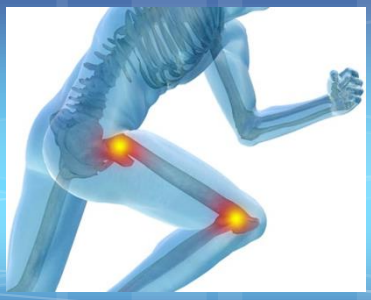

Alleviating Arthritis

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Arthritis is not a single disease, but it is a big group of conditions, that affects one or more joints and their surrounding tissues. Symptoms of arthritis can include pain, warmth, redness, and swelling around the joint, stiffness - particularly in the morning or after periods of rest – and a loss of function of the inflamed joint. These symptoms range from mild to severe and may fluctuate over time. Interestingly, severity of the arthritis that we find on XR do not seem to correlate well with the symptoms a person exhibits. The joint can appear essentially normal, with little if any joint space narrowing, but the person may be experiencing a lot of pain and dysfunction. Conversely, the XR may show a lot of joint deformity, but the person may experience little pain. About 40% of people with the worse XR classification for osteoarthritis are actually pain free.

There are dozens of different types of arthritis, each with its own causes, but often overlapping symptoms. Some individuals are unfortunate to have more than one type of arthritis. The most common ones affecting Australians include the following:

1. **Osteoarthritis (OA)**: a degenerative disease when the protective cushioning-cartilage lining in the joints breaks down over time, faster than your body can build it back up. This is the most common type, and this will be addressed in this editorial.

2. **Rheumatoid Arthritis (RA)**: an autoimmune disorder where the immune system mistakenly sees the healthy tissue that line your joints (synovium) as foreign, and attacks theses tissues. This causes inflammation, and subsequent erosion and degradation of the joint.

3. **Psoriatic Arthritis (PsA)**: joint inflammation associated with a skin condition called psoriasis.

4. **Gout**: a type of arthritis that is caused by the buildup of uric acid crystals in the joints, leading to a quite a sudden onset of severe inflammation with intense pain, heat, redness and swelling.

5. **Ankylosing Spondylitis**: another inflammatory autoimmune arthritis that primarily affects the joints and ligaments of the spine, ultimately resulting in fusion of the bones, deformation of the spine, and dysfunction of the shoulders and hips.

There are a number of risk factors that do contribute to the development of osteoarthritis The risk of osteoarthritis increases with age. Cartilage naturally degenerates as a person ages. This results in the release of enzymes that destroy cartilage components, and the ability to restore and synthesize normal cartilage structures also declines with age. Excess weight is a huge risk factor as it puts additional load and stress on the weight-bearing joints, such as the knees and hips. Previous joint injuries, such as fractures or ligament tears, or damage caused by an infection in the joint, can increase the risk of osteoarthritis developing in that joint, later in life. Activities that involve repetitive movements or overuse with excessive heavy lifting can increase the risk of osteoarthritis, because these activities can accelerate the wear and tear of cartilage on the joints. On the other hand, having a very sedentary life with a lack of exercise, reduces the hydration of the joint cartilage and decreases the diffusion of nutrients into the affected area. Inactivity decreases muscle strength. Muscle weakness increases joint wear, and the inactivity can lead to weight gain, which can worsen arthritis, causing the cycle to repeat itself. There is evidence to suggest that genetics play a role in the development of osteoarthritis. Other health conditions do contribute to the development of osteoarthritis. For example, in diabetes, the insulin resistance not only increases inflammation but also impairs cartilage regeneration.

A combination of lifestyle measures plays a crucial role in both the prevention and management of osteoarthritis, helping to improve overall joint health and alleviate symptoms.

Diet is front and centre for both prevention and management of osteoarthritis. The one diet that fulfills all the needs in this condition, and also in autoimmune arthritis such as rheumatoid, is the Whole-Food Plant-Based Diet. A diet rich in fruits, vegetable, legumes, nuts, grains and seeds in their whole or only minimally processed form.

Benefits of the Whole-Food Plant-Based Diet on joint health:

- This diet is rich in anti-inflammatory antioxidants, fibre, and a host of other plant chemicals. This alleviates the chronic inflammation that plays a significant role in the joint damage and pain, and relieves the symptoms of the arthritis.

