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#### www.worldwidehealthcenter.net

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Most Glucosamine supplements that are sold only contain Glucosamine sulphate which is good for building cartilage in the joints, but not very helpful for building spinal discs, given that so many people suffer from low back problems these days.

### **CONTAINS:**

- No gluten
- Wheat
- Lactose
- Added sugar
- Artificial preservatives
- Colourings

#### PRODUCT INFORMATION

Each serving (6 capsules) provides:

- 90 mg Vitamin C (Calcium Ascorbate) L-Lysi ne - 75 mg Glucosamine Sulphate 2KCL - 1.5 g Glucosamine (n-Acetyl-d) - 270 mg Ginger (Zingiber officinale) Extract (10:1) - 120 mg Quercetin - 60 mg - 150 mg MSM Hyaluronic Acid - 90 mg Marine Collagen (Peptan®) - 540 mg Bamboo (Bambusa vulgaris) Extract (25:1, 75% Silica) - 210 mg

- 300 mg

Capsule Shell: Vegetable Cellulose

#### **Directions**

Chondroitin Sulphate

Take 2 capsules, 3 times daily or as directed by a health professional.

Our doctor-formulated Glucosamine Complex has many other ingredients that are helpful for building the spinal discs as well. It contains Collagen hydrosylate for building the spinal discs, as well as MSM, Hyaluronic acid, Bamboo, Chondroitin as well as anti-inflammatory compounds such as Ginger and Ouercetin.

Glucosamine is a compound naturally found within the cartilage of our joints, made from chains of sugars and proteins bound together. It acts as one of the body's natural shock-absorbents and joint lubricants, allowing us to move around without (or at least with less) joint, bone and muscle pains.

Glucosamine possesses natural anti-inflammatory and anti-aging properties. One of the most popular supplements taken by people with bone and joint pain, glucosamine aids in treating common symptoms of age-related disorders like arthritis and osteoarthritis. It can also help improve digestion

and gut health, mobility, range of motion and general joint health, even in healthy people who have no chronic joint or bowel disorders.

Without glucosamine, everyday movements and tasks would be very difficult and painful. The body needs glucosamine for the synthesis of certain proteins and lipids (fats) that form various important tissues, especially cartilage. This plays an important part in the construction of our joints, tendons and ligaments.



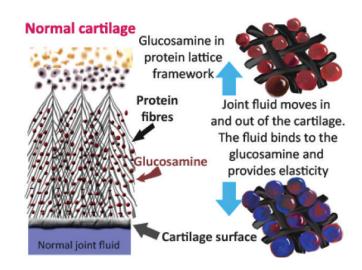
In addition, it helps form the fluids that surround joints and provide lubrication. (This is called synovial fluid). Glucosamine also serves an important role in microbiome health. It helps form connective tissue that make up parts of the digestive tract, a system that helps the immune system function.

Although not every person with severe joint pain will benefit from glucosamine supplementation, many find some relief from pain within just 6 to 8 weeks. Many people do benefit from it, though, experiencing quality of life improvements like natural relief from arthritis, better digestive health, lower inflammation or less bone pain. It can be used for years safely to combat signs of aging and improve overall quality of life, with little to no side effects or risks in most people.

## **How Does Glucosamine Work?**

Most of the research done on glucosamine looked specifically at the benefits of glucosamine sulphate, the natural chemical found in the human body. Researchers believe that using glucosamine supplements or obtaining it from natural sources like bone broth increases the amount of cartilage and fluid that surrounds our joints. This helps prevent joint breakdown and reduces pain.

Glucosamine is an aminosaccharide that helps create cartilage from compounds called aggrecan and proteoglycans. Since joint deterioration and loss of cartilage are common osteoarthritis triggers, you can see why glucosamine's cartilage-building properties are important ways to naturally ease symptoms of the condition.



There's no current recommended daily dosage for glucosamine, but most people do best when taking about 1,500 milligrams daily, whether alone or in combination with other supplements (like sulphate, omega-3s or MSM supplements). Studies show this dosage range helps:

- lower inflammation and help reverse autoimmune reactions
- preserve joint health
- reduce joint pain and tenderness
- protect and repair gut lining
- fight irritation to the stomach, bladder and intestines
- treat inflammatory bowel disease and leaky gut syndrome
- rebuild tissue and stronger bones following fractures or injuries

Remember, the most commonly recommended form of glucosamine is glucosamine sulphate. The "sulphate" seems to play an important part in joint health because it helps the body produce cartilage. Glucosamine sulphate seems to provide more of an impact compared to the other forms of glucosamine, including glucosamine hydrochloride or N-acetyl glucosamine.

