

All about Fresh Garlic

Garlic Chemistry

Garlic contains many compounds that individually possess a wide range of beneficial effects. One of the most biologically active is allicin, which also provides garlic's distinct odor. However, allicin itself is not present in an intact garlic clove. It is formed when a clove is crushed, releasing the precursor alliin and the enzyme allinase, which then come together to form allicin. Several well designed, robust studies have demonstrated allicin's health supportive benefits. 1-3

While allicin from fresh garlic has very high bioavailability,⁴ its strong odor can be problematic. Garlic odor is not merely present in breath after its consumption, it is also released through the pores of the skin, often persisting for hours or days afterwards.^{1,2}

The compounds in garlic have variable stability. Allinase is easily inactivated by gastric acid and allicin is fairly unstable prior to absorption in the bloodstream.³⁻⁵ Therefore, it is crucial that alliin and allinase taken in dietary supplements are introduced into the body where they can effectively create allicin.

Garlic Supplement Disparities

Currently, there are several types of garlic supplements, including garlic oil, garlic powder, and aged garlic extract (AGE) products. Garlic oil supplements do not contain allicin, only allicin-derived compounds that have little beneficial effects at normal levels of garlic consumption.^{6,7} Softgel or hard shell capsulated garlic powder supplements that contain alliin and allinase are destroyed by gastric acid before they can create allicin and have minimal health supportive activity.⁸⁻¹⁰

Aged garlic extract products purposefully do not contain allicin. Disregarding the abundance of evidence that demonstrates the significance of allicin, the manufacturers of AGE supplements claim that other compounds are responsible for garlic's health supportive properties.¹¹ Some studies have demonstrated that AGE supplements may have limited benefit. However, because AGE manufacturers sponsored these studies and their findings have yet to be replicated, leading garlic researchers question the validity of these findings. To date, the scientific consensus contends that allicin obtained from enteric-coated garlic tablets provides the most significant health supportive benefit.¹²

Allicin Research

Several studies have demonstrated allicin's health supportive benefits. Allicin acts as an antioxidant¹³ and helps support cardiovascular health.¹³⁻¹⁸ Allicin supports healthy immune system function, including support of healthy immune cell activation.¹⁹⁻²² Allicin supports healthy gastrointestinal function, especially support of healthy gastrointestinal mucosal lining. 23-25

Garlinase 4000®

The patented Swiss process makes Garlinase 4000® truly unique among garlic supplements. When Garlinase 4000® tablets are swallowed, the enteric coating resists disintegration until it reaches the alkaline environment of the small intestine. There the Garlinase 4000® tablet dissolves releasing alliin and allinase to form allicin, which is slowly released over a long period of time and absorbed into the bloodstream.²⁶ The slow release of Garlinase 4000® in the small intestine also provides the superior health benefits of fresh garlic, but without garlic's distinct, and sometimes offensive, odor.

SUMMARY

Garlinase 4000®'s formulation reflects the considerable evidence that allicin is the most biologically active garlic compound. Formulated from a patented Swiss process, Garlinase 4000®'s enteric coating and ensures that optimal allicin formation occurs. Garlinase 4000®'s unique slow delivery of allicin provides significant health supportive benefits.

Recommendations:

One tablet daily with food. Do not crush or chew.

Precautions:

Garlic has some anticoagulant, or blood clotting prevention activity. As a result, concomitant use of garlic supplements with prescription anticoagulants or similar substances might potentiate the blood thinning effect. However, the exact significance of this interaction has not been quantified.

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