Soyfoods Guide

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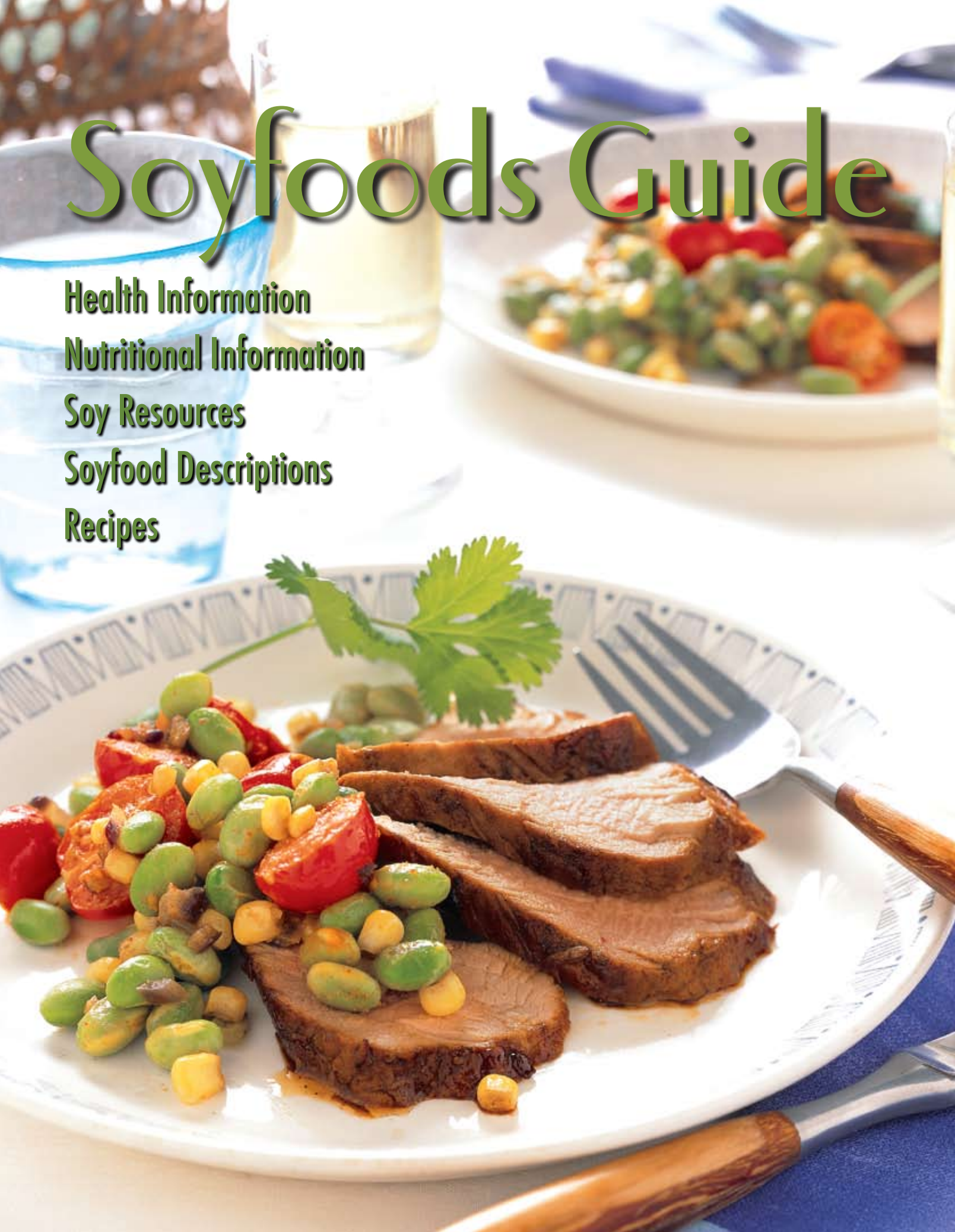

Soybean Oil

...more than you know

Although this *Soyfoods Guide* contains information primarily about soy protein, another major component of the soybean, soybean oil, is one of the top two most frequently used cooking oils in the country. In fact, most "vegetable oil" sold at the grocery store is really soybean oil – just check the ingredients on the label to be sure!

Liquid soybean oil is relatively low in saturated fat and high in poly- and monounsaturated fats, contains zero grams of trans fat, and is cholesterol-free. It is also one of the few non-fish sources of omega-3 fatty acids. While the long-chain omega-3s found in fish are preferred for bioavailability, soybean oil is the principle source in the U.S. diet. These polyunsaturated fatty acids positively affect overall cardiovascular health, including reducing blood pressure and preventing heart disease. Research is underway to develop an increased omega-3 soybean oil, for a renewable source of this essential fatty acid.

A new science advisory from the American Heart Association recently concluded that omega-6 fatty acids found in soybean oil may decrease risk for heart disease. A meta-analysis of several trials indicated that replacing saturated fats with omega-6s lowered heart disease risk by 24 percent. Soybean oil is about 50 percent omega-6 fatty acids, while olive oil and canola oil are both low in omega-6s. The advisory recommends Americans aim for 5-10 percent of their daily calories from omega-6s (12-22 grams) depending on age, gender and physical activity.

