

Table *of* Contents

SOY: A HEALTHY CHOICE	2
TOFU	6
SOYMILK	12
EDAMAME	16
TEXTURED VEGETABLE PROTEIN (TVP®)	18
SOY FLOUR	22
SOY NUTS	25
SOY IN THE AMERICAN KITCHEN COOKBOOK SERIES	26
ILLINOIS CENTER FOR SOY FOODS	27



SOY A Healthy Choice



Photos by David Reicks, UIUC-ACES-ITCS

A wide variety of foods can be made with soybean ingredients.

Why Soy?

- **Health Benefits** - The FDA has approved a soy health claim that states 25 grams of soy protein a day as part of a diet low in saturated fat and cholesterol may reduce the risk of heart disease. Emerging research continues to illustrate the benefits of adding soy to the diet – for diabetes management, for cancer prevention, for bone loss prevention and memory retention, just to name a few. Check out www.soyfoodsillinois.uiuc.edu for more information.
- **High-Quality Protein** - Soy is a complete protein – it has all the essential amino acids people need.
- **Nutrients and Fiber** - Soybeans are rich in many vitamins and minerals as well as fiber.
- **Variety** - Soy foods come in a variety of flavors and textures to suit every taste. Check the shelves of your grocery store for new soy products.

More Advantages of Soy

- **Lactose, Casein or Gluten** - Soy foods offer an alternative for people who cannot tolerate dairy products. Most brands of soymilk and tofu are fortified with calcium. Soy flour is also important when used in gluten-free flour blends to add protein and nutrients to the mix.
- **Saturated Fat & Cholesterol** – Soy is naturally free of saturated fat and cholesterol. It is an excellent low-fat protein source.
- **Complicated Cooking** – Soy is easy to cook with and there are lots of easy ways to prepare soy foods.
- **Expensive** – Soy is economical. It allows you to stretch your food dollars because it often costs less per pound than meat-based proteins.

Soy Foods Glossary

Edamame, also known as sweet soybeans, are a variety of fresh green soybeans harvested just prior to maturity. These delicious beans can be purchased frozen and cook in only three to five minutes.

Soymilk is the nutritious beverage traditionally made by grinding blanched soybeans with water and pressing out the rich liquid. Flavorings and sweeteners are often added.

Tofu is a soy “cheese” made from soymilk. Silken tofu has a creamy texture and is usually available in aseptic cartons that do not need refrigeration until opened. Tub tofu, which has a firmer texture, is packaged in water and kept chilled.

Tempeh is a fermented soybean product. It is generally available in rectangular “cakes” that are kept chilled.

Miso is a fermented soybean paste with a rich, complex flavor. Some people liken the flavor to mushrooms or wine. Grains, such as barley or rice, may also be used when making miso. Generally, a lighter color miso has a milder flavor. Red miso is a rich red-brown color and is traditionally used as the base for miso soup.

Soy nuts are not nuts at all, but are mature soybeans that have been soaked and roasted. These crunchy ‘nuts’ are often salted or flavored.

Black soybeans are a dark colored variety of soybean. They cook more quickly and are milder in flavor than the more common yellow soybeans.

Textured vegetable protein, or TVP® (a registered trademark of the Archer Daniels Midland Company), is an easy-to-use dry soy food made from defatted soy flour that has been texturized through an extrusion process and formed into granules. It is also known as Textured Soy Protein (TSP®)

Soy flour is made from soybeans that have been processed into flakes and then ground into flour. Because soy flour does not contain gluten, it is used in combinations with other flours.

Soy analogs are a variety of soy products made to resemble meat or dairy foods. Products like soy burgers, soy yogurt and soy cheese fall into this category.

Soy protein isolate is a processed form of soy that is high in protein. It is easily digestible and has very little flavor of its own.

Nutrition Comparison of Soy Foods

Soy Food	Serving	Kcal	in grams			
			Protein	Fat	Carbs	Fiber
Edamame	½ cup	95	9	4	8	4
Mature soybeans, cooked	½ cup	149	14	8	9	5
Black soybeans, canned*	½ cup	120	11	6	8	7
Roasted soynuts	¼ cup	120	12	4	9	5
Soymilk, “traditional”	1 cup	120	9	5	11	3
Commercial soymilk* plain	1 cup	100	7	4	8	1
Commercial soymilk* light plain	1 cup	70	6	2	8	1
Commercial soymilk* vanilla	1 cup	100	6	4	10	1
Commercial soymilk* chocolate	1 cup	140	5	4	23	2
Tempeh	½ cup	160	15	9	8	0
Soy nut butter	2 Tbsp	170	7	11	10	3
Soy “beef or sausage” crumbles*	2/3 cup	80	10	2.5	4	3
Soy “chicken nuggets”*	4 nuggets	190	12	9	19	4
Soy “hot dog”*	1	50	7	0.5	5	0
Soy “meatless burger”*	1	130	15	6	5	2
Tofu, silken, firm	3 oz	52	6	2	2	0
Soy yogurt	1 cup	150	5	3.5	24	1
Soy cheddar cheese	1 oz	60	7	3	0	0
Miso	2 Tbsp	68	4	2	9	2
Soy flour, defatted	½ cup	165	24	1	19	9
TVP*	¼ cup	80	12	0	7	4
Soy-wheat blend pasta*	2 oz	210	13	2	35	2
Soy protein bar (Genisoy Chocolate)*	1 bar	240	14	5	35	2
Soy fruit bar (SoyJoy Apple)	1 bar	140	4	6	16	3

