Glucosamine

url: https://medlineplus.gov/druginfo/natural/807.html  
  
  
Glucosamine  
What is it?  
Glucosamine is a chemical found in the body. Glucosamine supplements are sold as glucosamine sulfate, glucosamine hydrochloride, and N-acetyl glucosamine.  
  
Glucosamine is used by the body to make other chemicals that build tendons, ligaments, cartilage, and the fluid that surrounds joints. Joints are cushioned by the fluid and cartilage around them. Taking glucosamine might increase the cartilage and fluid around joints and/or help prevent their breakdown.  
  
People commonly use glucosamine sulfate and glucosamine hydrochloride for osteoarthritis. Glucosamine is also used for joint pain, rheumatoid arthritis, multiple sclerosis, and many other conditions, but there is no good scientific evidence to support these other uses.  
  
  
  
  
How effective is it?  
Natural Medicines Comprehensive Database rates effectiveness based on scientific evidence according to the following scale: Effective, Likely Effective, Possibly Effective, Possibly Ineffective, Likely Ineffective, Ineffective, and Insufficient Evidence to Rate.The effectiveness ratings for GLUCOSAMINE are as follows:Likely effective for...  
Osteoarthritis. Taking glucosamine sulfate by mouth for at least 4 weeks can provide some pain relief and improve function for people with knee osteoarthritis. Products that contain glucosamine hydrochloride do not seem to work as well unless they are taken in combination with other ingredients. Taking glucosamine sulfate doesn't seem to reduce the risk of getting osteoarthritis.   
  
  
There is interest in using glucosamine for a number of other purposes, but there isn't enough reliable information to say whether it might be helpful.  
  
  
Is it safe?  
When taken by mouth: Glucosamine sulfate is likely safe in most adults when used for up to 3 years. Glucosamine hydrochloride is possibly safe for most adults when used for up to 2 years. N-acetyl glucosamine is also possibly safe when used for up to 6 months. Glucosamine can cause some mild side effects including bloating, nausea, diarrhea, and constipation.   
When applied to the skin: N-acetyl glucosamine is possibly safe when used for up to 10 weeks.  
When given as an enema (rectally): N-acetyl glucosamine is possibly safe when used in doses of 3-4 grams daily.  
  
  
Special precautions & warnings:  
Pregnancy and breast-feeding: There isn't enough reliable information to know if glucosamine sulfate, glucosamine hydrochloride, or N-acetyl glucosamine is safe to use when pregnant or breast-feeding. Stay on the safe side and avoid use.  
Asthma: Glucosamine might make asthma worse. Until more is known, people with asthma should be cautious about taking products that contain glucosamine.  
Diabetes: There used to be some concern that glucosamine might increase blood sugar levels. But most research shows that glucosamine doesn't increase blood sugar levels in people with diabetes.  
Glaucoma: Glucosamine might increase the pressure inside the eye and could worsen glaucoma. If you have glaucoma, talk to your healthcare provider before taking glucosamine.  
High cholesterol: There used to be some concern that glucosamine might increase cholesterol levels. But most research shows that glucosamine doesn't seem to increase cholesterol levels.  
High blood pressure: There used to be some concern that glucosamine might increase blood pressure. But most research shows that glucosamine does not seem to increase blood pressure.  
Shellfish allergy: Glucosamine is produced from the shells of shrimp, lobster, and crabs. If you have a shellfish allergy, talk to your healthcare provider before using glucosamine.  
  
