

SOYA

Nutrition profile of soybeans

Soy is a high-quality protein. It is one of the few known plant foods (the other is amaranth seed and to a lesser degree, quinoa) to contain all the essential amino acids, like those found in meat.

The soybean is:

- High in fibre
- High in protein
- Low in saturated fats
- Cholesterol free
- Lactose free
- A good source of omega-3 fatty acids
- A source of antioxidant
- High in phytoestrogens.

Soybeans and phytoestrogens

Soybeans contain hormone-like substances called phytoestrogens ('phyto' means plant), which are naturally occurring chemicals found in plants. Given the right conditions, these compounds copy the action of the female hormone oestrogen but are much less powerful – about 1,000 times less.

There are many types of phytoestrogens, one example being isoflavones. Isoflavones are very strong antioxidants and can mimic the effects of oestrogen, but their full physiological effects are still being investigated.

Soybeans are the most common source of isoflavones in food. However, the amount of isoflavones varies with the type of soy food, preparation method and brand.

Some of the richest sources of isoflavones are soy flour and soy nuts.

Health benefits of soy foods

Research suggests that soybeans and soy foods have a range of health benefits.

Coronary heart disease

Having a diet rich in soy foods is linked with a lower risk of cardiovascular disease, including stroke and coronary heart disease.

Oestrogen may protect women against heart disease during their reproductive years, but rates of heart disease increase after menopause.

Soybeans have been shown to lower total cholesterol and LDL cholesterol levels, both known risk factors of heart disease.

An analysis of clinical trials suggests 14g to 50g of soy protein can significantly reduce total blood cholesterol levels, LDL (bad) cholesterol levels and triglycerides, while moderately increasing HDL (good) cholesterol levels.

The United States Food and Drug Administration also found adults who include at least 25g soy protein (about four servings of soy) daily in a diet low in saturated fat and cholesterol can reduce LDL cholesterol by about 3–4%.

Whole soy products (such as soymilk, soybeans and soy nuts) have a greater effect on improving cholesterol levels than processed soy products.

It is not known how this happens – it could be phytoestrogens or soy proteins working alone or together. Other factors, such as soy's high-fibre or low saturated-fat content may play a part.

Another reason could be, the amount of animal protein in the diet (including saturated fat and cholesterol within the animal protein) may be reduced and indirectly improve our blood cholesterol levels.

However, studies also show that eating soy protein without isoflavones results in only small cholesterol reductions, and isoflavone supplements alone have minimal cholesterol lowering effects.

GARLIC

Synonym: Garlic, Lahsun, Russian Penicillin, Stinky rose, Veluthulli

Biological source: It consists of fresh **compound bulbs** of *Allium sativum* Linn, Family, **Liliaceae**. It is a bulbous, perennial herb, closely related to onion.

Constituents

It contains:

Sulfur compounds– Allin, allicin, ajone, allyl propyl disulphide, allyl sulfide, glutathiones-S-transferase, diallyl trisulphide, sallyl cysteine, vinyl dithines, S-allyl mercato cysteine.

Enzymes: Allinase, peroxidase, myrosinase.

Amino acids: arginine.

Minerals: Seleniun, germaniun, tellurium.

Vitamins: B1, A, C.

Also it contains sulphur compounds, several enzymes, 17 amino acids and minerals. It contains higher concentration of sulphur compounds than any other allium species. **S-responsible** for the **pungent odor** and medicinal effect of the plant. It possess **cardiovascular**, hypolipidemic, antihypertensive, anti-athrosclerotic.

GIT / Hepatic system: Spasmolytic, hepato protective.

Endocrine system: Hypoglycemic.

Hematologic-anti-platelet / anti thrombotic.

Immune system- Immune modulator.

Antimicrobial, antiparasitic.

It is used as analgesic, stimulant, anticonvulsant, antibacterial, diuretic, tonic; used in hypertension and atherosclerosis (thickening of arterial wall), carminative, gastric stimulant and aids in digestion and absorption of food.

Used in the treatment of malignant tumors. Tuberculosis and whooping cough, aphrodisiac, piles and duodenal ulcer, treatment of epilepsy, reduce blood sugar level and for to treat chronic bronchitis, bronchial asthma; Oil of garlic is used as an insecticide.

Health food

- Other parts of the garlic plant are also edible. The **leaves** and **flowers** (bulbils) on the head are sometimes eaten.
- They are milder in flavor than the bulbs, and are most often consumed while immature and still tender.
- Immature garlic is sometimes pulled, and sold as "**Green garlic**."
- Green garlic is often chopped and stir-fried or cooked in soup or hot pot in Southeast Asian (ie. Vietnamese, Thai, Myanmar, Lao, Cambodian, Singaporean), and Chinese cookery, and is very abundant and low-priced.
- Garlic may be applied to different kinds of bread, to create a variety of classic dishes, such as garlic bread, garlic toast, bruschetta (toasted Italian bread drenched in olive oil and served typically with garlic or tomatoes), crastini (small pieces of toasted or fried bread served with a topping as a starter).
- The flavor varies in intensity and aroma with the different cooking methods.
- It is often paired with onion, tomato or ginger.

- Immature scapes (a long flower stalk coming directly from a root) are tender and edible. They are also known as "**garlic spears**", "**stems**", or "**tops**".
- Scapes generally have a milder taste than the cloves.
- Garlic leaves are a popular vegetable in many parts of Asia. The leaves are cut, cleaned and then stir-fried with eggs, meat and vegetables. Garlic powder has a different taste from fresh garlic.
- **Oils** can be flavored with garlic cloves. These infused oils are used to season categories of vegetables, meats, breads and pasta.
- Garlic, along with fish sauce, chana fresh chilis, lime juice, sugar, and water, is a basic essential item in dipping fish sauce condiment used in Indochina.
- In East and Southeast Asia, chilion with garlic is a popular dipping sauce, especially for meat and sea food.
- Vietnam chili garlic sauce is a highly popular condiment and dip across North America and Asia.
- In some countries, the young bulbs are pickled for three to six weeks in a mixture of sugar, salt, and spices.
- In Eastern Europe, the shoots are pickled and eaten as an appetizer.
- Laba garlic, prepared by soaking garlic in vinegar, is a type of pickled garlic served with in northern China to celebrate the Chinese New Year.
- Garlic has antibacterial and antifungal activity against pathogenic organisms i. e. *Candida albicans*, *Shigella sonnei* and *Salmonella typhi*.
- Fried and raw garlic exhibits an increase in fibrinolytic (prevent blood clot) activity in inschemic (not getting enough blood and oxygen) heart disease patients.
- It also controls the cholesterol and triglyceride level.

Safety

Normal use of garlic as a food has not reported any toxic effects, but prolonged use "may cause severe testicular lesions after 70 days and arrest in spermatogenesis.

Its asthmatic allergic reaction has been reported in some sensitive persons.