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. Partial hydrogenation is the process of rearranging the chemical structure of a liquid oil to make it more solid; unfortunately, it also produces trans fatty acids. Before this was understood, it 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.

The soybean industry is working diligently on creating new varieties of soybeans that will produce more healthful oils that do not require partial hydrogenation. Simultaneously, soybean processors are developing new oil-processing techniques that allow for food manufacturers to announce their products contain zero grams of trans fat.

The first soy-based trans fat solution to enter the market is low-linolenic soybean oil, which may be used in light frying applications, sauces, rolls and pizza dough. Coming soon, increased oleic soybean oils will offer additional trans fat solutions for baked goods.

Further in the research pipeline are low-saturate and high-stearic soybean oils. Research indicates stearic acid may be cholesterol-neutral compared to other types of saturated fats. It's highly stable and neutrally flavored, ideal for a wide range of products.

The U.S. Dietary Guidelines, developed jointly by the U.S. Department of Agriculture and the U.S. Department of Health and Human Services, recommend keeping total fat intake to in between 20-35 percent of calories, with most fat coming from poly- and monounsaturated fats and minimal intake from saturated and trans fats. Additionally, the American Heart Association suggests keeping saturated fat less than 7 percent and trans fat less than 1 percent of total daily caloric intake. For these reasons, liquid soybean oil is an excellent heart-healthy choice, as part of an overall healthy eating plan with plenty of exercise.

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Email: info@soybean.org


Mark Messina

Recent Soy Research Major Findings and Developments

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

In terms of research, 2009 was a pretty good year for soyfoods. As discussed below, the results of a variety of studies published last year showed that soyfoods can make important contributions to an overall healthy diet. There are no superfoods and no food should play too large of a role in the diet. But the evidence is quite clear that Americans would benefit by consuming a couple servings of soyfoods daily. And with all the choices now available, doing so is easier than ever.

Soyfoods and bone heath

In response to declining estrogen levels as women enter the menopause, they can lose substantial amounts of bone thereby increasing their fracture risk. Not surprisingly, estrogen therapy reduces postmenopausal bone loss and risk of fracture.[1] The protective effects of estrogen led researchers to investigate the potential skeletal benefits of soyfoods because they contain isoflavones. Isoflavones are classified as phytoestrogen (plant estrogens) although they are different from the hormone estrogen.

The first clinical trial to investigate the impact of an isoflavone-rich product on bone mineral density (BMD) in postmenopausal women was published in 1998.[2] Since then, more than 25 trials have done so although many involved small numbers of subjects and were conducted for relatively short durations. [3,4]

Among the many clinical trials one of the longest (2 years) and largest (304 subjects) found that postmenopausal Italian women in the placebo group lost approximately six percent of their BMD at the spine and hip, whereas those women given the soybean isoflavone genistein gained about this much bone at both sites.[5] The amount of genistein administered to the subjects in this study is provided by approximately four daily servings of soyfoods. That is certainly more than most people consume but is a reasonable amount for an experiment of this type. Although intended to last only two years, among those subjects that agreed to continue for a third year, the differences between groups was even more striking.[6]

Unfortunately, in contrast to the results of this Italian study are findings from several recently conducted US trials. Of these the most important is a three-year trial conducted by researchers from Iowa State University and the University of California that involved over 200 postmenopausal women. Two different doses (80 and 120 mg/d) of isoflavone supplements were used. Only in response to the high dose was there a suggestion of even modest benefit.[7] Overall, the results from the clinical studies are disappointing.

However, the findings from a very large epidemiologic study published in 2009 that evaluated the relationship between soyfood intake and fracture risk are very encouraging. In this study, there were almost 700 hip fractures (the only site studied) among the 35,000 postmenopausal Singaporean women during the seven-year period the women were followed.[8] Fracture risk was reduced by approximately one-third when women in the highest soy intake group – which consumed about 1 ½ servings of soy per day – were compared to those in the lowest.

In epidemiologic studies, subjects are not actually fed a particular diet or given food or supplement like they are in a clinical trial. Rather, the dietary intake of subjects in the study is recorded and the data analyzed to determine if eating in a certain way is associated with risk of a particular health outcome. Unlike the results of clinical studies, epidemiologic studies can't form the basis for reaching definitive conclusions about health effects. But epidemiologic studies are responsible for generating most nutrition hypotheses. Furthermore, the protective effects observed in the hip fracture study from Singapore are in close agreement with a previously published study from China that also found high soy consumers were about one-third less likely to have a fracture.[9] It is noteworthy that in the two epidemiologic studies showing protective effects against fracture, subjects were consuming traditional Asian soyfoods whereas in the clinical trials, subjects were given soy supplements.

