

Viscosupplementation Treatment for Knee Arthritis

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Knee arthritis is the most common joint arthritis, mainly caused by osteoarthritis. Osteoarthritis is an age-related condition, wear and tear disease, that generally affects the weight-bearing joints.

As the global population ages, the prevalence of knee arthritis is also increasing. There is no cure for the condition, but there are many treatments to prevent its progression. Most people would use medications and non-pharmacological means to manage the disease. Thus, people would use drugs, supplements, physiotherapy, physical therapy, and much more.

Generally, doctors recommend lifestyle modification to reduce mechanical stress on the knee joints. Thus, weight loss and low-impact exercises like walking and swimming can help stay active.

Doctors often recommend pain killers like acetaminophen or nonsteroidal anti-inflammatory drugs (NSAIDs) to reduce pain and inflammation. ⁽¹⁾

In more severe cases, doctors may recommend opioids to control pain. However, surgical intervention or even joint replacement may be needed if the disease continues to progress.



The role of viscosupplementation in knee arthritis

One of the effective and minimally invasive ways of managing knee pain is injecting medications directly into the affected joint. This method may be quite beneficial in many cases. Generally, doctors may either inject corticosteroids or hyaluronic acid. Among them, hyaluronic acid is a more readily available and safer option.

Thus, viscosupplementation is about injecting hyaluronic acid into the knee joints. Hyaluronic acid is a polysaccharide naturally present in the knee joints and is highly viscous. There is reduced intrinsic production of hyaluronic acid in those living with osteoarthritis. Thus, injecting it into the joints can help prevent the progression of osteoarthritis.

Viscosupplementation helps in many ways. It primarily helps restore rheological properties of the synovial fluid, improving its protecting properties, reducing pain, helping counter inflammation, and exerting a chondroprotective effect. In addition, it considerably helps minimize mechanical damage to the knee joint, thus helping prevent the condition's progress. ⁽²⁾

It appears that hyaluronic acid acts in two ways. Firstly, it improves the pressure-bearing ability of joints due to enhanced mechanical force distribution. Secondly, it seems to have a direct role in suppressing local inflammatory responses and thus diminishing the production of cytokines and other inflammatory enzymes.

How effective is viscosupplementation?

Viscosupplementation is a minimally invasive procedure that is especially good for all stages of knee joint osteoarthritis. Most studies show that it can help and thus should be considered when physical therapy and common pain killers fail to help sufficiently.

Thus, one of the meta-analyses in 2007 that combined data from 5 clinical studies found strong or level 1 evidence that viscosupplementation can help. ⁽³⁾ Similarly, American Family Physician (AFP) treatment guidelines say that it can help quite well in many cases. ⁽¹⁾

One of the most extensive systemic reviews done in 2012 that included eighty-nine clinical studies with 12,667 participants found significant evidence in favor of using this therapy. Furthermore, the study concluded that it is associated with clinically relevant benefits. ⁽⁴⁾

To conclude, knee arthritis is the most common joint disorder in adults. It might not be cured but is well managed with physical therapy, non-pharmacological means, and with the help of minimally invasive interventions like viscosupplementation.

References

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