S Schmidt

Amayeza Information Services, South Africa Corresponding author, email: stephani@amayeza-info.co.za

Republished from: *SAPA* 2021;21(3):19-22 Prof Nurs Today 2021;25(4):14-17

Osteoarthritis

Osteoarthritis is also known as 'wear and tear' arthritis and is the most common form of arthritis. In people with osteoarthritis, the cartilage in the joints becomes worn down. Cartilage covers the ends of the bones and allows for the bones to move smoothly against each other (cartilage is the protective cushion on the end of the bones). Damage to the cartilage typically results in pain and leads to stiffness of the joint. In some cases, reduced joint movement and function may affect a person's ability to perform daily tasks such as climbing stairs, walking or opening jars. Any joint may be affected; however, the joints in the knees, hips, fingers, feet and spine are most commonly affected by arthritis.

Signs and symptoms of osteoarthritis

Signs and symptoms of osteoarthritis vary from person to person and also depend on which joint is affected. Some people with osteoarthritis do not experience pain or other symptoms, and some may be able to function normally despite the pain, while others may find it difficult to perform even simple tasks due to pain.

Signs and symptoms may include:

- Pain typically occurs near or over the affected joint but may also be referred to other areas. Initially, pain increases with activity and eases with rest, but it can also become more constant later in disease.
- Morning stiffness usually gets better within half an hour of rising, but stiffness may recur after prolonged periods of inactivity. Joint pain and stiffness may also be more pronounced in cold or damp weather.
- Swelling may occur as a result of excess fluid build-up.
- When joints no longer move smoothly against each other, a grating or crackling sensation may occur when the joint is moved. Sometimes clicking noises may be heard.
- Changes in the shape of the affected joint(s). Bone spurs (enlargements/outgrowths of bone), also known as

osteophytes, can form around the edges of a joint. These changes may be prominent when small joints in the hand are affected, for example, if the joints in the fingers are affected.

Risk factors for osteoarthritis

There are several risk factors in developing osteoarthritis. These include:

- Advancing age. Although osteoarthritis may develop at any age, the risk increases with age. It appears to be more common in people aged 40 years and over.
- Gender. Women are more likely to develop osteoarthritis compared to men.
- Obesity.
- Certain occupations, for example, occupations that require:
- frequent kneeling or squatting (for example, carpentry)
- heavy lifting (for example, construction work)
- prolonged standing or
- walking long distances each day.
- Injury. Trauma or significant injury to a joint increases the risk of osteoarthritis in that joint, in the future.
- Sports. Certain competitive sport such as football, wrestling and boxing predispose participants to joint injury, which increases the risk of osteoarthritis. In contrast, the risk of osteoarthritis does not seem to be increased with non-competitive running.

Treatment

There is currently no cure for osteoarthritis. Treatment should be individualised and would depend on the affected joint(s), severity of pain and stiffness, whether the person has difficulties in performing daily activities, as well as personal preference. There are a number of treatments to help relieve symptoms. These include:

- Arthritis education and support.
- · Lifestyle measures and assistive devices.
 - Weight loss (especially, those who are overweight or obese)
 - Physical therapy and exercise programmes. Targeted exercise helps to strengthen the muscles surrounding the joint and helps to improve flexibility.
 - Orthoses are devices such as splints or braces that help to immobilise joints or help to keep joints aligned. These devices may help to reduce pain and inflammation.
 - The use of assistive devices such as canes and walking sticks may reduce stress on the affected joint and may make it easier to perform everyday tasks.
- · Medication.
 - Oral or topical therapies with nonsteroidal antiinflammatory drugs (NSAIDs), for example, naproxen, ibuprofen and diclofenac, or topical capsaicin may be considered (if not contraindicated) for persons who do have adequate symptom relief with nonpharmacological measures.
 - Nutritional supplements.
 - Joint injections.
- Surgery.

Focus on ArthroGuard® Acute Intensive Joint Protection & Support

ArthroGuard® Acute Intensive Joint Protection & Support (ArthroGuard®) is a nutritional supplement that may play a role in maintaining healthy cartilage and/or joint health. It is used to help ease joint pain and to help protect against the deterioration of cartilage.

ArthroGuard® contains glucosamine, methylsulphonylmethane (MSM), chondroitin, flaxseed powder, hydrolysed collagen, curcumin powder, ginger extract, mangosteen extract, zinc, boron, manganese, selenium, vitamin C, vitamin B₁, B₂, B₃, B₅, B₆ and vitamin E.

ArthroGuard® may:

- Assist with the development and maintenance of cartilage, bones, gums and teeth.
- Contribute to normal collagen formation for the normal function of cartilage, bones and blood vessels.
- Assist with connective tissue formation.

