INGREDIENTS
Glucosamine Chondroitin MSM + Hyaluronic Acid features a comprehensive suite of reliable ingredients to support joints and connective tissue in the body. The patented, award-winning ingredient BioCell Collagen® is derived from a naturally occurring matrix of constituents that is standardized to 20% chondroitin sulfate (CS) and 10% hyaluronic acid (HA), with approximately 60% Collagen Type II. Our formula also includes 1,500 mg of glucosamine sulfate (GS) and 1,000 mg of additional CS (above and beyond what is provided by the BioCell Collagen® ingredient), quantitatively matching or exceeding dosage amounts used in landmark clinical studies that have revealed the utility of these two pivotal ingredients towards joint health. Furthermore, Glucosamine Chondroitin MSM + Hyaluronic Acid features patented OptiMSM® methylosulfonylmethane, MSM distilled to be 99.9% pure. MSM is a naturally occurring nutrient that provides sulfur, used by the body to maintain normal connective tissues.¹

BENEFITS
Superior Ingredients with an Outstanding Record
Glucosamine Chondroitin MSM + Hyaluronic Acid provides an all-in-one formula that brings together joint and skin health ingredients in substantial amounts. Glucosamine sulfate (GS) and chondroitin sulfate (CS) have been the topics of intense and fruitful research into joint health over the past few decades. Levels of GS & CS seen in the most acclaimed research are offered in this complete formula. Also in the formula are two vital structural components of the joint and skin that decline as we age: collagen type II and hyaluronic acid. The formula’s BioCell Collagen® furnishes these to help replenish the body’s natural supply, which in turn can support joint function and healthy skin.

BioCell Collagen® is hydrolyzed and denatured to low molecular weight compounds that increase the bioavailability and absorption of its components. In an absorption study of BioCell Collagen®, measurements revealed a gradual and significant increase of active total Hyaluronic Acid (HA) in the blood of test subjects after a single dose.² In the same study, subjects taking BioCell Collagen® for 28 days maintained elevated blood levels of HA compared to initial levels.

Glucosamine and chondroitin sulfates are often discussed together in scientific literature. In a recent meta-analysis of six studies involving 1,502 volunteers, it was determined that long-term daily supplementation with glucosamine sulfate (at 1,500 mg for at least 3 years) or chondroitin sulfate (at 800 mg for at least 2 years) supported maintenance of knee joint structure over the years, compared to placebo.³ In a recent report, a British physician and joint health specialist concluded that, “Glucosamine, chondroitin, and the combination of these two agents have stood the test of time.”⁴

Glucosamine/ methylsulfonylmethane combo formulations have also been successfully used to support joint function. In one study using a GS/MSM combination, a total of 118 subjects were randomized into one of four groups for 12 weeks: glucosamine (500 mg three times daily), MSM (500 mg three times daily), the combination of glucosamine and MSM, or a placebo treatment. Glucosamine alone and MSM alone were shown to enhance joint function, while the combination was found to be even more effective in supporting joint comfort and mobility, by both subjective and objective measurements.⁵

Promotes Healthy Joint Structure*
Enhances Joint Comfort and Mobility*

Glucosamine Sulfate
Glucosamine sulfate (GS) supports joint function by supplying the body with dietary ingredients (glucosamine and sulfur) to help maintain healthy joints. Glucosamine, a monosaccharide that is essential to the glycosaminoglycans found in cartilage and synovial fluid, stimulates chondrocytes (cartilage cells) to manufacture building blocks known as proteoglycans. These building blocks contribute to the maintenance of sound joint struc-

