



2015 SOYFOODS GUIDE

Discovering the Goodness of Soy

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The Nutrition and Health Attributes of Soyfoods

By Mark Messina, PhD

Soyfoods have long been prized in Asian cuisines for their versatility and rich nutrient content. Nutritionists recognize that soyfoods provide high-quality protein,¹ healthful fat,² and a variety of vitamins and minerals, such as the B-vitamin folate and potassium.³ More recently, soyfoods have attracted the attention of scientists for their possible health benefits which are independent of the nutrients they provide. One reason

is that soyfoods are unique dietary sources of compounds called isoflavones which may reduce risk of heart disease, osteoporosis, and certain forms of cancer. They also alleviate hot flashes in menopause.

Isoflavones are phytoestrogens—

or plant estrogens—but they differ from the hormone estrogen in important ways. In some parts of the body, they act like estrogen, but in others they potentially have anti-estrogenic effects. In some cases they have no effect on tissue where estrogen has a pronounced effect. This unique aspect of isoflavones means that they may have important health benefits for humans. The protein in soy is also beneficial, particularly for heart disease.

Heart Disease

Isoflavones may improve the health of the lining of the arteries, which is important for reducing heart disease risk.⁴ But they are just part of the story where soyfoods and heart health are concerned.

The protein in soy can directly lower cholesterol levels and may also lower blood pressure. More than ten countries including the United States^{5,6} and Canada⁷ have issued health claims for soyfoods and coronary heart disease based on the ability of soy protein to lower cholesterol. And because soybeans contain healthful fats, when traditional protein and dairy products are replaced in meals with soyfoods like tofu, tempeh and veggie meats, the saturated fat content of the diet declines. This change has an

additional beneficial effect on cholesterol.⁸ The soybean also contains an omega-3 fatty acid, that appears to be especially heart-healthy.⁹

Because of all of these benefits, it's not surprising that women who eat the most soy in China¹⁰ and Japan¹¹ have the lowest risk of cardiovascular disease.

Breast Cancer

Women in Asia, where soy consumption is common, have a lower risk for breast cancer compared to women in western countries where soy is rarely consumed.¹² Furthermore, among Asians, women who consume the highest amount of soy have a one-third lower risk of breast cancer in comparison to women who consume relatively little soy.¹³

However, the evidence suggests that for soy to have a protective effect, it must be consumed during childhood and/or adolescence. Young girls who consume soy may have a lifetime risk for breast cancer that is anywhere from 28 to 60 percent lower than those who are not regular consumers of soyfoods.^{14,15} This protective effect appears to result from changes made by isoflavones to the cells of the developing breast that make the cells more resistant to cancer.

Women who have had breast cancer may also derive protection from eating soyfoods. Although the consumption of soyfoods by women with breast cancer was once controversial, studies in the United States and in China show that prognosis is better for women who consume the most soyfoods after a diagnosis of their disease.¹⁶ Recently, the World Cancer Research Fund International concluded that eating soyfoods may help to improve the survival of breast cancer patients.¹⁷

Prostate cancer

Prostate cancer is less common in Asia than in Western countries and soy consumption may be part of the reason.¹² Within those countries, men with the highest soy intake have an approximately 50 percent reduction in risk of developing prostate cancer.¹⁸

Soyfoods may also be beneficial for men who are being treated for prostate cancer. In one small study, consuming soy lessened the side effects



Soyfoods provide high-quality protein, which may promote bone health, and some soyfoods are good sources of well-absorbed calcium.

of radiation treatment for prostate cancer.¹⁹ Soy may also slow the rise in prostate specific antigen (PSA) levels—a reflection of tumor size—in men who don't respond well to cancer treatment.²⁰ Eating more soy may inhibit the spread of prostate cancer as well. In one animal study, the isoflavones in soy inhibited the spread of prostate cancer to the lung by 96 percent.²¹

Bone Health

Since estrogen therapy protects bone health in older women, there has been interest in potential benefits of soyfoods for preventing osteoporosis. Some studies suggest that this benefit exists. For example, in Asian populations, women who consume the most soy have been found to have an approximately one-third lower risk for fracture.^{22,23} In contrast, clinical studies (studies where soy isoflavones are fed directly to women as opposed to just assessing their usual intake) aren't as impressive.²⁴⁻²⁶ The findings are conflicting and it isn't clear whether isoflavones are protective or not.

It is possible that isoflavones are protective only in women who have consumed soyfoods their entire lives. But whether or not isoflavones have skeletal benefits, soyfoods may make important contributions to bone health. They provide high-quality protein, which may promote bone health,²⁷ and some soyfoods are good sources of well-absorbed calcium.²⁸

Menopausal Symptoms

The causes of hot flashes in menopause are

not fully understood, but the drop in estrogen levels is one trigger. Women in Japan—as well as Chinese-American and Japanese-American women—are less likely to experience hot flashes, and isoflavones may be part of the explanation.

Since 1995, more than 50 clinical trials have examined the impact of soyfoods or isoflavone supplements on hot flashes. The largest and most comprehensive analysis conducted found that soy isoflavone supplements consistently alleviate the frequency and severity of hot flashes, with an average reduction of about 50 to 60 percent.²⁹ So women experiencing 10 hot flashes per day can expect to have only four or five after consuming isoflavones. The key is to make sure that the supplement provides the types of isoflavones found in the soybean itself. One particular isoflavone, called genistein, appears to be most protective. Studies that don't consider the exact make-up of isoflavone supplements may miss the benefits of these soybean components.

Skin Aging

Since estrogen improves the health of the skin and can delay signs of aging, there has been interest in the potential effects of isoflavones on skin health.

In studies of women who consumed supplements that included soy isoflavones, there are noticeable improvements in skin elasticity and wrinkles compared to women taking a placebo pill. One study found within just 14 weeks there was a 10 percent decrease in wrinkles.³⁰ Although research is relatively limited, the existing evidence for the skin benefits of isoflavones is exciting.



Soy Controversies

■ Cognitive Function

Although estrogen therapy may improve cognitive function, there has been some concern that isoflavones could have the opposite effect. The concern is based on the results from population studies that found a potential association between soyfoods consumption and poorer cognitive function. However, all of these studies had significant design flaws. Also, some population studies haven't found a relationship between soy intake and cognition.³¹

Human intervention studies are much more useful for testing the effects of isoflavones and soy on cognitive function since researchers can control for the exact amount of soy consumed as well as other factors that might affect cognition. These studies suggest that soy isoflavones could actually be beneficial for cognition, although the findings aren't strong enough to make specific recommendations.³¹ Given the conflicting evidence, it's not possible to draw any conclusions about the effects of soyfoods on cognitive function at this point.

■ Male Feminization

Since isoflavones can have estrogen-like effects, it's natural to wonder about their effects in men. The clinical research in this area is reassuring as it shows conclusively that soyfoods do not affect testosterone³² or estrogen³³ levels in men, even when very high amounts of isoflavones—amounts that are much greater than what men in Asia typically consume—were used.

Similarly, the clinical studies show that neither soyfoods nor isoflavone supplements have any effect on sperm.^{34,35} In fact, Italian scientists have suggested that isoflavones could be a cure for low sperm concentration.³⁶

■ Thyroid Health

In studies of rats, isoflavones partially inactivate an enzyme needed for a healthy thyroid, although rats consuming soyfoods still have good thyroid function overall.

However, in healthy humans, isoflavones have no effect at all on thyroid function.³⁷ And again, the amount of isoflavones used in these studies far exceeded the amount in traditional Japanese diets.

For those people who need to take synthetic thyroid supplements, eating soyfoods may increase the amount of medication needed. This isn't unusual since it's true of food in general and also of many herbs, and of fiber and calcium supplements. For people taking these medications it's a good idea to always take them separately from the consumption of food.

