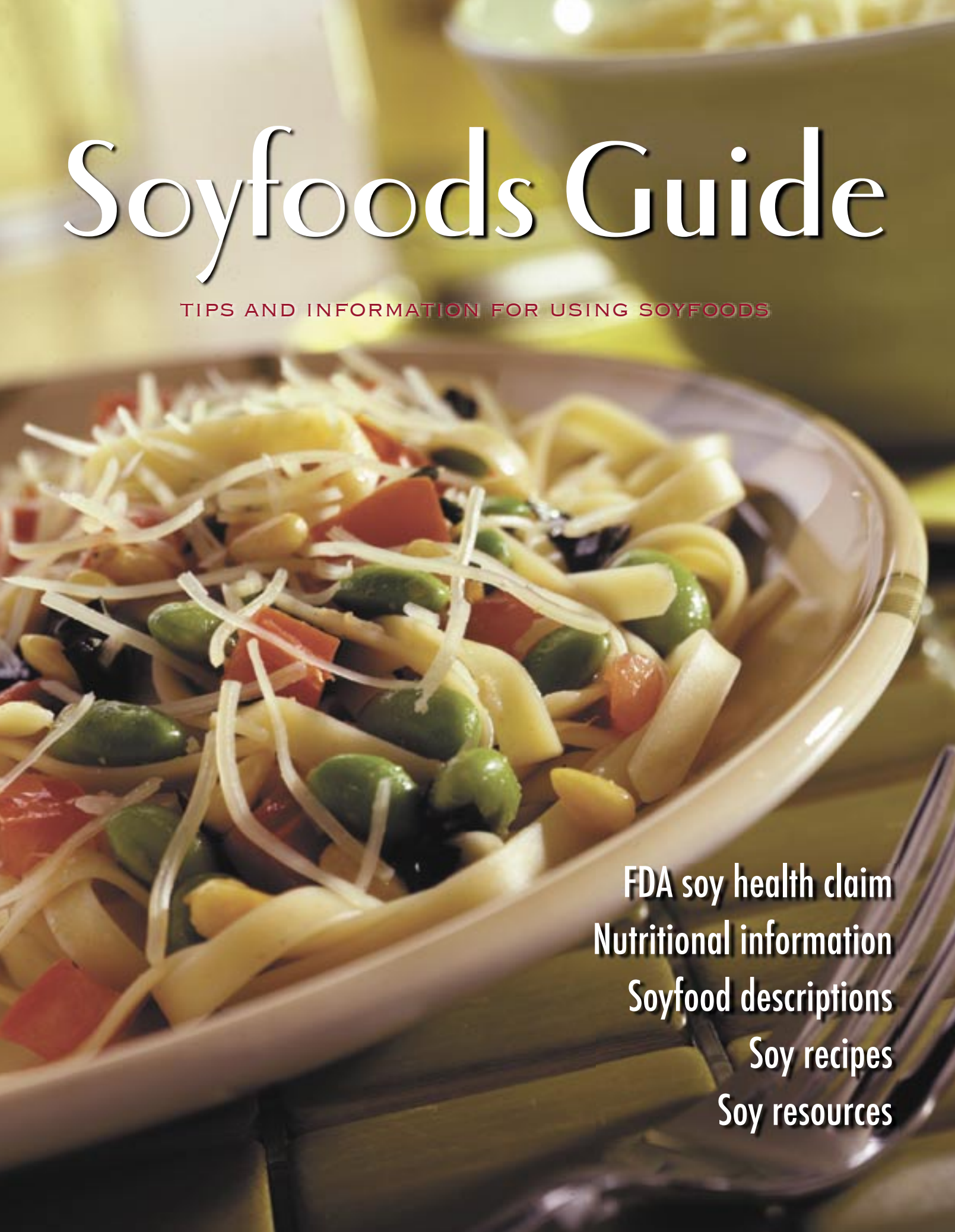


Soyfoods Guide

TIPS AND INFORMATION FOR USING SOYFOODS

A close-up photograph of a white ceramic bowl filled with a colorful pasta salad. The salad consists of wide, flat, light-colored pasta strips, likely made from soy flour. It is mixed with diced red bell peppers, green peas, and sliced almonds. A generous amount of shredded white cheese is sprinkled over the top. The background is softly blurred, showing another bowl of similar food and a fork resting on the table.

FDA soy health claim
Nutritional information
Soyfood descriptions
Soy recipes
Soy resources



Good For Your Heart



In 1999 the Food and Drug Administration (FDA) announced that foods containing soy protein may reduce the risk of coronary heart disease (CHD). Foods that meet the FDA guidelines can label their products with this claim.

The soy health claim is based on the FDA's determination that 25 grams of soy protein per day, as part of a diet low in saturated fat and cholesterol, may reduce the risk of heart disease by reducing blood cholesterol levels.

To get the heart-healthy benefits of soy protein, the FDA recommends that consumers incorporate four servings of at least 6.25 grams of soy protein into their daily diet for a total of at least 25 grams of soy protein each day.

In order to claim the healthful effects of soy, a soyfood must meet the following criteria:

- 6.25 grams or more soy protein
- Low fat (less than 3 grams)
- Low saturated fat (less than 1 gram)
- Low cholesterol (less than 20 mg)

Foods made with the whole soybean may also qualify for the health claim if they contain no fat in addition to that present in the whole soybean. These would include soyfoods such as tofu, soymilk, soy-based burgers, tempeh, and soynuts.

New food product labels may now say, "Diets low in saturated fat and cholesterol that include 25 grams of soy protein a day may reduce the risk of heart disease. One serving of (name of food) provides ____ grams of soy protein."

Over 40 scientific research studies have been conducted on the effects of soy protein and cardiovascular disease. More than 54 million people in the U.S. have high blood cholesterol (levels over 200), according to the American Heart Association.

For more information on FDA soy health claims, go to the FDA web site: www.cfsan.fda.gov/~dms/fdsoypr.html.

25-Gram Soy Smoothie

Drink one Hi-Protein Soy Smoothie a day for healthy heart benefits.

- 1 cup soymilk (any flavor)
- 1 scoop soy protein powder (any flavor)

Mix well in blender until soy protein powder is completely dissolved.
Serve immediately.

Yield: 1 serving: 1 1/4 cup. Per serving: 250 calories, 5 g total fat (0 g sat fat), 25 g protein (25 g soy protein), 26 g carbohydrate, 320 mg sodium, 0 mg cholesterol, 0 g dietary fiber.

*(Note: Soy protein levels per serving vary depending on the brand.
Read the label for protein content per serving.)*



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*5th International Symposium***Role of Soy in Preventing and Treating Chronic Disease**

By Mark Messina, PhD, Adjunct Professor, Department of Nutrition, Loma Linda University, and president of Nutrition Matters, Inc.

The Fifth International Symposium on the Role of Soy in Preventing and Treating Chronic Disease was held in September 2003 in Orlando, Fla. The meeting attracted nearly 300 scientists from 20 different countries, and research findings from nearly 200 new studies were presented. The volume of research attests to the phenomenal extent to which the health effects of soyfoods are being investigated in laboratories throughout the world. A brief review of some of the key findings from the Fifth Symposium is presented below.

Bone Health

Dr. Suzanne Ho from the Chinese University of Hong Kong arguably provides the strongest data to date that soybean isoflavones have skeletal benefits. Dr. Ho found that over the course of one year, Chinese postmenopausal women who took an isoflavone supplement each day experienced a statistically significant increase in hip-bone strength in comparison to women taking a placebo. Because this study involved large numbers of subjects, the findings are particularly meaningful. Plus, they are consistent with another recently published study, which also found that in comparison to a placebo, isoflavone supplements reduced bone loss in postmenopausal women. However, in this study, the most dramatic benefits were noted at the spine. Overall, the clinical trials conducted over the past six years point toward isoflavones promoting bone health.

The skeletal benefits of isoflavones are good news to postmenopausal women because in the years immediately following the menopause, women often lose large amounts of bone, especially at the spine. Conventional hormone replacement therapy (HRT) is effective for reducing bone loss and fracture risk; however, the harmful effects of HRT outweigh the benefits, so HRT no longer is recommended for long-term use.

Prostate Cancer

There is considerable research indicating that one reason so few Japanese men die from prostate cancer is because they consume soyfoods. Animal studies show that isoflavones from soybeans prevent the growth of prostate tumors, and a European group of experts recently concluded that isoflavones prevent small prostate tumors from progressing to the more advanced form of this life-threatening disease. However, some scientists suggest that serum isoflavone levels are too low to produce anticancer effects in humans. A study presented at the symposium suggests that is not the case.

The reason is that the prostate tissue actually concentrates

isoflavones relative to the serum. That is, serum levels actually underestimate the amount of isoflavones in the prostate. The key to health effects is not serum levels but tissue levels. Prostate tissue levels of two of the main isoflavones were found to be 6 and 13 times higher than serum levels in men who were fed soyfoods.

Soy Allergy

Soy protein generally is listed as one of the main food proteins to produce allergic reactions, although soy protein is seen as being much less allergenic than are commonly consumed proteins such as the protein from peanuts, milk, eggs, and certain types of fish. Also, allergic reactions to soy protein usually are much less severe in comparison to these other proteins. Still, some people must avoid soy protein because they are allergic to it.

However, a new analysis suggests that the number of people allergic to soy protein has been greatly overestimated. In fact, data suggest that only one out every 3,000 adults is allergic to soy protein. Thus, few adults need to worry about soy allergy.

Eye Health

Relatively little investigation of the effect of soyfoods on eye health has been conducted. Research into the relationship between eye health and diet is likely to become increasingly important as the number of people in America reach the age when eye health begins to decline. New research suggests soyfoods may be one component of an eye-healthy diet as the isoflavone genistein was shown to protect against x-ray-induced cataract formation in rats. Genistein was found to be present in the crystalline lens and was effective against x-rays whether given in the form of soy protein or as a supplement. The antioxidant effects of genistein may have been responsible for protection against cataract formation.

Interestingly, other recently published research suggests that soyfoods may qualify as radioprotectants. Radioprotective agents are compounds that are administered before exposure to ionizing radiation to reduce its damaging effects, including radiation-induced lethality. In this research the survival of mice given genistein and a lethal dose of radiation was markedly increased in comparison to mice given the radiation but not genistein. There are many situations in which radioprotectants can be of use; these include clinical oncology, space travel and radiation site clean-up.

Isoflavones Do Not Equal Estrogen

Soyfoods have attracted lots of attention from the scientific community because they contain isoflavones, which are often referred to as phytoestrogens. However, some concerns have arisen about the safety of isoflavones because of reports that the

(Continued on page 8)

Soyfoods are a source of high-quality protein. In addition, consumption of soy protein provides health benefits that may help prevent or treat certain chronic diseases. Currently, a great deal of research is being conducted to investigate possible health benefits of soy.

Isoflavones

Soyfoods are the richest dietary source of isoflavones. These compounds are being studied intensively because they exert physiological effects that may help reduce risk for certain diseases. Phytochemicals are plant compounds that exert biological effects in the animals or humans who consume them.

One type of phytochemical is isoflavones. These are found in varying amounts in legumes, but the only significant source in the human diet is soybeans. Isoflavones are phyto-serms (selective estrogen receptor modulators) and have some estrogen-like qualities, but they are very different from estrogen and have nonhormonal properties as well.

When consumed by animals or humans, isoflavones exert weak estrogen-like effects, but they fall into the same category as tamoxifen. The two primary isoflavones in soybeans are genistein and daidzein, and their glycosides. In fact, most isoflavones occur in soybeans in the form as glycoside (genistein and daidzein). Foods made from soybeans have varying amounts of the isoflavones, depending on how they have been processed.

Soyfoods such as tofu, soymilk, soy flour, and soynuts have isoflavone concentrations of 1.3 to 3.8 mg/g or about 37 to 108 mg

Soy Serves Up Healthy Benefits



per ounce. Concentrations are lower in foods made from a combination of soy and grains. Soy sauce and soybean oil have virtually no isoflavones.

Soy products that are used as additives, such as isolated soy protein and soy protein concentrate, likewise have varying amounts of isoflavones, depending on how they were processed.

Epidemiological studies have indicated that populations that regularly consume soyfoods (as in Asia) have lower incidences of breast, colon, and prostate cancers. The incidence is particularly low for the hormone-dependent cancers. This fact has led researchers to investigate the possible effects of phyto-serms on cancer risk.

Heart Disease

Soybeans have a favorable nutrient profile for heart health, and have other properties that may help lower risk for

heart disease. The FDA has authorized the use of health claims about the role of soy protein in reducing the risk of coronary heart disease (CHD) on the labeling of foods containing soy protein.

