

Arthritis & joint health

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Most people expect a few aches and pains with ageing – but very few are prepared for the reality of arthritis and its impact on quality of life. Tania Flack reports.

WITH arthritis, the simple act of getting out of bed is like balancing your entire body weight on joints that feel as though they're full of crushed granite and then tenderly taking one painful step after another until the stiffness loosens and the dull, unrelenting ache settles in for the day. Sometimes the decline in joint function and mobility occurs slowly over time, so adaptation and adjustment to the limitations of joint changes occur naturally; but for people with one of the many arthritic conditions driven by metabolic dysfunction or autoimmunity, arthritis can occur suddenly and randomly as a lightning

cases occurs in people between the ages of 15 to 60. Women are more likely to develop arthritis: 51.4% of Australian women aged 55 years and over have it, compared to 35.2% of men in the same age group.

Types and causes

There are over 100 different types of arthritis which fall broadly into three categories, each with distinctly different causes. The natural medicine approach to these conditions varies depending on the type of arthritis, although there are some commonalities in dietary interventions and treatments.

Osteoarthritis The most common form of arthritis, accounting for 58.9% of all cases. It is most often associated with the wear and tear that occurs with ageing, but it can also be brought about by repeated damage to the joint, such as that caused by sport. Osteoarthritis causes degeneration of the cartilage that cushions and protects the joint. This leads to painful inflammation, which in turn causes the bony remodelling of the joint, significantly limiting mobility over time. A hallmark of osteoarthritis is morning stiffness that slowly improves as the day progresses.

Autoimmune arthritis There are numerous types, including rheumatoid arthritis, ankylosing spondylitis, psoriatic arthritis, lupus and, perhaps the cruellest of all, juvenile idiopathic arthritis, which can affect children as young as one year old. Rheumatoid arthritis is the most

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strike. So what causes the remodelling of a perfectly good joint? Most importantly, how can we use natural medicine to prevent it or at least help manage the pain?

Recent figures from the Australian Bureau of Statistics show that 3.5 million Australians suffer from arthritis, making it the leading cause of chronic pain. Nor do these figures solely represent the aging population. Arthritis can affect people from all backgrounds, ages and lifestyles, and surprisingly, two out of every three



Eat to beat arthritis

* ENJOY

Vegetables aim to have six to nine serves per day, buy organic, or soak and scrub them if they're not

Fruit a couple of pieces of fruit per day

Fish deep-sea, oily fish, such as salmon, sardines or mackerel, at least three times per week

Nuts and seeds a handful a day

Poultry choose organic, free-range products

Red meat choose lean grass-fed, organic red meat, and eat sparingly

Whole grains small amounts of quinoa, buckwheat, amaranth, brown rice

* AVOID

Alcohol save it for special occasions only, as it's very inflammatory

Gluten this is considered an inflammatory component of grains like wheat, barley and rye

Sugar in nearly all processed foods, and nearly impossible to avoid if buying packaged foods

Saturated fats may cause changes in the gut microbiome that encourage inflammation

Trans fats found in fried food, potato crisps, margarine, bakery items, biscuits and many tinned and packaged foods

Refined carbohydrates this includes bread, biscuits, pastries and crackers

Food additives the range is endless, found in packaged and tinned foods

common autoimmune-mediated form and is the second most common type of arthritis in Australia, accounting for 11.5% of cases. These types of arthritis are caused by the immune system attacking the joints, cartilage and synovial membranes, causing significant pain and disability.

Metabolic arthritis Gout, the third most common form of arthritis in Australia, is a type of metabolic arthritis, which stems from problems with the body's metabolic processes. Gout is caused by the crystallisation of uric acid within the joint, which causes exquisite pain, redness and swelling. Historically thought of as 'the disease of kings', because a diet rich in meat, alcohol and foods high in purines can trigger an attack, it is often seen in people with metabolic syndrome, which includes abdominal obesity, high blood pressure, insulin resistance, and high cholesterol. The tendency for gout is partly genetic. Another type of metabolic arthritis is the equally nasty 'pseudo gout', which is caused by calcium crystals being deposited in the joints. This also has a genetic component and is often found in people carrying the genes for haemochromatosis.

Natural medicine can help

Natural medicine can provide significant benefits. Diet is the cornerstone of treatment, along with lifestyle modification, exercise, and nutritional and herbal medicines.

Fish oil This has powerful anti-inflammatory properties and its impact on arthritis has been extensively studied. A 2015 randomised controlled trial of 139 participants found high-dose fish oil supplementation (3.2g EPA and 2.3g DHA daily) increased remission and reduced inflammation in patients with recent-onset rheumatoid arthritis. Interestingly, a small-scale study in 2005 found that supplementation of 3g of fish oil and 9.6ml of extra virgin olive oil produced greater improvement in patients with rheumatoid arthritis than the 3g of fish oil alone. While fish oil's benefits in the inflammatory types of arthritis like rheumatoid arthritis have been repeatedly demonstrated, evidence of its efficacy in osteoarthritis has yet to be proven.

Chondroitin sulphate This is a structural component of cartilage that helps to protect against the effects of load bearing and compression in the joint. A 2015 Cochrane Review found that 1,000mg of chondroitin sulfate supplementation daily, either alone or in combination with glucosamine, improved pain in patients with osteoarthritis.

TOP 10 anti-inflammatory foods

- 1 Oily fish
- 2 Ginger
- 3 Cherries
- 4 Green leafy vegetables
- 5 Blueberries
- 6 Green tea
- 7 Garlic
- 8 Shiitake mushrooms
- 9 Papaya
- 10 Pineapple



Vitamin D This plays an important role in bone metabolism and immune function, and reduces the risk of developing autoimmune disease.