Both glucosamine and chondroitin are natural components found in the body. Glucosamine is one of the building blocks of cartilage and chondroitin is a building block for the formation of joint matrix structure and may help protect against the deterioration of cartilage (may slow cartilage breakdown). It has been suggested that:

- MSM has antioxidant and anti-inflammatory properties and may help to protect cartilage and improve physical function
- Curcumin and ginger may have pain-relieving and antiinflammatory properties.
- Various vitamins and minerals included in ArthroGuard® (for example, vitamin C, vitamin E and selenium) may protect the cells against oxidative damage.

Dosage and directions for use

The recommended dose for adults is one tablet three times per day with meals, or as directed by their healthcare professional. It should be taken with calcium and vitamin D.

Patients should be advised to avoid taking the tablet at bedtime.

Results may vary from person to person. In order to achieve full benefit, ArthroGuard® should be used for at least four weeks.

Contraindications

ArthroGuard® should not be used by people who:

- · Are hypersensitive to any of the ingredients.
- · Are allergic to seafood.
- Have severe glaucoma. (People with mild-to-moderate glaucoma should be monitored for changes in intraocular pressure.)

It is also not suitable for use in children.

Safety in pregnancy and lactation has not been established. ArthroGuard® should therefore not be used by women who are pregnant or breastfeeding.

Special warnings and precautions

Individuals with other underlying medical conditions should first consult with their healthcare professional before starting treatment.

ArthroGuard® has the potential to interact with other medicines. Individuals using other medication should also first consult with their healthcare professional before starting treatment.

Side effects

After taking glucosamine, some people may experience side effects such as (including, but not limited to), nausea, vomiting, dizziness, heartburn, constipation, diarrhoea, abdominal cramps, headache, fatigue, drowsiness, insomnia, fever, chills or skin disorders. People experiencing discomfort should be advised to consult with their healthcare professionals.



Summary

There has been a growing interest in the use of phytochemical, herbal products and nutritional supplements for osteoarthritis of the knee, hand or hip. However, clinical studies have either reported conflicting results or there is only limited data available on the efficacy of these substances. More well-designed studies are needed to evaluate the role of complementary or alternative therapies in patients with osteoarthritis.

Bibliography

- Deveza LA, Bennell K. Patient education: Osteoarthritis treatment (Beyond the Basic). Post TW, editor. UpToDate. c2021. Waltham, MA: UpToDate Inc.; 2019. Accessed 30 Mar 2021.
- Doherty M, Abhishek A. Patient education: Osteoarthritis symptoms and diagnosis (Beyond the Basics). Post TW, editor. UpToDate. c2021. Waltham, MA: UpToDate Inc.; 2019. Accessed 30 Mar 2021.
- Arthritis South Australia. Arthritis Information sheet: Osteoarthritis [Internet]. Available from: https://arthritisaustralia.com.au/wordpress/wp-content/uploads/2018/02/Osteoarthritis_New-updated.pdf. Accessed 3 Apr 2021.
- Deveza LA, Bennell K. Management of knee osteoarthritis. (Beyond the Basic). Post TW, editor. UpToDate. c2021. Waltham, MA: UpToDate Inc.; 2021. Accessed 30 Mar 2021.

- ArthroGuard® Acute Intensive Joint Protection Support (Tablet). Package insert. Adcock Ingram.
- Arthritis South Australia. Arthritis Information sheet: Glucosamine and chondroitin [Internet]. Available from: https://arthritisaustralia. com.au/wordpress/wp-content/uploads/2018/02/ArthAus_ GlucoChond_2807.pdf. Accessed 3 Apr 2021.
- MedlinePlus. Turmeric. MedlinePlus [Internet]. Bethesda (MD): National Library of Medicine (US); updated 24 Mar 2021. Available from: https://www.nccih.nih.gov/health/turmeric. Accessed 3 Apr 2021.
- ArthroGuard® Everyday Joint Protection and Support. Package insert. Adcock Ingram.
- Bartels EM, Folmer VN, Bliddal H, et al. Efficacy and safety of ginger in osteoarthritis patients: a meta-analysis of randomised placebocontrolled trials. Osteoarthritis and Cartilage. 2015;23(1):13-21. https://doi.org/10.1016/j.joca.2014.09.024.
- Liu X, Machado GC, Eyles JP, Ravi V, Hunter DJ. Dietary supplements for treating osteoarthritis: a systematic review and meta-analysis. Br J Sports Med. 2018;52(3):167-75. https://doi.org/10.1136/ bjsports-2016-097333.
- MedlinePlus. Antioxidants [Internet]. Available from: https://medlineplus.gov/antioxidants.html. Accessed 9 Apr 2021.
- 12. Bruyère O, Honvo G, Veronese N, et al. An updated algorithm recommendation for the management of knee osteoarthritis from the European Society for Clinical and Economic Aspects of Osteoporosis, Osteoarthritis and Musculoskeletal Diseases (ESCEO). Semin Arthritis Rheum. 2019;49(3):337-50. https://doi.org/10.1016/j.semarthrit.2019.04.008.