Mesoglycan

En Español (Spanish Version)

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Supplement Forms / Alternate Names
• Aortic GAGs; Aortic Glycosaminoglycans; Chondroitin Polysulphate; Chondroitin Sulfate A; CSA; GAGs; Glycosaminoglycans; Mucopolysaccharide

Principal Proposed Uses
• Atherosclerosis; Intermittent Claudication; Varicose Veins/Venous Insufficiency

Other Proposed Uses
• Hemorrhoids; High Cholesterol; Kidney Stones; Osteoarthritis; Phlebitis

Mesoglycan is a type of substance found in many tissues in the body, including the joints, intestines, and the lining of blood vessels. Chemically, mesoglycan is related to the blood-thinning drug heparin and the supplement chondroitin. Unlike chondroitin, mesoglycan is primarily used to treat diseases of blood vessels. Preliminary evidence suggests that mesoglycan may be helpful for atherosclerosis, varicose veins, phlebitis, and hemorrhoids.

Sources

Mesoglycan is not an essential nutrient because the body usually manufactures it from scratch. For supplement purposes, mesoglycan is commercially extracted from the intestines of pigs. Very similar substances can be produced from cartilage, bone, and the lining of large blood vessels, and are often used interchangeably.

Therapeutic Dosages

The usual dosage of mesoglycan is 100 mg daily.

Therapeutic Uses

Most proposed uses of mesoglycan involve diseases of blood vessels. For example, evidence suggests that mesoglycan may slow the development of hardening of the arteries, perhaps by lowering cholesterol levels, "thinning" the blood, or through other effects.

People with severe hardening of the arteries sometimes develop blockage in the arteries of the legs, a condition called intermittent claudication. This condition limits the ability to walk by causing intense, crampy pain after walking a relatively short distance. There is some evidence that mesoglycan may help.

The conditions just discussed involve arteries. Mesoglycan may also be useful for various diseases of the veins,
including varicose veins/venous insufficiency, hemorrhoids, and phlebitis.4–8,19

One study suggests that a substance related to mesoglycan, hyaluronic acid, might be helpful for asthma when taken by inhalation.22

Warning: Do not self-treat phlebitis. It is a potentially deadly disease.

Preliminary evidence suggests mesoglycan may additionally be useful in treating kidney stones.9

The substance chondroitin is used for the treatment of osteoarthritis. Based on the chemical similarities between chondroitin and mesoglycan, researchers conducted a large (almost 400 participant) 5-year, double-blind, placebo-controlled study of injected mesoglycan for slowing the progression of osteoarthritis.21 Unfortunately, no benefits were seen.

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What Is the Scientific Evidence for Mesoglycan?

Intermittent Claudication

A 20-week, double-blind, placebo-controlled trial that enrolled 242 people evaluated the effects of mesoglycan (100 mg a day orally, after a short course of injected treatment) for treating intermittent claudication.20 Significantly more participants in the mesoglycan group responded to treatment (defined as a greater than 50% improvement in walking distance) than in the placebo group.

Atherosclerosis in General

In a double-blind, comparative study, men with atherosclerosis in the arteries of the heart (coronary artery disease) were given either 200 mg daily of mesoglycan or no extra treatment.10 After 18 months, the layering of the vessel lining was 7.5 times greater in the untreated group than in the mesoglycan group, a significant difference. However, because this was not a double-blind placebo-controlled trial, the results can't be taken as truly reliable. (For information on why double blind studies are essential for proving a treatment effective, see Why Does This Database Depend on Double-blind Studies?)

Additional preliminary evidence that mesoglycan might help atherosclerosis comes from other studies in animals and people.11,12

We don't know for certain how mesoglycan might help atherosclerosis. There is some evidence that it can reduce cholesterol levels and also "thin" the blood.13

Vein Diseases

Several studies suggest that mesoglycan may be helpful in the treatment of vein problems, such as varicose veins/venous insufficiency, phlebitis, and hemorrhoids.14–19 For example, in a double-blind, placebo-controlled trial, 183 individuals with leg ulcers caused by poor vein function were treated with either placebo or mesoglycan (first by injection and then orally) for 24 weeks.19 The results of this double-blind study suggest that mesoglycan significantly improved the rate at which the leg ulcers healed.

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Safety Issues

Mesoglycan is essentially ground-up pig intestines and is believed to be safe, even if taken in large quantities.
However, because mesoglycan appears to decrease blood clotting, it should not be combined with prescription blood thinners such as warfarin (Coumadin), clopidogrel (Plavix), ticlopidine (Ticlid), pentoxifylline (Trental), or heparin, or drugs in the aspirin family. Maximum safe dosages for young children, pregnant or nursing women, or those with severe liver or kidney disease have not been determined.

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**Interactions You Should Know About**

If you are taking drugs that decrease blood clotting, such as warfarin (Coumadin), heparin, clopidogrel (Plavix), ticlopidine (Ticlid), pentoxifylline (Trental), or aspirin, do not use mesoglycan except under physician supervision.

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**References [+]**