For those who have marginal hypothyroidism (subclinical hypothyroidism), consuming isoflavones may slightly increase the likelihood of progressing to overt hypothyroidism, but it also can improve health in these people by reducing inflammation and blood pressure and improving blood glucose control.³⁸

■ Mineral Absorption

Although plant foods provide minerals like iron, zinc, and calcium, they are not always well-absorbed. Like other beans and whole grains, soyfoods contain phytates, compounds that inhibit mineral absorption. Despite this, absorption of minerals from soyfoods is good. The iron in soyfoods is in a form called ferritin that recent research suggests is not affected by phytate.³⁹ And while soybeans also contain oxalate, a compound that binds calcium and inhibits its absorption, calcium absorption from soyfoods is surprisingly good, similar to that from cow's milk.²⁸ Calcium bioavailability of calcium carbonate fortified soymilk is equivalent to cow's milk in young women. Finally, zinc absorption from soybeans is only modestly lower than from other sources, although soy is not particularly high in this mineral.⁴⁰

■ Allergies

Soy protein is one of eight foods responsible for about 90 percent of all food allergies in the United States. However, these foods are not equally allergenic. Allergies to soy protein are relatively rare affecting only 1 out of every 2,500 adults.⁴¹ Allergies to milk protein are about four times more common. Although all types of food allergies are more common in children, about 70 percent of these allergies are outgrown by age 10. By that age, about 1 out of every 1,000 children is allergic to soy.^{42,43}

■ Optimal Soy Intake

It's easy to determine optimal soy intake by looking at the results of studies and also at usual intakes among healthy Asian populations. In Japan and in Shanghai, China, adults consume about 1 to 1½ servings of soyfoods per day, with some consuming as much as three servings per day. Average isoflavone intakes among these populations is about 30 to 50 milligrams per day.⁴⁴ Studies of the beneficial effects of soy isoflavones use the equivalent of anywhere from two to four servings per day. Based on what we know about health effects of different levels of soy intake and usual Asian intake, an optimal soy intake appears to be two to three servings per day. One serving is one cup of soymilk, one ounce of soynuts, and one-half cup of tofu, cooked soybeans and edamame.

The clinical research shows conclusively that soyfoods do not affect testosterone or estrogen levels in men, even when very high amounts of isoflavones were used.

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New Recommendation: Some Fat In Diet Desirable

By Marilyn D. Schorin, PhD, RDN, CFS, FAND

"Eat less fat." That was the mantra of the health care community for much of the last fifty years. Recently, however, a new model has emerged in which very low fat intake is not the goal of heart healthy diets. The focus today is to eat a moderate amount of fat—about 25–35 percent of calories—with the emphasis on unsaturated fats.

The American Heart Association issued updated recommendations in 2013 with this advice: They urge Americans to get no more than 5–6 percent of calories from saturated fat and less than 1 percent of calories from trans fat. Saturated fats are found primarily in animal foods—meat, whole milk, cheese, and butter, and tropical oils like coconut oil and palm oil. Trans fats are found mostly in partially-hydrogenated oils.

The food industry undertook a substantial effort to reformulate and remove trans fat containing products when the adverse health effects were discovered and the FDA added mandatory declaration of trans fat to the food label in 2006. However, some food products like pies and cakes get their texture or flakiness from either saturated fats or partially-hydrogenated oils. Food scientists are continually experimenting

with ways to reduce the levels of these fats.

Monounsaturated fats, particularly oleic acid, help lower LDL cholesterol, without lowering beneficial HDL cholesterol. Found naturally in olive oil and peanut oil, oleic acid has now been bred into new soybean varieties. High-oleic soy oil and other monounsaturated fats are replacing partially-hydrogenated oils to both increase oil stability during deep-frying and improve the ratio of healthful fats to saturated/trans fat in American diets.

Some polyunsaturated fatty acids serve as essential nutrients because the body cannot synthesize them. These fatty acids help regulate a host of critical functions, including the inflammatory response, smooth muscle contraction, renal function, and maintenance of blood platelets. Polyunsaturated fatty acids include omega-6 fatty acids and omega-3 fatty acids. The ideal ratio of omega-6 to omega-3 fats is not known, but the current diet provides about ten times the amount of omega-6 fatty acids.

For those wishing to lose weight, moderation in total fat, especially saturated fat, helps to maintain diet quality.



The Hormonal Effects of Soy

By Mark Messina, PhD

There is evidence that isoflavones may reduce risk of heart disease and certain forms of cancer, alleviate hot flashes and improve skin health, among other proposed benefits.

Understanding the Soybean Phytoestrogens

Soyfoods have long been valued in Asian countries where they serve as excellent sources of protein and healthful fats.^{1,2} Soybeans and the foods made from them also provide nutrients such as iron, potassium, and the B vitamin folate.

In addition to their nutrient content, soyfoods provide isoflavones, a type of plant estrogen. More than 1,000 scientific papers are published on isoflavones every year.

Soybeans are uniquely-rich sources of these compounds. People who don't consume soyfoods generally don't have isoflavones in their diet. Isoflavone intake in Japan, where soyfoods are a common part of the diet, is about 30 to 50 milligrams per day.³ People in the United States consume less than three milligrams of isoflavones per day.⁴

It's because of their isoflavone content that soyfoods have been the focus of much research over the past 25 years. There is evidence that isoflavones may reduce risk of heart disease and certain forms of cancer, alleviate hot flashes and improve skin health, among other proposed benefits.

But popular websites and books have also raised questions about soyfoods and how they might affect hormone levels in both men and women. Fortunately, research has put any concerns about soyfoods and their effects on hormones to rest.

Nearly all of the studies that raised concern about soy were conducted in animals. Animal studies often poorly predict effects in humans, and this is especially true in the case of soy. Rodents metabolize isoflavones differently than humans. So, it's not surprising that the health effects of consuming soy are very different in humans.

Isoflavones are Different from Estrogen

The hormone estrogen promotes development of female secondary sex characteristics, such as breast development. It's also involved in regulating the menstrual cycle. Although it's a female

sex hormone, men also produce estrogen. (Likewise, women produce the male hormone testosterone). In fact, men have higher levels of estrogen in their blood than postmenopausal women.⁵ In men, estrogen regulates certain functions of the reproductive system important to the maturation of sperm⁶ and may be necessary for a healthy libido.⁷ Estrogen also contributes to bone health in both men and women.⁸

Isoflavones look a lot like estrogen, and are classified as phytoestrogens (plant estrogens) but they aren't the same as estrogen. They have small differences in chemical structure that often translates to very different effects on health. This is often true of closely-related chemical compounds. An example is cholesterol—found only in animal products—and a group of its close cousins called phytosterols, which are found in plants. Eating foods with cholesterol raises blood cholesterol levels and increases risk for heart disease. But while phytosterols look very similar, they have the opposite effect, lowering blood cholesterol and helping to protect heart health.

So, it's not surprising that isoflavones are very different from estrogen. Sometimes they act in a similar way to estrogen—reducing hot flashes,⁹ for example, and improving the health of the arteries.¹⁰ In other tissues, they have exactly the opposite effect of estrogen. For example, where estrogen may promote breast cell growth and raise risk for breast cancer, soy isoflavones may lower breast cancer risk and improve the prognosis of women with breast cancer.¹¹

Soyfoods in the Diets of Men

Consuming soyfoods has no effect on testosterone¹² or estrogen¹³ levels in men. This is true whether men consume soyfoods or take isoflavone supplements. In the studies that have tested this relationship, very high amounts of isoflavones were often used, much higher than what men in Asia typically eat. In addition, clinical (human intervention) studies have found that isoflavones have no effect on sperm or semen.^{14,15} Interestingly, Italian scientists actually proposed that isoflavones could be a treatment for low sperm concentration.¹⁶ In fact, men can gain a number of benefits from eating soyfoods since these foods help to lower blood cholesterol

levels,¹⁷ provide high-quality protein,¹ and may reduce risk for prostate cancer.¹⁸

Soyfoods and Women

Soyfoods have either no effect or negligible effects on estrogen levels in women.¹⁹ Some research suggests that soyfoods may increase the length of the menstrual cycle by approximately one day, but they have no effect on ovulation.¹⁹ These longer cycles may actually be beneficial, since there is evidence that they are related to lower risk for breast cancer.²⁰

Nor do soy isoflavones present a risk for women with estrogen-sensitive breast cancer. The clinical studies consistently show that isoflavones don't affect markers of breast cancer risk.²¹ And population studies show that consuming soy after a diagnosis of breast cancer actually reduces recurrence and improves prognosis.^{11,22} Very recently, the World Cancer Research Fund International suggested that soyfoods may improve the survival of breast cancer patients.²³

Finally, although there is only limited research in children, the few clinical studies that have been

conducted show that soy doesn't affect hormone levels.^{24,25}

Soyfoods are more than Isoflavones

Although isoflavones are the most unique aspect of soyfoods, they are just one part of a complex whole. Like all foods, soybeans and the foods made from them contain hundreds of compounds with diverse biological effects.²⁶⁻²⁸ Conclusions about the health effects of soyfoods can be made only from studies on the effects of soyfoods, not studies that look merely at the actions of one soybean component. Studies evaluating soybean constituents can provide important clues about the effects of soyfoods but not definitive answers.

