

Patient information Leaflet

Viscosupplementation

Viscosupplements play a vital role in the healthy synovial joint.

Viscosupplements give the synovial fluid its characteristic physical properties, enabling this fluid to act as a lubricant, a shock absorber and a filter controlling the movement of cells and large molecules within the joint. They form a coating over the entire inner surface of the joint. This coating acts as a viscoelastic shield over the articular cartilage and synovium, protecting these structures from mechanical damage. In addition, viscosupplements protect the cartilage and synovium from free radicals and other inflammatory factors. They form the backbone of the proteoglycan aggregates that are essential for the structural and functional integrity of the articular cartilage.

In osteoarthritis and synovitis, the synovial fluid becomes less viscous and its lubricating, shock-absorbing and filtering abilities are reduced. The coating of viscosupplements over the surface of the joint breaks down, leaving the cartilage and synovium exposed to mechanical and inflammatory damage. The synovium becomes inflamed. As a result, it grows more permeable to inflammatory molecules, which are therefore able to enter the joint in increased numbers. The articular cartilage is gradually destroyed.

The administration of exogenous viscosupplements increases the viscosity of the synovial fluid, restoring its lubricating, shock-absorbing and filtering properties. In addition, it re-establishes the protective coating of viscosupplements over the inner surface of the joint and increases the scavenging of free radicals. As a result of these changes, inflammation of the synovium is reduced.

The direct effects of exogenous viscosupplements cannot account for their long-term benefits, as each dose is cleared from the joint within a few days. It appears that, through their direct effects, exogenous viscosupplements restore the ability of the joint to produce its own viscosupplements and thus returns it to a state of homeostasis.

Evidence exists suggesting that exogenous viscosupplements may slow the destruction of cartilage.

When are Viscosupplements given?

The benefits are probably greatest in early osteoarthritis, but viscosupplements can be used at any stage of disease. However, they are usually reserved until other treatment options have been tried and fail to relieve your pain. The supplement is injected directly into your joint. To help make your injection as comfortable as possible, your doctor may apply a local, topical anesthetic first. To receive a complete course of treatment with Ostenil, your knee must be injected three separate times, 1 week apart.

What results can you expect?

Whether or not these products "work" is somewhat controversial. While some studies have found these products to improve the pain and function in some people with mild to moderate osteoarthritis, some clinicians have argued that the design of the clinical trials have been flawed or included too few patients, making interpretation of the results difficult. Other clinicians state that the real questions – do the viscosupplementation products work better than corticosteroid injections or NSAIDs and do they have a role in severe osteoarthritis – have yet to be convincingly answered. Further, there's no proof that viscosupplementation delays or reverses the underlying course of osteoarthritis.

Of patients who seem to be helped by the injections, many report feeling some pain relief during the course of the injections; pain relief is delayed in others. Most patients report the greatest pain relief 8 to 12 weeks after beginning treatment.

What are the risks or side effects?

The most commonly reported side effects associated with the injections are temporary injection-site pain, swelling, heat and/or redness, rash and itching, bruising around the joint and/or fluid accumulation in the injected knee. These reactions are usually mild (but occasionally are severe) and do not last long. You should avoid any strenuous activities or prolonged (more than 1 hour) weight-bearing activities (such as jogging or tennis) for 48 hours following the injection.

Because viscosupplements are not drugs, they should not interfere with medications you may be taking, including pain relievers and/or anti-inflammatory drugs; however, remember to talk with your health care provider about any medications you are taking. The safety and effectiveness has not been determined in pregnant women.