The soy health claim is based on the FDA's determination that 25 grams of soy protein per day, as part of a diet low in saturated fat and cholesterol, may reduce the risk of heart disease by reducing blood cholesterol levels.

Recent clinical trials have shown that consumption of soy protein compared to other proteins can lower total and LDL-cholesterol levels. Soyfoods are an excellent choice for a heart-healthy diet.

Menopause & Osteoporosis

The hormonal changes that occur during menopause can cause a variety of symptoms and increase risk for heart disease and osteoporosis. Soyfoods, which contain phyto-serms, are being studied

for possible efficacy in decreasing the negative effects of menopause.

During peri-menopause, women experience fluctuations in estrogen levels. This can cause uncomfortable symptoms such as hot flashes, night sweats, insomnia, vaginal dryness, or headaches. Changes in estrogen levels have surprisingly wide-ranging effects throughout the body.

Hormone replacement therapy (HRT) is commonly prescribed to help prevent the negative health effects of menopause. However, many women do not want to take HRT because of the possible increased risk for breast cancer. Can soyfoods provide the same kinds of health benefits as HRT, without the risks? Scientists don't have the answer yet, but evidence is accumulating for several health benefits of soy.

Soy contains phyto-serms in the form of the isoflavones, genistein and daidzein. These are known to have estrogen-like qualities, but are very different from estrogen and have nonhormonal properties as well when consumed by animals and humans. Researchers are studying the physiological effects of the isoflavones to find out whether they can serve some of the same functions as physiological estrogens and thereby decrease the health risks associated with menopause.

A cross-cultural study of menopause found that women in Japan rarely reported the symptoms of peri-menopause that are common in the West. Post-menopausal Japanese women also have lower rates of osteoporosis and heart disease, and a longer life expectancy.

These facts have fueled an interest in research designed to clarify the relationship between soy consumption and health.

Cancer

Soyfoods fit the dietary guidelines for reducing cancer risk, and they contain anticarcinogens that may prove to be protective. Epidemiological studies show that populations which consume a typical Asian diet have lower incidences of breast, prostate, and colon cancers than those consuming a Western diet. The Asian diet includes mostly plant foods, including legumes, fruits, and vegetables, and is low in fat. The Japanese have the highest consumption of soyfoods.

On the other hand, the typical Western diet includes lesser amounts of legumes, fruits and vegetables, is lower in fiber and complex carbohydrates, and is high in fat. Soyfoods are dietary staples in the Orient but are not commonly included in the Western diet. Japan has a very low incidence of hormone-dependent cancers. The mortality rate from breast and prostate cancers in Japan is about one-fourth that of the United States.

There is evidence that suggests the difference in cancer rates is not due to genetics but rather to diet. Migration studies have shown that when Asians move to the United States and adopt a Western diet, they ultimately have the same cancer incidence as Americans.

The American Cancer Society has created guidelines designed to help reduce the risk for cancer. Their recommendations include:

- Choose most of the foods you eat from plant sources;

- Limit your intake of high-fat foods.

Soyfoods fit these guidelines for a health-promoting diet. Soybeans contain high-quality protein. Soyfoods and soy products are amazingly versatile and can easily be incorporated into a varied diet.

Allergies

Though uncommon, food allergies can have serious consequences. Only 1 in 3,000 adults is estimated to be allergic to soy protein. This estimate is much lower than is commonly perceived. However, the incidence of true food allergy among adults is quite low, and soy is much less allergenic than are many commonly consumed foods. Also, the reaction to soy protein is typically less severe than is the case for many other foods.

Soyfoods often take the place of the more allergenic foods, such as cow's milk and eggs. However, some people are also allergic to soy. Those who are allergic to soy may be able to tolerate some soyfoods but not others. It is important for these people to read food labels and familiarize themselves with the ingredients.

If a person has a food allergy, alternative foods must be found to provide the missing nutrients. Identifying alternative foods is especially crucial in the case of young children because they are in a phase of rapid growth and development. Soy-based infant formulas have been used for decades to feed infants with cow's milk protein allergies.

Today's soy formulas are equivalent to cow's milk formulas in digestibility, nutrition profile, and acceptability. In healthy infants,

soy formulas promote normal growth, nutritional status, and bone mineralization.

Diabetes & Kidney Disease

There is some research evidence that soyfoods may help with blood sugar control in diabetics. It is interesting that the use of soyfoods for diabetes control was one of the first health benefits noted for soy.

Soy may also help lower risk for some of the complications of diabetes, such as kidney disease. Legumes, especially soybeans, have a very low glycemic index and are valuable foods to include in a diabetic diet.

Regardless of source, the total amount of carbohydrate in the diet needs to be within the patient's recommended limit. Blood sugar control may also be improved by choosing carbohydrates that are high in soluble fiber. Some researchers believe that fiber has no measurable benefit unless it is added to the diet in very large amounts.

Supplemental soy fiber may also help by slowing absorption of sugars. In kidney disease, a soy-based diet may be preferable to the traditional low-protein diet for decreasing renal damage. Soy provides high-quality protein without stimulating hyperfiltration and proteinuria. It may also help prevent kidney damage by lowering serum LDL cholesterol levels.

Cardiovascular disease is two to four times as common in diabetics as in the general population. Therefore it is important for diabetics to follow the standard recommendations for heart health.

More research is needed to clarify the possible benefits of soyfoods in a diabetic diet.

Soybean Oil

Although this *Soyfoods Guide* contains information primarily about soy protein, another major component of the soybean, soybean oil, is the most widely used vegetable oil in the country. Liquid soybean oil is low in saturated fat and high in poly- and monounsaturated fats and is among the most healthful of all edible oils. It is also one of the few nonfish sources of omega-3 polyunsaturated fatty acids, which may be beneficial in helping to prevent cancer and heart disease.

Although liquid soybean oil is used in a number of products, including salad dressings, cooking oils, and some brands of margarine, other food applications require a more solid form of oil for increased stability and texture. Hydrogenation is the process of rearranging the chemical structure of a liquid oil to make it more solid, which also produces trans fatty acids. Hydrogenated vegetable oils became very popular in the '70s and '80s as a replacement for oils that are high in saturated fat, such as lard, tallow, and some tropical oils.

More recent research suggests that trans fatty acids may behave similarly to saturated fats in the body, and the Food and Drug Administration (FDA) decided to require food manufacturers to list trans fatty acid content on the Nutrition Facts panel on food labels effective January 2006. In the meantime, the soybean industry is working diligently on creating new varieties of soybeans that will produce a more healthful oil that does not require hydrogenation. Simultaneously, soybean processors are developing new oil-processing techniques that prevent the formation of trans fat.

It is important to keep in mind that even today, trans fats represent only 2.6 percent of the average American's total caloric intake, whereas saturated fats represent approximately 12.5 percent of total calories. Most health authorities do not recommend replacing trans fats with saturates, and instead advocate reducing the total amount of fat in the diet. The American Heart Association's Nutrition Committee suggests total fat intake be less than 30 percent of total calories. The best advice is to look for oils that are high in poly- and monounsaturated fat and relatively low in saturated fat, such as liquid soybean oil.

Soy Dietary Guidelines for Americans

See how soy fits into the USDA's Food Pyramid

Fats, Oils, & Sweets:

- Soybean oil is rich in polyunsaturated fat and contains only minimal saturated fat.
- Fats, like soybean oil, are needed to regulate your body temperature.
- Fats, like soybean oil, help transport fat-soluble vitamins throughout your body.
- Soybean oil is a rich source of omega-three fatty acids.
- Soybean oil, labeled "vegetable oil," is a good source of the antioxidant vitamin E.

Milk, Yogurt, & Cheese:

- The Dietary Guidelines for Americans lists 1 cup of calcium-enriched soy-based beverage as a serving in this group.
- Choose plain or flavored soymilk in either shelf-stable or refrigerated carton.
- 2 ounces of calcium-fortified soy cheese counts as 1 serving in this group.
- 1 cup of soy yogurt, fortified with calcium, is 1 serving in this group.
- Soy ice cream products are a part of this group but do not contain as much calcium or protein as the other soy products in this group.

Meat, Poultry, Fish, Dry Beans, Eggs, & Nuts:

- 1 serving in this protein-rich group is equal to the protein found in 2-3 ounces of cooked lean meat, poultry, or fish.
- The Dietary Guidelines for Americans allow one-half cup of tofu to count as 1 serving in the meat, poultry, eggs and nuts group.
- A 2.5 ounce soy burger counts as 1 ounce of the meat, poultry, eggs, and nuts group.
- Other soy protein sources, such as chicken-type nuggets and patties, soy protein franks, and soy burger-type crumbles, count as 1 serving in the meat, poultry, eggs, and nuts group.
- 2 tablespoons of soynut butter is comparable to 1 ounce of lean meat.
- One-third cup of soynuts (12 grams soy protein) is equal to an ounce serving of lean meat.
- One-half cup of cooked or canned green, yellow, or black soybeans is equal to 1 ounce of lean meat.



Vegetables:

- Dried beans, including soybeans, are the only food to count in two different food groups in the Pyramid. (They can be found in this group and the meat group.)
- Count one-half cup of canned or cooked soybeans as 1 vegetable group serving.
- One-half cup of green soybeans (edamame) counts as 1 serving of vegetables and contains 10 grams of soy protein.
- All soybeans are a good source of dietary fiber and isoflavones.

Fruits:

- Fruit juices provide many nutrients, especially vitamin C. Count 6 ounces as 1 fruit serving.
- Canned fruits are filled with valuable vitamins, minerals, and fiber just as are fresh fruits. A serving of canned fruit is one-half cup.
- Fruits are rich in phytochemicals that may help reduce risk of cancer. Phytochemicals are found only in plant foods such as fruits and soybeans.

Grain, Cereal, Rice & Pasta:

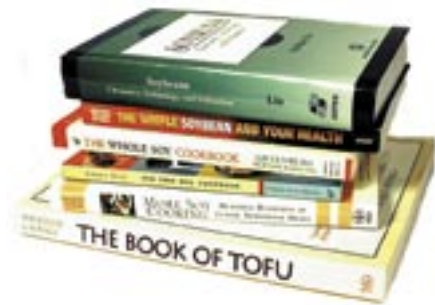
- Count 1 ounce of soy cereal as a serving in this group.
- One-half cup of cooked cereal, such as soy grits, counts as 1 serving.
- One soy waffle counts as 1 grain serving.
- All cooked pastas, including soy pasta, are in this group. One serving is one-half cup of cooked soy pasta.
- A sandwich made with 2 slices of soy bread counts as 2 servings.
- Soy flour is part of this group. Substitute up to one-fourth of the total flour in your favorite baked product recipe.