It's also important to consider study design since some types of study carry more weight than others. In the discussion of isoflavones and soyfoods above, nearly all of the studies cited are clinical studies which are considered to be the most credible by the scientific community.

Men can gain a number of benefits from eating soyfoods since these foods help to lower blood cholesterol levels, provide high-quality protein, and may reduce risk for prostate cancer.



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Soy Provides a High Protein, Low-Budget Option for Meal Plan

By Julia Driggers, RD, CNSC, LDN

Soy is an economical, excellent source of plant protein and can fit into most budgets. An important key to successful savings at the grocery store is to plan meals before shopping. Money-saving menu plans incorporate items that can be used frequently in a variety of ways. Common soy products like soy milk, tofu, and alternative meats are perfect staples for people on a budget. Soy products are versatile and generally less expensive than traditional protein sources. For example, just half of a cup of tofu contains 10 grams of protein. Try incorporating soy products into a couple of meals per day to save money and boost nutrition.

Tips for grocery store shopping on a budget:

- Shop with a list and stick to it. Plan weekly meals prior to shopping (*Table 1 & 2*).
- Consider lower cost alternative protein sources (soy, beans, nuts)
- Choose generic products over name brand
- Buy non-perishable items in bulk
- Buy fresh fruits and vegetables in season. For produce out of season, buy frozen.

Sample Grocery List (Table 1)

Produce	Protein	Grains	Beverages	Miscellaneous Foods
Bananas	Tofu, extra firm, 16 oz.	Oatmeal, plain, 42 oz.	Orange juice, 64 oz.	Soy yogurt (2), 6 oz.
Strawberries	Soy breakfast sausage	Bread loaf	Soy milk, 32 oz.	Soup, canned, 19 oz.
Mushrooms, 16 oz.	Beans, canned, 15 oz.	Brown rice, 16 oz.	Tea bags	Hummus, 7 oz.
Onion (2)	Edamame, frozen, 10 oz.			Soy nuts
Cucumber				Tomatoes, canned, 15 oz.

Sample 3-Day Meal Plan for Individual (Table 2)

	Breakfast	Lunch	Snack	Dinner
M O N D A Y	Oatmeal with Fruit ½ c. oatmeal ½ c. soy milk 3 strawberries, sliced ½ banana, sliced ½ tsp cinnamon 1 tsp maple syrup (optional) 4 oz. hot tea	Hummus Sandwich 2 slices bread 3 Tbsp hummus ½ cucumber, sliced ½ tsp mustard or mayo to taste ½ c. cooked edamame	1 banana 2 Tbsp peanut butter 4 oz. orange juice	Beans, 'Sausage' and Rice ½ c. beans ½ c. rice 2 soy sausage links ¼ c. sautéed onions 1 slice toast 2 Tbsp hummus
T U E S D A Y	2 slices toast 2 Tbsp peanut butter 2 soy breakfast sausages 4 oz. orange juice	Soup 19 oz. soup, canned Vegetable Rice 1 c. cooked rice ¼ c. sautéed onions ¼ c. sautéed mushrooms	Fruit Smoothie 6 oz. soy yogurt 4 oz. soy milk 2 oz. orange juice 1 banana 3 strawberries	Tofu Chili 4 oz. tofu, cubed 1 c. beans 1½ c. cooked tomatoes ¼ c. sautéed mushrooms ¼ tsp pepper, chili powder, garlic, and spices to taste 1 slice toast
W E D N E S D A Y	Tofu Scramble 6 oz. tofu, crumbled ½ c. sautéed onions ½ c. sautéed mushrooms ¼ c. cooked tomatoes ¼ tsp pepper, basil, tamari and spices to taste 3 strawberries, sliced 4 oz. hot tea	Soy Yogurt Parfait 6 oz. soy yogurt ½ banana, sliced 3 strawberries, sliced 1 slice toast 1 Tbsp peanut butter	3 Tbsp hummus ½ cucumber, sliced 4 oz. orange juice	Tofu Stir-Fry 6 oz. tofu, cubed 1 c. cooked rice ¼ c. sautéed onions ¼ c. sautéed mushrooms ¼ c. edamame ½ c. cooked tomatoes

Edamame Hummus

Makes 10 servings

Every plant-powered kitchen should have a container of homemade hummus in the refrigerator. It's a great snack with whole grain pita and fresh veggies, as well as a nutrient-rich spread for sandwiches, wraps, and veggie burgers. The "clean" ingredients list of homemade hummus—which can be whizzed up in minutes—is much more wholesome than you'll find in many store-bought versions. A serving of this edamame hummus rakes in 5 grams of protein!

1 can (15 ounces, 425g) chickpeas, drained (liquid reserved)
2 medium garlic cloves, minced
Juice of 1 medium lemon
2 Tablespoons tahini
2 teaspoons extra virgin olive oil

½ teaspoon smoked paprika
1 cup (150g) shelled cooked edamame, thawed and drained if frozen
¼ cup (15g) chopped fresh parsley
Pinch of sea salt, optional

1. Place the chickpeas, garlic, lemon juice, tahini, olive oil, paprika, edamame, and parsley in a blender.
2. Add $\frac{1}{3}$ cup of the reserved chickpea liquid. Process the mixture until smooth, scraping down the sides as needed. Add additional reserved liquid as needed to make a smooth, thick hummus. Taste and season with a pinch of sea salt, if desired.
3. Chill until serving time. Serve cold or at room temperature with whole wheat pita, fresh veggies, and sandwiches.

Note: This recipe stores well in an airtight container in the refrigerator for up to three days.

Variations:

■ Substitute canned white beans for the chickpeas.

Nutrition Per Serving (about $\frac{1}{4}$ cup): 89 calories, 5g protein, 9g carbohydrate, 4g fat, 0.5g saturated fat, 3g fiber, 3g sugar, 122mg sodium



Edamame Arancini Bites For a Crowd

Makes 40 servings

2 Tablespoons soybean oil
2/3 cups diced onion
2 Tablespoons minced garlic
1½ cup Arborio rice
1 cup white wine
4 cups water

1 cup frozen edamame (shelled), cooked according to package directions, chopped
1 cup Parmigiano-Reggiano cheese, shredded
1 teaspoon salt
4 cups soybean oil (for deep frying)
1½ cup bread crumbs
2 cups marinara sauce (optional)

1. Heat soybean oil in large saucepan over medium-high heat; add onion and garlic and cook, stirring occasionally, for 4 minutes until tender. Add rice, stirring frequently, for 4 minutes until lightly toasted.
2. Add wine to rice; reduce heat to medium. Add water one cup at a time, stirring frequently until water is completely absorbed, approximately 20 to 25 minutes. Rice should be tender but firm and mixture should be creamy. Remove from heat; stir in cheese, chopped edamame and salt.
3. Spread rice mixture onto foil-lined baking sheet. Place in refrigerator for 1 hour until well chilled.
4. Preheat 4 cups soybean oil to 350°F in heavy frying pan or small deep fryer. Line baking sheet with paper towels.
5. Place bread crumbs in shallow bowl. Portion chilled rice, using 2 tablespoon measure or 1 ounce scoop. Shape into balls; roll in bread crumbs, coating thoroughly.
6. Carefully place 8 rice balls into hot oil. Fry approximately 3 minutes, turning once, until golden brown. Remove from oil; place on paper towels to drain. Repeat with remaining rice balls. Serve with marinara sauce, if desired.

