand an increased chance of developing arthritis as an adult.

GLOSSARY

Antibodies – blood proteins which are formed in response to germs, viruses or any other substances which the body sees as foreign or dangerous. The role of antibodies is to attack foreign substances and make them harmless.

Anti-nuclear antibodies (ANA) – antibodies which are often found in the blood of people with forms of arthritis other than reactive arthritis. A test for anti-nuclear antibodies is sometimes carried out to exclude these conditions.

Chlamydia – the most common sexually transmitted infection (STI) in the UK. It is on the increase especially in young people. It is a bacterium that can remain dormant for years and is a major cause of infertility. It may have no symptoms.

HLA-B27 – human leucocyte antigen B27. One of the HLA genes from the HLA-B family. People who have this gene are more likely to have conditions such as reactive arthritis, psoriatic arthritis or ankylosing spondylitis.

Infective arthritis – also known as septic arthritis, this is very different from reactive arthritis. It occurs when there is an active infection within a joint or joints, usually only one joint initially. It can happen as a complication of an artificial joint replacement or arthritis. Septic arthritis is a medical emergency requiring hospital treatment.

NSU (non-specific urethritis) – an inflammation of the urethra (where urine comes out) not caused by chlamydia or gonorrhoea. It is presumed to be caused by unidentified bacteria. It can be treated with antibiotics. Accurate diagnosis needs a sample to be taken on a swab from the urethra. NSU can cause a burning sensation when passing urine, or a discharge, or it may have no symptoms.

Parvovirus – cause of a common childhood illness known as ‘fifth’ disease or ‘slapped cheek’ syndrome. Adults in contact with children who have this infection may pick up a mild infection without realising it. This virus can also trigger reactive arthritis.

Septic arthritis – see infective arthritis.
ARTHRITIS FOUNDATION
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