

MONO*VISC*[®]

the
CHOICE
THERAPY

Highest Dose of HA in a Single Injection*

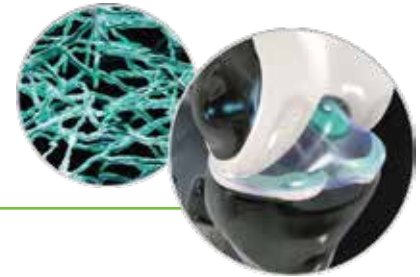


The Right Dose Osteoarthritis Therapy

In osteoarthritic knee, the pathologic changes of synovial fluid hyaluronic acid (HA), with its decreased molecular weight and concentration, led to the concept of viscosupplementation.*²

Hyaluronic Acid for immediate relief^{*3,4,5,6,7}

The goal of viscosupplementation is to improve the viscoelasticity of synovial fluid, replicating healthy joint function by increasing the molecular weight and concentration of hyaluronic acid (HA).



The role of HA in bio-mechanical & bio-therapeutic effect:

Pain Relief:

- Provides 'cushioning' and lubricating effect for pain relief
- Forms a viscous coating over the synovial and cartilage lining, acting as a mechanical barrier over pain receptors and inflammatory cells.
- Modulates pain perception directly through inhibition of nociceptors or indirectly through binding of substance P, a small peptide involved in the transmission of pain signals.

Anti-Inflammatory Effect:

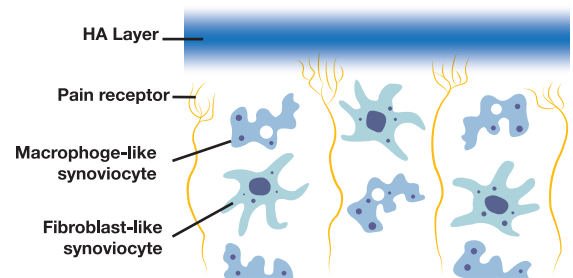
- Reduces level of inflammatory mediators, including prostaglandin and cyclic adenosine monophosphate in arthritic synovial fluid

Cartilage Nourishment:

- Provides nutrients and removing waste from cartilage cells that do not have a direct blood supply in cartilage.

Stimulate Self-Production of Hyaluronic Acid:

- Stimulate endogenous production of hyaluronic acid by human synoviocytes (suggested by in vitro research).



Highest Dose of Hyaluronic Acid in a Single Injection*

Monovisc is the new generation single injection viscosupplement with 4ml of highly purified, non-animal derived hyaluronic acid (HA).
The unique features of Monovisc:

High dose of optimum molecular weight HA

- 88mg in 1 injection, delivers more HA than other single HA injection products.

Application of the 'Light Cross-Linked' technology

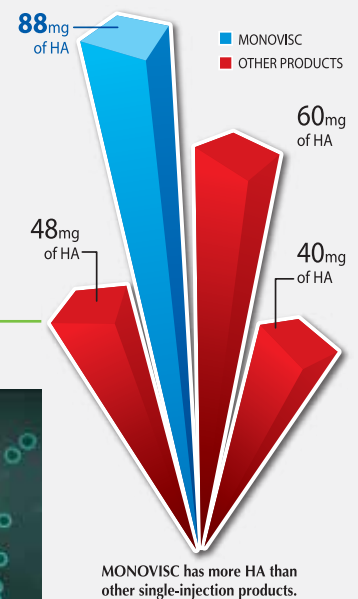
- Stabilise the HA molecules

Optimal viscosity profile



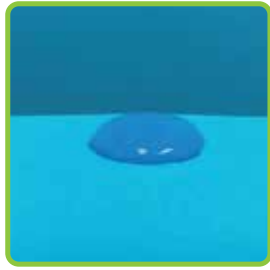
MONOVISC

HA products with lower dose of HA





MONOVISC



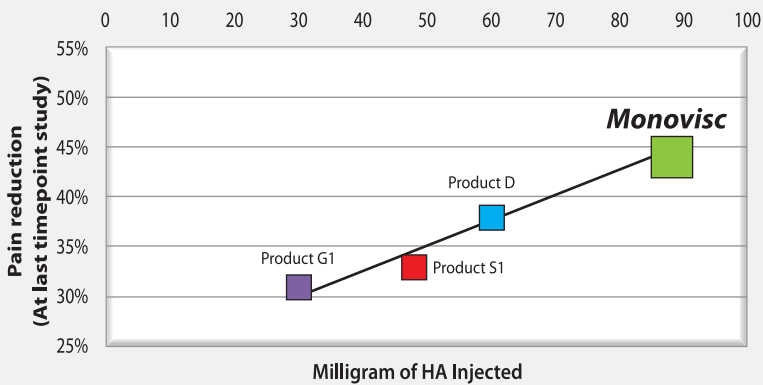
Other product

Is High Dose of HA Deliver Better Result?

