The Possible Benefits of SynovoDerma, a Dietary Supplement

- Nutritionally supports the rejuvenation of skin and the protection of joints
- Protects against loss of moisture in elastin and other tissues
- Enhances and speeds wound healing
- Facilitates nutrient transport, metabolic waste elimination, lubrication and shock absorption throughout the body
- Has potential to protect against aging and maintain proper immune system function
- Oral form HA avoids the problems associated with intraarticular injections

Description

SynovoDerma contains Hyaluronic acid (HA), an essential compound for maintaining healthy skin and joints. The body produces HA throughout, but the benefits of supplementing with additional HA to rejuvenate skin and protect joints are now being recognized. HA also shows potential as an anti-aging factor and a compound that can help maintain proper immune system function.

In the past, commercially available HA was limited in its use due to its high molecular weight, and was only available in injectable and topical form. SynovoDerma is the result of a new, patented enzymatic process, which reduces the molecular weight of the compound, making HA highly absorbable and bioavailable in an oral form. In addition, the low molecular weight may enhance HA’s ability to penetrate the lining of synovial cells, thereby increasing HA’s effectiveness for joint health.

Hyaluronic acid is part of a group of biologically active macromolecules known as glycosaminoglycans (GAGs). GAGs are negatively charged, high molecular weight molecules, consisting of repeating disaccharide units forming long, unbranched, linear polysaccharides. They have high viscosity and low compressibility, which makes them ideal for lubricating the joints, while their rigidity underlies cellular structural integrity.

The HA disaccharide unit consists of D-glucuronate and N-acetylglucosamine. The most important biological function of HA is its ability to retain water. It is important to note that this is not the undesirable type of water retention, but the type that is essential for life: our cells must retain fluid to function. By maintaining the proper levels of intracellular water, HA can facilitate the critical cellular functions of toxin and waste elimination, nutrient transport, and absorbing shock.

HA is a major component of the synovial fluid. The fluid acts as a shock absorber, lubricant, and in nutrient transport. It is found in the joint cavities, where it nourishes the cartilage. Cartilage is a specialized type of connective tissue that provides strength and flexibility to the body. The backbone of hyaline cartilage (found throughout the body) is HA. If the body becomes low in HA, the cartilage weakens.

HA is also the GAG that is found in the highest amounts in the extracellular matrix (ECM). The ECM is found between the tissues and fills the space between the cells, and HA is essential to the structure and function of the ECM. Within the skin, the ECM is comprised of GAGs, collagen and elastin. Elastin must be bathed in fluid. If fluid levels drop in the ECM, elastin becomes dry and brittle, which is what leads to lines, wrinkles and dry skin not only in the facial tissue, but throughout the tissue of the entire body.

The cells and tissues that have a greater fluid component, such as the ears and eyes, have much higher concentrations of HA. For instance, HA is a major component of the vitreous humor, the clear gelatinous substance that fills the center of the eyes. Other cells and tissues that have a need for increased lubrication and shock absorption, such as the heart and joints, are also higher in HA content.

The turn-over rate of HA in the body varies, depending on the bodily tissues. Within the cartilage, it takes 2 to 3 weeks for the body to metabolize 50% of the HA that is produced on a daily basis, but within the epidermis, it takes less than one day. So as the body ages, it produces less HA but continues to metabolize the same 50%. Eventually, this leads to HA depletion, often first noticed in the skin.

Almost fifty percent of total HA is found in the skin. HA is found in both the underlying dermis layers of the skin, and in the visible epidermis layer of the skin. It plays a crucial role in facilitating the transport of nutrients to the epidermis, and the elimination of toxins and metabolic waste from the epidermis. HA may help the body eliminate the dead outer layer of skin cells (keratinocytes), and assist regeneration by modulating the life cycle of skin cells.
encouraging them to live longer and be replaced more quickly once they die. When skin cells survive longer, the epidermis thickens, which prevents buildup of excessive layers of dead skin. Well known products such as alpha-hydroxy acids and other exfoliating agents are commonly used to achieve this result in skin appearance, but HA does it from the inside out.

Intraarticular injections of HA have been used for alleviating the pain associated with progressive damage to bones and cartilage, as a way to prevent or delay more invasive procedures and to prevent further damage. Numerous studies have shown the beneficial effects of intraarticular injections of HA for pain relief and joint function equal to or better than the relief obtained through the use of NSAID’s and steroids, with longer lasting results. The mechanism of action involves the hydration and lubrication of the synovial membrane which helps to control permeability and reduce synovial cell proliferation. Recent research indicates that HA has chondroprotective and/or chondrostimulating effects. Additional studies have demonstrated HA’s positive effect on the cell-mediated immune response associated with inflammation in patients with temporomandibular joint disorders.

HA’s ability to aid in wound healing has been utilized for years. In an animal study comparing the efficacy for wound healing of SynovoDerma, a known wound healing enhancer (CGS-21680), and a placebo, oral absorption and efficacy of SynovoDerma was demonstrated. All results were statistically significant and indicated that SynovoDerma significantly improves normal wound healing on a daily basis when administered orally as compared with placebo. Furthermore, there was little difference between the activity of SynovoDerma and the known topical wound healing cream. The results also indicated that wound half closure time (CT50) was dramatically reduced versus placebo. This study demonstrates that SynovoDerma provides the same bodily functions as the body’s own naturally produced HA.

Subjective monitoring tests conducted in 96 women ages 22-65 at Ohtsuma University in Japan showed dramatic improvements in several physiological parameters. The test subjects were given 6 capsules of SynovoDerma for 45 days. The results of this study demonstrate oral HA’s significant potential as an internal cosmetic agent, increasing skin moisture, smoothness and firmness. In addition, results also suggested that oral HA may help restore joint mobility.

HA in topical and injectable form has been used since the 1950’s with no significant side effects, other than pain on injection. It is exceptionally well tolerated and does not appear to accumulate in tissues beyond what is therapeutically necessary. Oral HA has been used in Japan and other countries for a number of years. This new, patented low molecular weight oral HA has demonstrated excellent absorption, bioavailability, safety and efficacy.

### Each three (3) softgels contain:
- Hyaluronic Acid Powder (9% min. Hyaluronic Acid) 210 mg

### Other ingredients:
- Rice bran oil, yellow beeswax, titanium dioxide.

### Suggested Use:
As a dietary supplement, 6 softgels daily for 20 days, then reduce dosage to 3 softgels daily, or as directed by a healthcare practitioner. May be taken with or without food.

### References


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