- Saturated fat and cholesterol accelerate the progression of osteoarthritis. The Whole-Food Plant-Based Diet is naturally low in saturated fats and has no cholesterol. Individuals with osteoarthritis tend to have higher cholesterol levels within their joints.. The higher the cholesterol, the more severe the osteoarthritis. This diet is amazing in its ability to lower the cholesterol levels.
- Whole-Food Plant-Based Diets are typically nutrient dense in vitamins, minerals, and essential nutrients which are required for healthy joints and preventing inflammation in the joints.
- It has lower processed sugars and saturated fats compared to other diets which leads to more efficient weight management. This, in turn, reduces the stress on weight-bearing joints.
- The high fiber content in the Whole-Food Plant-Based diet promotes a healthy gut microbiome. This can influence inflammation throughout the whole body which can benefit osteoarthritis patients by reducing joint inflammation.
- This diet is associated with lower risks of chronic diseases such as diabetes and cardiovascular disease. Preventing and managing these comorbidities, can reduce symptoms and hinder the progression of osteoarthritis.

Several specific nutrients from the whole-food plant-based diet protect the joints from oxidative stress and inflammation, enhance collagen synthesis and joint health, and improve symptoms of osteoarthritis

- **Vitamin C** is an anti-inflammatory antioxidant, and is also essential for collagen synthesis (a major component of cartilage). There is a three-fold reduction in the risk of osteoarthritis progression with higher Vitamin C intake. Good sources are guavas, yellow capsicum, berries, citrus fruits, and leafy green vegetables
- **Vitamin E** acts synergistically with the Vitamin C with its anti-inflammatory benefits and supporting the production and maintenance of collagen. Great sources include nuts and seeds such as almonds and sunflower seeds, and all the leafy green vegetables.
- **Vitamin A** is important for the maintenance and repair of cartilage tissue. Sources of this include mangoes, papayas, carrots, sweet potatoes, kale and spinach.
- **Vitamin B6** has both an anti-inflammatory roll and supports collagen synthesis, helping to maintain the resilience and strength of cartilage in the joints. This vitamin can be readily found in legumes, nuts and seeds.
- **Vitamin K** is an anti-inflammatory vitamin. However, it also plays a role in the regulation of collagen synthesis and helps maintain the flexibility and function of the cartilage which is essential for smooth joint movements. Low levels of Vitamin K in the diet are directly linked to the formation of osteoarthritis. Leafy green vegetables are the best source of Vitamin K.
- **Zinc** is crucial for tissue repair and regeneration, including cartilage. Sources of zinc include soybeans, peas, lentils, peanuts, corn and pecans
- **Copper** is required for the formation of both collagen and elastin – important components of cartilage. Wholegrains, nuts, seeds, legumes, potatoes, and leafy green vegetables are good dietary sources.
- **Boron** supports the synthesis and maintenance of collagen and plays an important role in reducing the enzymes that cause an inflammatory response, reducing joint pain and stiffness. This trace mineral is found in many plant foods including apples, pears, peaches, prunes, avocadoes, peanuts, and beans
- **Calcium** is vital for bone strength and does play a role in the maintenance of cartilage in the joints. Some wonderful plant sources of calcium include cooked leafy greens such as kale and spinach, figs, soy beans (most legumes are a good source of calcium), broccoli, and almonds.
- **Magnesium** helps to regulate cartilage health as well. Great sources include legumes, nuts, seeds, wholegrains and leafy greens.
- **Omega 3** reduces joint inflammation, pain and stiffness and improves the function of the joint. It does this by reducing the production of inflammatory chemicals such as cytokines and prostaglandins, which can protect the cartilage from damage. Healthy plant sources include linseed, chia seed and walnuts.

If you are looking for an osteoarthritis superfood, then the humble strawberry may be your answer. There was a study that randomized individuals into two groups. The first group was given a powdered compound made from real strawberries to have each day, and the second group a compound that was only flavored like strawberries but not contain real fruit. The individuals in both groups did not know what they were receiving. After 12 weeks, the second group that had no strawberries showed no improvements, whereas the first group did. Markers of inflammation and cartilage degradation were significantly decreased, and joint pain was reduced.

Maybe you'd prefer something from the vegetable kingdom for osteoarthritis. Then you can't overlook the brilliant brassica family. This is family of vegetables includes broccoli, cauliflower, cabbage, kale and brussel sprouts. These vegetables contain a brilliant chemical called sulforaphane can block enzymes that cause joint destruction, to help prevent and slow down the progression of osteoarthritis.