For more information, visit the web site www.soybean.org
 USDA Dietary Guidelines Food Pyramid:
www.nal.usda.gov:8001/py/pmmap.htm

S O Y F O O D S C O M P O S I T I O N

Soyfood	Calories	Protein (grams)	Fat (grams)	Carbohydrates (grams)	Fiber (grams)	Calcium (Mg)	Iron (Mg)	Zinc (Mg)	Thiamine (Mg)	Riboflavin (Mg)	Niacin (Mg)	Vitamin B (Mg)	Folate (Mg)	Sugar (grams)	Sodium (Mg)	Phosphorus (Mg)	Potassium (Mg)
Miso (2 tsp)	21	1.1	.61	2.8	.5	7	.27	.33	.01	.025	.086	.022	3	.47	365	15	16
*Soy Burgers (1 burger)	103	10	3	8.3	3.3	-	-	-	-	-	-	-	-	.7	243	-	-
*Soy Cheese, Cheddar, singles (1 slice)	40	4	3	0	0	-	-	-	-	-	-	-	-	0	185	-	-
*Soy Cheese, Mozzarella, singles (1 slice)	20	2	0	3	0	-	-	-	-	-	-	-	-	1	220	-	-
*Soy Chik Pattie (1 pattie)	150	9	6	15	2	-	-	-	-	-	-	-	-	1	570	-	-
*Soy Crumbles (2/3 cup)	70	9.6	.8	5.3	2	-	-	-	-	-	-	-	-	1	256	-	-
Soy Flour, Defatted (1 cup)	33	4.7	.12	3.84	1.8	24	.92	.25	.07	.025	.26	.057	305	-	2	67	238
Soy Flour, Full-fat, roasted (1 cup)	375	29.6	18.5	28.6	8.2	160	4.9	3.0	.35	.80	2.8	0	193	-	10	405	1735
Soy Flour, Low-fat (1 cup)	327	41	5.9	33.4	9	165	5.27	1.0	.33	.25	1.9	.46	361	-	16	522	2262
*Soy Hot Dog (1 dog)	62	11.3	1.5	2.6	3.3	-	-	-	-	-	-	-	-	.3	323	-	-
Soy Protein Concentrate (1 oz.)	94	16.5	.13	8.8	1.6	103	3.0	1.2	.09	.04	0.2	.04	96	-	1	238	624
Soy Protein Isolate (1 oz.)	96	22.8	1.0	2.0	1.6	50	4.1	1.1	.05	.03	0.4	.03	50	-	285	220	23
*Soy Protein, Textured (1/4 cup)	80	12	0	7	4	-	-	-	-	-	-	-	-	3	2	-	-
*Soy Sausage Pattie (1 pattie)	55	7.2	1.5	4.5	1.2	-	-	-	-	-	-	-	-	.8	235	-	-
*Soy Yogurt (8 oz.)	150	5	3.5	24	1	-	-	-	-	-	-	-	-	13	40	-	-
*Soybeans, Canned, Yellow (1/2 cup)	150	13	7	11	3	-	-	-	-	-	-	-	-	3	140	-	-
*Soybeans, Canned, Black (1/2 cup)	120	11	6	8	7	-	-	-	-	-	-	-	-	1	30	-	-
*Soybeans, Green in pod (1/2 cup)	100	8	3	8	1	-	-	-	-	-	-	-	-	1	10	-	-
*Soybeans, Green bean (2/3 cup)	105	9.5	4	10	8	-	-	-	-	-	-	-	-	2	3.5	-	-
*Soybeans, Roasted (1/4 cup)	136	10	6	8	5	-	-	-	-	-	-	-	-	1	24	-	-
Soymilk (1 cup)	120	9.19	5.1	11.3	3.2	10	1.4	.05	.39	.17	.36	0	5	-	29	120	345
*Soynut Butter (2 Tbs)	170	8	11.6	9.8	3	-	-	-	-	-	-	-	-	2.8	113	-	-
Tempeh (1 cup)	320	30.6	17.9	15.6	-	184	4.48	1.89	.129	.59	4.3	.357	40	-	15	442	684
Tofu, Firm, Water-packed (1/2 cup)	97	10	5.6	3.7	.5	204	1.8	1.27	.11	.13	.01	.07	42	.7	10	185	222
Tofu, Firm, Silken (1 slice)	52	5.8	2.3	2.0	.1	27	0.87	.51	.08	.03	.20	.0	-	1.0	30	76	163

Source unless specified: Nutrient Database Laboratory, USDA Food Composition Data, USDA. Web Site: www.nal.usda.gov/fnic/cgi-bin/nut_search.pl
 * Information taken from commercial product nutrition facts label on package. Saturated fat is not listed because most soy-based products have insignificant amounts of saturated fat. (-) Information not available on nutrition label or USDA database.



Books

- *Soybeans, Chemistry, Technology, and Utilization*, by KeShun Liu
- *The Simple Soybean and Your Health*, by Mark Messina and Virginia Messina
- *Textured Vegetable Protein in the American Kitchen*, by Illinois Center for Soy Foods, Barbara Klein, Editor
- *Tofu in the American Kitchen*, by Illinois Center for Soy Foods, Barbara Klein, Editor
- *The Book of Tofu*, by William Shurtleff
- *The Soy Zone*, by Barry Sears Ph.D.

Web Sites

- www.soybean.org
- United Soybean Board - www.talksoy.com
- Stratsoy (University of Illinois) - www.ag.uiuc.edu/faq/faq.poll?project_id=5
- Soyfoods Association of North America - www.soyfoods.org
- U.S. Soyfoods Directory - www.soyfoods.com
- Illinois Center for Soy Foods - www.soyfoodsillinois.uiuc.edu
- Soy Isoflavone Database - <http://www.nal.usda.gov/fnic/foodcomp/Data/isoflav/isoflav.html>
- Illinois Soybean Board - www.ilsoy.org
- Iowa Soyfoods Council - www.iasoybeans.com
- Michigan Soybean Promotion Committee - www.michigansoybean.org/consumer/consumer.htm
- Missouri Soybean Council - www.mosoy.org
- Nebraska Soybean Board - www.soycooking.com
- North Dakota Soybean Council - www.ndsoybean.org
- Ohio Soybean Council - www.soyohio.org

Soy Newsletters

- Soy Connection newsletter on soy health/nutrition - www.talksoy.com/

Soy Research, Health

- Soy/Health Fact Sheets: www.talksoy.com/Health/HealthFactsSheets.htm
- Annual Soy Symposium Findings: www.soybean.org/

Soyfood Protein & Isoflavone Content

Soyfood	Serving Size	Total grams soy protein/serving	Total milligrams (mg) isoflavone/serving
Miso	1 Tablespoon	2	7
Soybeans, Green, Cooked	1/2 cup	11	50
Soybeans, Black, Cooked	1/2 cup	9	40
Soybeans, Yellow, Cooked	1/2 cup	14	78
Soybeans, Roasted, Plain	1/4 cup	15	78
Soymilk, Plain, Unfortified	1 cup	7	10
Soymilk, Plain, Fortified	1 cup	10	43
Soy Flour, Defatted	1/4 cup	12	42
Soy Flour, Full-Fat	1/4 cup	8	33
Soy Flour, Low-Fat	1/4 cup	11	50
Soy Crumbles, Meat Alternative	1/2 cup	11	9
Soy Protein Isolate Powder, Plain	1/3 cup	23	53
Textured Soy Protein, Dry	1/4 cup	11	33
Tempeh	1/2 cup	16	53
Tofu	1/2 cup	10	25

Source: Soyfoods Association of America, *Soyfood Facts*, www.soyfoods.org
 Soy protein and isoflavone levels may vary with products based on manufacturing process and the source of soy protein. Additional information on soyfood isoflavone content can be found at: *Soy Isoflavone Database* - www.nal.usda.gov/fnic/foodcomp/Data/isoflav/isoflav.html



How Does Your Garden Grow?

Want to try growing your own soybeans in the garden? Listed below are two garden seed mail-order web sites that sell soybean seeds for the garden.
www.burpee.com
www.parkseed.com

(Soy Research...Continued from page 3)

female sex hormone estrogen may produce adverse effects. But extensive research indicates that despite sometimes being referred to as phytoestrogens, isoflavones are very different from estrogen. For example, estrogen increases levels of a blood lipid called triglycerides that raises heart disease risk. Isoflavones do not. Estrogen causes the cells in the endometrium to divide and multiple, which raises risk of endometrial cancer. Isoflavones do not. In animals, isoflavones affect many different genes from estrogen and produce many different and sometimes opposite effects. The bottom line is this: No conclusions about the health effects of isoflavones, or soyfoods, for that matter – good or bad – can be made on the basis of what estrogen does or doesn't do.

For more soyfood information and recipes, visit our web site: www.soybean.org

25-Grams-a-Day Meal Planner

Day 1 - 25 grams soy protein

Breakfast: Super Soy Protein Smoothie (see back page for recipe) = 25 g soy protein

Day 2 - 32 grams soy protein

Lunch: 1 cup vanilla soymilk over cereal = 7 g soy protein

Dinner: 1 soy burger = 10 g soy protein

Snack: 1/4 cup soynuts = 15 g soy protein

Day 3 - 29 grams soy protein

Breakfast: 2 soy breakfast links = 6.5 g soy protein

Lunch: soy protein bar = 14 g soy protein

Dinner: 3 oz. water-packed tofu chunks in stir fry = 8.5 g soy protein

Day 4 - 32 grams soy protein

Breakfast: 8 oz. glass of plain soymilk, bowl of soy cereal = 21 g soy protein

Dinner: 2 slices Sausage & Pepperoni Pizza = 12 g soy protein (see page 21 for recipe)

Day 5 - 26 grams soy protein

Breakfast: 2 tablespoons soynut butter on bagel = 8 g soy protein

Lunch: Ham & Soybean Soup = 18 g soy protein (see page 17 for recipe)

Day 6 - 27 grams soy protein

Breakfast: 1 cup Mocha Soy Cappuccino = 19 g soy protein (see page 14 for recipe)

Lunch: Chicken Salad = 8 g soy protein (see page 16 for recipe)

Day 7 - 27 grams soy protein

Breakfast: 1 cup soymilk, 1 slice Tofu Quiche = 12 g soy protein (see page 14 for recipe)

Lunch: 1 cup Creamy Tomato Soup = 10 g soy protein (see page 17 for recipe)

Snack: 1/4 cup roasted soy nuts = 5 g soy protein

1 bushel of soybeans = 60 pounds

(79% soybean meal, 18% soybean oil, 3% waste)

1 bushel of soybeans can be processed into:

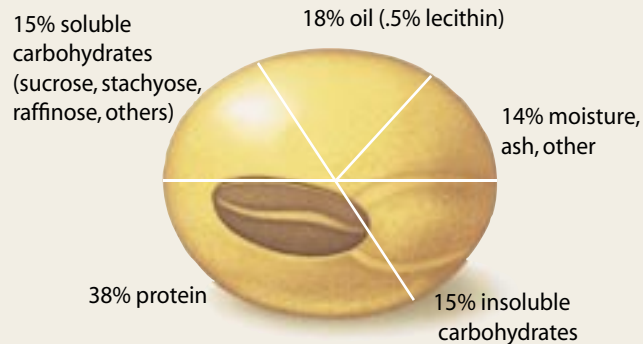
10.7 pounds crude soybean oil

47.5 pounds soybean meal

39 pounds soy flour

20 pounds soy protein concentrate

11.8 pounds isolated soy protein



What's In A Soybean?

As a versatile source of food, the soybean is hard to beat. The soybean is one of a large family of plants called legumes. Although they can be eaten whole after being boiled or roasted, most soybeans are transformed into a great variety of foods, from ice cream to burgers, from milk to nuts.

In addition, a great many foods already found in your kitchen cupboard contain soyfoods, such as soybean oil (often called vegetable oil), lecithin, soy protein concentrate, textured soy protein, and many more. The soyfood descriptions listed here represent the most common soyfoods produced in the United States.

Protein

Soy protein is a complete protein. Soy protein is the only plant protein that is equivalent to animal protein. Soyfoods contain all nine essential amino acids. The USDA evaluates protein quality using the Protein Digestibility Corrected Amino Acids Score (PDCAAS). PDCAAS measures the amino acid pattern of proteins and factors in digestibility. Soy protein has a PDCAAS score of 1.0, equivalent to animal protein.

Fat

Soybean oil is low in saturated fat, rich in the essential fatty acids, and is an excellent source of vitamin E. Like all plant fats, soybean oil has no cholesterol. Soybeans are the world's leading source of edible oil.

The soybean is low in saturated fat, with a content of about 15%; and high in unsaturated fat, with 61% polyunsaturated and 24% monounsaturated fat. Soybean oil is a good source of both linoleic and linolenic acids, which are essential for humans. More than 50% of the fat in soy is linoleic acid, while about 7% of the total fat is linolenic. When soybean oil is hydrogenated, the percentages of these polyunsaturated fats decrease.

Soy Ingredients



Soy Flour (50% protein)

Soy flour is made from roasted soybeans ground into a fine powder. All soy flour gives a protein boost to recipes. Soy flour is 50 percent protein. However, defatted soy flour is an even more concentrated source of protein than is full-fat soy flour. Soy flour is gluten-free, so yeast-raised breads made with soy flour are more dense in texture. There are three kinds of soy flour available: Natural or full-fat, which contains the natural oils found in the soybean; defatted, which has the oils removed during processing; and lecithinated, which has had lecithin added to it.

Hydrolyzed Vegetable Protein (HVP)

Hydrolyzed vegetable protein (HVP) is a protein obtained from any vegetable, including soybeans. HVP is a flavor enhancer that can be used in soups, broths, sauces, gravies, flavoring and spice blends, canned and frozen vegetables, meats, and poultry.

Lecithin

Extracted from soybean oil, lecithin is used in food manufacturing as an emulsifier in products high in fats and oils. It also promotes stabilization, antioxidation, crystallization, and spattering control.



Soy Protein, Textured (Flour or Concentrate)

Textured soy protein usually refers to products made from textured soy flour and textured soy protein concentrates. Textured soy flour is made by running defatted soy flour through an extrusion cooker, which allows for many different forms and sizes. It contains 50 percent protein as well as the dietary fiber and soluble carbohydrates from the soybean. When hydrated, it has a chewy texture. It is widely used as a meat extender. Often referred to simply as textured soy protein, textured soy flour is sold dried in granular and chunk style and is bland in flavor. Textured soy protein concentrates are made by extrusion and are found in many different forms and sizes. Textured soy protein concentrates contain 70 percent protein as well as the dietary fiber from the soybean. When hydrated, they have a chewy texture and contribute to the texture of meat products.

