

VOON XIU YAN

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## BENEFITS OF RAW GARLIC

- Amaryllidaceae is the family name for the plant known technically as *Allium sativum*, or garlic.
- When used properly and with purpose, garlic has the potential to offer health advantages.
- To make sure the effects gained are real and not just a placebo, it is crucial to understand the molecular features of the active components in garlic.



**Allicin, an organosulfur molecule with a strong sulphur smell and a sharp, spicy flavour, is the primary chemical ingredient in garlic that is active.**

**The precursor chemical alliin and the enzyme alliinase react to produce allicin.**

### CAN ALLICIN BE PRODUCED WITHOUT DESTROYING GARLIC CELLS?



- No. Only when the garlic cells are destroyed by cutting, crushing, chopping, or pounding the biosynthesis process that creates allicin take place.
- The more cells that are destroyed, the higher the potential for the precursor chemicals, alliin, and alliinase, to come into contact, resulting in the production of more allicin.

### WHAT HAPPENS WHEN GARLIC IS COOKED (BOILED, ROASTED, FRIED)?



#### With cell destruction:

- In this case, the active chemical compound will certainly be formed.
- However, continuous heat causes the active compound allicin to evaporate.

#### Without cell destruction:

- Allicin does not generated when garlic cells are not destroyed because the precursor chemical alliin does not interact with the enzyme alliinase.
- The alliinase enzyme is denatured and rendered inactive after engaging in cooking operations. At temperatures above 40°C, which is higher than the body temperature of an adult, this enzyme becomes inactive.
- Garlic cells and the precursor molecules alliin are also destroyed by prolonged heat.

### SO, IS COOKED GARLIC NOT BENEFICIAL?

- Possibly not.
- Garlic includes stable nutrients such as carbohydrates, proteins, minerals, vitamins, and other phytochemicals in addition to the active ingredient allicin.
- These nutrients help to give garlic its distinct flavour and aroma.

### DOES CONSUMING RAW GARLIC HAVE ANY SIDE EFFECTS?

- YES.
- Garlic has a powerful, pungent flavour that can contribute to foul breath because it contains natural sulphur compounds.
- Due to the blood-thinning effects of garlic, excessive ingestion should be avoided when injured.
- Certain drug therapies can interact with garlic. It is crucial to talk to the doctor before consuming raw garlic along with any medications we are taking.

**REFERENCES FOR POSTER ;  
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