Alcohol and Osteoarthritis is not a good mix. There is plenty of evidence suggesting that consuming alcohol has a negative effect on joint health. Alcohol consumption is known to promote inflammation throughout the whole body, contributing to pain, swelling and stiffness of the joints; and also accelerating the progression of osteoarthritis. Alcohol also leads to cartilage degradation and joint damage, interfering with the balance of cartilage synthesis and breakdown, leading to accelerated joint deterioration. Excessive alcohol intake can cause nutritional deficiencies of vitamins and minerals which are essential for bone and joint health. These deficiencies can worsen the symptoms and speed up the progression of osteoarthritis. Alcohol

consumption is often associated with excess calorie intake and weight gain. This increases the stress on weight-bearing joints, exacerbating osteoarthritis symptoms and hastening joint degeneration.

Aside from a plethora of other negative effects, smoking also adversely effects joint health in multiple ways. Smoking is associated with an increased risk of developing osteoarthritis when compared to non-smokers. This can be attributed to smoking induced inflammation and oxidative stress. With the extra inflammation and oxidative stress, smoking has a detrimental effect on cartilage metabolism, leading to accelerated joint degeneration in individuals with osteoarthritis. The research shows that smokers have greater cartilage loss and more severe joint damage over time when compared to non-smokers. Smoking-induced inflammation and impaired circulation, can worsen pain perception and joint function. Smokers report higher severity of pain and greater difficulties performing their activities of daily living compared to non-smokers

Having adequate water intake is an important aspect in maintaining joint health and improving arthritis symptoms. Staying well hydrated helps to reduce inflammation in the body and decrease the inflammatory response in the joint. Water is vital in the creation of synovial fluid which is special thin layer of fluid in the joints that cushions and delivers nutrients to the joint. It helps to reduce the friction on the joints as you move around. When there is inadequate water intake, the body finds it difficult to manufacture this synovial fluid and this results in more friction and pain. About 65 to 80% of the cartilage in your joints is made from water. It is therefore crucial to have adequate water to help maintain its flexibility and shock-absorbing ability. Dehydrated cartilage becomes more brittle and susceptible to damage.

Healthy fresh juices can not only help with hydration but are also useful in many health complaints. A fantastic juice that I often recommend for my patients suffering with acute arthritis symptoms is the following: using carrots, green apples and celery, at a ratio of 4 to 2 to 1, try to get at least 2 glasses or 500ml each day. Feel free to add some ginger to this.

Hydrotherapy - the use of hot and cold water - on the affected joints, can be very useful in helping to manage the osteoarthritis.

Hot Water Therapy

- Increases blood circulation, which can help deliver oxygen and nutrients to the affected joints, promoting healing and reducing stiffness.
- Helps relax muscles around the joints, reducing muscle spasms and tension, which can alleviate some of the pain.
- Stimulates sensory receptors in the skin, which decreases pain signals sent to the brain.
- Improves joint flexibility and range of motion, making it easier for to perform daily activities.

Cold Water Therapy

- Effectively reduces joint inflammation and swelling in joints affected by osteoarthritis.
- Numbs the area, providing immediate pain relief and reducing the transmission of pain signals to the brain.
- Reduces muscle spasms.
- Regular use leads to overall improved physical function and decreased disability.

You can enhance the benefits of both therapies by using both hot and cold contrast treatment. You can do this for specific joints, or A contrast shower if there are multiple joints involved. To do the contrast treatments you it is 5 minutes hot, 1 minute cold, 3 minutes hot, 1 minute cold, 3 minutes hot, 1 minute cold; making the water as hot as you can tolerate it but not burning, and on the coldest setting for the cold portion. Following this, dress warmly and rest for about one hour. Try to do this at least 2-3 times per week. This is not advisable if you are particularly frail or have any heart rhythm issues

Exercise is a cornerstone recommendation in osteoarthritis prevention and management. It can

- Improves joint function
- Provide pain relief
- Maintain cartilage
- Stimulate production of synovial fluid

While high-impact activities may not be suitable for all individuals with osteoarthritis, low-impact aerobic exercises such as walking, swimming, and cycling are usually well tolerated and very beneficial for the joints. Strength training exercises and stretches that target specific muscle groups around the affected joints are also recommended. You need to have at least three exercise sessions each week to see the benefits on the joint health.

