



DR DAVID SAMRA
www.drdavidsamra.com.au

SPORTS MEDICINE DOCTOR
MBBS (Hons), B App Sci (Physio)

P: (02) 8382 6969

F: (02) 8580 4899

drdavidsamra@gmail.com

Consulting at:

St Vincent's Sportsmed Darlinghurst

SportsLab Alexandria

Stadium Sports Medicine Moore Park

See website for details



Hyaluronic Acid Injections

What is Hyaluronic Acid (HA)?

Hyaluronic acid is a type of “ground substance” that exists in the connective tissue of the body to help lubrication between those tissues. It is also called Hyaluron as it is not actually an acid. It is mostly found in the joints in the lubricating fluid called synovial fluid. The special property of HA is that it has the **ability to change its viscosity**- it tends to become thick with inactivity and then thinner during movement to control friction.

You can think of it as the part of the “engine oil” that works to reduce friction.

It is thought to contribute to joint health by nourishing and reducing stress on the cartilage, which is the main shock absorber.

Over 30 years ago, pharmaceutical companies discovered this substance could be produced, and was originally approved for eye operations. They derive it from the comb on the head of roosters.

What is the evidence?

Hyaluronic acid injections appear effective for a small improvement in pain and function in mild-moderate osteoarthritis of the knee. (1)

Overall, the patients who respond well to these injections report improvement that is significant and sustained (up to 12 months).(2,3) Response varies and the injections do not help everyone.(4)

Therefore, the decision on whether to try a Hyaluronic acid injection rests with the patients' preference and whether the cost to benefit ratio is acceptable.

What are the risks?

Any joint or deep tissue injection carries a 1:80,000 risk of infection and a similar risk of significant bleeding.

Ultrasound is helpful in visualising the safest pathway for injection to avoid nerves and blood vessels, and it is always important to know if you are on blood thinners or have any immune system suppression.

Financial risk- these injections cost around \$500 out of pocket to buy them from the company, plus the costs for the doctor to provide management and inject them.

What should I expect?

Most people tolerate Synvisc-One without too many problems. Less than 5% of people may have a strong local inflammatory reaction, causing pain and swelling in their knee for a few days. This can be treated with anti-inflammatory medication. It is important to alert your doctor if you have this reaction as blood tests and knee fluid may need to be tested.

If you are allergic to products from birds- such as eggs, poultry and feathers please tell your doctor, as this increases the risk of allergy to Synvisc.

Some patients enjoy relief from their symptoms straight away after the injection, however the best studies indicate that the peak benefit occurs at around 8 weeks after the injection, and may last up to 12 months. You can also take an active role in your treatment using the **Synvisc Track Your Changes Kit**. The Kit has information on what to expect from Synvisc treatment and a chart to track your treatment for discussion with your doctor.

See [Synvisc Australia website](https://www.synvisc-one.com.au) for ordering information:

<https://www.synvisc-one.com.au/Home.aspx>

Durolane is the main competitor of Synvisc and is a very similar product, with similar outcomes reported in studies and by clinicians.

Distributed by: Smith & Nephew Surgical Pty Limited 85 Waterloo Rd North Ryde NSW 2113 Ph: +61 2 9857 3999

Only a single injection of Synvisc-One or Durolane is required to have an effect. A few years ago, these products did not have the same ability to stay in the joint for long periods and therefore three separate injections were required.

When can I resume my normal activities?

It is recommended that you rest your knee for a minimum of 24 hours after each injection. You should have somebody drive you home after each injection and then rest, with your leg elevated occasionally, for the remainder of the day. It is important that you do not undertake any strenuous activities (i.e. sports) for at least 48 hours after your injection.

References:

1. Colen S, van den Bekerom MPJ, Mulier M, Haverkamp D. Hyaluronic acid in the treatment of knee osteoarthritis: a systematic review and meta-analysis with emphasis on the efficacy of different products. *BioDrugs Clin Immunother Biopharm Gene Ther.* 2012 Aug 1;26(4):257–68.
2. Campbell KA, Erickson BJ, Saltzman BM, Mascarenhas R, Bach BR, Cole BJ, et al. Is Local Viscosupplementation Injection Clinically Superior to Other Therapies in the Treatment of Osteoarthritis of the Knee: A Systematic Review of Overlapping Meta-analyses. *Arthrosc J Arthrosc Relat Surg Off Publ Arthrosc Assoc N Am Int Arthrosc Assoc.* 2015 May 18;
3. Laudy ABM, Bakker EWP, Rekers M, Moen MH. Efficacy of platelet-rich plasma injections in osteoarthritis of the knee: a systematic review and meta-analysis. *Br J Sports Med.* 2015 May;49(10):657–72.
4. Rutjes AWS, Jüni P, da Costa BR, Trelle S, Nüesch E, Reichenbach S. Viscosupplementation for osteoarthritis of the knee: a systematic review and meta-analysis. *Ann Intern Med.* 2012 Aug 7;157(3):180–91.