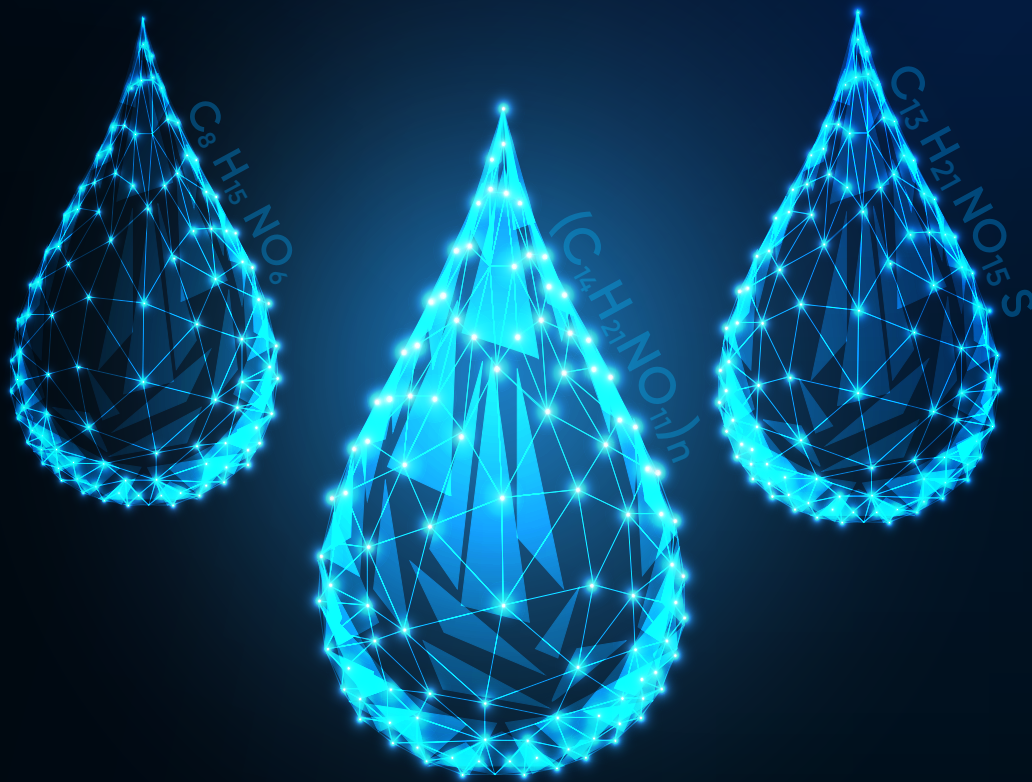


Viscoelastic Gel for Intra-articular Use

ViscoPhiTM Trio



THE THREE MUSKETEERS OF INTRAARTICULAR WORLD

40 mg / 2 mL Sodium Hyaluronate - 40 mg / 2 mL N-Acetylglucosamine - 40 mg / 2 mL Chondroitin Sulphate

All for One, One for Health

Viscoelastic Gel for Intra-articular Use
ViscoPhi[™]
Trio

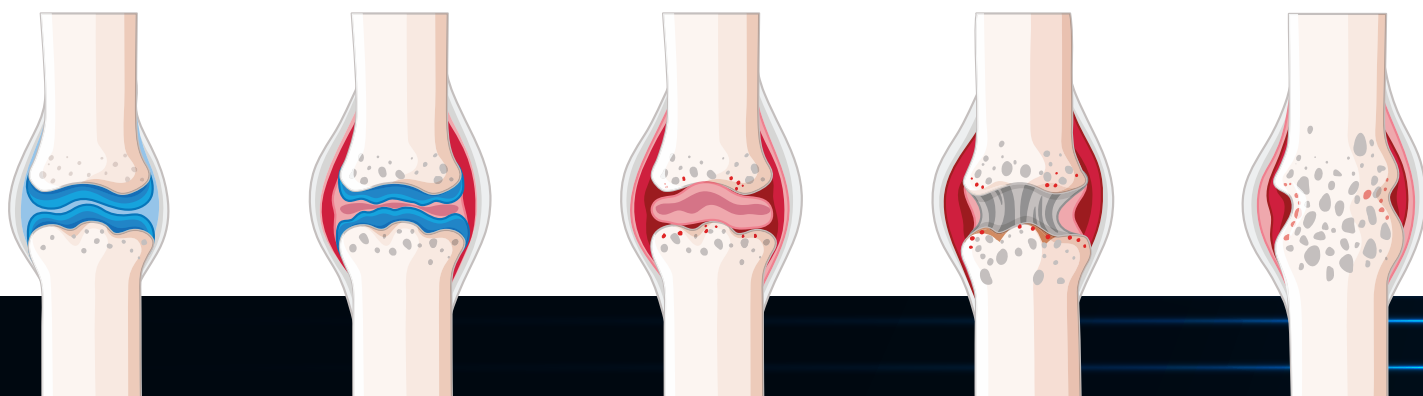
ViscoPhi[™] Trio is an intra-articular injectable gel developed for the treatment of osteoarthritis (OA), degenerative joint disease (DJD) and degenerative meniscopathy. **ViscoPhi[™] Trio** has a safe, effective and easy to apply technology for intra-articular treatment process. **ViscoPhi[™] Trio** relieve pain, restore cartilage and reduce degeneration with glucosamine forms which contains in formulation.