Soy Grits

Soy grits are similar to soy flour except that the soybeans have been toasted and cracked into coarse pieces rather than the fine powder of soy flour. Soy grits can be used as a substitute for flour in some recipes. High in protein, soy grits can be added to rice and other grains and cooked together.



Soy Protein Isolate (Isolated Soy Protein) (90% protein)

When protein is removed from defatted flakes, the result is soy protein isolate, the most highly refined soy protein. Containing 90 percent protein, soy protein isolates possess the greatest amount of protein of all soy products. They are a highly digestible source of amino acids (building blocks of protein necessary for human growth and maintenance). Isolates are bland in flavor.

Soy Protein Concentrate (70% protein)

Soy protein concentrate comes from defatted soy flakes. It contains 70 percent protein while retaining most of the bean's dietary fiber. It is a highly digestible source of amino acids and is bland in flavor.

Soy Fiber (Okara, Soy Bran, Soy Isolate Fiber)

There are three basic types of soy fiber: okara, soy bran, and soy isolate fiber. All of these products are high-quality, inexpensive sources of dietary fiber. Soy bran is made from hulls (the outer covering of the soybean), which are removed during initial processing. The hulls contain a fibrous material that can be extracted and then refined for use as a food ingredient. Soy isolate fiber, also known as structured protein fiber (SPF), is soy protein isolate in a fibrous form.



Soybean Oil & Products

Soybean oil, also referred to as soyoil, is the natural oil extracted from whole soybeans. It is the most widely used oil in the United States, accounting for more than 75 percent of our total vegetable fats and oils intake. Oil sold in the grocery store under the generic name "vegetable oil" is usually 100 percent soybean oil or a blend of soybean oil and other oils. Read the label to make certain you're buying soybean oil. Soybean oil is cholesterol free and high in polyunsaturated fat. Soybean oil also is used to make margarine and shortening.

Traditional Soyfoods



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 by-product 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 & 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-Based Products



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.

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 cow milk-based formulas, isolated soy protein-based formulas are safe and effective alternatives to provide appropriate nutrition for normal growth and development.



Soy Nut Butter

Made from roasted, whole soybeans, which are then crushed and blended with soybean oil and other ingredients, soy nut 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.

Soymilk

Soymilk is the rich, creamy milk of whole soybeans. It is lactose-free and casein-free. Soy milk is available in regular and low-fat varieties, and some brands are fortified with calcium, vitamin D, and/or vitamin B-12. Soy milk comes in plain, vanilla, chocolate, and strawberry flavors. The color of plain soy milk varies from tan to white. Note that soy milk is not the same as soy infant formula.

Storing Soy milk

Soy milk is found in aseptic (non-refrigerated) containers, and in refrigerated plastic or cardboard quart and half-gallon containers. Unopened, aseptically packaged soy milk can be stored at room temperature for several months. Once it is opened, soy milk must be refrigerated. It will stay fresh for about five days. Soy milk also is sold as a powder, which must be mixed with water. Soy milk powder should be stored in the refrigerator or freezer.

Cooking Basics

Soy milk may be consumed as a beverage or substituted for dairy milk in most recipes. Culinary chefs prefer cooking with whole soy milk versus “non-fat” or “light” forms to provide firmer consistency in cooked dishes such as puddings and custards.

Soy milk Tips

Soy milk can be used in almost any way that cow’s milk is used.

- Use soy milk to make cream sauces that are cholesterol-free and low in saturated fat.

- Make rich pancake and waffle mixes.

- Create your own delicious shakes with soy milk, soy ice cream or tofu, soy yogurt, and fruit.

- Use soy milk to make cream soups.

- Try soy milk instead of evaporated milk to produce lower-fat custards and pumpkin pies.

- Mix 1 teaspoon of your favorite powdered fruit drink mix with 1 cup of soy milk for a refreshing drink.



Pineapple Smoothie ☺

- 1 pkg (10.5 oz.) soft silken tofu
- 1 medium banana
- 1/2 can (12 oz.) unsweetened orange-pineapple juice, chilled
- 1 can (8 oz.) unsweetened crush pineapple, chilled

Mix all ingredients in a blender until thoroughly smooth. Serve immediately or refrigerate. Shake well before serving.

Yield: 5 cups. Per cup: 176 calories, 3 g fat (.1 g sat fat), 0 mg cholesterol, 6 mg sodium, 35 g carbohydrate, 5.1 g protein (1.3 g soy protein), 1.4 g dietary fiber.

Chocolate Junkie ☺

- 1 medium banana
- 2 scoops chocolate soy ice cream
- 1 cup chocolate soy milk
- 2 scoops chocolate-flavored soy protein powder
- 1 box (10.5 oz.) soft silken tofu

Mix all ingredients in a blender until thoroughly smooth. Serve immediately or refrigerate. Shake well before serving.

Yield: 4 cups. Per cup: 267 calories, 11 g fat (1.7 g sat fat), 0 mg cholesterol, 95 mg sodium, 25 g carbohydrate, 12 g protein (11 g soy protein), 4 g dietary fiber.

Cranberry & Raspberry ☺

- 2 cups vanilla soy milk
- 1/2 cup frozen cranberry juice concentrate (undiluted)
- 3/4 cup frozen raspberries.

Mix all ingredients in a blender until thoroughly smooth. Serve immediately or refrigerate. Shake well before serving.

Yield: 3 1/4 cups. Per cup: 310 calories, 5 g fat (0 g sat fat), 0 mg cholesterol, 122 mg sodium, 60 g carbohydrate, 6.5 g protein (6 g soy protein), 2 g dietary fiber.

Soynut & Banana ☺

- 2 large banana
- 2 cups chocolate soy milk
- 1/4 cup soy nut butter
- 4 scoops soy protein powder mix

Mix all ingredients in a blender until thoroughly smooth. Serve immediately or refrigerate. Shake well before serving.

Yield: 4 cups. Per cup: 280 calories, 8.5 g fat (1 g sat fat), 0 mg cholesterol, 254 mg sodium, 36 g carbohydrate, 16 g protein (6 g soy protein), 1.5 g dietary fiber.

Strawberry Daiquiri ☺

- 1 cup vanilla soy milk
- 1 can (10 oz.) frozen strawberry daiquiri mix
- 1 box (10 oz.) frozen strawberries
- 1/2 cup silken tofu (soft or firm)

Mix all ingredients in a blender until thoroughly smooth. Serve immediately or refrigerate. Shake well before serving.

Yield: 4 cups. Per cup: 122 calories, 2.5 g fat (.1 g sat fat), 0 mg cholesterol, 92 mg sodium, 24 g carbohydrate, 4 g protein (2 g soy protein), 2 g dietary fiber.

Mandarin Orange ☺

- 1 cup vanilla soy milk
- 1 can (15 oz.) mandarin oranges, well drained
- 1/2 can (12 oz.) frozen orange juice concentrate, undiluted

Mix all ingredients in a blender until thoroughly combined. Serve immediately or refrigerate. Shake well before serving.

Yield: 4 cups. Per cup: 185 calories, 1.5 g fat (0 g sat fat), 0 mg cholesterol, 18 mg sodium, 41 g carbohydrate, 3.2 g protein (1.6 g soy protein), 1.3 g dietary fiber.

Protein Power Tip:

For more soy protein punch:

- Add a box of silken soft tofu in blender to smoothie recipes.
- Add isolate soy protein powder to favorite smoothie recipe.

☺ Good recipe for children & teenagers.

Soy Flour

Soy flour is made from roasted soybeans that have been ground into a fine powder. Two kinds of soy flour are available. Full-fat soy flour contains the natural oils that are found in the soybean. Defatted soy flour has the oils removed during processing. Both kinds of soy flour will give a protein boost to recipes; however, defatted soy flour is even more concentrated in protein than full-fat soy flour.

Storing

Full-fat soy flour should be stored in the refrigerator or freezer to preserve its freshness. Defatted soy flour may be stored on the shelf.

Cooking Basics

Soy flour tends to pack down in a container, so always stir or sift it before measuring. Baked products containing soy flour tend to brown more quickly, so you may want to lower oven temperatures slightly.

Substituting Soy Flour

Since soy flour is free of gluten, which gives structure to yeast-raised breads, soy flour cannot replace all of the wheat or rye flour in a bread recipe. However, using about 15 percent soy flour in a recipe produces a dense bread with a nutty flavor and a wonderful moist quality.

Just place two tablespoons of soy flour in your measuring cup for every cup of wheat flour before measuring all-purpose or other flour called for in the recipe.

In baked products, such as quick breads, that are not yeast-raised, up to 1/4 of the total amount of flour called for in the recipe can be replaced with soy flour. For each cup of flour called for, use 1/4 cup soy flour and 3/4 cup wheat flour (all-purpose or whole wheat).

Soy Flour Tips

- In your own kitchen, use soy flour to thicken gravies and cream sauces, to make homemade soymilk, or to be added to a variety of baked foods.
- Premix a batch of 1 part soy flour and 3 parts wheat flour so that it is ready to use when you bake.

Raspberry Streusel Muffins

- 1 1/2 cups all purpose flour
- 1/2 cup soy flour
- 2 tsp baking powder
- 2/3 cup sugar
- 2 large egg whites
- 3/4 cup vanilla soy milk
- 2 Tbs soybean oil
- 1/3 cup unsweetened applesauce
- 1 1/2 cup fresh or frozen unsweetened raspberries

Streusel Topping

- 1/3 cup chopped soy nuts
- 1/4 cup firmly packed brown sugar
- 1/4 cup all purpose flour
- 2 tablespoons margarine

Place paper baking cups in muffin tin or coat well with vegetable cooking spray. Preheat oven to 375° F. Combine flours, baking powder and sugar in a large bowl. Make a well in the center of mixture. Combine egg whites, soymilk, oil and applesauce in a small bowl. Add to dry ingredients, stirring just until moistened. Fold in raspberries.

Fill prepared muffin pan, filling two-thirds full.

Combine ingredients for streusel topping in a small bowl until crumbly. Sprinkle over muffins.

Bake at 375° F for 20 to 25 minutes or until toothpick inserted in center comes out clean.

Yield: 1 dozen. Per muffin: 240 calories, 6 g fat (1 g sat fat), 0 mg cholesterol, 115 mg sodium, 42 g carbohydrate, 5 g protein (2.5 g soy protein), 2.5 g dietary fiber.

Tofu Quiche

- 1 Ready-to-use 9" deep-dish pie crust
- 1 pkg (12.3 oz.) tofu, extra firm, silken style
- 2 eggs
- 1/3 cup soy milk, plain
- 1/2 tsp oregano, crushed
- 1/4 tsp garlic, minced
- 1/2 cup onion, chopped
- 2 tsp bacon flavored bits (Bac-Os)
- 1/4 tsp salt
- 1 Tbs soy flour

Preheat oven to 400°F. Place pie



crust in middle of oven and bake for 10 minutes. Remove from oven. Reduce oven to 350°F.

While the pie crust is baking, combine the rest of the ingredients in a bowl and blend well.

Pour mixture into baked pie crust. Bake in oven at 350°F for 35-40 minutes. Let stand for 10 minutes. Serves 6.

Yield: 8 slices. Per slice: 154 calories, 8.9 g fat (1.9 g sat fat), 46 mg cholesterol, 256 mg sodium, 12.7 g carbohydrate, 6.5 g protein (5.2 g soy protein), 1 g dietary fiber.

Apple Cinnamon Bread ☺

(Bread Machine)

- 3 cups bread flour
- 1/3 cup soy flour
- 3 Tbs sugar
- 1 1/2 tsp cinnamon
- 1 1/2 tsp salt
- 1 1/2 Tbs margarine
- 2/3 cup oatmeal
- 1 cup chopped apple, skin left on
- 3/4 cup vanilla soymilk
- 1/2 cup apple juice
- 2 tsp yeast

Add ingredients to bread machine according to manufacturer's directions.

Yield: 16 slices/loaf. Per slice: 152 calories, 2 g fat (0.3 g sat fat), 0 mg cholesterol, 254 mg sodium, 28 g carbohydrate, 5 g protein (1 g soy protein), .75 g dietary fiber.

Mocha Soy Cappuccino

- 1 cup very hot water
- 1 scoop chocolate soy protein powder mix
- 5 tsp cappuccino powder mix

Combine ingredients in a large mug and stir until dissolved.