Notes:

- Risotto may be made the day prior.
- Arancini may be frozen.

Nutrition Per Serving (1 ball): 90 calories, 3g protein, 10g carbohydrate, 1g fiber, 4.5g fat, 1g sat. fat, 0g trans fat, 5mg cholesterol, 130mg sodium



Chicken and Tofu Patty Sandwich

Makes 8 servings

These easy tofu patties are fabulous as a quick lunch or dinner entrée!

1 pound firm or frozen tofu, mashed
1/4 pound ground, cooked chicken
3/4 cup quick rolled oats
2 Tablespoons chopped onion or green onion
1 teaspoon minced clove of garlic
2 Tablespoon vegetable oil
1 teaspoon chili powder
2 Tablespoons corn starch, or 1/4 cup bread crumbs

2 Tablespoons green pepper, finely diced
1 egg
1 Tablespoon soy sauce
1/8 teaspoon black pepper
1/8 teaspoon red pepper
1 teaspoon salt
Fresh or dried herbs, such as basil, oregano, or dill (optional)

1. Mix all ingredients together well.
2. Form into 3 inch diameter patties.
3. Cook on an oiled frying pan or grill for 5–8 minutes per side until brown. Tofu cakes can also be baked at 325°F for 16 minutes, turning them after 8 minutes.

Nutrition Per Serving (1 patty): 1166 calories, 10g fat, 1.8g saturated fat, 38mg cholesterol, 467mg sodium, 8g carbohydrate, 12g protein, 2g fiber

From *Tofu in the American Kitchen* published by the National Soybean Research Laboratory at the University of Illinois at Urbana-Champaign



Crispy Fish Tacos with Kimchi

Makes 8 servings

4 cups soybean oil (for deep frying)
1 egg (beaten)
1 cup Panko bread crumbs
1 pound cod filets, uncooked, cut into 2 x 1-inch strips
6 tablespoons fire-roasted salsa
2 tablespoons mayonnaise

8 fresh corn tortillas, 6-inch
1 cup kimchi
2 cups shredded red cabbage
1 cup grated carrots
1/2 cup frozen edamame (shelled), cooked according to package directions

1. Preheat soybean oil to 350°F in heavy frying pan or small deep fryer. Line baking sheet with paper towels.
2. Place egg in shallow dish. Place panko bread crumbs in a separate shallow dish. Dip fish pieces into egg and then roll in panko, pressing gently into each side of fish, to coat completely.
3. Carefully place 8 pieces of fish into hot oil. Fry approximately 4 minutes, turning once, until golden brown and crisp. Remove from oil; place on paper towels to drain. Repeat with remaining fish.
4. Combine salsa and mayonnaise in small bowl.
5. Top each tortilla with 2 pieces of fish, kimchi and assorted vegetables as desired.
6. Serve with salsa mixture.

Nutrition Per Serving (1 taco): 260 calories, 15g protein, 23g carbohydrate, 3g fiber, 12g fat, 2g sat. fat, 0g trans fat, 55mg cholesterol, 260mg sodium



This and other delicious recipes can be found online at SoyConnection.com

Creamy Cauliflower and Potato Soup

Makes 6 servings

1 Tablespoon soybean oil (commonly labeled vegetable oil)
1 small onion, diced
3 cups chopped cauliflower
1 cup diced white potatoes
2 cups vegetable or chicken broth

2 cups plain soymilk
2 Tablespoons chopped parsley
1 teaspoon lemon zest
1 teaspoon chopped garlic
Salt and pepper to taste

1. Heat soybean oil in large saucepan over medium heat.
2. Add onions and cook for 2 to 3 minutes until soft.
3. Add cauliflower, potatoes and broth. Cover and cook for 8 minutes until very tender.
4. Place mixture in food processor. Process 1 minute until smooth.
5. Return to saucepan and heat over medium heat.
6. Add soymilk and cook, stirring occasionally, until soup begins to simmer. Season the soup with salt and pepper, as desired.
7. Ladle into bowls. Top with parsley, lemon zest and garlic.

Nutrition Per Serving (1 bowl): 120 calories, 6g protein, 15g carbohydrate, 4g fiber, 4.5g fat, 0.5g sat fat, 0mg cholesterol, 210mg sodium



Wholesome Soy Berry Pancakes

Makes 8 servings

1½ cup white whole-wheat flour
½ cup oatmeal, quick cooking
2 tablespoons baking powder
1½ cup vanilla or plain soymilk
4 eggs

2 Tablespoons brown sugar, packed
2 Tablespoons soybean oil
4 cups fresh blueberries, divided
Maple syrup (optional)

1. Combine flour, oatmeal and baking powder in medium bowl. Whisk soymilk, eggs, brown sugar and soybean oil in large bowl until blended. Add flour mixture to soymilk mixture; stir just until blended. Stir in 2 cups berries.
2. Heat large skillet over medium heat; brush lightly with soybean oil. Pour ¼ cup batter into hot skillet; cook until bubbles begin to burst.
3. Turn and continue cooking for 1 to 2 minutes or until golden. Repeat with remaining batter.
4. Serve with remaining berries and maple syrup, if desired.

Nutrition Per Serving (2 pancakes): 230 calories, 8g protein, 34g carbohydrate, 4g fiber, 7g fat, 1.5g sat. fat, 0g trans fat, 110mg cholesterol, 460mg sodium



Tofu Cobb Salad

Makes 8 servings

Who says plant-powered eaters can't enjoy a Cobb salad now and again? Especially if you swap out a few of the animal foods in a classic Cobb for these plant superstars, including baked tofu and black beans. It's an easy, colorful entrée salad, which furnishes a rainbow of vibrant plant foods, including tomatoes, avocados, walnuts, and fresh herbs. Pair it with a whole grain vegetable soup, such as Zucchini-Orzo Soup.

6 cups (282g) torn, loosely packed romaine lettuce
1 Tablespoon extra virgin olive oil
1 teaspoon red wine vinegar
1 Tablespoon finely minced fresh herbs (e.g., oregano, tarragon, thyme), or $\frac{1}{2}$ teaspoon dried
 $\frac{1}{4}$ teaspoon ground mustard
1 small garlic clove, minced
 $\frac{1}{4}$ teaspoon freshly ground black pepper
Pinch of sea salt, optional

1 cup (185g) cooked black beans, no salt added, rinsed and drained if canned
8 ounces (227g) baked tofu (savory flavor), cubed (see Note)
2 small tomatoes, diced
1 medium avocado, peeled, cored, and diced
1 teaspoon lemon juice
 $\frac{1}{2}$ cup (58g) walnut pieces
2 Tablespoons minced fresh chives

1. Place the lettuce in a mixing bowl.
2. Whisk together the olive oil, vinegar, herbs, mustard, garlic, black pepper, and sea salt, if desired, in a small dish. Add to the lettuce and toss well.
3. Place the dressed lettuce on an oval platter in a uniform layer.
4. Arrange the black beans on top of the lettuce, creating a row in the center of the platter.
5. To the right of the black beans, create a row of baked tofu.
6. To the left of the black beans, create a row of tomatoes.
7. Sprinkle the avocados with the lemon juice to avoid discoloration and arrange them in a narrower row to the right of the baked tofu.
8. To the left of the tomatoes, create a single smaller row of walnut pieces.
9. Sprinkle the entire salad with the chives.
10. Serve immediately.

Note: Baked tofu is marinated, seasoned tofu, which is available in the refrigerator section in many supermarkets. It is an excellent addition to salads and sandwiches. You can make your own this way: Preheat the oven to 350°F (180°C). Slice 8 ounces of pressed tofu in half lengthwise into two rectangles. Place the rectangles into a small baking dish and drizzle with 2 tablespoons reduced sodium soy sauce and additional herbs and spices, as desired. Bake the tofu for 20 to 25 minutes.

Variations:

- Substitute any colorful cooked bean for the black beans, such as cranberry beans, kidney beans, pink beans, or green flageolet beans.

Nutrition Per Serving (about 1 $\frac{1}{4}$ cups): 195 calories, 11g protein, 12g carbohydrate, 13g fat, 1.5g saturated fat, 5g fiber, 1g sugar, 125mg sodium



Manicotti

Makes 7 servings

This simple but elegant dish is wonderful for company. It's easy to stuff the uncooked manicotti shells, which soften during baking.

