**Hyaluronic Acid Injections for Osteoarthritis**

Joints are like gears – they work best if they’re well lubricated. In a healthy joint, a thick substance called synovial fluid provides lubrication, allowing bones to glide against one another. Synovial fluid acts as a shock absorber, too. In people with osteoarthritis, a critical substance in synovial fluid known as hyaluronic acid breaks down. Loss of hyaluronic acid appears to contribute to joint pain and stiffness.

That begs the question: Will replacing hyaluronic acid relieve osteoarthritis symptoms? Hyaluronic acid injections (also known as viscosupplements) are approved by the U.S. Food and Drug Administration (FDA) for treating osteoarthritis of the knee, though some doctors have used the therapy on other joints.

**An Alternative to NSAIDs**

The idea of using hyaluronic acid to treat osteoarthritis was originally proposed 70 years ago by Hungarian scientist Endre A. Balasz. By 1987, hyaluronic acid treatments were being used overseas, though the first viscosupplement available in the United States, Hyalgan, wasn’t approved by the FDA until 10 years later. There are now five hyaluronic acid treatments for knee osteoarthritis in use in this country. Hyalgan, along with Orthovisc, Supartz and Synvisc are made from a surprising raw material: rooster or chicken combs.

Hyaluronic acid injections are one treatment option doctors may offer when a patient is no longer able to control osteoarthritis pain with ibuprofen or other nonsteroidal anti-inflammatory drugs (NSAIDs), or the patient can’t tolerate these drugs (which can cause side effects such as stomach bleeding and kidney problems). The treatment regimen for hyaluronic acid usually involves receiving one injection in the affected joint per week for three to five weeks. Many patients appear to get at least some relief – eventually.

In 2006, a team led by Nicholas Bellamy, MD, of the University of Queensland in Brisbane, Australia, reviewed 76 studies examining the use of hyaluronic acid for treating knee osteoarthritis. The review, the largest and most comprehensive of its kind, found that pain levels in the average patient who receives these injections are reduced by 28 to 54 percent. That’s roughly what a patient might expect from taking NSAIDs, the authors concluded. Meanwhile, hyaluronic acid improved the ability to move about and perform daily activities by 9 to 32 percent.

As a patient soon learns, though, hyaluronic acid is no quick fix. According to Bellamy’s review (which was conducted on behalf of the Cochrane Collaboration, an international consortium that reviews scientific evidence for medical treatments), it takes about five weeks, on average, before a patient experiences the full benefits of hyaluronic acid. By contrast, corticosteroid injections – the other primary treatment choice when NSAIDs aren’t an option – provide significant relief within a few days. However, pain relief from corticosteroids diminishes markedly within a month or so. What’s more, overuse of corticosteroids can have a catabolic effect – that is, it could cause cartilage to break down and deteriorate further, explains Case Western Reserve University rheumatologist Roland W. Moskowitz, MD. Meanwhile, the Cochrane review found that pain-relieving benefits of hyaluronic acid persist at peak levels for about three months, on average. Dr. Moskowitz sometimes gives patients a double shot in the knee – one injection each of hyaluronic acid and corticosteroids – for quick-acting, long-lasting relief.

What’s more, studies indicate that injecting supplemental hyaluronic acid may coax the joint into increasing its own production of this important substance, which may in turn help to preserve cartilage. “There’s a lot of data to suggest that it can slow the disease down,” says Dr. Moskowitz, a coauthor of the Osteoarthritis Research Society International recommendations on treating hip and knee osteoarthritis. “Hyaluronic acid is not a magic pill,” says Dr. Moskowitz. “But it has a definite role in the armamentarium for treating osteoarthritis of the knee.”

**Cost**

The cost of hyaluronic acid is significant. The average wholesale price for five vials of Hyalgan is $661.00 ($132.20 per vial). For a package of three prefilled syringes of Synvisc, the average wholesale price is $620.00.22 Third-party reimbursement is variable, but Medicare and most insurance companies now cover viscosupplementation.

**Demostration**

Below is the video link present which demostrates how this injection works.

* <http://www.synviscone.com/videos/kneevideos.aspx?video=9>

**Source:**

* [**http://www.arthritis.org/living-with-arthritis/treatments/medication/drug-types/other/hyaluronic-acid-injections.php**](http://www.arthritis.org/living-with-arthritis/treatments/medication/drug-types/other/hyaluronic-acid-injections.php)
* The video source has been taken from the website of Syncvisc One. The link is present below:

<http://www.synviscone.com/what-is-synvisc-one.aspx>

* <http://www.aafp.org/afp/2000/0801/p565.html>