Yield: 1 cup. Per cup: 130 calories, 2 g fat (1.7 g sat fat), 8 mg cholesterol, 246 mg sodium, 8 g carbohydrate, 20 g protein (19 g soy protein), .4 g dietary fiber.

☺ Good recipe for children & teenagers.

Cherry Almond Muffins ☺

- 1 cup sugar
- 1/2 cup margarine
- 3 eggs
- 1 1/4 cup all-purpose flour
- 1/2 cup soy flour
- 1 tsp baking powder
- 1 tsp baking soda
- 1/4 tsp salt
- 1 Tbs plus 1 tsp almond extract
- 3/4 cup vanilla soymilk
- 3/4 cup (3.5 ounce bag) dried cherries

Preheat oven to 375°F. Cream sugar and margarine in a large bowl until light and fluffy. Add eggs and beat well. In a separate bowl, whisk together flours, baking powder, baking soda and salt. Add to creamed mixture alternately with almond extract and soymilk. Stir until combined. Fold in dried cherries.

Pour batter into greased or paper-lined muffin pan. Bake 20 - 25 minutes or until toothpick inserted in middle comes out clean.

Yield: 12 muffins. Per muffin: 140 calories, 2.5 g fat (.5 g sat fat), 45 mg cholesterol, 199 mg sodium, 25.5 g carbohydrate, 4.5 g protein (2 g soy protein), .9 g dietary fiber.

Mouthwatering Apple Cinnamon Pancakes ☺

- 1 cup buttermilk pancake mix
- 3/4 cup* vanilla soymilk
- 1/2 teaspoon cinnamon, ground
- 1/3 cup apples**, peeled and diced

Mix pancake mix, soymilk and cinnamon together until blended. Stir in apples. Cook as directed on pancake mix package. Makes 8 to 9, 4-inch pancakes.

*The amount of liquid may vary with pancake mix. Use the same amount of soymilk as the liquid amount stated in the package directions.

**May substitute 1/3 cup apple pie filling for the apples.

Yield: 9 pancakes. Per pancake: 170 calories, 2 g fat (0 g sat fat), 0 mg cholesterol, 830 mg sodium, 36 g carbohydrate, 4 g protein (1.72 g soy protein), 0 g dietary fiber.

Soy Granola

- 3 cups uncooked quick-cooking oats
- 1 cup sliced unblanched almonds
- 3 Tbs margarine
- 1 cup honey
- 1/2 cup vanilla flavored soy protein powder mix
- 1 tsp cinnamon
- 3 cups soy cereal flakes or whole-grain cereal
- 1/2 cup dried golden raisins
- 1/2 cup dried cranberries or cherries
- 1/2 cup dried banana chips or pitted dates
- 1/2 cup roasted soy nuts

Preheat oven to 325°F. Spread oats and almonds in single layer in 13x9-inch baking pan. Bake 30 minutes until lightly toasted, stirring frequently with wooden spoon.

Remove pan from oven and set aside. Melt butter. Combine honey, butter, soy protein powder, and cinnamon in large bowl and blend well. Add oat/almond mixture and toss until completely coated.

Spread mixture in single layer in baking pan. Bake 20 minutes or until golden brown. Cool completely. Break mixture into chunks. Add oat chunks to cereal and dried fruits. Store in airtight container at room temperature for up to 2 weeks.

Yield: 12 cups. Per 1 cup: 363 calories, 12 g fat (2.4 g sat fat), 0 mg cholesterol, 125 mg sodium, 59 g carbohydrate, 11 g protein (7 g soy protein), 6.4 g dietary fiber.

Soy Breakfast Sandwich ☺

- 1 biscuit
- 1 soy breakfast sausage-style pattie
- 1 (1 oz.) slice soy cheddar cheese

Heat breakfast pattie in microwave. Slice biscuit and place cheese and breakfast pattie between biscuit.

Yield: 1 sandwich. Per sandwich: 200 calories, 9 g fat (2 g sat fat), 1.8 mg cholesterol, 678 mg sodium, 15 g carbohydrate, 14 g protein (8 g soy protein), 2.5 g dietary fiber.

English Muffin Breakfast Sandwich ☺

- 1 English muffin, split in half and toasted
- 1 egg, cooked over easy
- 2 slices (about 1 oz.) soy Canadian bacon or ham
- 1 slice (3/4 to 1 oz.) soy cheddar cheese

Layer cooked egg, Canadian bacon and cheese slice on one half of English muffin. Top with other muffin half. Eat warm.

Yield: 1 sandwich. Per sandwich: 315 calories, 10 g fat (2 g sat fat), 213 mg cholesterol, 765 mg sodium, 30 g carbohydrate, 24 g protein (5 g soy protein), 3 g dietary fiber.



Soy Protein Powder

If you want to get the most soy protein per serving in your meals, then try adding some soy protein isolate powder in your favorite recipes.

Soy protein isolate is a dry powder food ingredient that is made from defatted soy flakes. Containing 90 percent protein, soy protein isolates possess the greatest amount of protein and all the essential amino acids of all soy products.

Soy protein isolate powder is sold in canisters in health food sections of stores. It's often labeled as "soy protein powder drink mix."

Storing

Kept sealed and dry, it is shelf-stable for many months. Look for use-by dates on the container.

Recipe Ideas

- Read the nutrition label of your soy protein powder for the protein level/serving.
- Add a serving of plain soy protein isolate to your favorite soup. Remove a small amount of hot soup and blend it with the isolate powder. Add the mixture to the soup.
- Whisk a serving of plain soy protein isolate powder into cooked Marinara sauce or your favorite sauces.
- Mix a serving of flavored soy protein shake powder with cold juice, milk, or soymilk.
- Mix a serving of soy protein powder into your favorite hot cereal.
- Try mixing soy protein powder to your favorite salad dressings for extra protein kick.

Protein Power Drinks

Most of the soy protein powder drinks on the market are made with soy protein isolate.

Soy protein powders come in plain, vanilla, chocolate, and strawberry flavors.

Many brands are sold in canisters with expiration dates stamped on the bottom. Several brands are fortified with calcium.

Soy Protein Products

Soy protein products (also called meat analogs) are foods made from soy protein and other ingredients mixed together. Food scientists know how to make these products taste quite good.

Where to Find

Look for soy protein products in grocery stores in the following locations:

- Refrigerated case
- Freezer case
- Dry, prepared foods

Storing

Frozen or refrigerated soy protein products should be stored accordingly at home. Others come in dry-mix boxes and may be stored on the shelf.

Cooking Basics

Follow package directions. Soy protein products can be included in many of your favorite recipes.

Recipe Tips

- Soy protein products can usually be used the same way as many of the traditional foods you use.
- Using soy protein products in highly seasoned dishes, such as tacos, minimizes the flavor difference between them and other protein products.
- Use a package of soy crumbles for when preparing your favorite spaghetti, sloppy joe, chili, stroganoff, or hamburger casserole recipes.

Greek Salad with Tangy Lemon Tofu Dressing

Salad

- 3 cups (2 large) Cucumber, peeled and chopped
- 2 cups (2 medium) Tomatoes, seeded and chopped
- 1 1/2 cups Iceberg lettuce, torn
- 1 1/2 cups romaine lettuce, torn
- 1 cup (1 medium) red onion, thinly sliced into rings
- 1 cup edamame (Whole Green Soybeans), shelled and cooked
- 1/3 cup (1 - 3.4 oz. can) black olives, pitted, sliced and drained

Dressing

- 1 package (12.3 oz.) Silken tofu
- 2 Tbs soybean oil
- 1 Tbs lemon juice
- 1 tsp (1 clove) garlic, minced*
- 1/2 tsp dried oregano leaves
- 1/2 tsp ground black pepper
- 1/4 tsp salt
- 1/2 cup feta cheese, crumbled

Combine all salad ingredients in large bowl. Purée all dressing ingredients except cheese in small food processor until smooth, scraping occasionally. If dressing is too thick, use pulse. Pour dressing over salad and mix until blended. Sprinkle with cheese.

* May substitute 3/8 teaspoon garlic powder for the fresh garlic, if desired.

Yield: 6 cups. Per cup: 180 calories, 11 g total fat (2.5 g sat fat), 10 mg cholesterol, 430 mg sodium, 12 g carbohydrate, 10 g protein (6.3 soy protein), 3 g dietary fiber.

Marinated Green Soybean Pasta Salad

- 1 bag (16 oz.) Freshlike Baby Broccoli Blend (contains sweet green soybeans)
- 2 cups frozen green soybeans (not in pod)
- 2/3 cup chopped green onion



- 2/3 cup chopped red onion
- 2 large tomatoes, chopped or 2 cups cherry tomatoes
- 4 cups cooked soy rotini or penne pasta (8 to 10 oz. dry pasta)
- 1 1/4 cups reduced-fat or fat-free Italian dressing

Combine all ingredients except salad dressing in a large bowl and stir. Add salad dressing and toss lightly. Marinate in refrigerator at least three hours before serving or until frozen vegetables are thawed.

Yield: 10 cups. Per cup: using fat-free Italian dressing: 168 calories, 2 g fat (0 g sat fat), 0 mg cholesterol, 525 mg sodium, 24 g carbohydrate, 10.5 g protein (6.5 g soy protein), 5 g dietary fiber.

Chicken Salad ☺

- 2 cups chicken broth
- 2 cups textured soy protein (granulated or chunks pounded into smaller pieces) or use soy chicken veggie strips, diced
- 1/4 cup onion, chopped
- 1/4 cup celery, chopped
- 2 Tbs pickle relish
- 1/4 tsp dill weed
- Salt & pepper to taste
- 25 white or red grapes, halved
- 1/2 cup salad dressing or mayonnaise

Bring chicken broth to boil in a large pot. Add textured soy protein. Reduce heat and cook until textured soy protein is tender and liquid is absorbed. Let stand for 5 minutes. Transfer textured soy protein to a large bowl and add onion, celery, relish, dill weed, salt & pepper to taste, grapes and salad dressing. Mix well. Chill and serve.

Yield: 6 cups. Per cup: 494 calories, 17.8 g total fat (2.8 g sat fat), 7 mg cholesterol, 685 mg sodium, 76 g carbohydrate, 19 g protein (8 soy protein), 15.3 g dietary fiber.

Cole Slaw

- 1/2 cup soymilk
- 1 pkg (12 oz.) silken soft tofu
- 1 cup mayonnaise
- 1 Tbs sugar
- 1 tsp dried dill weed
- 1 Tbs French salad dressing
- 1 pkg (16 oz.) shredded cabbage
- salt & pepper to taste

Blend soymilk, silken tofu, mayonnaise, sugar, dill weed and French dressing until smooth. Pour blended mixture in cabbage and mix. Salt and pepper to taste. Chill until ready to eat.

Yield: 10 1/2 cups. Per 1/2 cup: 203 calories, 20 g total fat (3 g sat fat), 8 mg cholesterol, 249 mg sodium, 5 g carbohydrate, 3.2 g protein (2 g soy protein), 1.1 g dietary fiber.

Frosted Cranberry Salad

- 1 can (20 oz.) unsweetened, crushed pineapple, undrained
- 1 package (6 oz.) strawberry gelatin
- 1 can (16 oz.) whole-berry cranberry sauce
- 1 cup ginger ale
- 1/2 cup chopped celery
- 1 1/4 cups soy cream cheese (about 10 oz.)
- 1 tsp vanilla extract
- 1/3 cup sugar
- 1 container (8 oz.) frozen whipped topping, thawed
- 1/2 cup coarsely chopped roasted, salted soynuts

Drain pineapple, reserving juice; set pineapple aside. Add enough water to juice to measure 2 cups. Bring to boil and remove from heat. Add gelatin, stirring until gelatin dissolves. Add cranberry sauce, stirring until blended. Stir in ginger ale. Chill until mixture is the consistency of unbeaten egg white. Fold in reserved pineapple and celery. Spoon mixture into a 13 x 9 pan that has been lightly coated with vegetable spray. Cover and chill until firm.

Beat soy cream cheese, vanilla and sugar at medium speed of electric mixer until light and fluffy. Fold in whipped topping. Spread mixture evenly over gelatin salad and sprinkle with chopped soynuts. Cover and chill until firm.

Yield: 15 squares. Per square: 242 calories, 7 g fat (3.5 g sat fat), 0 mg cholesterol, 213 mg sodium, 39 g carbohydrate, 4 g protein (3 g soy protein), 1.5 g dietary fiber.