½ cup dry textured soy protein (TSP), rehydrated with 1 Tablespoon Worcestershire sauce and 6 Tablespoons water	1 egg
8 ounces ricotta cheese	2 teaspoons dried parsley
8 ounces extra firm tofu, mashed	1 teaspoons onion powder
1 package (10 ounces) frozen chopped spinach, thawed and squeezed dry	½ teaspoon black pepper
2 cups shredded mozzarella cheese, divided	¼ teaspoon garlic powder
½ cup grated Parmesan cheese, divided	1 jar (26 ounces) marinara sauce
	1 package (8 ounces) manicotti shells

1. In a medium sized mixing bowl, combine the rehydrated TSP with the ricotta cheese, mashed tofu, spinach, $\frac{3}{4}$ cup mozzarella cheese, $\frac{1}{4}$ cup Parmesan cheese, egg, parsley, onion powder, black pepper, and garlic powder.
2. Spread $\frac{1}{2}$ cup of the marinara sauce over bottom of 9 x 13 inch baking dish. Tightly stuff the filling into the uncooked shells and lay them in the baking dish. You may spoon in the filling or squeeze it from a plastic storage bag with one corner snipped off.
3. Pour the remaining sauce over shells. Top with the remaining mozzarella and Parmesan cheeses. Cover with foil and refrigerate overnight.
4. To bake, put the covered dish into a cool oven, and then turn the temperature to 350°F. Bake for 45 minutes. Uncover and bake an additional 15 minutes, until hot and bubbling.

To bake manicotti immediately: After the dish is assembled, drizzle $\frac{3}{4}$ cup water around the inside edges of the pan. Cover tightly with foil and bake one hour, until hot and bubbling.

To freeze stuffed manicotti shells: Stuff the manicotti shells. To protect from breaking, lay them back into the trays they came in. Slide the trays into a freezer bag, close, and freeze. To bake, place the desired number of frozen stuffed shells in a baking dish that has a thin layer of marinara sauce in the bottom. Cover with more sauce, sprinkle with cheese, cover with foil, and bake at 350° until heated through, about 1 hour and 15 minutes for fourteen shells.

Nutrition Per Serving (2 shells): 418 calories, 16g fat, 8.0g saturated fat, 74mg cholesterol, 957mg sodium, 40g carbohydrate, 30g protein, 6g fiber



Pizza Stuffed Peppers

Makes 4 servings

Delicious pizza flavors wrapped up in a pepper!

4 large green or red bell peppers
1 Tablespoon oil
1 medium onion, chopped
 $\frac{1}{2}$ cup chopped mushrooms
2 cups prepared marinara sauce

1 cup dry textured soy protein (TSP)
2 Tablespoons pizza seasoning (regular or spicy)
 $1\frac{1}{2}$ cups cooked rice (leftover, or cook $\frac{1}{2}$ cup raw rice)
1 can (2.25 ounces) sliced black olives, drained
 $\frac{1}{2}$ cup shredded part-skim mozzarella cheese

1. Preheat the oven to 350°F. Coat a medium baking dish with cooking spray.
2. Slice the tops off the peppers and reserve tops. Remove seeds and excess white membrane from the inside of the peppers. Set aside.
3. Heat the oil in a large nonstick skillet over medium-high heat. Add the onion and mushrooms and sauté until the onions are soft.
4. Stir in the marinara sauce, TSP, and pizza seasoning. Simmer about 2 minutes. Stir in the rice and heat through.
5. Remove the skillet from the heat and stir in the black olives and mozzarella cheese.
6. Fill the peppers with the mixture and put into the prepared baking dish. Top each pepper with one of the reserved pepper tops. If there is any extra filling, spoon it around the peppers in the dish.
7. Cover the dish and bake until the peppers are soft, about 1 hour.

Nutrition Per Serving (1 stuffed pepper): 381 calories, 15g fat, 2.6g saturated fat, 9mg cholesterol, 1000mg sodium, 46g carbohydrate, 16g protein, 9g fiber



Vegetarian Lasagna

Makes 8-10 servings

Your favorite ready-made or homemade sauce works well in this lasagna that was designed to go together with minimum preparation time!

3 jars (16 ounces) of prepared spaghetti sauce
1 box (1 pound) lasagna noodles, uncooked

4 cups shredded mozzarella cheese
16 ounces extra firm tofu, mashed

1. Preheat oven to 350°F.
2. Cover bottom of 9 x 13 or 10 x 15 inch baking pan with ½ cup of the sauce.
3. Add one layer of uncooked lasagna noodles on top of sauce.
4. Add another layer of sauce on top of noodles.
5. Sprinkle one layer of tofu on top of sauce.
6. Sprinkle one layer of cheese on top of tofu.
7. Continue layering noodles, sauce, tofu and cheese, ending with cheese.
8. Use 1 cup water to rinse the jars and pour the mixture around outside edge of baking pan.
9. Cover with foil and bake at 350°F for 1 hour to 1 hour 15 minutes until noodles are tender.
10. Uncover and bake for additional 15 minutes to allow some sauce to evaporate. Grated parmesan cheese can be sprinkled on top of lasagna during his time.
11. Let stand for 10 minutes before cutting and serving.



Variations:

- Other vegetables can be added in between each layer, such as chopped mushrooms, cooked spinach, or chopped peppers.
- More tofu can be used to replace all cheese, or mozzarella-type soy cheese can be used.

Nutrition Per Serving: 347 calories, 12g fat, 4.7g saturated, 24mg cholesterol, 843mg sodium, 39g carbohydrate, 19g protein, 2g fiber

Tempeh Noodle Skillet with Bok Choy

Makes 6 servings

Tempeh is a nutritious fermented soy-and-grain cake developed in Indonesia about two hundred years ago, becoming a major source of protein in this region. Tempeh adds a flavorful dimension to stir-fries such as this one. Packed with crisp vegetables and Thai spices, this easy one-dish meal showcases the health and flavor benefits of whole soy foods. Plus, you can cook up this healthier take on pad Thai in less time than it would take you to pick up takeout.

4 cups (948ml) water	½ teaspoon cinnamon
8 ounces (227g) uncooked Asian brown rice noodles (e.g., pad Thai noodles)	1 cup (237ml) canned light coconut milk (well mixed before measured)
1 teaspoon peanut oil	1 medium bell pepper (yellow or red), sliced
1 Tablespoon vegetarian Thai chili paste (see Notes)	1 cup (70g) sliced mushrooms
2 medium garlic cloves	8 ounces (227g) tempeh, cubed (see Notes)
½ teaspoon turmeric	2 Tablespoons reduced sodium soy sauce
½ teaspoon minced fresh ginger	¾ cup (72g) diced green onions, white and green parts
1 teaspoon coriander	6 ounces (170g) baby bok choy, trimmed, leaves separated
1 teaspoon cumin	1 medium lime, quartered
½ teaspoon cardamom	½ cup (30g) chopped fresh cilantro
¼ teaspoon cloves	

1. Bring the water to a boil in a medium pot over high heat. Add rice noodles and cook over medium heat according to package directions (do not over-cook). Drain the noodles and rinse. Set aside.
2. Meanwhile, heat the peanut oil over medium heat in a large skillet or wok. Add the chili paste, garlic, turmeric, ginger, coriander, cumin, cardamom, cloves, cinnamon, and 2 tablespoons of the coconut milk. Cook for 1 minute, stirring, to make a paste.
3. Add the bell pepper, mushrooms, and tempeh and sauté for 3 minutes.
4. Stir in the soy sauce and remaining coconut milk and mix well.
5. Add the drained, cooked noodles and ½ cup of the diced green onions and stir well. Place the bok choy leaves on top, cover, and cook for an additional 3 to 4 minutes, until the mixture is heated through and the bok choy leaves are bright green but crisp-tender (to avoid mushiness, do not overcook).
6. Garnish the skillet with the lime quarters, cilantro, and remaining ¼ cup of chopped green onions.