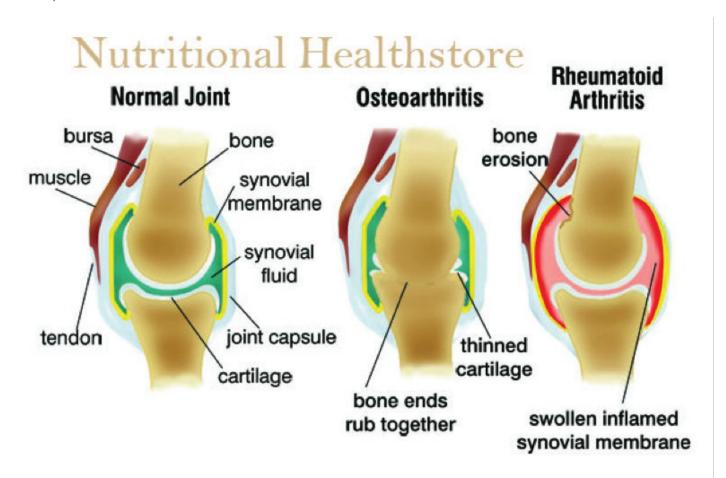
## 4 Benefits of Glucosamine

#### 1. Helps Improve Joint Health & Osteoarthritis

Glucosamine is one of the best supplements for supporting joint health and lowering symptoms related to degenerative disorders like osteoarthritis. Aging naturally impacts the strength and durability of our joints, normally causing cartilage loss and joint pain over time. It doesn't improve symptoms 100 percent of the time, but compared to many other supplements like chondroitin, glucosamine consistently rank as one of the most effective for treating arthritis discomfort.

Glucosamine slows down deterioration of joints when used long-term, plus it offers other benefits that prescription painkillers cannot (such as lowering chronic inflammation and improving digestive health). The results of taking glucosamine differ from person to person, but some long-term users often report pain relief that allows them to avoid surgeries and lower or eliminate medication use.

Osteoarthritis is a disorder characterized by on-going joint pain caused from years of accumulating pressure and friction places on joints. It's the most common type of arthritis worldwide, effecting millions of people (especially older adults).



Osteoarthritis is a degenerative disease, so it becomes harder to move over the years as joint friction increases. Studies show that taking about 1500 milligrams of glucosamine daily can help millions of people suffering from degenerative joint diseases, preventing further damage, especially in commonly effected joints such as those in the knees and hips. It has been shown to help offer relief from joint pain within 4–8 weeks, which might be longer than some prescriptions or over-the-counter pain killers, but it's also a more natural and well-tolerated approach.

Glucosamine, whether used alone or in combination with other supplements like chondroitin, is not a "cure all" and guaranteed to help everyone, but major studies have found it can help many, especially those impacted most by arthritis.

The Glucosamine/Chondroitin Arthritis Intervention Trial (GAIT), which is considered the most comprehensive trial ever done involving glucosamine, found that the combination of glucosamine and chondroitin sulphate used for 8 weeks resulted in significant relief in the majority of study participants who had high amounts of joint pain. Many experienced improvements regarding their moderate-to-severe knee pains, although not all did (including those with milder pains).

#### 2. Improves Digestion & Eases Inflammatory Bowel Diseases

Glucosamine is a helpful supplement for improving digestive function and repairing the lining of the GI tract. It's even been shown to be an effective leaky gut supplement, combating a condition sometimes called "intestinal permeability." This condition involves undigested food particles and proteins (like gluten, toxins and microbes) passing into the bloodstream through tiny openings in the lining of the GI tract.

Once these particles enter the bloodstream, they often trigger inflammation or initiate or worsen immune responses in the body. These include food sensitivities, arthritis and inflammatory bowel diseases. Glucosamine supplements, or naturally glucosamine-rich bone broth, help repair damaged tissue and lower inflammation related to inflammatory bowel disease (IBD), a set of conditions that are notoriously painful and hard to treat. The supplement may also help repair the lining of the bladder and stomach and intestines.

In 2000, researchers from the University Department of Paediatric Gastroenterology at University College School of Medicine found that glucosamine was an effective, inexpensive and nontoxic supplement used for treating chronic inflammatory bowel diseases, such as Crohn's disease and ulcerative colitis. Children affected by inflammatory bowel disease tend to have lower levels of glucosamine in the body. Interestingly, N-acetyl supplementation (GlcNAc) offered a mode of action distinct from conventional treatments, resulting in lower symptoms in 75 percent of patients.

The researchers found evidence of significant improvements in the majority of patients using glucosamine, even those who were unresponsive to other anti-inflammatory medications and antibiotics. Results showed improved integrity of the GI tract and restoration of healthy epithelial cell structures that helped stop gut permeability.