Chicken Noodle Soup ☺

- 4 oz. soy spaghetti pasta (regular pasta may be substituted), dry
- 1/2 medium onion, chopped
- 2 tsp vegetable oil
- 1 pkg (6 oz.) soy chicken veggie strips, cut into small pieces
- 4 cups chicken broth
- 1/4 tsp garlic powder
- salt & pepper to taste

Cook soy pasta according to package directions; drain and set aside. In a 4-quart pot, saute onion in oil for 3 minutes or until transparent. Add soy strips, chicken broth, and garlic powder; bring to boil. Reduce heat and simmer for 15 minutes. Stir in cooked pasta, remove from heat. Add salt and pepper to taste.

Yield: 6 cups. Per cup: 98 calories, 3.5 g fat (.7 g sat fat), 2 mg cholesterol, 1190 mg sodium, 9.7 g carbohydrate, 7 g protein (6 g soy protein), 1.9 g dietary fiber.

Ham & Soybean Soup

- 1/4 cup onion, chopped
- 1/4 cup celery, chopped
- 2 tsp vegetable oil
- 2 cups canned yellow soybeans
- 3 soy deli ham slices, shredded
- 4 cups chicken broth
- salt & pepper to taste

In 4-quart saucepan, saute onion and celery in oil for 3 minutes or until transparent. Add soybeans, soy ham, and chicken broth; bring to a boil. Reduce heat and simmer 15 minutes. Add salt and pepper to taste.

Yield: 6 cups. Per cup: 153 calories, 7.9 g fat (1.4 g sat fat), 2 mg cholesterol, 1191 mg sodium, 9.8 g carbohydrate, 11.5 g protein (4 g soy protein), 2.2 g dietary fiber.

Three-Bean Chili ☺

- 2 tsp vegetable oil
- 1 1/2 cups chopped onion
- 1 can (15 oz.) white soybeans
- 1 can (15 oz.) black soybeans
- 1 can (15 oz.) red beans
- 2 cans (14.5 oz.) diced tomatoes
- 1 can (15 oz.) tomato sauce
- 2 Tbs brown sugar
- 1/2 tsp salt
- 1 tsp black pepper
- 2 tsp ground cumin
- 2 Tbs minced garlic
- 1 Tbs chili powder

Heat oil in large pot over medium-high heat. Cook onions until soft.

Drain and rinse three beans and add to onions. Stir in all remaining ingredients. Bring to a boil and then reduce heat to low and simmer for 30 to 45 minutes.

Yield: 6 cups. Per 1 1/2 cup: 303 calories, 7 g fat (1 g sat fat), 0 mg cholesterol, 1420 mg sodium, 55 g carbohydrate, 20 g protein (12 g soy protein), 12 g dietary fiber.

Potato and Corn Chowder

- 4 large Yukon Gold potatoes, cut into 1/2 inch cubes, skin left on
- 1 large onion, chopped
- 2 cups water
- 1 tsp chicken or vegetable bouillon powder
- 2 tsp dried parsley
- 1/2 tsp salt
- 1/4 tsp pepper
- 1 (14.5 oz.) can cream style corn
- 1 (14 oz.) can whole kernel corn, drained
- 1 cup plain soymilk

In a medium saucepan, combine the potatoes, onion, water, bouillon, parsley, salt and pepper. Bring to a boil, reduce heat and simmer until potatoes are tender, about 15 to 20 minutes. Remove pan from heat and stir in both cans of corn. Put two cups of the mixture into a blender and briefly puree. Do not overblend or potatoes will become gummy. Return the pureed mixture

to the saucepan, stir in the soymilk and heat thoroughly. Adjust spices and seasonings to taste.

Yield: 6 (1 1/2 cups). Per 1 1/2 cup: 370 calories, 3 g fat (0 g sat fat), 0 mg cholesterol, 1055 mg sodium, 79 g carbohydrate, 12 g protein (1.5 g soy protein), 8 g dietary fiber.

Creamy Tomato Soup ☺

- 1 medium onion, diced
- 2 tsp soybean oil
- 1 large tomato, diced
- 1/2 tsp chopped garlic
- 1 tsp fresh basil, chopped
- 1/2 tsp salt
- 1/2 tsp white pepper
- 1 cup soymilk
- 1 package (12 oz.) firm lite silken tofu, crumbled

In 4-quart saucepan saute onion in oil for 3 minutes or until transparent. Add tomato and garlic; continuing cooking 2-3 minutes. Add basil, salt, and pepper. Blend in soymilk.

Cook, stirring constantly, for 1 minute. Remove from heat and cool briefly. Stir in tofu. Transfer to food processor and puree until smooth. Serve hot or chilled.

Yield: 3 (1 1/2 cups). Per 1 1/2 cup: 181 calories, 8.5 g fat (0 g sat fat), 0 mg cholesterol, 450 mg sodium, 17 g carbohydrate, 12 g protein (10 g soy protein), 3 g dietary fiber.

☺ Good recipe for children & teenagers.





Easy, Never-Fail Lemon Artichoke Soufflé

- 8 eggs
- 3 cups soymilk, fat-free, unsweetened
- 3/4 tsp dry mustard
- 1/2 tsp salt
- 1 can (13.7 oz.) artichokes hearts in water, drained and chopped
- 2 tsp grated lemon peel
- 1 1/2 tsp ground thyme
- 12-16 slices white bread
- 1 pkg (11 oz.-12 oz.) soy Pepper Jack style cheese, low fat, grated
- 1/4 cup butter or margarine, melted

Basil Sauce (optional)

- 1 cup fresh basil
- 1 Tbs fresh thyme
- 1 cup low-fat sour cream
- 1 tsp minced garlic
- 1/2 tsp lemon juice
- 1/4 tsp salt
- 1/8 tsp ground cayenne pepper

Stir eggs, soymilk, dry mustard and salt in large bowl until blended; set aside.

Stir artichokes, lemon peel and thyme in medium bowl until blended; set aside.

Cut crust off of bread and set bread aside. Place crust in food processor and process to fine crumbs; set aside uncovered.

Place 6-8 slices bread in buttered 13x9x2-inch pan, covering bottom. Spoon lemon-artichoke mixture over bread. Sprinkle with cheese. Place remaining 6-8 slices bread over cheese. Pour egg mixture over top of bread. Cover and refrigerate at least 8 hours or overnight.

Preheat oven to 350°F. Let soufflé stand at room temperature 1 hour before baking.

Mix melted butter and reserved crust crumbs together. Sprinkle over top of soufflé just before baking. Bake at 350°F for 50 to 60 minutes until set and top is browned.

Remove from oven and let stand 5 minutes before cutting. Serve with dollop of basil sauce. Makes 8 servings.

Optional: To make basil sauce, place sauce ingredients in food processor or blender and puree until smooth. Serve with soufflé.

Yield: 8 slices. Per slice: 420 calories, 20 g total fat (8 g sat fat), 240 mg cholesterol, 1390 mg sodium, 38 g carbohydrate, 23 g protein (10 g soy protein), 4 g dietary fiber.

Linguini With Roasted Garlic Sauce

- 1 head garlic*, skin attached
- 2 tsp soybean oil
- 8 oz. linguini, fresh or dry
- 2 Tbs soybean oil
- 3 Tbs shallots, minced
- 1/2 cup dry white wine
- 1/2 cup chicken or vegetable broth
- 2 cups (2 medium) tomatoes, seeded and diced
- 1 cup edamame (whole green soybeans), shelled and cooked
- 1/2 cup pine nuts, toasted
- 1/4 cup fresh basil, chopped**
- 1/4 cup grated parmesan

Preheat oven to 400°F. Cut pointed top off garlic head, leaving cloves intact, and place on square of aluminum foil. Drizzle 2 teaspoons oil over cloves. Seal foil around garlic and bake at 400°F for 30 to 40 minutes or until cloves are soft; cool. Squeeze paste from cloves, mash and set aside.

Prepare linguini as directed on package; drain and set aside.

Heat 2 tablespoons oil in medium saucepan. Add shallots and garlic paste. Sauté until shallots are translucent, stirring occasionally.

Add wine and chicken broth, bring to boil and simmer until reduced in half.

Add tomatoes and edamame. Cook 1 minute until warmed, stirring gently. Stir-in pine nuts and basil. Remove from heat; add salt and pepper to taste. Spoon over linguini and sprinkle with Parmesan.

* May substitute 1/4 teaspoon garlic powder for the head of garlic, if desired. Add garlic powder with the chicken broth.

** May substitute 1 tablespoon dried basil for fresh basil, if desired.

Yield: 4 servings. Per serving: 380 calories, 22 g total fat (4 g sat fat), 5 mg cholesterol, 250 mg sodium, 29 g carbohydrate, 14 g protein (4 g soy protein), 6 g dietary fiber.





Spicy Shrimp Primavera in Roasted Red Pepper Sauce

- 1 cup edamame (whole green soybeans), shelled
- 8 oz. dry fettuccine
- 1 jar (26 oz.) roasted red peppers, drained, reserving liquid
- 1 Tbs Old Bay seasoning
- 1 tsp ground thyme
- 1 tsp salt
- 2 tsp balsamic vinegar
- 2 Tbs olive oil
- 1 cup shallots, chopped
- 4 tsp (4 cloves) garlic, minced
- 1 medium carrot, thinly sliced on the bias
- 1 lb. shrimp, fully cooked, medium to large, fresh or frozen, drained with tails removed
- 1 yellow bell pepper, cut into thin strips
- 1 cup Kalamata olives, pitted, drained and cut in half
- 1/8-1/4 tsp crushed red pepper flakes
- grated Parmesan, optional

Prepare edamame as directed on package, drain and set aside. Prepare fettuccine as directed on package, drain and set aside.

Place red peppers, Old Bay seasoning, thyme, salt and vinegar in food processor or blender. Process until smooth; set aside.

Place olive oil in large skillet. Add shallots and garlic and sauté over medium-high heat 3 minutes. Add carrot and sauté 3 minutes. Add edamame, red pepper mixture, shrimp, bell pepper, olives and red pepper flakes. Add 4 to 6 tablespoons of reserved roasted red pepper liquid to desired sauce consistency. Cook 5 to 10 minutes or until heated through and vegetables are crisp tender, stirring occasionally.

Spoon over hot fettuccine. Sprinkle with grated Parmesan cheese, if desired. Serve immediately.

Yield: 4 servings. Per serving: 600 calories, 16 g total fat (2.5 g sat fat), 220 mg cholesterol, 1980 mg sodium, 71 g carbohydrate, 41 g protein (5 g soy protein), 5 g dietary fiber.

Chicken Pot Pie ☺

- 1 sheet (8 1/2 oz.) frozen puff pastry (1/2 of 17.3 oz. pkg.), thawed
- 1/2 cup all-purpose flour
- 2 tsp ground poultry seasoning
- 1 1/2 tsp salt
- 1/2 tsp ground black pepper
- 1 lb chicken breasts, boneless, skinless, cut into 1-inch cubes
- 2 Tbs butter or margarine
- 1/2 cup shallots, finely diced
- 2 cloves garlic*, minced
- 1 1/2 cups chicken broth
- 1 cup soymilk, unsweetened
- 1 cup potatoes, peeled and cut into 1/2-inch cubes
- 1 cup edamame (whole green soybeans), shelled and cooked
- 1 cup carrots, peeled and cut into 1/4-inch rounds

Preheat oven to 375°F. Roll out pastry into 9x9-inch square or round to match baking dish shape. Place on baking sheet and chill.

Stir flour, poultry seasoning, salt and pepper in large bowl until blended. Add chicken and stir until coated.

Melt butter or margarine in large skillet. Sauté shallots and garlic until translucent. Add chicken mixture (including left over flour). Sauté 10 to 12 minutes or until chicken is cooked.

Stir chicken broth and soymilk slowly into chicken mixture until blended. Add potatoes, edamame

and carrots. Bring to boil, reduce heat and simmer 10 minutes or until vegetables are tender.

Pour into buttered 2 1/2-quart baking dish. Place pastry over vegetable mixture. Bake at 375°F 30 to 35 minutes or until golden. Let stand 10 minutes before serving.

* May substitute 1/2 teaspoon garlic powder for the fresh garlic, if desired.

Yield: 6 servings. Per serving: 470 calories, 23 g total fat (5 g sat fat), 55 mg cholesterol, 1060 mg sodium, 39 g carbohydrate, 27 g protein (3.79 g soy protein), 4 g dietary fiber.