Notes:

- Thai chili paste is a condiment/seasoning available at many supermarkets, as well as Asian stores and online purveyors. Read the ingredients list, since some feature nonvegetarian ingredients.
- Tempeh is available in the refrigerated section (with tofu) at many supermarkets, natural food stores, and Asian markets.

Variations:

- You may substitute your favorite Asian noodle for the rice noodles, such as soba, ramen, or udon, and cook according to the package directions in step 1. You may also substitute extra firm tofu (pressed) for the tempeh.

Nutrition Per Serving (about 1 cup): 270 calories, 11g protein, 41g carbohydrate, 8g fat, 3g saturated fat, 5g fiber, 4g sugar, 380mg sodium



Wok Charred Edamame 3 Ways

Makes 16 servings

2 Tablespoons soybean oil (commonly labeled vegetable oil)
4 cups edamame, in-shell, thawed
1 Tablespoon soy sauce
2 teaspoons fresh ginger
1 teaspoon sesame seeds

2 Tablespoons maple syrup
1 Tablespoon balsamic vinegar
1 teaspoon sea salt
2 Tablespoons Dukkah spice blend

1. Heat soybean oil over high heat in a wok or skillet.
2. Add edamame; sauté for 3 to 5 minutes, stirring constantly, until pods begin to lightly char.
3. Remove and season as desired.

Nutrition Per Serving (unseasoned): 90 calories, 4g protein, 5g carbohydrate, 2g fiber, 3g fat, 0g sat fat, 0mg cholesterol, 15mg sodium

This and other delicious recipes can be found online at SoyConnection.com



Shrimp and Tofu Pad Thai

Serves: 6

8 ounces rice noodles, dried
1½ cup sugar
¾ cups ketchup
1¼ cup water
1½ Tablespoons soy sauce
2 teaspoons Worcestershire sauce
2 Tablespoons vegetable oil
1½ cup tofu, firm, drained and diced into ½ inch cubes

1½ cup shrimp, small, cooked
2 teaspoons garlic, fresh, chopped
1 egg, beaten
3 cups bean sprouts, fresh
1½ cup edamame, cooked and drained
1½ cup green onions, chopped, divided
1½ cup peanuts, chopped, divided

1. Soak noodles for 30 minutes in hot tap water; drain and set aside. (Noodles will be flexible, but not soft.)
2. Mix sugar, ketchup, water, soy sauce, Worcestershire sauce and cayenne pepper in small bowl; set aside.
3. Heat oil in wok or large frying pan over high heat. Add tofu, shrimp and garlic, stirring constantly, for 3 minutes. Stir in noodles, stirring constantly to keep from sticking. Add ketchup mixture, stirring constantly, for 2 minutes or until sauce is absorbed.
4. Push noodles to side of pan. Add egg and stir until cooked. Add bean sprouts, edamame, ¼ cup green onions and ¼ cup peanuts, stirring until mixed with egg and noodles.
5. Mound mixture on large serving plate. Sprinkle remaining green onions and peanuts over top. Serve immediately.

Nutrition Per Serving: 430 calories (31% calories from fat), 20g protein, 57g carbohydrate, 4g fiber, 15g fat, 2.5g sat. fat, 0g trans fat, 110mg cholesterol, 670mg sodium

This and other delicious recipes can be found online at SoyConnection.com



Tofu Ratatouille

Makes 8 servings

Tofu—protein-rich, versatile, and easy—is a plant-powered eater’s best friend. You can add it to a number of dishes, where it will take on the flavors of the foods with which it is paired. In this traditional vegetable stew from Provence, France, tofu takes on the earthy flavors of sun-ripened vegetables, including eggplant, tomatoes, zucchini, and bell peppers. This rich mélange can hold its own at the center of the plate, especially served with whole grain pasta or steamed farro.

1 Tablespoon extra virgin olive oil
1 large onion, diced
2 medium garlic cloves, minced
One 1½ pound (548g) eggplant, diced
2 medium zucchinis, diced
1 medium bell pepper (green or yellow), diced
8 ounces (226g) extra firm tofu, drained and diced (pressed)
1 teaspoon dried basil

1. Heat the olive oil in a very large sauté pan or Dutch oven over medium heat, add the onion, and cook, stirring frequently, for 7 minutes.
2. Add the garlic, eggplant, zucchini, bell pepper, and tofu to the pan and sauté for an additional 10 minutes.
3. Preheat the oven to 350°F (180°C).
4. Stir the basil, tomatoes, marinara sauce, capers, black pepper, and sea salt, if desired, into the vegetable mixture and cook for an additional 1 to 2 minutes, until bubbling.
5. Transfer the contents to a large casserole dish (about 9 x 13 inches) or leave in the Dutch oven and bake for about 45 minutes, uncovered, until the vegetables are tender.
6. Stir every 15 minutes to distribute the liquid.
7. Remove the dish from the oven, sprinkle with the parsley, and serve immediately.

Variation:

- To make bean ratatouille with tofu, rinse and drain one 15-ounce (425g) can of beans, such as garbanzos or white beans, and add in step 4.

Nutrition Per Serving (about 1 cup): 115 calories, 6g protein, 15g carbohydrate, 4g fat, .5g saturated fat, 5g fiber, 7g sugar, 58mg sodium

One can (14.5 ounce, 411g) diced tomatoes, no salt added, with liquid
1 cup (257g) marinara sauce
1 Tablespoon capers, rinsed and drained
Freshly ground black pepper to taste
Pinch of sea salt, optional
¼ cup (15g) chopped fresh parsley



Soyfoods Comparison

The wide-variety of soyfoods available today offer delicious alternatives for today's health-conscious consumer.

Green Vegetable Soybeans (Edamame)

These large soybeans are harvested when the beans are still green and sweet tasting and can be served as a snack or a main vegetable dish after boiling in slightly salted water for 15–20 minutes. They are high in protein and fiber and contain no cholesterol. Green soybeans are sold frozen in the pod and shelled.

Natto

Natto is made of fermented, cooked whole soybeans. Because the fermentation process breaks down the beans' complex proteins, natto is more easily digested than whole soybeans. It has a sticky, viscous coating with a cheesy texture. In Asian countries natto traditionally is served as a topping for rice, in miso soups, and is used with vegetables. Natto can be found in Asian and natural food stores.

Okara

Okara is a pulp fiber by-product of soymilk. It has less protein than whole soybeans, but the protein remaining is of high quality. Okara tastes similar to coconut and can be baked or added as fiber to granola and cookies. Okara also has been made into sausage.

Miso

Miso is a rich, salty condiment that characterizes the essence of Japanese cooking. The Japanese make miso soup and use it to flavor a variety of foods. A smooth paste, miso is made from soybeans and a grain such as rice, plus salt and a mold culture, and then aged in cedar vats for one to three years. Miso should be refrigerated. Use miso to flavor soups, sauces, dressings, marinades and pâtés.

Soybeans

As soybeans mature in the pod, they ripen into a hard, dry bean. Although most soybeans are yellow, there are also brown and black varieties. Whole soybeans (an excellent source of protein and dietary fiber) can be cooked and used in sauces, stews and soups. Whole soybeans that have been soaked can be roasted for snacks. Dry whole soybeans should be cooked before eaten.

Soynuts

Roasted soynuts are whole soybeans that have been soaked in water and then baked until browned. Soynuts can be found in a variety of flavors, including chocolate covered. High in protein and isoflavones, soynuts are similar in texture and flavor to peanuts.

Soymilk

Soybeans soaked, ground fine and strained produce a fluid called soybean milk. Plain, unfortified soymilk is an excellent source of high-quality protein and B vitamins. Soymilk is most commonly found in aseptic containers (nonrefrigerated, shelf stable), but also can be found in quart and half-gallon containers in the dairy case at the supermarket. Soymilk is also sold as a powder that must be mixed with water.

Soy Sauce (Tamari, Shoyu, Teriyaki)

Soy sauce is a dark-brown liquid made from soybeans that has undergone a fermenting process. Soy sauces have a salty taste, but are lower in sodium than traditional table salt. Specific types of soy sauce are shoyu, tamari and teriyaki. Shoyu is a blend of soybeans and wheat. Tamari is made only from soybeans and



is a byproduct of making miso. Teriyaki sauce can be thicker than other types of soy sauce and includes other ingredients such as sugar, vinegar and spices.