#### 3. Can Help Relieve TMJ Symptoms

TMJ (a disorder related to the temporo-manibular joint in the jaw) is common in young to middle-aged adults and characterized by frequent jaw and neck pains, headaches and trouble sleeping. TMJ affects the joint that connects the jaw to the skull and allows for the head to move up and down, or side to side, normally without pain.

As the TMJ joint becomes inflamed and worn down, pain worsens. This makes it harder to talk, eat and function normally. Studies suggest glucosamine helps ease TMJ symptoms and pain in people with arthritis that effects the jaw. The pain relief is on par with taking NSAID pain relievers can (such as ibuprofen or Advil). Taking 500 to 1500 milligrams of glucosamine daily for several months or years may help you sleep better, chew and heal while lowering inflammation in the jaw long-term.

#### 4. Helps Alleviate Bone Pain

Many people with bone pain, low bone density and a history of fractures can benefit from taking glucosamine, which assists bone healing. This is especially true if they also have joint pains or a form of arthritis. Some evidence suggests that glucosamine helps preserve articular cartilage surrounding bones, decreases pain, increases physical function, and enhances activities in people with bone disorders or those who are at most at risk for bone loss (such as middle-aged and older women).

A 2013 study by the Department of Orthopaedics and Traumatology at Haseki Training and Research Hospital in Turkey found that glucosamine helped speed up the time it took rats to heal from bone fractures. Those researchers found that new bone formation and osteoblast lining were significantly higher in glucosamine-treated rats compared to those in control groups. After 4 weeks of taking 230 milligrams of glucosamine sulphate daily, the rats' connective tissue surrounding bones were more cellular and vascular, and the newly formed bones that were previously fractured were stronger compared to controls.

# How to Use Glucosamine: Supplement Types & Dosages

Today, glucosamine can be found in several supplemental forms:

- glucosamine sulphate (many researchers believe that glucosamine sulphate is the most beneficial type due to how it's easily absorbed and how glucosamine positively interacts with sulphate)
- glucosamine hydrochloride
- N-acetylglucosamine

You'll probably notice that glucosamine and chondroitin are two supplements often taken together in order to improve results, since both help create molecules that form cartilage, the spongy-substance found within the spaces between our joints that help attach muscles to bones.

Both glucosamine and chondroitin are commonly synthesized in labs, but they can be found in nature, too. Natural glucosamine used in high-quality supplements is usually derived from the "exoskeltons" of shellfish, including shrimp, crab and lobster. These creatures all contain glucosamine in their rigid, external shells. Less often, glucosamine comes from certain fermented grains.

Chondroitin, on the other hand, is derived from the natural cartilage of animals like cows and chickens. It's found in high amounts in their bones, skin and tissues. Drinking bone broth is probably the greatest way to obtain both glucoasmine and chondroitin at home, since the bones, connective tissues and other animal parts used to make the broth leach out high amounts of these nutrients in an easy-to-absorb form.

#### Below are recommended dosage instructions for adults taking glucosamine:

- For improving joint health and lowering joint pain: 1,500 milligrams taken once daily (or 500 milligrams taken in three divided doses). You can use glucosamine in combination with other anti-inflammatory supplements, including turmeric and omega-3 fatty acids.
- For easing arthritis/osteoarthritis symptoms: 1,500 milligrams daily taken with 400 milligrams of chondroitin sulphate. This amount can safely be used long-term for up 3 years.
- For improving digestive health: 1,500 milligrams taken daily. You might want to combine glucosamine with other helpful supplements known to boost gut health like MSM, licorice root, digestive enzymes and probiotics.

## Glucosamine Side Effects & Interactions

Since it's already present within the human body, glucosamine is usually very safe and well-tolerated. Many studies have found that using glucosamine daily for 6 to 8 weeks improves symptoms in most adults and poses a very low risk of side effects.

However, there are times when it can cause side effects in some people, especially if they have an allergy to the source used to make glucosamine supplements. (Or if it interacts with another prescription.) If you have a known seafood/shellfish allergy, make sure to carefully avoid supplements created from these sources by checking the label and ingredient information.

Although rare, potential side effects of glucosamine supplements include: indigestion, nausea, heartburn, diarrhoea, constipation, skin reactions and headaches. It's not well known how glucosamine affects women during pregnancy or while breastfeeding, so it's best to avoid taking supplements during those times unless being monitored.

There's also some evidence that glucosamine supplements (usually when taken in high doses) might have the potential to cause changes in cholesterol, insulin and blood sugar levels in people with diabetes or high cholesterol, so be careful if you fall into these categories and consider getting your doctor's advice.