At this point, no conclusions about the direct skeletal benefits of soyfoods can be made. However, because soyfoods provide high quality protein[10], which may be important for bone health [11], and some soyfoods are good sources of calcium and also vitamin D[12], they certainly should be part of a bone-healthy diet.

Soyfoods and breast cancer patients

The estrogen-like effects of isoflavones have raised concern that soyfoods might be contraindicated for women at increased risk of breast cancer and for breast cancer patients with tumors

Continued on next page

whose growth is stimulated by the hormone estrogen.[13-17] And in fact, in certain types of experimental rodent models, isoflavones stimulate the growth of existing estrogen-responsive mammary tumors.[18, 19] However, whole soyfoods do not have this effect.[20] More importantly, the human evidence indicates that isoflavones, regardless of the source or form in which they are delivered to subjects, do not exert stimulatory effects on breast tissue.[21-24] Furthermore, a large study published in December of 2009 in the Journal of the American Medical Association (JAMA) suggests that soyfoods may actually benefit breast cancer patients.

Data from the Shanghai Breast Cancer Survival Study, which included over 5,000 breast cancer survivors, were analyzed to evaluate the effect of soy intake after diagnosis on breast cancer prognosis.[25] During the median follow-up period of approximately 3.9 years, women in the highest soy protein intake group were about 30% less likely to die from breast cancer or suffer a recurrence. In this study high soy intake was as protective as the breast cancer drug tamoxifen. That is, women who didn't take tamoxifen benefited as much by consuming soy as women who benefited from taking tamoxifen but didn't eat soy. The exciting results of this study are in general agreement with a study also published in 2009 that included 1,954 US breast cancer survivors. In this study women were followed for 6.3 years,[26] and as in the Shanghai study, soy intake tended to be associated with improved prognosis.

It may still be too early for oncologists to recommend that that breast cancer patients consume soyfoods specifically for the purpose of improving their outcome. But there is also no longer any reason for breast cancer patients to avoid them. To this point, an editorial in JAMA concluded that "Patients with breast cancer can be assured that enjoying a soy latte or indulging in pad thai with tofu causes no harm and, when consumed in plentiful amounts, may reduce risk of disease recurrence".[27]

Endothelial function

Elevated blood cholesterol level is the best known coronary heart disease (CHD) risk factor. In 1999, the US Food and Drug Administration approved a health claim for the cholesterol-lowering effects of soy protein. Furthermore, soyfoods are low in saturated fat so when they replace more traditional sources of protein in Western diets, which tend to be high in saturated fat, saturated fat intake will be decreased and heart disease risk lowered. Therefore, soyfoods are obviously very heart-healthy. However, there are many risk factors for CHD aside from elevated cholesterol. For example, elevated blood pressure is actually a much bigger risk factor than elevated cholesterol. Importantly, there is evidence that soyfoods favorably affect several CHD risk factors.

This evidence includes several epidemiologic studies showing that high-soy consumers are much less likely to report having a stroke or heart attack in comparison to low-soy consumers. The protective effects noted in these studies far exceeds that which could be due to cholesterol reduction alone. For example, in one study involving nearly 65,000 postmenopausal women from Shanghai, women consuming the most soy protein were 86% less likely to have a heart attack.[28] And in a study from Japan that involved 40,462 participants aged 40-59 years old, women who consumed soy at least 5 times per week were about one-third, one-half, and two-thirds less likely to have a stroke, heart attack, and to die from CHD, respectively, in comparison to women who consumed soy less than 2 times per week.[29]

What might account for the protective effects observed in these studies? There are many possibilities as clinical studies – studies in which subjects were actually fed soyfoods or given soybean components – have found that soy favorably affects a wide range of stroke and CHD risk factors. However, because the results from these studies have been inconsistent it is not possible to draw definitive conclusions. But a new analysis of the literature provides insight into at least one reason for the inconsistency.

One CHD risk factor is impaired endothelial function. Endothelial cells line the blood vessels including the ones that provide blood to the heart. If these cells are not functioning properly, heart disease risk is greatly increased. Many studies have evaluated the impact of soy on the health of these cells. Slightly less than half have shown benefit. In an attempt to explain this inconsistency researchers from the Cardiovascular Institute & FuWai Hospital, Chinese Academy of Medical Sciences & Peking Union Medical College, Beijing, China, conducted a statistical analysis of the data.

They found that soy was consistently beneficial in women with impaired endothelial function at baseline – that is, at the start of the study. In contrast, in women with a healthy endothelium, soy was without benefit. These findings make a lot of sense, as you might not expect to see benefit in healthy subjects. But it is the unhealthy subjects who need the benefit and in whom soy is beneficial. Thus, for people at risk of developing heart disease there is now one more reason to eat soyfoods.

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Kim Galeaz

Common Food & Nutrition Myths and Their Impact on Soyfoods

By Kim Galeaz, a registered and certified dietitan, freelance nutrition and culinary consultant based in Indianapolis, Indiana

No wonder most people are confused about the "right way" to eat. With such an overwhelming amount of information floating around on the web today, it's difficult to sort fact from fiction.

