

# What Your Patients Should Know About Soyfoods

SCIENTIFIC CITATIONS AND COMPLEMENTARY RESEARCH

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## Benefits of Soy and Soyfoods

All soy comes from soybeans, which are naturally grown beans similar in size to a pea. Soy is a nutrient-rich food delivering high-quality, complete protein, carbohydrates, fiber, healthy fats and a number of vitamins and minerals important for good health.

### Here are the facts to share with your patients:

**Protein** Soybeans have more protein than any other bean and are the only plant-based protein source that contains a high proportion of all nine essential amino acids, making it a source of high-quality, complete protein.

**Whole Soy** Soy in its whole form delivers not only isoflavones (plant-based compounds with estrogen-like effects) but also a number of essential nutrients important to good health. Whole soy is a rich source of fiber, protein, healthy fats and vitamins and minerals including folate, potassium, magnesium, zinc, iron and calcium. Whole soy fits into three categories of the USDA MyPyramid: The vegetable subgroup called dried beans and peas; the meat and beans group; and as an alternative source of calcium in the dairy group, such as a calcium-fortified soy beverage.

**Soy & Heart Health** Soy is good for the heart because it is high in soy protein and fiber, contains heart-healthy fats and micronutrients, and is low in saturated fat and cholesterol free.

**Soy & Bone Health** Soybeans and calcium-fortified soyfoods are good choices for bone health because they contain soy isoflavones as well as bone-building calcium and vitamin K, which are essential to bone mineralization.

**Soy & Breast Cancer** A protective effect against breast cancer may occur when soy consumption is high before puberty.

**Soy & Menopause** Research found that the percentage of women experiencing hot flash symptoms was much lower among Japanese and Chinese women than among those in North America. This finding prompted researchers to examine cultural differences, which led to much investigation of soy's potential role in alleviating hot flash symptoms.

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## Common Questions Related to Soy and Soyfoods

**What are Soy Isoflavones?** Soy is rich in isoflavones – plant-based compounds called phytoestrogens that have estrogen-like activity but are very different from human estrogen. Isoflavones are thought to positively affect the health of men and women.

Soy isoflavones are one of the most studied compounds found in whole soy. Some research has suggested they may help build strong bones, maintain a healthy heart, and help support hormone balance during menopause.

**Can Patients with Breast Cancer Eat Soy?** The American Cancer Society concludes that cancer survivors may safely consume up to three servings of whole soyfoods a day.

Although some animal data suggests that some soy isoflavones, but not whole soyfoods, might stimulate breast cancer growth in certain women, human clinical trials support the safety of soy and soy isoflavone consumption. There is no evidence to suggest that consuming traditional soyfoods is harmful.

**Does Soy Impact Reproduction?** Three intervention studies with men consuming 40-70 mg/day of soy isoflavones from soyfoods or soy supplements failed to show effects on plasma hormones or semen quality.

There are no human data that show that consuming soy causes abnormal testosterone or estrogen levels. Other human trials found that men consuming 40-70 mg/day of soy isoflavones from soyfoods or soy supplements have shown no significant changes in testosterone levels compared to control groups or baseline levels.

**Does Soy Have an Adverse Effect on Thyroid Function?** A comprehensive review of the literature published in 2006 concluded that soy does not adversely affect thyroid function. The review further recommended that thyroid function be reassessed if there is a substantial increase or decrease in soy intake, but normal day-to-day variations are unlikely to affect normal thyroid function.

# Recommended Reading

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## Soy & Cholesterol

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## Soy & Thyroid

- Messina M, Redmond G. Effects of soy protein and soybean isoflavones on thyroid function in healthy adults and hypothyroid patients: a review of the relevant literature. *Thyroid*. 2006 Mar;16(3):249-58.