More Recipes

(Listed below are additional "Main Course" recipes located at the web site: www.soyfoods.com)

- Overnight Beans & Ham
- Chinese No-Meat Balls
- Italian Meat Balls
- Easy Tacos
- Cajun Stew
- Hot & Spicy Burrito Meat
- Sloppy Joes
- Friday Night Supper
- Quick Lasagna
- Macaroni Casserole
- Pasta With Spaghetti Sauce
- Stir-Fry Pork & Vegetables
- Barbecued Tempeh
- Meatless Stroganoff

☺ *Good recipe for children & teenagers.*



Whole Soybeans (dry, canned, green)

Soybeans belong to the legume family and are native to East Asia. Soybeans can be purchased as dry whole soybeans, canned yellow or black soybeans, and green (fresh or frozen) and shelled or in the pod.

Green Soybeans (Fresh, Frozen)

Green vegetable soybeans (also called edamame) are harvested at 80 percent maturity. Edamame soybeans are a special bean variety that are bigger and sweeter than traditional soybeans grown in fields by most farmers. Cooked and lightly salted, these little green beans are a popular snack in Asia. These beans are often sold in the freezer section of natural food stores and should be stored in the freezer. Fresh beans, purchased still in the pod, should be cooked and stored in the refrigerator.

Whole, Dry Soybeans

Soybeans are harvested when they are fully mature and dry. As soybeans mature in the pod, they ripen into a hard, dry bean. Whole, dry soybeans can be found in grocery and health food stores.

Most soybeans grown in fields by farmers are smaller than food-grade beans used to make tofu and soy milk. Field beans may be cleaned and used in recipes after they have been soaked and cooked.

Do not eat soybeans raw. Soybeans must be cooked to destroy the protease inhibitor found in soybeans. Heat treatment is necessary to decrease the activity of the inhibitors and improve the digestibility of the proteins.

Storing

Dry soybeans can be stored in an airtight container for long periods of time. Cooked soybeans, both yellow and black, are available in cans in natural food stores.

Cooking Tips

- Do not add salt or acidic ingredients (such as tomatoes, lemon juice, or vinegar) to yellow soybeans until they are thoroughly cooked. Acidic products delay the softening process. However, you may add these when cooking black soybeans to help them retain their shape.
- One 15-ounce can of white or black soybeans is equal to 1 1/2 cups of cooked soybeans.
- Substitute canned soybeans (white or black) in your favorite recipes that call for beans.
- Substitute green cooked soybeans in recipes that call for green peas or beans.

Cooking Dry Soybeans

- Soak soybeans in 4 cups of water for each cup of beans for 8 hours or overnight. If you soak beans longer than 8 hours, place them in the refrigerator.
- Drain and rinse the beans, then add 4 cups of fresh water for each cup of beans you started with.
- Bring to a boil, reduce heat, and skim off excess foam. Simmer about 3 hours, adding more water as needed, until beans are tender. They will remain somewhat firm compared to cooked navy beans.

Yield: 1 cup dry beans = 2-3 cups cooked beans.

Pressure Cooker Method

- Place presoaked (8-12 hours soaked), drained, and rinsed beans in a pressure cooker.
- Add 4 cups of water plus 2 tablespoons of cooking oil for the first cup of beans, and 3 cups of water and 2 tablespoons of vegetable oil for each additional cup of beans (oil controls foaming).
- Do not fill the cooker above the halfway mark! Cook with fifteen pounds of pressure for 9 to 12 minutes.
- Quickly release pressure by placing cooker under cold running water.
- Drain immediately.



Spinach Dip

- 1 pkg (10 oz.) frozen chopped spinach
- 1 pkg (1.4 oz.) dry vegetable soup mix
- 1 pkg (12 oz.) firm silken tofu
- 1 can (8 oz.) water chestnuts, chopped coarsely
- 2/3 cup green onions, chopped
- 1 cup reduced-fat or light sour cream
- 1/2 cup low-fat mayonnaise
- 1 cup shredded soy cheddar cheese
- 1 can (3.8 oz.) black olives, diced
- 1 cup green onions, chopped
- 1 cup salsa

Spread single layer each of mashed soybeans, sour cream, salsa, cheese, black olives, and green onions. Chill and serve with taco chips.

Yield: 30 tablespoon. Per tablespoon: 41 calories, 8 g fat (.1 g sat fat), 0 mg cholesterol, 295 mg sodium, 3 g carbohydrate, 1.4 g protein (1.2 g soy protein), 0.6 g dietary fiber.

Thaw the package of spinach and squeeze dry. Stir all ingredients together in a large bowl until blended. Cover; chill 2 hours. Stir before serving.

Yield: 4 cups. Per 1/4 cup: 65 calories, 2 g fat (1 g sat fat), 4.5 mg cholesterol, 295 mg sodium, 8 g carbohydrate, 3 g protein (1.5 g soy protein), 0.8 g dietary fiber.

Mex-Layered Bean Dip ☺

- 1 can (15 oz.) black or yellow soybeans, drained, mashed
- 1 cup soy sour cream

Tofu Dips

- 1 pkg (12 oz.) soft tofu
- 1 pkg (1.13 oz.) dried soup or seasoning packet such as ranch dressing packet

Mix ingredients in blender until smooth. Chill and serve with fresh vegetables, chips or crackers.

Yield: 15 tablespoons. Per tablespoon: 20 calories, .7 g fat (0 g sat fat), 4.5 mg cholesterol, 163 mg sodium, 2 g carbohydrate, 2 g protein (1.6 g soy protein), 0.2 g dietary fiber.

Sausage & Pepperoni Pizza ☺

- 1 (16 oz.) pre-made Italian pizza crust (12- inch size)
- 1 (4 oz. pkg) soy pepperoni slices
- 1 jar (14 oz.) pizza sauce
- 7 oz. soy sausage-style crumbles
- 2/3 cup chopped green pepper
- 1 cup thinly sliced fresh onions
- 1 tsp crushed dried oregano
- 2 cups (8 oz.) shredded mozzarella cheese or soy cheese

Preheat oven to 450 °F. Place pizza crust on baking sheet. Top with sauce and all ingredients. Bake for 10-15 minutes, or until cheese is melted and all toppings are completely heated.

Yield: 8 slices. Per slice: 293 calories, 9 g fat (3 g sat fat), 0 mg cholesterol, 955 mg sodium, 34 g carbohydrate, 22 g protein (6 g soy protein), 4 g dietary fiber.



Green Bean Casserole ☺

- 1 can (28 oz.) cut green beans
- 1 can (10.75 oz.) cream of mushroom soup
- 1 pkg (12 oz.) firm silken tofu
- 1/2 cup french fried onions salt & pepper to taste

Preheat oven to 350°F. Drain green beans. In a large bowl, mix green beans, mushroom soup, tofu and 1/2 cup dried onions together and pour in casserole. Add remaining dried onions over top of casserole. Bake uncovered for 45 minutes until bubbly.

Yield: 6 cups. Per cup: 98 calories, 6 g fat (1 g sat fat), 1 mg cholesterol, 295 mg sodium, 7 g carbohydrate, 5.3 g protein (2.8 g soy protein), 0.5 g dietary fiber.

Roasted Soy Nuts

Microwave method:

Use 1 cup of beans that have been soaked 8 hours or more. Drain them well. Spread the beans into a single layer in a 9" or 10" glass pie plate. Microwave on high for 3 minutes. Stir, then cook 3

minutes more. After that, cook for 1 minute at a time, stirring after each minute to ensure even browning.

The total time will vary depending on the moisture of the bean and the wattage of the oven, but will probably take about 9 to 12 minutes. When the beans are beginning to get hard and golden, you may want to cook for 30-second intervals to avoid burning them. They are done when they are golden brown and crunchy.

Oven method:

Use up to 2 cups of beans per baking sheet. Soak beans for 8 hours or more. Drain the beans, then spread into a single layer. Bake at 350°F, stirring after 15 minutes, then stirring every 5 minutes until golden brown and crunchy. The total time will vary depending on the moisture of the beans, but should take about 25 minutes. Watch carefully when the beans are getting close to done.

Yield: 1/2 cup nuts from 1 cup beans. Per serving: 122 calories, 6 g total fat (1 g sat fat), 10 g protein (10 g soy protein), 9 g carbohydrate, 2 mg sodium, 0 mg cholesterol, 5 g dietary fiber.

Textured Soy Protein

Textured soy protein is one of the most economical soy protein sources on the market. It's made from defatted soy flour or soy protein concentrate that is compressed and extruded into granules or chunks. It is sold as a dried, granular product. When rehydrated with water, textured soy protein has a texture similar to ground beef or other meat products. Textured soy protein is often labeled as TSP® or TVP®. TSP® is a registered trademark of PMS Foods. TVP® is a registered trademark of Archer Daniel Midlands.

Where to Find

Textured soy protein is not always easy to find in the supermarket. It's normally carried in natural food stores in the bulk food area or the flour section. Because it is a dry product, you can find mail-order companies on the Internet that sell it.

Storing

Textured soy protein has a long shelf life. Stored in a tightly closed container at room temperature, it will keep for several months. Once it has been rehydrated, store the textured soy protein in the refrigerator and use it within a few days.

Cooking Basics

Most recipes call for textured soy protein to be rehydrated before it is used in recipes. Read the package directions for rehydration. When using textured soy protein in soups and sauces, you do not have to rehydrate it before use – just be sure the recipe has enough liquid in it. Textured soy protein chunks should be simmered a few minutes before using.

Recipe Tips

- Use textured soy protein to replace all or part of the ground meat in almost any recipe. Replace one-fourth of the ground beef in meat loaf or burgers.
- Generally, textured soy protein will triple in volume when hydrated. For example, 1 pound dry textured soy protein will make about 3 pounds hydrated textured soy protein.
- For one pound of ground beef, substitute 1 1/2 cups dry textured soy protein and hydrate with 1 1/2 cups water.

More Recipes

(Listed below are additional "Snacks, Sides and Appetizers" recipes located at the web site: www.soyfoods.com)

- Pigs in a Blanket
- Game Day Pretzels
- O'Brien Potato Wedges
- Broccoli Cheddar Cheese Wedges
- Soynut Butter BonBons
- Thai Soynut Butter Sauce
- Soynut Sauce
- Soynut Cilantro Rice Pilaf
- Maple Crunch
- Layered Rice Casserole
- Honey Nuggets
- Almond Cream Dip
- Super Crunchy Caramel Corn
- Snack Mix With Soynuts
- Golden Baked Beans
- Black Soybeans & Rice
- Roasted Red Pepper Dip

☺ Good recipe for children & teenagers.



Creamy Cheesecake ☺

Crust

- 2 cups graham cracker crumbs
- 4 Tbs sugar
- 4 Tbs margarine (melted)

Filling

- 1 pkg (12.3 oz.) silken tofu, extra firm
- 2 pkgs (8 oz. each) Neuf-châtel 1/3 less fat cream cheese
- 1 container (8-oz.) soy cream cheese
- 1 1/4 cup sugar
- 3 Tbs soy flour
- 1 Tbs pure vanilla extract
- 1/2 tsp lemon zest
- 1 Tbs lemon juice
- 3 large eggs

Topping

- 1 can (21 oz.) strawberry or cherry pie filling

Preheat oven to 325°F. Mix graham cracker crumbs, sugar, and margarine; press into bottom of 10-inch springform pan. Bake crust for 10 minutes.

Beat tofu, all cream cheeses, sugar, soy flour, vanilla, lemon

zest, and lemon juice with electric mixer on medium speed until well blended. Add eggs, one at a time, mixing on low speed just until blended.

Pour filling over crust. Bake at 325°F for 60 to 75 minutes or until center is almost set. (Center may still seem slightly uncooked, but will cool and become firm once cheesecake is cooled).

Do not overcook. Run knife around rim of pan to loosen cake; cool before removing rim of springform pan. Refrigerate 4 hours or overnight. Top with pie filling before serving.

Yield: 14 slices. Per slice: 368 calories, 15 g fat (6 g sat fat), 69 mg cholesterol, 454 mg sodium, 47 g carbohydrate, 10 g protein (3.25 g soy protein), 0 g dietary fiber.

Chocolate Tofu Ice Cream ☺

- 1 pkg (16 oz.) silken soft tofu
- 1 cup soymilk (plain, or vanilla)
- 1/2 cup vegetable oil
- 1 cup sugar

- 1/4 cup cocoa
- 1 Tbs vanilla
- 1/8 tsp salt

Blend all the ingredients with an electric mixer until smooth and creamy. Use a home ice cream maker to freeze the blended ingredients, following instructions for ice cream.

Yield: 8 cups. Per cup: 307 calories, 18.7 g fat (2.5 g sat fat), 0 mg cholesterol, 44 mg sodium, 295 g carbohydrate, 8.8 g protein (8.2 g soy protein), 1.8 g dietary fiber.