A 2016 meta-analysis of 15 studies found that serum vitamin D levels were significantly lower in patients with rheumatoid arthritis. Other studies show that supplementing with vitamin D leads to significant improvements in symptoms of rheumatoid arthritis.

Boswellia (Indian frankincense) This herb has significant anti-inflammatory properties. A 2014 Cochrane Review of herbal treatment for osteoarthritis found daily supplementation with 100mg of boswellia extract over 90 days significantly improved function and reduced pain in patients with osteoarthritis.

Turmeric A powerful anti-inflammatory herb that has been traditionally used to treat arthritis. A systemic review of randomised controlled trials found that 1,000 mg of curcumin daily was as effective as NSAIDs in reducing pain, but with fewer adverse effects, in patients with osteoarthritis and rheumatoid arthritis. These benefits are amplified when turmeric and boswellia are taken together. A randomised controlled trial showed that a combination formula of 250mg of turmeric extract and 150mg of boswellia extract, taken twice daily, was more successful at managing symptoms of osteoarthritis in the knee, such as pain, walking distance and joint tenderness, than treatment with 100mg of Celecoxib (a strong anti-inflammatory medication) twice daily.

Diet and lifestyle

The Mediterranean diet The typical Australian diet is pro-inflammatory, due to

the high intake of processed foods, refined carbohydrates, sugar, salt, and fat. Even some 'healthy' choices found on supermarket shelves fit into this category. A wholefoods, Mediterranean-style diet is high in valuable nutrients and low in irritating chemicals and additives, it provides your body with the building blocks to fuel balanced immune responses, a robust gut microbiome, and effective elimination of toxins via healthy liver and gut function, all of which help manage the inflammation, pain and metabolic dysfunction seen in arthritis. In a large-scale study of 4,470 patients with osteoarthritis, those who followed a Mediterranean diet had better quality of life, decreased pain and depressive symptoms. Another smaller randomised controlled study of 56 patients with moderately active rheumatoid arthritis showed that adopting the Mediterranean diet for 12 weeks reduced inflammatory activity, increased physical function, and improved vitality.

Resistance exercise This has systemic anti-inflammatory effects on the body and helps to build and maintain muscle, which is important in patients with rheumatoid arthritis. A 2015 meta-analysis of 10 randomised controlled trials found that resistance exercise was a safe and effective adjunctive therapy for patients with rheumatoid arthritis, both reducing disability and improving strength and joint mobility.

Tai chi This increases muscular strength and flexibility, stabilises the knee joint, improves balance, and reduces the risk of falls. The meditative aspects of tai chi also reduce stress and increase wellbeing. A 2013 systemic review found that regular tai chi is effective in short-term control of pain and improving physical function in patients with osteoarthritis in the knee.

Acupuncture This can provide significant pain relief in arthritis. In a 2006 randomised controlled trial of 570 patients with osteoarthritis of the knee, regular acupuncture sessions over 12-26 weeks greatly improved function and lowered pain.

Infrared sauna In a small clinical trial involving 34 patients with rheumatoid arthritis or ankylosing spondylitis, twice-weekly 30 minute sessions of infrared sauna over a four-week period significantly improved pain and stiffness. The benefits were observed both during the treatment and for several days afterwards. ✨

A wholefoods, Mediterranean-style diet, is arguably the single most effective step you can take to reduce inflammation in arthritis.

✿ Are you at risk?

Being overweight This is the single most important modifiable risk factor for the development of arthritis, especially when you consider that every additional unit of weight you gain results in a fourfold increase in joint loading. In fact, being overweight doubles your risk of developing knee osteoarthritis, while obesity quadruples the risk. This staggering increase in risk is due to the mechanical strain, as well as the fact that carrying extra body fat results in systemic inflammatory changes and metabolic dysfunction that increase the risk of different types of arthritis. If you only do one thing to prevent arthritis, achieving and maintaining a healthy weight is the most important.

Hormonal changes Women are more likely to have arthritis than men and the biggest risk period for this is perimenopause. Oestrogen plays a protective role against the development of osteoarthritis and oestrogen receptors have been found in joint tissue. However, as oestrogen levels decline, around menopause, women lose this protective effect and are more likely to develop osteoarthritis. Interestingly, the changes that occur in a woman's body in the postpartum

period increase the risk of women developing an autoimmune-mediated arthritis, such as rheumatoid arthritis. In fact, oestrogen is so protective against rheumatoid arthritis that women are less likely to develop it during pregnancy when oestrogen is highest and more likely to develop it when levels drop after delivery.

The microbiome connection The body is home to trillions of bacterial cells, which play an important role in our mucosal defence system and help train our immune system to recognise what is 'self' tissue and what is a foreign invader. While research into the connection between arthritis and the microbiome is in its infancy, some exciting developments have been reported. For example, we know that probiotic bacteria given alongside prebiotics have demonstrated benefits similar to that of non-steroidal anti-inflammatory drugs (NSAIDs) in animal studies of osteoarthritis. Several specific species of bacteria have also been associated with the onset of rheumatoid arthritis, including *Prevotella copri*, which is associated with inflammatory conditions. This common gut bacterium can be identified through microbiome testing and successfully eradicated using safe natural medicines. Modifying the gut microbiome with a diet rich in plant foods and fibre helps to normalise the balance of the bacteria in the body and reduce inflammation in arthritis.

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