  
  
Are there interactions with medications?  
MajorDo not take this combination.Warfarin (Coumadin)Warfarin is used to slow blood clotting. Taking glucosamine with or without chondroitin increases the effects of warfarin. This can increase the risk for serious bruising and bleeding. Don't take glucosamine if you are taking warfarin.ModerateBe cautious with this combination.Medications for cancer (Topoisomerase II Inhibitors)Some medications for cancer work by decreasing how fast cancer cells can copy themselves. Glucosamine might block these medications from working. Taking glucosamine along with some medications for cancer might decrease the effectiveness of these medications.MinorBe watchful with this combination.Acetaminophen (Tylenol, others)Taking glucosamine SULFATE and acetaminophen together might affect how well each works. But more information is needed to know if this interaction is a big concern.Medications for diabetes (Antidiabetes drugs)Glucosamine might increase blood sugar levels. Taking glucosamine along with diabetes medications might reduce the effects of these medications. Monitor your blood sugar closely.  
  
  
Are there interactions with herbs and supplements?  
Chondroitin sulfateTaking chondroitin sulfate together with glucosamine HYDROCHLORIDE might reduce blood levels of glucosamine hydrochloride. But it's not clear if this will change the effects of glucosamine hydrochloride.  
  
  
Are there interactions with foods?  
There are no known interactions with foods.  
  
  
How is it typically used?  
Glucosamine sulfate and glucosamine hydrochloride have most often been used by adults in doses of 1500 mg by mouth daily for up to 3 years. Speak with a healthcare provider to find out what dose might be best for a specific condition.  
  
Keep in mind that glucosamine used in supplements often comes from the shells of shellfish. Talk to your healthcare provider before taking these supplements if you have a shellfish allergy. Also, some glucosamine products aren't labeled correctly. In some cases, the amount of glucosamine actually in the product has varied from none to over 100% of the amount stated on the product's label. Some products have contained glucosamine hydrochloride when glucosamine sulfate was listed on the label.  
  
  
  
  
Other names  
(3R,4R,5S,6R)-3-Amino-6-(Hydroxymethyl)Oxane-2,4,5-Triol Hydrochloride, 2-Acetamido-2-deoxyglucose, 2-Amino-2-Deoxy-D-Glucosehydrochloride, 2-Amino-2-Deoxy-Beta-D-Glucopyranose Hydrochloride, 2-Amino-2-Deoxy-Glucose, 2-Amino-2-Deoxy-Beta-D-Glucopyranose, 2-Amino-2-Deoxy-D-Glucose Sulfate, 3-Amino-6-(Hydroxymethyl)Oxane-2,4,5-Triol Sulfate, Acetylglucosamine, Ac tylglucosamine, Amino Monosaccharide, Chitosamine, Chitosamine Hydrochloride, Chlorhidrato de Glucosamina, Chlorhydrate de Glucosamine, Chlorure de Potassium-Sulfate de Glucosamine, D-Glucosamine, D-Glucosamine HCl, D-Glucosamine Hydrochloride, D-Glucosamine Sulfate, D-Glucosamine Sulphate, G6S, GlcNAc, Glucosamine HCl, Glucosamine KCl, Glucosamine N-Acetyl, Glucosamine, Glucosamine Potassium Sulfate, Glucosamine Sulphate, Glucosamine Sulfate 2KCl, Glucosamine Sulfate-Potassium Chloride, Glucosamine Sulphate KCl, Glucosamine-6-Phosphate, GS, Mono-Sulfated Saccharide, N-Acetil Glucosamina, N-Ac tyl Glucosamine, N-Ac tyl-Glucosamine, N-Ac tylglucosamine, N-Acetyl D-Glucosamine, N-Ac tyl D-Glucosamine, NAG, N-A-G, pGlcNAc, Poly-N-Acetyl Glucosamine, Poly-NAG, Poly-(1->3)-N-Acetyl-2-Amino-2-Deoxy-3-O-Beta-D-Glucopyranurosyl-4-(or 6-) Sul, p-GlcNAc, Saccharide Mono-Sulfat , Saccharide Sulfat , Sulfate de Glucosamine, Sulfate de Glucosamine 2KCl, SG, Sulfated Monosaccharide, Sulfated Saccharide, Sulfato de Glucosamina.  
  
  
  
Methodology  
  
 To learn more about how this article was written, please see the Natural Medicines Comprehensive Database methodology.   
   
  
  
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