Quick Mix Cookie Bars ☺

- 2 packages (18 oz.) refrigerated chocolate chip cookie or oatmeal chocolate chip, slice and bake cookie dough
- 1 package (12 oz.) firm silken tofu
- 2 eggs
- 1 cup sugar
- 1 tsp vanilla

Preheat oven to 350° F. Soften one roll of cookie dough. Spray the bottom of a 9" x 13" baking pan with non-stick spray. Line the bottom with the softened cookie dough, spreading to all sides.

In food processor bowl, combine tofu and remaining ingredients until smooth. Spread over cookie dough. Drop second roll of cookie dough by teaspoon on top of filling. Bake for 40 to 45 minutes.

Yield: 36 bars. Per bar: 155 calories, 6 g fat (2 g sat fat), 18 mg cholesterol, 65 mg sodium, 23 g carbohydrate, 2 g protein (0.7 g soy protein), 0 g dietary fiber.

Pumpkin Pie ☺

- 1 package (12 oz.) firm silken tofu
- 1 can (15 oz.) solid pumpkin
- 1/2 cup brown sugar
- 1/4 cup sugar
- 1 tsp cinnamon
- 1/2 tsp ground ginger
- 1/4 tsp ground cloves
- 1/4 tsp ground nutmeg
- 1 9-inch unbaked pie shell

Preheat oven to 425°F. Drain tofu and purée in a blender or food processor until smooth.

Whisk together the pumpkin and sugars in a large mixing bowl. Whisk in the spices and puréed tofu.

Pour the mixture into the pie shell and bake at 425°F for 15 minutes. Lower the oven heat to 350°F and bake an additional 40 to 50 minutes, until filling is set and pie crust cooked throughout. Chill before serving.

Yield: 8 slices. Per slice: 254 calories, 6.5 g fat (1.6 g sat fat), 0 mg cholesterol, 296 mg sodium, 48 g carbohydrate, 5.9 g protein (3.7 g soy protein), .7 g dietary fiber.

Applesauce Cake ☺

- 1 3/4 cups sugar
- 1 1/2 cups unbleached flour
- 1 cup soy flour
- 1 1/2 tsp baking soda
- 1/4 tsp baking powder
- 1 1/2 tsp salt
- 1 tsp cinnamon
- 1/2 tsp cloves
- 1/2 tsp allspice
- 1/2 tsp nutmeg
- 2 cups applesauce
- 1/2 cup vegetable oil
- 1/2 cup soft tofu
- 1 cup raisins, chopped

Preheat the oven to 350°F. In a large bowl, mix with electric mixer sugar, unbleached flour, soy flour, baking soda, baking powder, salt, cinnamon, cloves, allspice, and nutmeg; mix thoroughly. Add the applesauce and vegetable oil; Beat on low for 1 minute, then medium speed for 2 minutes.

In a small bowl, mash the tofu until creamy; add to the batter. Beat until blended. Fold the raisins into the batter.

Pour the batter into a 9-by-13-inch nonstick baking pan. Bake for 45-50 minutes. Cool before serving.

Yield: 12 slices: Per slice: 333 calories, 11.3 g fat (1.4 g sat fat), 0 mg cholesterol, 436 mg sodium, 55 g carbohydrate, 5.1 g protein (3.2 g soy protein), 2 g dietary fiber.



Francine's Soy Cookies ☺

- 2 cups margarine
- 2 1/4 cups packed brown sugar
- 2 1/4 cups granulated sugar
- 4 eggs
- 1 Tbs vanilla
- 3 1/2 cups all-purpose flour
- 3/4 cup soy flour
- 1 tsp salt
- 2 tsp baking soda
- 2 tsp baking powder
- 1 1/2 cups quick-cooking rolled oats
- 2 cups shredded coconut
- 2 cups semi-sweet chocolate chips
- 2 cups whole toasted soybeans

In a large bowl cream margarine, sugars, eggs and vanilla on medium speed of mixer until blended. In a medium bowl combine flour, soy flour, salt, baking soda and baking powder; mix well. Add flour mixture to creamed mixture. Mix until ingredients are combined; do not over mix. Add remaining ingredients, one at a time; mix well after each addition. Lightly spray baking sheets with soy pan spray. Drop dough onto sheets 2-inches apart, using a tablespoon. Bake at 325°F about 15 minutes or until lightly browned.

Yield: 6 dozen cookies. Per cookie: 135.6 calories, 6.5 g fat (1.9 g sat fat), 7.8 mg cholesterol, 110 mg sodium, 18 g carbohydrate, 2.6 g protein (1.5 g soy protein), 1.6 g dietary fiber.

Chocolate Pie ☺

- 1 package (12 oz.) semi-sweet chocolate chips
- 4 Tbs light corn syrup
- 1 package (12 oz.) firm silken tofu
- 1 package (12 oz.) soft silken tofu
- 1 9-inch chocolate cookie pie crust

In a 1-quart microwave-safe bowl, cook chocolate chips in microwave at 1-minute intervals until melted. Stir frequently to prevent burning. Stir in the corn syrup. Blend the tofu in a food processor or blender until smooth. Add the melted chocolate mixture to tofu and blend until creamy. Pour chocolate filling into pie crust. Chill at least 6 hours before serving.

Yield: 10 slices. Per slice: 342 calories, 19 g fat (7.5 g sat fat), 0 mg cholesterol, 66 mg sodium, 41 g carbohydrate, 6.3 g protein (2.5 soy protein), 1.2 g dietary fiber.

☺ Good recipe for children & teenagers.

Tofu

Tofu is probably the most versatile soyfood to use in cooking. Also known as soybean curd, tofu is a soft, cheese-like food made by curdling fresh, hot soymilk with a coagulant. In recipes, tofu acts like a sponge and has the miraculous ability to soak up any flavor that is added to it.

Types of Tofu

Two main types of tofu are available in American grocery stores.

Water-Packed (Extra-Firm, Firm) tofu is dense and solid and holds up well in stir-fry dishes, soups, or on the grill – anywhere that you want the tofu to maintain its shape. Water must be squeezed out before using.

Silken (Extra-Firm, Firm, Soft, Reduced Fat) tofu is made by a slightly different process that results in a creamy, custard-like product. Silken tofu works well in puréed or blended dishes.

Storing Tofu

•Tofu most commonly is sold in water-filled tubs, vacuum packs, or in aseptic brick packages. Unless it is aseptically packaged, tofu should be kept cold. As with any perishable food, check the expiration date on the package. Once the tofu package is open, leftover tofu should be rinsed and covered with fresh water for storage. Change the water daily to keep it fresh, and use the tofu within a week.

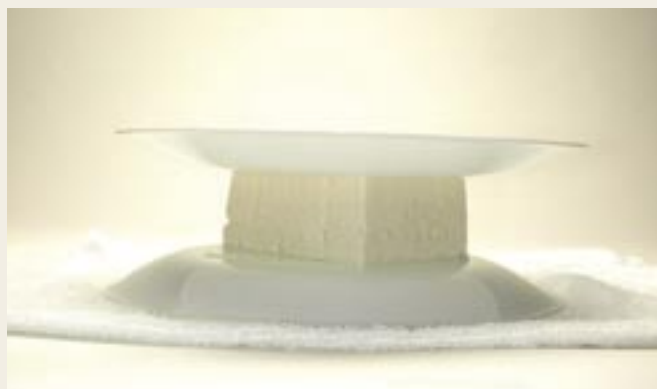
•Tofu can be frozen up to five months. The texture will be spongy, chewy, and more meat-like. After thawing tofu in refrigerator, squeeze out excess water.

Recipe Tips

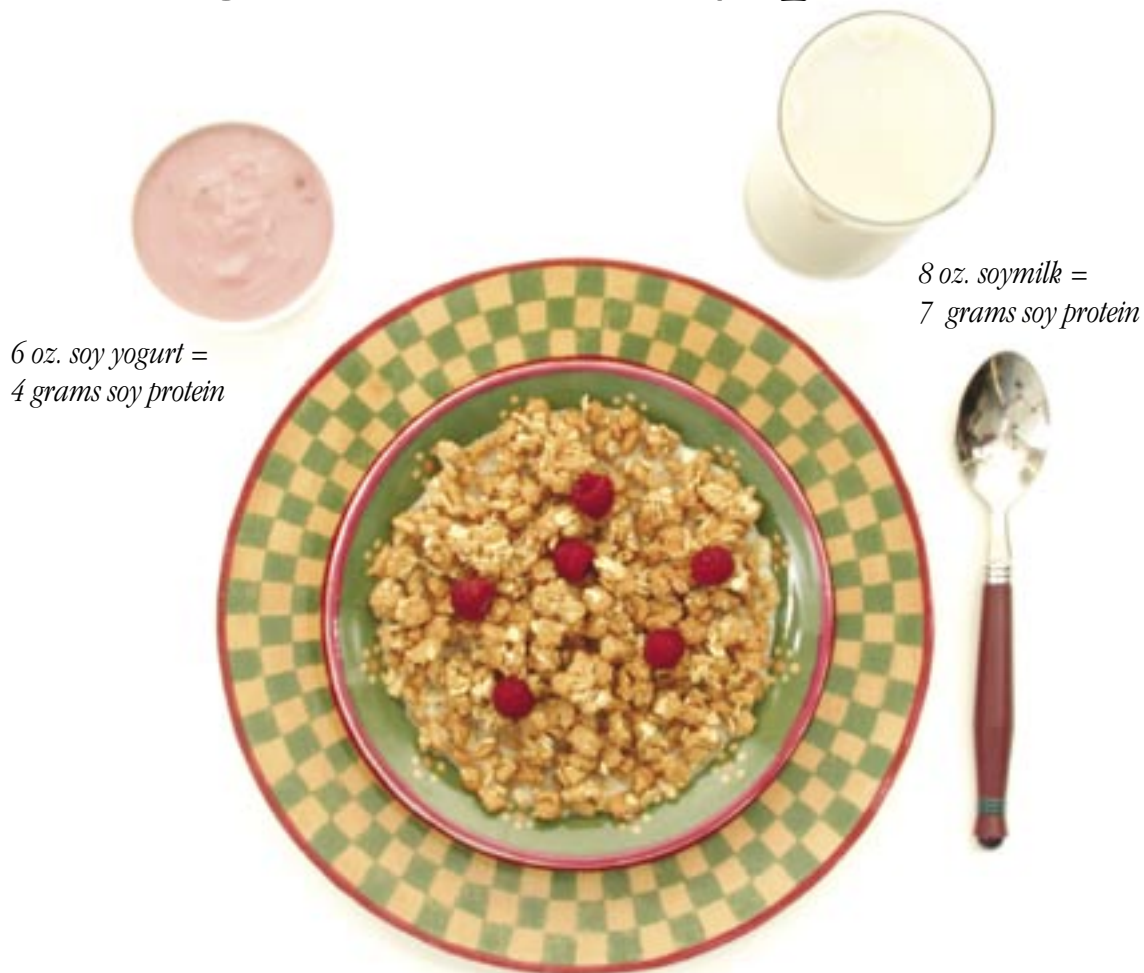
- Replace all or part of the cream in creamed soups with silken soft tofu.
- Substitute puréed silken soft tofu for part of the mayonnaise, sour cream, cream cheese, or ricotta cheese in a recipe. Use it in dips and creamy salad dressings.
- Mix 1 box instant pudding mix, 1 1/2 cups soymilk, and 10 ounces of silken tofu for dessert. Chill for 2 hours.
- Crumble it into a pot of spicy chili sauce and it tastes like chili.
- Cubes of firm tofu can be added to any casserole or soup.
- Slices of extra-firm tofu can be baked on broiler pan at 375°F for 20-25 minutes. Marinate slices in your favorite sauce for extra flavor.
- Substitute 1/4 cup soft tofu for 1 egg in your favorite brownie box mix.

Tofu Pressing

To reduce the amount of water in water-packed tofu, place the block of tofu on a pie plate or shallow dish. Stack another plate on top of the tofu. Add weight to the plate (use more dishes or canned goods) and wait 15-20 minutes; then pour off water.



Start your morning with 25 grams of soy protein.



*6 oz. soy yogurt =
4 grams soy protein*

*8 oz. soymilk =
7 grams soy protein*

Bowl of soy cereal = 13 grams soy protein
*As an alternative to soy cereal add 1 scoop of
powdered soy protein to your favorite cereal.*

The Food & Drug Administration has concluded that soy protein included in a diet low in saturated fat and cholesterol may reduce the risk of coronary heart disease by lowering blood cholesterol levels. The FDA recommends incorporating 25 grams of soy protein in your daily meals.



For more soyfoods information visit our Web site: www.soybean.org

