


# Improve your joints

Athletes are very aware of their joints and look after them well, as both their performance and career depend on them. The rest of us tend to take our joints for granted until they start playing up, by which time significant degenerative changes may already have occurred as a result of osteoarthritis.

by Dr Sarah Brewer



If several of the factors shown in the list overleaf apply to you, you may be at risk of osteoarthritis. It would then be vital to take steps to protect your joints and long-term mobility! Luckily, a number of supplements is available to help maintain joint health. Each tends to be effective for two out of three people with joint pain, so it is a question of selecting one and trying it for a couple of months until you find that which suits you. Most joint health supplements can be taken in combination for additional benefits.

#### Glucosamine Sulphate

Glucosamine sulphate is a natural substance that provides building blocks to help make synovial fluid, the joints' oil, thicker and more cushioning. It is also needed to help repair torn cartilage, sprained ligaments or strained tendons. In a recent study involving over 200 patients with osteoarthritis of the knee, those taking glucosamine supplements (1500mg daily for 3 years) reported significant improvements in pain and disability while showing no significant loss of joint space. In contrast, those taking a placebo developed worsening symptoms with increased narrowing of the knee joints. ▶





## ARE YOU AT RISK?

Osteoarthritis causes symptoms in at least one in two people over the age of 60. The cause is not fully understood, but is believed to result from an active process in which the cartilage lining a joint becomes weakened, followed by an over-zealous healing response. This allows the underlying bone ends to rub together and form bony outgrowths. As a result, joint movements become increasingly painful, stiff and restricted.

It's worth taking steps to look after your joints if any of the following apply:

- You are aged 45 or over.
- Arthritis runs in your family.
- You are overweight.
- You take little exercise.
- Work or exercise involves repetitive movements of a joint.
- You feel the need to stretch your back every day.
- You notice creakiness in one or more joints.
- A joint (eg knee, hip) is less flexible than before, or cannot be straightened fully.
- You can no longer touch your toes when standing with your knees straight.
- You have limited neck rotation and can no longer align your chin with your shoulder tip, or are unable to touch the front of your chest with your chin.
- Your joints are swelling or changing shape.
- Your fingers and toes easily get cold and stiff.
- A joint starts aching, especially after exercise.
- Your knees are painful when you sit on them.

### Chondroitin

Glucosamine is often combined with chondroitin, a substance which forms an important part of healthy cartilage and which helps give cartilage its shock-absorbing properties. Chondroitin is thought to improve the beneficial effects of the effects of Glucosamine Sulphate, although the ideal ratio between them is not yet known. Some arthritis experts suggest taking 1500mg glucosamine plus 1200mg chondroitin per day.

### MSM-sulphur

The sulphur component of glucosamine sulphate may contribute to the beneficial effects, as it helps to stabilise the connective tissues found in cartilage, tendons and ligaments. When another sulphur supplement, methyl-sulphonyl-methane – known as MSM – was used in a small trial involving 18 people with osteoarthritis, those taking MSM reported an 82% reduction in joint pain after six weeks, compared with average improvements of only 13% in those taking an inactive placebo. Glucosamine and MSM are often taken together.

### Omega 3 fish oils

Oily fish (eg salmon, mackerel, herrings, sardines, pilchard) are a rich source of omega-3 fatty acids called DHA and EPA. These are converted in the body to substances known as prostaglandins, which have an anti-inflammatory action and which help to maintain pain-free joints. When researchers analysed all the medical studies published between 1979 and 1995 that relate to fish oils, they confirmed that omega-3 fatty acids were superior to a placebo in improving several measures of joint health and could reduce the long-term need for taking painkillers such as ibuprofen. Fish oils can be taken together with glucosamine and other joint health supplements.

### Cod Liver Oil

While omega-3 fish oils are obtained from the flesh of oily fish, cod liver oil – as its name implies – is derived from the liver of cod. It therefore contains fewer omega-3 fatty acids (typically three times less), but significantly more of the fat-soluble vitamins A and D, which have an additional beneficial effect on bones. If choosing to take cod liver oil, select one described as 'concentrated' or 'extra high strength' to obtain the highest amount of omega-3 fatty acids. NB. If taking a multivitamin as well, check the total amounts of vitamin A and D you are taking. Do not exceed recommended doses.

### Devil's Claw

The tap root of devil's claw contains unique substances, known as herpegoxides, that have a natural anti-inflammatory painkilling action. Devil's claw is taken to treat low back pain, and painful, inflamed joints due to osteoarthritis, rheumatoid arthritis, gout or sports injuries. In one study, 103 people with chronic back pain were given either devil's claw (800mg three times a day) or inactive placebo, and were allowed to take additional painkillers if necessary. After four weeks, 9 out of the 51 people taking devil's claw were pain free compared with only one of the 54 receiving placebo. Another clinical trial showed significant reductions in muscle pain, pain sensitivity and muscle tension in those suffering from shoulder neck and back pain. NB. Do not take if you have peptic ulcers or indigestion as it promotes secretion of digestive juices.

### Ginger

The rhizome of ginger contains a variety of 'warming' substances, such as gingerol and zingerone, which help to reduce inflammation. Although traditionally taken for nausea, it is now widely used to help relieve muscle and joint aches and pains, including those of rheumatoid and osteoarthritis. In a recent trial involving 267 people with moderate osteoarthritis of the knee, those taking ginger extracts had significantly more pain relief on standing than those taking an inactive placebo.

### Vitamin C

Eat plenty of fresh fruit and vegetables – at least five servings per day. These contain antioxidant vitamins such as vitamins A, C, carotenoids and mineral selenium which help to damp down inflammation, reduce cartilage loss and slow the progression of osteoarthritis. In one study of 640

men and women, those with moderate to high intakes of vitamin C (two or more times the recommended daily amount) were three times less likely to develop knee pain or see their knee osteoarthritis progress than those with low intakes (up to about twice the recommended daily amount). Vitamin C supplements may help to maintain healthy joints, too. ■