Active Ingredients

Hyaluronic Acid is naturally occurring biopolymer in the articular cartilage. Fluid provides lubrication of the knee joint and has a protective effect in cartilage structure. Basic effect of intra-articular hyaluronic acid is; injected in to the joints, in the place of diminishing joint fluids, lubricity to joint and to enhance cartilage durability. Also not directly, but indirectly may influence pain relief. Molecular weight and purity of hyaluronic acid is effective for treatment of OA. Hyaluronic acid should provide proper lubricity and quality for ideal protection of cartilage structure.

Chondroitin sulfate & N-acetylglucosamine are substances that situated in the normal cartilage structure. These ingredients provide survival and proliferation chondrocytes. Also restrain enzymes that leads to reduced cartilage cell production. Chondroitin sulfate and glucosamine has chondroprotective and anti-inflammatory activity in OA. Eventually, ingredients suppress synovitis, restore cartilage and reduce degeneration.



Osteoarthritis and Joint Diseases

Osteoarthritis, also known as degenerative arthritis, degenerative joint disease or osteoarthrosis, is a form of arthritis caused by inflammation, breakdown, and the eventual loss of cartilage in the joints because the cartilage wears down over time.

Osteoarthritis is a progressive disease and any joint of the body may be affected. However, the disease is most likely to occur in the patient's hands, hips, knees, lower back and shoulders.



Osteoarthritis mainly has three characteristics:

- Bony growths develop around the edge of joints.
- Cartilage damage. Cartilage is the part of the joint that cushions the ends of the bones and allows easy movement of joints.
- **Synovitis:** when there is a mild inflammation of the tissues around the joints.

Osteoarthritis is more common among females than males, especially after the age of fifty years old. Most commonly, it develops in people aged over 40. Younger people may also be affected; usually after an injury or as a result of another joint condition.

ViscoPhi™ Trio intraarticular injection

ViscoPhi™ Trio is a combination of sodium hyaluronate, chondroitin sulfate and n-acetylglucosamine containing intra-articular injectable gel.

ViscoPhi™ Trio is a new effective and beneficial product, because of active ingredient which is n-acetylglucosamine in gel structure. In Vitro studies on isolated chondrocytes, or cartilage explants from healthy or OA patients, provide more evidence for the proposed mechanisms regarding how glucosamine supports joint health. It has been shown that glucosamine enhances the production of cartilage matrix components in chondrocyte culture, such as aggrecan.

Furthermore, glucosamine increases hyaluronic acid production in synovium explants.

Experiments have shown that glucosamine prevents collagen degeneration in chondrocytes by inhibiting lipoxidation reactions and protein oxidation. Enzymes are responsible for cleavage preferentially in the interglobular domain of the aggrecan molecule, which leads to loss of aggrecan function. Glucosamine inhibits the MMP synthesis and further proteoglycan degeneration. Inflammatory processes, which are also responsible for degeneration of cartilage, are inhibited by glucosamine.

Expectation From Treatment

Osteoarthritis treatment expectations are generally consisting of mobility, pain relief and protection of cartilage structure. Intra-articular injection treatment does not envisage totally healing for osteoarthritis and cartilage diseases. But by courtesy of glucosamine active ingredient in Genvisc provides cartilage cartilage restoration and anti-inflammatory activity



ViscoPhi™ Trio suppresses synovitis,
inhibits aggrecan loss, chondroprotective
efficacy and antiinflammatory activity.

**Chondroitin sulfate &
N-acetyldglucosamine**

Non-Animal

Min. 99% Pure Formula

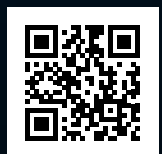


Klingerstr. 24, 60313

Frankfurt am Main, Germany

Phone: +49 152 07659955 Landline: +49(0)6940767397

e-mail: info@phibio.de



www.phibio.de