* Information from manufacturer’s Nutrition Facts Label, all other information from the Nutrient Database Laboratory, USDA Food Composition Data, USDA. Always check the Nutrition Facts label on the soy foods you buy. Products will vary by brand.

Tofu



Photo by David Reicks, UIUC-ACES-ITCS

Vegetarian Lasagna, see Tofu recipe on page 9.

Tofu is one of the ultimate convenience foods – quick and easy to use in a wide variety of dishes. It is highly nutritious and easily digested. Tofu is made by forming curds from fresh soymilk, similar in the same way that cottage cheese is made from cow’s milk. The curds are then formed into blocks of tofu.

Kinds of Tofu

In most stores you will find either regular tofu, which comes in refrigerated tubs, or silken tofu, which is available in shelf-stable packages. Depending on how much water is pressed out, the tofu will be soft, firm, or extra firm. In many recipes you can use any of the types of tofu that you prefer. Firm or extra firm regular tofu is excellent for grilling or pan frying because it holds its shape well. Silken tofu is wonderful in dips, spreads, and smoothies because it has a creamy texture.

Storing Tofu

Tofu is perishable and should be used by the date stamped on the package. Regular tofu needs to be refrigerated. Once the package has been opened, store the tofu in clean water in the refrigerator and use within a few days. Shelf-stable packaged tofu must be refrigerated once it is opened and used within a few days.

Tips for Using Tofu

- Cut blocks of regular tofu in serving size pieces and let them sit briefly in your favorite marinade. You can grill, bake, or pan fry the slices.
- Regular tofu can be frozen. When defrosted, it will have a chewy, meat-like texture. Thaw the frozen tofu in the refrigerator, a tub of cold water, or the microwave. Press out the excess liquid and crumble the tofu to use with or instead of ground meat in casseroles, tacos, or stews.
- Purée silken tofu to use as a base for your favorite sauces, dips and spreads. Mix it with your favorite seasonings, and stir in some low-fat sour cream or mayonnaise for a quick dip.
- Make a quick shake by blending silken tofu with juice and frozen berries.

Spinach Dip

(from *Soy for the Last Minute Chef Cookbook*)

- 6 oz (1/2 package) firm silken tofu
- 8 oz light sour cream
- 1 envelope of dry vegetable soup mix
- 1 package (10 oz) frozen chopped spinach, thawed and squeezed dry
- 1 can (8 oz) sliced water chestnuts, drained and chopped

Put the tofu and sour cream in a blender and blend until smooth. Pour into a mixing bowl and stir in the soup mix, spinach and water chestnuts. Refrigerate at least 2 hours to allow dip to firm up and flavors to blend.

Serve with chips, bread cubes, or vegetables as dippers. This is also a good sandwich spread. This recipe replaces the traditional mayonnaise with tofu and saves nearly 100 calories per serving for the dip alone.

Makes 3 cups.

Per serving (1/4 cup): 56 Calories, 4 grams Protein, 6 grams Carbohydrate, 2 grams Fat

Traditional Spinach Dip: 152 Calories, 2 grams Protein, 13 grams Carbohydrate, 11 grams Fat

Vegetarian Lasagna

(from *the Tofu in the American Kitchen Cookbook*)

- 2 jars (26 oz each) of prepared spaghetti sauce
- 1 lb lasagna noodles, uncooked
- 1 lb regular tofu, mashed
- 4 cups part-skim mozzarella cheese
- 1 cup water
- Grated parmesan cheese (optional)

1. Preheat the oven to 350° F.
2. Cover bottom of baking pan (9-inch x 13-inch or 10-inch x 15-inch) with a thin layer of sauce, then a layer of uncooked lasagna noodles, another layer of sauce, a layer of tofu, and then a layer of cheese. Continue layering noodles, sauce, tofu, and cheese, ending with cheese.
3. Pour 1 cup water along the edges between the lasagna and the pan. Cover with foil and bake at 350° for 1 hour to 1 hour 15 minutes, until noodles are tender. Uncover and bake for an additional 15 minutes to allow the sauce to thicken.
4. Let the lasagna stand for 10 minutes before cutting and serving. If desired, sprinkle with grated Parmesan cheese.

Note: Vegetables may be added to the sauce. Reduce fat content by replacing some of the cheese with fat-free mozzarella or soy cheese.

