

Supplements to help manage Blood Sugar Health

Garlic

COMMON NAME: Garlic

SCIENTIFIC NAME: *Allium sativum*

NOT RECOMMENDED - EVIDENCE

LEVELS OF EVIDENCE



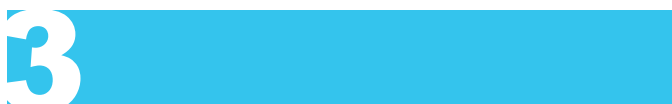
Recommended:

Several well-designed studies in humans have shown positive benefit. Our team is confident about its therapeutic potential.



Recommended with Caution:

Preliminary studies suggest some benefit. Future trials are needed before we can make a stronger recommendation.



Not Recommended - Evidence:

Our team does not recommend this product because clinical trials to date suggest little or no benefit.



Not Recommended – High Risk:

Our team recommends against using this product because clinical trials to date suggest substantial risk greater than the benefit.

Evaluated Benefits

No evidence of efficacy or not indicated

Source

Native to central Asia and cultivated around the world, garlic (*Allium sativum*) has been used for thousands of years for medicinal purposes. Sanskrit records show its medicinal use about 5,000 years ago, and it has been used for at least 3,000 years in Chinese medicine. The Egyptians, Babylonians, Greeks, and Romans used garlic for healing purposes.

Indications/Population

Noneffective.

Mechanism of Action

Garlic has a high concentration of sulfur-containing compounds. The thiosulfinates, including allicin, appear to be the active substances in garlic. Allicin is formed when alliin, a sulfur-containing amino acid, comes into contact with the enzyme alliinase when raw garlic is chopped, crushed, or chewed. Dried garlic preparations containing alliin and alliinase must be enteric coated to be effective because stomach acid inhibits alliinase. Because alliinase also is deactivated by heat, cooked garlic is less powerful medicinally.

Preliminary clinical research suggests some compounds in garlic, such as S-methylcysteine sulfoxide and S-allyl-L-cysteine sulfoxide, might have some antidiabetic activity. However, garlic doesn't seem to affect blood glucose in people without diabetes. It may act as an insulin secretagogue.

Side Effects

- Excessive consumption of garlic can cause burning sensations from the GI tract (mouth, esophagus, etc.) and diarrhea.
- Garlic odor on the breath and skin.
- Occasional allergic reactions such as itching, sneezing and others may occur.
- Raw-garlic preparations containing allicin can cause chemical burns on the skin.

Dosing

Adults 4 grams (one to two cloves) of raw garlic per day

One 300-mg dried garlic powder tablet (standardized to 1.3% alliin or 0.6% allicin yield) 2–3 times per day

7.2 grams of aged garlic extract per day

Drug Interactions/Cautions

Garlic extraction results in greater and more consistent efficacy and safety compared with raw garlic, dehydrated garlic powder, or other preparations.

Physicians and patients need to be mindful, however, of a potentially harmful interaction of garlic with protease inhibitors in antiretroviral therapy.

Since garlic might “thin” the blood, it is probably imprudent to not take garlic pills immediately prior to or after surgery or labor and delivery, because of the risk of excessive bleeding. Similarly, garlic should not be combined with blood-thinning drugs, such as warfarin (Coumadin), heparin, aspirin, clopidogrel (Plavix), ticlopidine (Ticlid), or pentoxifylline (Trental).

Notes

Because of the complex chemistry in *Allium* plants, variations in processing yield quite different preparations. There are four groups: garlic essential oil, garlic oil macerate, garlic powder, and garlic extract. The manufacturing process is an important consideration when choosing a garlic supplement. As described earlier, the chemistry of garlic is quite complicated, and different types of processing produce products that are more than just preparations in different forms. The various forms also differ in their ingredients, effects, and toxicities. Some patients may find a minor blood sugar lowering effect from some preparations, but no study demonstrates constant benefit.

Garlic has “Generally Recognized as Safe” (GRAS) status in the U.S.

References

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