Soy Sprouts

Although not as popular as mung bean sprouts or alfalfa sprouts, soy sprouts (also called soybean sprouts) are an excellent source of nutrition, packed with protein and vitamin C.

Tofu and Tofu Products

Tofu, also known as soybean curd, is a soft, cheese-like food made by curdling fresh, hot soymilk with a coagulant. Tofu is a bland product that easily absorbs the flavors of other ingredients with which it is cooked. Tofu is rich in both high-quality protein and B vitamins and is low in sodium. Firm tofu is dense and solid and can be cubed and served in soups, stir fried or grilled. Firm tofu is higher in protein, fat and calcium than other forms of tofu. Soft tofu is good for recipes that call for blended tofu. Silken tofu is a creamy product and can be used as a replacement for sour cream in many dip recipes.

Tempeh

Tempeh, a traditional Indonesian food, is a chunky, tender soybean cake. Whole soybeans, sometimes mixed with another grain such as rice or millet, are fermented into a rich cake of soybeans with a smoky or nutty flavor. Tempeh can be marinated and grilled and added to soups, casseroles or chili.

Yuba

Yuba is made by lifting and drying the thin layer formed on the surface of cooling hot soymilk. It has a high-protein content and is commonly sold fresh, half-dried and as dried bean curd sheets. Found in Asian food stores.

Soy Protein Products (Meat Analogs)

Protein products made from soybeans contain soy protein or tofu and other ingredients mixed together to make a protein product. These protein products are sold as frozen, canned or dried foods. Usually, they can be used the same way as the foods they replace. With so many different protein products available to consumers, the nutritional value of these foods varies considerably. Generally, they are lower in fat, but read the label to be certain. Protein products made from soybeans are excellent sources of protein, iron and B vitamins.

Soy Beverages

Soy beverages can be made with soymilk or isolated soy protein. Flavorings or fruit juices may be added. They can be purchased ready to drink or in a dry-powder form to which liquid is added.

Soy Cheese

Soy cheese is made from soymilk. Its creamy texture makes it an easy substitute for most cheeses, sour cream or cream cheese and can be found in a variety of flavors. Products made with soy cheese include soy pizza.



Whipped Toppings, Soy-Based

Soy-based whipped toppings are similar to other nondairy whipped toppings, except that hydrogenated soybean oil is used instead of other vegetable oils.

Soynut Butter

Made from roasted, whole soynuts, which are then crushed and blended with soybean oil and other ingredients, soynut butter has a slightly nutty taste, significantly less fat than peanut butter and provides many other nutritional benefits as well.

Soy Yogurt

Soy yogurt is made from soymilk. Its creamy texture makes it an easy substitute for sour cream or cream cheese. Soy yogurt can be found in a variety of flavors in natural food stores.

Nondairy Soy Frozen Desserts

Nondairy frozen desserts are made from soymilk or soy yogurt. Soy ice cream is one of the most popular desserts made from soybeans.

Infant Formulas, Soy-Based

Soy-based infant formulas are similar to other infant formulas except that a soy protein isolate powder is used as a base. Carbohydrates and fats are added to achieve a fluid similar to breast milk. The American Academy of Pediatrics says that for term infants whose nutritional needs are not being met from maternal breast milk or cows milk-based formulas, isolated soy protein based formulas are safe and effective alternatives to provide appropriate nutrition for normal growth and development.

Soyfoods Composition

Soyfood	Cals.	Protein (g)	Fat (g)	Carbs (g)	Fiber (g)	Minerals					Vitamins			
						Iron (mg)	Ca (g)	Mg (mg)	Zinc (mg)	K* (mg)	B2 (mg)	B6 (mg)	B12 (mg)	Folate (mg)
Miso (2 tsp)	23	1.32	0.68	3.0	0.6	0.28	6	5.0	0.29	24	0.026	0.023	0.01	2.0
Soy flour, defatted (½ cup)	173	24.68	0.64	20.14	9.2	4.85	127	152	1.29	1252	0.133	0.301	0	160
Soy flour, full-fat, roasted (½ cup)	187	14.79	9.29	14.31	4.1	2.47	80	157	1.52	867	0.4	0.149	0	96
Soy flour, low-fat (½ cup)	165	20.02	3.92	15.37	7.0	3.61	125	125	1.8	920	0.123	0.462	0	127
Soy protein concentrate (1 oz.)	94	16.48	0.13	8.76	1.6	3.06	103	89	1.25	624	0.04	0.038	0	96
Soy protein isolate (1 oz.)	96	22.88	0.96	2.09	1.6	4.11	50	11	1.14	23	0.028	0.028	0	50
Soybeans, mature cooked, boiled, without salt (1 cup)	298	28.62	15.43	17.08	10.3	8.84	175	148	1.98	886	0.49	0.402	0	93
Soybeans, green, raw (1 cup)	376	33.15	17.41	28.29	10.8	9.09	504	166	2.53	1587	0.448	0.166	0	422
SILK plain soymilk, fortified (1 cup)	100	7.0	4.01	7.99	1.0	1.07	299	39	0.61	299	0.51	--	2.99	--
Soymilk, original and vanilla, unfortified (1 cup)	131	7.95	4.25	15.26	1.5	1.56	61	61	0.29	287	0.168	0.187	0	44
Soymilk, chocolate, fortified (1 cup)	153	5.49	3.72	24.18	1.0	1.17	61	36	0.83	347	0.637	0.187	1.7	27
Soymilk, all flavors, fortified (1 cup)	109	7.14	4.84	8.38	1.0	1.19	340	--	0.58	343	0.484	0.566	2.62	77.8
Soy butter (1 Tbsp)	101	0.13	11.32	0.13	0	0	4.0	0	0	6.0	0.005	0.001	0.01	0
Soy sauce (1 Tbsp)	11	1.89	0.02	1.0	0.1	0.43	4.0	7.0	0.08	38	0.027	0.036	0	3.0
Organic Nasoya Silken Tofu (½ block)	43	4.37	2.28	1.27	0.3	0.82	68	--	--	--	--	--	--	--
Nasoya Extra Firm Tofu (½ block)	77	7.98	4.11	2.05	1.0	1.26	61	--	--	--	--	--	--	--
Soy cheese curds (1 oz.)	45	3.7	2.4	2.04	0	1.66	56	67	0.51	59	0.041	0.021	0	7.0
Soy yogurt, vanilla (1 container)	150	5.0	2.99	25.01	1.0	1.44	299	--	--	--	--	--	--	--
Soy burger (1 patty)	124	10.99	4.41	9.99	3.4	1.69	95	39	0.88	233	0.171	0.212	1.41	87

Source: USDA National Nutrient Database, ndb.nal.usda.gov

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Resources Guide

State by State Roster of Soybean Board Communication Contacts or State Executives

ALABAMA

Alabama Soybean Producers

P.O. Box 11000
Montgomery, AL 36191
Phone: 334/613-4216
Executive: Carla Hornady
Email: chornady@alfafarmers.org

ARKANSAS

Arkansas Soybean Promotion Board

P.O. Box 31
Little Rock, AR 72203
Administrator: Matt King
Website: www.TheMiracleBean.com

DELAWARE

Delaware Soybean Board

3203 Greenstone Way
Oak Hill, VA 20171
Phone: 703/437-0995
Executive: Susanne Zilberfarb
Website: www.desoybeans.org

EASTERN REGION

Northwood Office Center
2215 Forest Hills Drive, Suite 40
Harrisburg, PA 17112
Phone: 717/651-5922
Executive: Jennifer Reed-Harry
Website: www.easternregionsoy.org

GEORGIA

Georgia Agricultural Commodity Commission for Soybeans

19 Martin Luther King Dr. SW, Room 324
Atlanta, GA 30334
Phone: 404/586-1405
Executive: Andy Harrison
Email: andy.harrison@agr.georgia.gov

ILLINOIS

Illinois Soybean Association

1605 Commerce Parkway
Bloomington, IL 61704
Phone 309/663-7692
Executive: Craig Ratajczyk
Communicator: Amy Roady
Website: www.ilsoy.org