Yield: 12 servings

Per serving (1 slice): 393 Calories, 22 grams Protein (6 grams soy pro), 42 grams Carbohydrate, 16 grams Fat (5.9 grams sat fat)

Tofu Alfredo Sauce

This recipe replaces the traditional heavy cream and butter with Tofu and saves 453 calories per serving for the sauce alone!

- 1 package (12 oz) firm silken tofu
- 1 garlic clove
- ½ cup parmesan cheese
- 1 Tbsp oil
- 1 ½ tsp dried basil
- 1 Tbsp dried parsley
- ¼ tsp black pepper
- 1 tsp kosher salt (or less to taste)
- 1 tsp onion powder
- ¼ cup skim milk or plain soymilk

Combine ingredients in a blender and blend until smooth. Warm in the microwave 3-4 minutes on high, or until hot.

Makes 4 servings, (sauce alone)

Per Serving (½ cup): 52 Calories, 4 grams Protein, 1 gram Carbohydrate, 3 grams Fat

No Fuss Cupcakes

(from the Baking with Soy in the American Kitchen Cookbook)

Tofu replaces all of the oil and some of the eggs in this fast and easy recipe that starts with a mix. This easy substitution cuts the total fat content in half!

- 6 oz silken tofu
- Water according to cake mix directions
- 1 box standard 2-layer cake mix
- 2 eggs*
- frosting (optional)

1. Preheat the oven according to cake mix directions. Line muffin tins with paper cupcake liners.
2. Put the silken tofu with half the water called for in the cake mix directions in a blender and blend until smooth.
3. Beat together the cake mix, tofu mixture, eggs, and remaining water in a large mixing bowl with an electric mixer at low speed. When combined, beat 2 minutes at medium speed.
4. Pour the batter into the prepared muffin cups, filling each about two-thirds full. Bake according to the directions on the cake mix box.
5. Cool and apply frosting as desired.

**Tofu replaces all the oil and one of the eggs or egg whites normally used to prepare a cake mix. If a mix calls for three eggs, use two eggs; if it calls for three egg whites, use two egg whites.*

Yield: 20 cupcakes

Per serving (1 cupcake): 126 Calories, 2 grams Protein (0.5 gram soy pro), 21 grams Carbohydrate, 4 grams Fat (0.7 gram sat fat)

Variations: This recipe also makes one 9-inch x 13-inch cake or two 9-inch round cakes.

Soy milk



Soy milk

Whether you drink it, pour it over your cereal, or use it in cooking and baking, soy milk fits well into a healthy diet. It is low in saturated fat and cholesterol free, and provides a variety of essential vitamins and minerals. Soy milk is a good source of high quality protein, is lactose and casein free, and available in several delicious flavors.

Choosing Soy milk

Soy milk comes in refrigerated cartons in the dairy case or on the shelf in aseptic shelf-stable containers that do not have to be chilled until they are open. You may find quart, half-gallon or single-serving containers.

Sample several brands of soy milk to find the one you like best. Try different flavors, too, such as vanilla, chocolate, mocha, chai, or eggnog. Test the soy milk by using it the way you normally would – pouring it over cereal, making a smoothie, drinking a glass, or using it in cooking. You may find that you like a variety of flavors for drinking and a plain or vanilla soy milk for cereal and cooking.

Tips for Using Soy milk

- Pour soy milk over your breakfast cereal.
- Use soy milk in shakes, coffee, and other beverages.
- Substitute soy milk for cow's milk in almost any recipe. You won't notice a difference in taste when substituting soy milk in most baked goods, but you might in sauces and creamy items.
- Experiment with flavors. Plain soy milk may be best for many cream soups, but vanilla soy milk adds subtle sweetness to winter squash soup and chocolate soy milk is great in chocolate cake!
- If using soy milk to prepare a packaged instant pudding mix, use only half the suggested amount of milk or the pudding will not set.
- Soy milk does not taste exactly like cow's milk. Give yourself some time to adjust to the difference, and you may find that you really enjoy—even prefer—soy milk.

Soy in the American Kitchen Cookbook Series



For those of you wanting to test out additional recipes, the Illinois Center for Soy Foods has created a series of cookbooks that feature soy recipes for the American kitchen.

- Tofu
- Textured Soy Protein
- Baking with Soy
- Soy for the Last Minute Chef
- Soy on the Menu (for Institutional Food Service)
- Around the World with Soy
- Chef's Use Soy

Cookbooks may be ordered online at www.soyfoodsillinois.uiuc.edu or by phoning (217) 244-1706.

Illinois Center for Soy Foods

The Illinois Center for Soy foods is dedicated to developing innovative processing and marketing techniques, educating society on the advantages of a soy-enriched diet, and communicating new health benefits of soy. Its mission includes:

- Development of soy foods through improved chemistry, engineering, microbiology, processing, and packaging techniques
- Understanding and improving sensory attributes
- Creation of advertising and product branding through better understanding of consumer perceptions
- Study the efficacy and safety of soy foods to improve human health
- Decreasing health care costs by finding disease-preventative and health-promoting benefits of soy foods

SOYnotes