Since I'm a registered dietitian, I come across a plethora of food/nutrition "myth-information" every day. But these six issues seem to be the most prevalent and most misunderstood. Join me for some food, nutrition and healthy eating myth-busting.

> *"The inside aisles are where you'll find all the grains filled with fiber and valuable nutrents..."*

Myth #1
Shop the Supermarket Perimeter Only.

Not only is this recommendation too simplistic, it's completely unnecessary from a healthy eating standpoint.

"If you shop only the outer aisles at the supermarket, you'll miss out on a lot of nutrient-rich and economical food choices," said Marianne Smith Edge, MS, RD, and Vice President of Committee Programs at International Food Information Council Foundation in Washington, DC.

The inside aisles are where you'll find all the grains filled with fiber and valuable nutrients, like whole wheat versions of breads, pastas, cereals and crackers. Fiber and nutrient-rich snacks like popcorn and almonds, peanuts, walnuts, soynuts and sunflower seeds are there, too, as well as the very convenient, economical and nutrient-rich canned beans and vegetables. "Canned tomato sauce and diced tomatoes are a great way to add extra vegetables to those whole grain pastas," Smith Edge said. "If you're concerned about sodium, look for lower sodium versions. Or just drain and rinse." Rinsing and draining canned beans (like navy, pinto and soybeans) helps cut the sodium content by 30 to 40 percent. Canned fruits are another nutrient-rich inside aisle option; simply choose those packed in water, light juice or natural juices to save calories. Smith Edge explained that many canned fruits and vegetables are fresher than some of the off-season produce we buy that has traveled for days to get to the store and then sat in our refrigerator even longer. "Most canned fruits and vegetables are packed almost immediately after being harvested," she said.

Tina Miller, MS, RD, a registered dietitian and the Meijer Healthy Living Advisor for eastern Michigan and northern Ohio, said quick turnaround is also the case with frozen fruits and vegetables as well. "Frozen fruits and vegetables are harvested and then flash frozen," she said. "They're a nutrient-rich, economical choice for more expensive, out of season produce." We'd probably all eat more fruits and vegetables if we remembered that all forms count: fresh, frozen, canned, dried and 100% fruit/vegetable juices.

"You'll find many soyfoods in the center aisles," said Miller. "Sure, there's soymilk along the perimeter, but you have access to so many more choices on the inside, like shelf-stable soymilk. You'll also find soynut butter, soy flour, textured soy protein and canned soybeans on those shelves. Most supermarkets today feature a specialty refrigerated/freezer section in the middle of the store where you'll find tempeh, edamame, tofu, soy kefir, soy yogurt and soy cheese.

One last reason for shopping the inner aisles: spices and herbs. "So many spices and herbs, like cinnamon, rosemary, ginger and garlic, are filled with antioxidants," said Miller. Smith Edge agreed, adding that dried seasonings are an economical way to make foods taste great.

Myth #2
Only Water Hydrates.

Other versions of this myth include "drink eight glasses of water daily" and "caffeinated beverages dehydrate." Actually, all beverages hydrate, even those with caffeine, and adults need more than eight glasses daily.

"Anything in liquid form can help meet your daily fluid requirements," Robyn Flipse, MS, RD said. "Even foods that have high moisture content, such as soups, fruits and vegetables contribute to total water intake." Flipse, a registered dietitian and nutrition communications consultant, explained that caffeinated beverages like coffee, tea and colas are more than 95 percent water and all that water contributes hydration. "Research has shown that the rate and/or volume of urination following the consumption of caffeinated beverages does not exceed the total amount of fluid taken in."

This hydration information is not new. The Institute of Medicine of the National Academy of Sciences (IOM/NAS) released their report for new fluid guidelines February 2004. So why is this "all beverages count" message still so obscure to consumers – and health professionals - six years later? Seems like we'd eagerly embrace this news, given the fact many of us get pretty bored drinking just plain water.

"Old habits are hard to break," Flipse said. "Many health professionals were taught that water was the best way to hydrate the body, and most people needed eight glasses to stay hydrated. This same information has been repeated for so long by the media, that it has taken on mythical significance." And even though current research and government guidelines support the fact that all beverages provide hydration, said Flipse, it's extremely difficult to educate everyone in one giant step, so it'll take hundreds of baby steps.

According to the IOM/NAS fluid guidelines, adult men require at least 13 cups (1 cup = 8 ounces) of total beverages daily and adult women need at least 9 cups (more is required with physical activity and in extreme climates). Eighty percent of your daily required water comes from beverages (those 13 or 9 cups) and the other 20 percent from foods. Research also shows that children and adults consume 45 to 50 percent more liquid when it's flavored versus plain. You'll stay better hydrated, said Flipse, when you like the taste of your beverages. So start counting everything you drink: lattes with vanilla soymilk, chocolate dairy or soymilk, smoothies, fruit/vegetable juices, soda, diet soda, sports drinks, coffee, tea and water. Even miso soup!