High Viscosity Profile¹

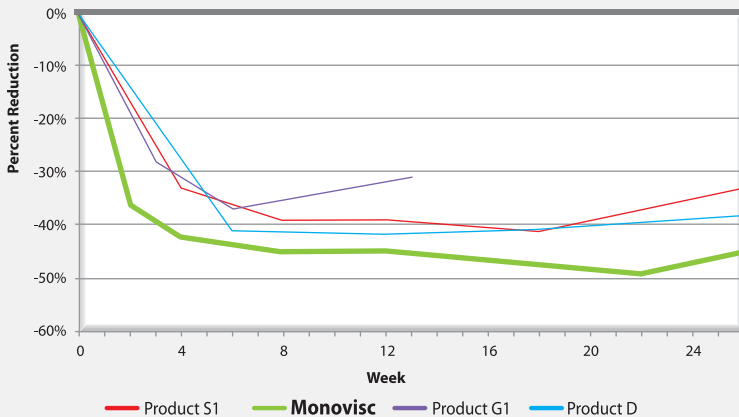
The viscoelasticity of synovial fluid is determined by both the Concentration and the Molecular Weight of its hyaluronic acid component.

Product	Reported NaHA, mg/ml	Molecular Weight, Daltons (Average)	Rheology Viscosity at 1.14 Shear Rate (1/s), Pa.s (cps)
Monovisc	22	1.48 x 10⁶	74.4
Product S1	8	3.52 x 10 ⁶	43.9
Product S2	10	0.63 x 10 ⁶	0.3
Product H	10	0.57 x 10 ⁶	0.2
Product G	10	0.96 x 10 ⁶	1.3



Greater pain reduction and durability of effect compared to other products.^{*8}

Reduction in Baseline WOMAC Pain as a Function of the HA Dose of the Treatment



Faster and Longer Pain Reduction^{*8}

Percent Reduction in WOMAC Pain for Four Single Injection HA Products Over the Length of their Pivotal Studies





MONOVISC[®]

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Highest Dose of Hyaluronic Acid in a Single Injection:

Powerful Performance with Greater, Faster & Longer Lasting Pain Relief*^{1,8}

- Delivers 88mg of optimum molecular weight HA in single injection
- Light Cross-linked technology, prolong HA's residence time

Good Safety Profile*^{1,8}

- The natural choice with highly purified, non-animal derived HA

Better Patient Compliance*¹

- Low volume, 4ml HA in a single injection



References:

1. Data on file
2. Intra-articular Hyaluronic Acid Injections for Knee Osteoarthritis. Available at <http://www.aafp.org/afp/2000/0801/p565.html> by DENNIS Y. WEN, M.D., University of Missouri-Columbia Medical School, Columbia, Missouri Am Fam Physician. 2000 Aug 1;62(3):565-570.
3. Viscosupplementation for the Osteoarthritis of the Knee. Available at <http://www.isakos.com/innovations/bobic2.aspx> & Hyaluronic acid injections & arthritis. Available at <http://www.thekneedoc.co.uk/hyaluronicacidinjectionsarthritiis>
4. Wright JM, Crockett HC, Dowd M: The Role of Viscosupplementation for the Osteoarthritis of the Knee. Orthopaedic Special Edition 2001;7:15-18.
5. Listrat V, Ayral X, Patarnello F, Bonvarlet JP, Simonnet J, Amor B, Dougados M. Arthroscopic evaluation of potential structure modifying activity of hyaluronan (Hyalgan) in osteoarthritis of the knee. Osteoarthritis Cart 1997;5:153-160.
6. Watterson JR, Esdaile JM. Viscosupplementation: Therapeutic Mechanisms and Clinical Potential in Osteoarthritis of the Knee. J Am Acad Orthop Surg 2000;8:277-284.
7. A key component of cartilage is hyaluronic acid. Available at <http://www.discount-vitamins-herbs.net/Hyaluronic-acid.htm>
8. Data on file (Anika Therapeutics) available at clinical efficacy and safety of Monovisc: A lightly cross-linked highly concentrated hyaluronan specially formulated for single injection in osteoarthritis.

*Data on file & Among the FDA approved single dose HA injection products

Product information provided is pertinent to use in Malaysia.

Product information contained herein is not approved for use in the United States of America

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