INDIANA

Indiana Soybean Alliance

5730 West 74th Street
Indianapolis, IN 46278
Phone: 800/735-0195
Executive: Jane Ade Stevens
Communicator: Megan Kuhn
Website: www.IndianaSoybean.com

IOWA

The Soyfoods Council

1255 SW Prairie Trail Parkway
Ankeny, IA 50023
Phone: 515/491-8636
Executive: Linda Funk
Website: www.iasoybeans.com
Website: www.thesoyfoodscouncil.com

KANSAS

Kansas Soybean Commission

1000 SW Red Oaks Place
Topeka, KS 66615
Phone: 877/KS-SOYBEAN
(877-577-6923)
Executive: Kenlon Johannes
Communicator: Brad Parker
Website: www.KansasSoybeans.org

KENTUCKY

Kentucky Soybean Board

P.O. Box 30
1001 US Highway 62 West
Princeton, KY 42445
Phone: 270/365-7214
Executive: Debbie Ellis
Communicator: Rae Wagoner
Website: www.kysoy.org

LOUISIANA

Louisiana Soybean & Grain Research & Promotion Board

P.O. Box 95004
Baton Rouge, LA 70895
Phone: 225/922-6209
Executive: Kyle McCann
Website: www.LSUAgCenter.com

MARYLAND

Maryland Soybean Board

P.O. Box 319
Salisbury, MD 21803
Phone: 410/742-9500
Executive: Sandra Davis
Website: www.mdsoy.com

MICHIGAN

Michigan Soybean Promotion Committee

P.O. Box 287
140 West Tuscola Street, Suite A
Frankenmuth, MI 48734
Phone: 989/652-3294
Executive: Gail Frahm
Website: www.MichiganSoybean.org

MINNESOTA

Minnesota Soybean Research & Promotion Council

151 Saint Andrews Court, Suite 710
Mankato, MN 56001
Phone: 507/388-1635
Executive: Tom Slunecka
Communicator: Cathy Riley
Website: www.mnsoybean.org

MISSISSIPPI

Mississippi Soybean Promotion Board

P.O. Box 9
Pope, MS 38658
Phone: 662/561-2348
Board Administrator: Carol Bullard
Website: www.mssoy.org

MISSOURI

Missouri Soybean Merchandising Council

P.O. Box 104778
Jefferson City, MO 65110
Phone: 573/635-3819
Communicator: Christine Tew
Website: www.mosoy.org

NEBRASKA

Nebraska Soybean Board

3815 Touzalin Avenue, Suite 101
Lincoln, NE 68507
Phone: 800/852-2326
Executive: Victor Bohuslavsky
Website: www.nebraskasoybeans.org

NEW JERSEY

New Jersey Soybean Board

Whitehorse Executive Center
1255 Whitehorse-Mercerville Road
Building B, Suite 514
Trenton, NJ 08619
Phone: 609/585-6871
Executive: Debbie Hart
Website: www.njsoybean.org

NEW YORK

New York Corn & Soybean Growers Association

P.O. Box 605
Sackets Harbor, NY 13685
Phone: 315/583-5296
Executive: Julia Robbins
Website: www.nycornsoy.org

NORTH CAROLINA

North Carolina Soybean Producers Association, Inc.

211 E. Six Forks Road, Suite 102
Raleigh, NC 27609
Phone: 919/839-5700
Executive: Charles Hall
Communicator: Laura Rogers
Website: www.ncsoy.org

NORTH DAKOTA

North Dakota Soybean Council

1555 43rd Street South, Suite 103
Fargo, ND 58103
Phone: 888/469-6409
Executive: Diana Beitelspacher
Communicator: Suzanne Wolf
Website: www.ndsoybean.org

OHIO

Ohio Soybean Council

918 Proprietors Road, Suite A
Worthington, OH 43085
Phone: 614/476-3100
Executive: Kirk Merritt
Communicator: Jennifer Coleman
Website: www.SoyOhio.org

OKLAHOMA

Oklahoma Soybean Board

P.O. Box 578
Claremore, OK 74018
Phone: 918/343-2326
Executive: Rick Reimer
Website: www.oksoy.org

PENNSYLVANIA

Pennsylvania Soybean Board

Northwood Office Center
2215 Forest Hills Drive, Suite 40
Harrisburg, PA 17112
Phone: 717/651-5922
Executive: Jennifer Reed-Harry
Website: www.pasoybean.org

SOUTH CAROLINA

South Carolina Soybean Board

1200 Senate Street
Wade Hampton Building, Fifth Floor
Columbia, SC 29201
Phone: 803/734-1767
Executive: Stephanie Sox
Website: www.scsoybeans.org

SOUTH DAKOTA

South Dakota Soybean Research & Promotion Council

5000 South Broadband Lane,
Suite 100
Sioux Falls, SD 57108
Phone: 605/330-9942
Executive: Jeremy Freking
Communicator: Sarah Even
Website: www.sdsoybean.org

TENNESSEE

Tennessee Soybean Promotion Board

100 Executive Drive
Jackson, TN 38305
Phone: 731/668-2850
Executive: Parks Wells
Communicator: Gina Thompson
Website: www.tnsoybeans.org

TEXAS

Texas Soybean Board

P.O. Box 1750
Navasota, TX 77868
Phone: 936/825-3300
Executive: Kenlon Johannes
Website: www.texassoybeans.org

VIRGINIA

Virginia Soybean Board

102 Governor Street, Room 319
Richmond, VA 23219
Phone: 804/371-6157
Executive: Philip T. Hickman
Website: www.vasoybean.com

WESTERN REGION SOYBEAN BOARD

3815 Touzalin Avenue, Suite 101
Lincoln, NE 68507
Phone: 402-441-3240
Executive: Victor Bohuslavsky

WISCONSIN

Wisconsin Soybean Marketing Board

4414 Regent Street
Madison, WI 53705
Phone: 608/274-7522
Executive: Robert Karls
Website: www.wisoybean.org

Resources Guide

National and International Soy Organizations:



UNITED SOYBEAN BOARD

www.unitedsoybean.org



www.soyfoods.org



www.usda.gov



www.thesoyfoodscouncil.com



www.soygrowers.com



SOYINFO CENTER

www.soyinfocenter.com



www.worldsoyfoundation.org

Internet Sites With More Soy Recipes

The Soy Connection—www.SoyConnection.com

Eating Well—www.EatingWell.com

Cooking Light—www.CookingLight.com

Bon Appetit—www.BonAppetit.com

Taste of Home—www.TasteofHome.com

The Home Cook—www.Food.com

Food Network—www.FoodNetwork.com

All Recipes—www.AllRecipes.com

My Recipes—www.MyRecipes.com

Boca products—<http://www.Bocaburger.com/recipes.html>

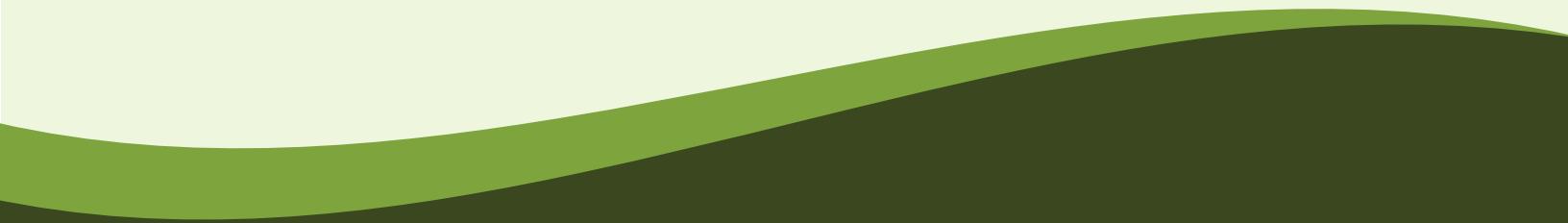
Revival products—www.Soyfoods.com/recipes

Silk products—www.Silk.com

Hodo Soy Beanery—www.HodoSoy.com/recipes

SoyConnection

www.soyconnection.com





United Soybean Board—working to maximize opportunities for all U.S. soybean farmers.

United Soybean Board

16305 Swingley Ridge Road, Suite 150
Chesterfield, MO 63017
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