Myth #3
Vegetarianism is Widespread.

You might think this is the case, given all the celebrities touting their new meatless way of eating or the overabundance of stories advising everyone to eat "mostly plant foods." All this hype has apparently made vegetarianism cool and vogue, so many people might say they're vegetarian when they really aren't.

Statistics vary widely on the actual number of practicing vegetarians and these statistics often depend on the methodology used. Some polls don't differentiate between the types of vegetarianism (vegan, lacto-ovo or lacto-vegetarian), which means the definition of a vegetarian diet is subject to individual interpretation.

But one type of diet starting to increase in prevalence and popularity is a blend of eating both meat and vegetable proteins. It's call flexitarian. "Instead of labeling ourselves as meat eaters or vegetarians, many of us are blending the two based on economic factors, green eating, taste and more," says Christine M. Palumbo, MBA, RD, a registered dietitian, nutrition communications consultant, freelance writer and speaker from suburban Chicago,

"...one type of diet starting to increase in prevalence and popularity is a blend of eating both meat and vegetable proteins."

Illinois. "A flexitarian diet usually means eating mainly plant sources of protein, but not being extremely rigid about it. You might enjoy leg of lamb at Easter or a hot dog at the football game, for example."

Flexitarian eating is undoubtedly here to stay, so consumers will appreciate the fact there are more meat and soyfood choices than ever before. Let's use Palumbo's college-aged daughter as an example. "My daughter prefers centering her meals on hummus, cheese, soy-based chicken patties, eggs and edamame. But she also gets a red meat craving every so often and enjoys a beef hamburger or pork tenderloin."

In addition to the soy-based chicken patties, Palumbo's daughter might enjoy soy-based chicken Buffalo wings or nuggets, or chicken-style soy strips for stir fry with her edamame. She could munch on dry-roasted edamame for an energizing snack late at-

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night while studying, or some soy crisps or soy chips dunked in hummus-style dip made with edamame or yellow soybeans. If she makes a breakfast burrito with scrambled eggs, she could add some black soybeans, sprinkle on soy cheddar cheese and wrap everything in a multi-grain flour tortilla made with part soy flour.

But when Palumbo's daughter craves red meat, she can choose any of the traditional cuts of beef, lamb and pork. If she's feeling adventurous, she can cook a new cut of beef, like the flat iron steak, or one of four new pork cuts. The pork breast works well in stir-fries and salads, petite tender is perfect for medallions, strips and kabobs, cap steak works well for fajitas, bbq or tacos, and pocket roast is a tender, tasty personal roast. "I love the fact here are so many options today. People can feel comfortable about eating meat and choosing plant-based protein sources. It's all good," says Palumbo.

"Soybean oil is cardio-protective because it's high in polyunsaturated fat, and low in saturated fat..."

Soyfoods are a perfect solution for those plant-based protein choices because of their high-quality complete protein content; soybeans contain all the essential amino acids. Many people who never even glanced at tofu, soymilk and soy burgers in the past are starting to add them to their shopping cart and include them in meals regularly.

Myth #4
Olive Oil is the Only Heart Healthy Oil.

Many oils, including soybean, are heart healthy. They are all low in saturated fat, the most detrimental fat (other than trans) to heart health and they all contain 14 grams total fat in a serving, which is one tablespoon. Differences lie mainly in the ratio of monounsaturated and polyunsaturated fat. Soybean oil is often the most misunderstood, though. So in order to better convey the benefits of soybean oil to her clients, Cecilia Pozo Fileti, MS, RD, a registered dietitian and owner of C.P. Fileti Associates, Inc. in Ann Arbor, Michigan, devised a clever system of 3 P's: protective, price and profile.

Protection

"Soybean oil is cardio-protective because it's high in polyunsaturated fat, contains monounsaturated fat and low in saturated fat, which can help lower LDL (bad) cholesterol while keeping HDL (good) unchanged," says Pozo Fileti. But even those polyunsaturated fats themselves are fraught with misinformation. "Soybean oil naturally contains omega-3 fatty acids and is the main source of non-fish, heart-healthy omega-3's in the American diet," Pozo Fileti explains. Plus, soybean oil contains about 50 percent omega-6 fatty acids, a type once thought to be associated with inflammation and increased heart disease risk. But recent research has concluded that omega-6's may actually offer protection, and in January 2009, the American Heart Association published a science advisory stating omega-6 fatty acids may help decrease risk of heart disease.

Another protective benefit of soybean oil – labeled as vegetable oil in the supermarket – is its vitamin E content. Soybean oil is the primary commercial source of this antioxidant nutrient, which has been linked to reducing risk of some cancers, heart disease and premature aging.

Price

In today's economy, who isn't concerned about spending every penny wisely? Pozo Fileti says soybean oil is one of the most economical oils in the supermarket, making it a perfect choice for getting the most nutrition out of every food dollar spent.

Profile

Soybean oil has a high smoking point and it's great for both hot and cold cooking applications. "And since the flavor is so neutral," says Pozo Fileti, "it goes well with many different foods. Just by adding herbs and spices, you can take it to new and exciting culinary destinations."