<table>
<thead>
<tr>
<th>Supplement Facts</th>
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<tbody>
<tr>
<td>Serving Size: 5 Capsules</td>
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<tr>
<td>Servings Per Container: 30</td>
</tr>
<tr>
<td><strong>Amount Per Serving</strong></td>
</tr>
<tr>
<td>Chloride (from glucosamine sulfate 2KCl)</td>
</tr>
<tr>
<td>Sodium (from glucosamine sulfate sodium)</td>
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<tr>
<td>Potassium (from glucosamine sulfate 2KCl)</td>
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<tr>
<td>BioCell Collagen*</td>
</tr>
<tr>
<td>(from chicken sternum cartilage) providing minimum:</td>
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<tr>
<td>Hydrolyzed Collagen Type II</td>
</tr>
<tr>
<td>Chondroitin Sulfate</td>
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<tr>
<td>Hyaluronic Acid</td>
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<tr>
<td>Glucosamine Sulfate 2KCl</td>
</tr>
<tr>
<td>Chondroitin Sulfate</td>
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<tr>
<td>(from chondroitin sulfate sodium)</td>
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<tr>
<td>MSM (Methylosulfonylmethane)(OptiMSM®)</td>
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</tbody>
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Other ingredients: Gelatin (capsule), rice powder, magnesium stearate (vegetable source). Contains Shellfish (crab and shrimp shells)

Suggested Adult Use: Take 5 capsules daily with food, or as recommended by a nutritionally-informed physician.

WARNING: Consult your physician before using any health supplement if pregnant, lactating, or have a medical condition. Not for use by individuals under the age of 18 years. Keep out of reach of children.

Non-GMO / Gluten Free / Soy Free

Store in a cool dry place.

*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.
Hyaluronic Acid

Hyaluronic Acid (HA) is a type of building block called a glycosaminoglycan, and it plays an important role in supporting the structural strength of joint tissue and the skin dermis. The physiological role of HA is underscored by its remarkable capability of retaining water molecules, which generates viscoelastic properties. HA plays dual roles for joint health. First, it is an essential structural component of proteoglycans such as aggrecans in the cartilage matrix. Second, HA is highly concentrated in synovial fluid, where it serves to enhance joint lubrication and the viscoelastic structural and functional characteristics of the joint. A clinical study in 2007 with 98 participants determined that a healthy concentration of HA in synovial fluid is a strong indicator of joint health. Since the body’s supply of HA naturally decreases with age, Glucosamine Chondroitin MSM + Hyaluronic Acid was formulated to help maintain healthy HA levels, allowing for the extended maintenance of joint and skin.

Helps Maintain Youthful Skin*

HA also plays an important role in maintaining the health and natural beauty of the skin. The compound enhances the structure and volume of the skin by promoting healthy connective tissues that interact with the skin. HA plays a direct role in the attraction and maintenance of moisture in the skin. As HA concentrations naturally decrease in the elderly, it may become difficult for the skin to retain moisture, leaving the skin dry and uncomfortable. Researchers have performed comparative measurements of hyaluronic acid levels in the skin of young and elderly individuals. Results indicate that there is a normal and progressive reduction in the number of hyaluronic acid granules in human skin with age—so much of a reduction, in fact, that a complete absence of these granules was seen in healthy individuals 60 years or older. These variations in HA levels with age may account for the decreased turgidity, wrinkled appearance, and altered elasticity of skin tissue. Recent in-vitro laboratory studies are now indicating that HA not only provides moisture retention and structural support to the skin, but also promotes cellular vitality. The results of one such study indicate that HA given to human epidermal (skin) cells induces cell signaling that promotes natural cell repair and tissue renewal.

The BioCell Collagen II® in Glucosamine Chondroitin MSM + Hyaluronic Acid provides a safe, natural, standardized source of building blocks useful for maintaining joint structure and function, as well as promoting the integrity of healthy skin.

SAFETY

BioCell Collagen® achieved GRAS (Generally Recognized As Safe) self-affirmation, meaning that a consensus on safety was reached by an independent expert panel of qualified scientists who carried out an extensive review of all available scientific safety data on this ingredient. Opti MSM® achieved GRAS status supported by a successful notification to the FDA—the most distinguished safety status currently available for this type of ingredient.

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