Sleep always plays a significant role in overall wellbeing but it does have some specific impacts on osteoarthritis. Restorative sleep reduces overall body inflammation resulting in an improvement in osteoarthritis symptoms. However, sleep deprivation leads to higher levels of inflammatory markers which contributes to the progression of joint inflammation and degeneration. Poor sleep increases pain perception and reduces pain tolerance.. With adequate rest there is improved pain perception, with a reduction in the severity of osteoarthritis symptoms. Sleep is vital for healing, tissue repair and regeneration in the joint tissues affected by osteoarthritis. This occurs primarily in the deep stages of sleep so adequate rest allows joints to recover from daily wear and tear, and maintain their function. The ideal scenario to receive the benefits to the inflammation levels, pain perception, and joint repair and function is to get 7-8 hours each night. Try to get plenty of sleep in before midnight as this is when the most restoration occurs.

Sunlight exposure triggers the production of vitamin D in the skin. Low levels of Vitamin D appear to be associated with increased risk of progression of osteoarthritis and predicts loss of cartilage in the joints. Vitamin D has some amazing anti-inflammatory properties, helping to alleviate joint inflammation and subsequent symptoms. It is important for muscle function and strength, and this helps to support, stablise and protect the joints.

Near Infrared Light (NIR) is showing some very promising therapeutic promise. NIR can penetrate the skin and into the deeper tissues to produce some amazing healing results. With regards to osteoarthritis, these are some of the benefits that are known.

- NIR light positively influences inflammation pathways, to reduce the joint inflammation, improve joint function and reduce stiffness.
- NIR light therapy has been shown to decrease pain perception.
- Chondrocytes, the cells in the joints responsible for maintaining cartilage, are stimulated by NIR light. This enhances cartilage repair, reduces destruction of the joint, and slows the progression of osteoarthritis.
- NIR light can enhance microcirculation and oxygenation in the affected joint areas, promoting tissue healing and reducing stiffness.
- NIR leads to improvements in joint mobility and function.

There are a number of really helpful natural remedies for alleviating osteoarthritis.

Celery Seed
- Dose: 3g dried seed daily
- Caution: not to use in pregnancy or if there is inflammation of the kidneys

Rosehip
- Dose: 5g daily

Ginger

Dose: 1g dried root daily

Turmeric
- Dose: 3g dried root daily
- Caution: not to use if you have gallstones or blockage in the bile duct

Boswellia
- Dose: 2g daily

Devil's Claw
- Dose: 1-3g dried tuber daily
- Caution: diabetics be careful as it lowers blood sugar

White Willow Bark
- Dose: 3g dried bark daily
- Caution: do not use in children or those with salicylate allergy

Meadowsweet
- Dose: 3g dried flowers/leaves daily
- Caution: do not use in children or those with salicylate sensitivity

Topical treatments
- Capsaicin (compound found in chillis)
- Olive oil
- Sesame seed oil
- Flaxseed oil

I have a long running quip with many of my suffering patients who have all manner of chronic disease. The consultation process begins with the patient asking, "When is my new body arriving?". I usually reply with, "It's still on back order." This is an absolute truth. We are on the brink eternity, waiting for the second coming of Jesus. *1 Thessalonians 4: 16, 17: For the Lord Himself will descend from heaven with a shout, with the voice of an archangel, and with the trumpet of God. And the dead in Christ will rise first. Then we who are alive and remain shall be caught up together with them in the clouds to meet the Lord in the air. And thus we shall always be with the Lord.* Both the dead and the living will finally meet the Lord and begin eternal life with our magnificent Creator. Not only is Jesus our Creator, but He is also our Recreator. There is indeed a with a new body waiting for those who believe. *1 Corinthians 15: 52, 53 in a moment, in the twinkling of an eye, at the last trumpet. For the trumpet will sound, and the dead will be raised incorruptible, and we shall be changed. For this corruptible must put on incorruption, and this mortal must put on immortality.* At the second coming of Jesus, only then will we receive this immortal body. Changed, brand new, never to suffer any ailment again, nor need my medical services for all eternity. I invite you to put your New Body on back order with God today. We do not have long to wait now.