Myth #5
Choose Wild-Caught Fish instead of Farm-Raised.

United States farm-raised fish is safe, economical and nutritious. It's also essential, because ocean capture fisheries, which have long provided the majority of the world's fish, have reached maximum sustainable yields.

Fish-farming is an evolving industry, and many opponents aren't aware of better production practices and safety improvements over the past several years according to Dr. Steve Hart, Director of Aquaculture for the Indiana Soybean Alliance. He also said most people don't realize the U.S. currently has the strictest aquaculture production guidelines of any fish farming country in the world. "I feel confident eating farm-raised fish from the U.S, and feel it's a safe and nutritious product to serve to my family," He added that many fisheries overseas are making positive changes to their practices for export purposes.

One of the most sustainable practices being incorporated into

fish farming is the use of soy-based fish feeds. Hart explained that the anchovies, herring and sardines currently being used in fish meal are already being fished at their maximum levels. So the aquaculture industry – which will only get larger to meet global fish demand – needs another source, like grains, to meet that demand. "Soy is an especially important grain for aquaculture because it has great protein content and an amino acid balance close to fish meal," Hart said. "The U.S. and several other countries can produce a lot of soybeans to meet aquaculture's increased need." Plus, soy-based meal is a much more economically viable option for aquaculture.

Nutritionally speaking, farmed fish and wild caught fish are fairly close if not the same; fish oil is usually added to provide omega-3 fatty acids. Hart said new developments with soybeans featuring increased omega-3 content could actually boost this heart-healthy component in farm-raised fish. But while the two types may be nutritionally similar, their supermarket price isn't even close. Farm-raised fish is often $5 to $15 dollars a pound less than wild caught.

Regarding previous reports about contaminants in farmed fish, Hart points out those levels have been below what the FDA considers dangerous. Furthermore, scientific flaws existed with those studies such as small sample size. We all need to put the whole issue in perspective, Hart said. "Any risk of eating farm-raised fish is miniscule compared to the current health crisis in America. Remember, the American Heart Association says eating fish twice a week will reduce our risk of heart disease by 50 percent. And heart disease is still the number one killer of adult men and women." Spoken like a dietitian.

> *"Biotechnology provides the means for increased crop yields at a cost-effective price for the farmer, the manufacturer and ultimately you and me, the consumers."*

Myth #6
Choose Only Organic Foods.

Some people choose organically grown fruits and vegetables because they think they're more nutritious and contain higher amounts of vitamins and minerals. "The bottom line is that there isn't really a difference with nutrient profiles between organic and conventionally grown produce," said Tina Miller, MS, RD, Meijer Healthy Living Advisor. Remember, too, that nutrient levels in all fruits and vegetables can vary widely depending on the season and nutrient levels in the soil. Pesticide use and farming practices are other reasons many choose organic produce. Miller explained there wouldn't be significant levels of pesticides in thick-skinned products like oranges, avocados and mangos, as the spray can't penetrate the skin. She also said many conventional growers are using other farming methods, like integrated pest management, to help decrease the use of herbicides and fungicides on our fruits and vegetables.

The organic issue also encompasses a common misconception that foods with genetically modified organisms (also called GMOs) are not safe. Genetic modification, or genetic engineering, is a form of modern biotechnology that enhances desired traits in crop plants such as improved nutritional content, flavor or resistance to pests and viruses. Genetic engineering has been researched and deemed safe by our government for all parties involved – the farmer, the environment and the consumer.

Just talk with a real farmer, who grows genetically engineered crops year after year, and you'll better understand the safety and benefits of the way they grow crops like corn, soybeans and wheat. "Growing genetically modified soybeans means you don't have to use a whole tool box of chemicals to control weeds," explains Marty Evans, a life-long farmer and owner of Be-N-Ag family farm with his son and son-in-law in Indiana. "Those weeds are controlled by using a lot less of just one herbicide, and it's just like the spray you use to kill the weeds around your sidewalk. That's good for the farmer and for the environment." Corn is also another crop that is often genetically modified so that less insecticides and fungicides need to be used, again good for both the farmer and the environment.

As the world population grows, so does the demand for food. Yet today, because of many factors including urbanization, says Evans, there is less and less farm acreage dedicated to growing that food. Biotechnology provides the means for increased crop yields at a cost-effective price for the farmer, the manufacturer and ultimately you and me, the consumers. Evans said without the advances with food technology and genetic engineering, he doesn't know how the increased food demand could be met.

Registered dietitian Kim Galeaz is a culinary-nutrition consultant, freelance writer and recipe developer in Indianapolis, Ind. and Jacksonville, Fla. She has worked with food and agriculture businesses for over 21 years, helping convey science-based, positive and balanced food and nutrition messages.

How Soy Fits Into the USDA's Food Pyramid

The Dietary Guidelines for Americans gives science-based advice on food and physical activity choices for health. To see the full 80-page Dietary Guidelines report, go to www.healthierus.gov/dietaryguidelines/.

Soyfoods can be an important part of a healthy diet as proscribed by the new USDA food pyramid. Most soyfoods contain no cholesterol, little or no saturated fat, high quality protein, and dietary fiber. Many soyfoods also provide essential vitamins and minerals, such as B vitamins, vitamins A and D, calcium, iron, and potassium.

Soy protein may help to reduce the risk of heart disease by lowering cholesterol and increasing the flexibility of blood vessels. Soybeans also contain important bio-active components that have begun to show promise in relieving menopausal symptoms, maintaining healthy bones, and preventing cancer.

Grains

- Soy cereal
- Soy grits
- Soy waffles
- Soy pasta
- Soy bread
- Soy flour

Consuming at least three or more ounce-equivalents of whole grains per day can reduce the risk of several chronic diseases and may help with weight maintenance.

Soy flour is part of this group. Substitute up to one-fourth of the total flour in your favorite baked product recipe.

Vegetables

- Green soybeans (edamame)
- Canned soybeans
- Soynuts

One-half cup of green soybeans (edamame) contains 10 grams of soy protein.

All soybeans are a good source of dietary fiber and isoflavones.

Fruits

- No soy-based foods in this category.

Any fruit or 100% fruit juice counts as part of the fruit group. Fruits may be fresh, canned, frozen, or dried, and may be whole, cut-up, or pureed.

Oils

- Soybean oil (also called vegetable oil)

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

- Soy beverage
- Soy cheese
- Soy yogurt
- Soy ice cream

According to the new USDA food guidelines, protein choices for those who do not consume milk products include calcium-fortified soy beverages, soybeans, soy yogurt, soy cheese, and tempeh.

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 & Beans

- Soy burgers
- Soy hot dogs
- Soy nuggets
- Soy burger-type crumbles
- Tofu
- Soynuts
- Canned soybeans
- Green soybeans (edamame)
- Soynut butter

According to the new USDA food guidelines, protein choices in this category include all of the above listed soyfoods.

Soybeans are a source of high-quality protein and include all eight of the essential amino acids.

For more information about soyfoods, visit the web site www.soybean.org.
For more information about the USDA Dietary Guidelines Food Pyramid: www.mypyramid.gov

Soyfoods Composition

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 (Mcg)	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.

Soy Resources

Books

- *Soybeans, Chemistry, Technology, and Utilization*, by KeShun Liu
- *The Simple Soybean and Your Health*, by Mark Messina and Virginia Messina
- From the Illinois Center for Soy Foods, Barbara Klein, Editor
  - *Soy on the Menu: Recipes for Food Service*
  - *Textured Vegetable Protein in the American Kitchen*
  - *Tofu in the American Kitchen*
  - *Around the World with Soy*
  - *Soy for the Last Minute Chef*
  - *Baking with Soy*
- *The Book of Tofu,* by William Shurtleff
- *The Soy Zone*, by Barry Sears Ph.D.
- *The World of Soy*, by Christine M. Du Bois (Editor), Chee-Beng Tan (Editor), Sidney Mintz

Web Sites

- www.soybean.org
- United Soybean Board - www.soyconnection.com
- Stratsoy (University of Illinois) - www.stratsoy.uiuc.edu/expert/askhealth.html
- Soyfoods Association of North America - www.soyfoods.org
- Illinois Center for Soy Foods - www.soyfoodsillinois.uiuc.edu
- Soy Isoflavone Database - www.nal.usda.gov/fnic/foodcomp/Data/isoflav/isoflav.html
- The Soyfoods Council - www.thesoyfoodscouncil.com/
- Michigan Soybean Promotion Committee -www.michigansoybean.org
- Missouri Soybean Council - www.mosoy.org
- Nebraska Soybean Board - www.nebraskasoybeans.org
- North Dakota Soybean Council - www.ndsoybean.org
- Ohio Soybean Council - www.soyohio.org
- South Dakota Soybean Research & Promotion Council - www.sdsoybean.org

Soy Newsletters

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

Soy Research, Health

- Soy/Health Fact Sheets: www.soyconnection.com

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? Edamame, large soybeans that are harvested when the beans are still green and sweet tasting, are easy to grow in your garden. They like full sun and are adaptable to most soil types. They are ready to harvest in 65 to 90 days, and planting seeds every week or so will let you fresh soybeans throughout the summer. Edamame is best—from both a flavor and nutrition standpoint—if eaten soon after picking. Edamame is a delicious, healthy snack. Because it is something you can eat with your fingers and its flavor has a light sweetness blended with a nutty taste, edamame appeals to children and adults alike. Boil the freshly picked pods for about ten minutes in salted water. Drain the pods and serve them heaped in an attractive bowl. They are equally delectable as finger food whether served slightly warm from cooking, at room temperature, or lightly chilled. Hold the pod and gently push the beans out of the pod, pop them into your mouth, and enjoy their sweet, nutty flavor. For more information about how to grow soybeans in your garden and a list of edamame varieties, visit the National Garden Bureau's Web site at: www.ngb.org.

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.

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 are 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 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.

Soynut Butter

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

Soy Yogurt

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

Nondairy Soy Frozen Desserts

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

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 soymilk. 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.

Edamame Hummus

- 2 cups edamame, shelled and cooked according to package directions
- 1/4 cup soybean oil
- 3 Tbs lemon juice
- 2 tsp garlic, chopped
- 3/4 tsp cumin, ground
- 1/2 tsp salt

Puree edamame, oil, lemon juice, garlic, cumin and salt in food processor for 30 seconds, scraping sides twice, until almost smooth. Cover and refrigerate until ready to serve.

Per 2 tablespoon serving: 60 calories, 5g fat (0g sat fat), 0 mg cholesterol, 90 mg sodium, 3 g carbohydrate, 2 g protein (2 g soy protein), 1g dietary fiber.

Serve with pita triangles, crackers, baguette or raw vegetables.

Oriental Soybutter Dip

- 1/2 cup reduced fat soybutter
- 2/3 cup fat free sour cream
- 2 tsp honey
- 1/2 tsp soy sauce
- 1/8 tsp ginger, ground
- 1/8 tsp Chinese five spice
- 1/4 cup roasted salted soynuts

In a bowl combine ingredients except soynuts. Refrigerate, covered at least 1 hour before serving. Add soynuts. Mix until blended.

Serves 10. Per serving: 100 calories, 5g fat (1g sat fat), 0 mg cholesterol, 115 mg sodium, 8 g carbohydrate, 4 g protein (3 g soy protein), 1g dietary fiber.

Serve with celery and carrot sticks, apple wedges, sliced bananas, large marshmallows, cheese flavored crackers, regular or chocolate covered pretzels.

Soy smoothies and shakes are easy to make, and it's fun to create your own recipes. A little soymilk and some fruit mixed in a blender will get you off and running. Add a few more secret ingredients and you will create your own masterpiece. Here are few recipes to get you started.

Double-Chocolate Malted Shake

- 1/2 cup chocolate ice cream
- 1/4 cup hocolate soy milk
- 1 tsp malted milk powder

Blend ice cream, soymilk and malted-milk powder in a blender until smooth.

Yield: 1 serving. Per serving: 224 calories, 9 g fat (5 g saturated fat), 22 mg cholesterol, 88 mg sodium, 28 g carbohydrate, 5 g protein (1 g soy protein), 1 g dietary fiber.

Soy Carrot Smoothie

- 2 cups carrot juice
- 1/2 cup apple juice
- 2 Tbs powdered protein isolate
- 1 banana
- 6 oz soy yogurt

Thoroughly mix all ingredients in blender. Serve in a 12-ounce glass.

Yield: 1 serving. Per serving: 62 calories, 0.4 g fat (0 g saturated fat), 0 mg cholesterol, 113 mg sodium, 7 g carbohydrate, 25 g protein (23 g soy protein), 1.2 g dietary fiber.

Thermos-ready Smoothie

- 1 cup frozen mixed berries
- 1/2 cup banana, sliced
- 1/2 cup apple juice
- 1/4 cup silken tofu

Combine berries, banana, apple juice and tofu in a blender; blend until smooth.

88 calories; 3 g fat (0 g saturated fat, 0 g mono unsaturated fat); 0 mg cholesterol; 62 g carbohydrates; 6 g protein; 7 g fiber; 33 mg sodium; 539 mg potassium

Per 2 cup serving: 88 calories, 3 g fat (0 g sat fat), 0 mg cholesterol, 33 mg sodium, 62 g carbohydrate, 6 g protein (4 g soy protein), 7 g dietary fiber.

Wake-Up Smoothie

- 1 1/4 cups orange juice
- 1 banana
- 1 1/4 cups frozen berries - raspberries, blackberries, blueberries and/or strawberries
- 1/2 cup low-fat silken tofu
- 1 Tbs sugar

Combine orange juice, banana, berries, tofu and sugar in a blender; cover and blend until creamy. Serve immediately.

Yield: 1 serving. 157 calories, 2 g fat (0 g saturated fat), 0 mg cholesterol, 19 mg sodium, 33 g carbohydrate, 4 g protein (3 g soy protein), 4 g fiber.

Protein power tips...

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

Soymilk

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

Storing Soymilk

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

Cooking Basics

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

Soymilk Tips

Soymilk can be used in almost any way that cow's milk is used.

- Use soymilk 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 soymilk, soy ice cream or tofu, soy yogurt, and fruit.
- Use soymilk to make cream soups.
- Try soymilk 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 soymilk for a refreshing drink.

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.

Cranberry-Pear Muffins

- 1 1/2 cups all-purpose flour
- 1/2 cup soy flour
- 1/3 cup granulated sugar
- 1 Tbs baking powder
- 2 tsp round cinnamon
- 1 tsp dehydrated orange peel
- 1/4 tsp alt
- 2 eggs
- 3/4 cup soymilk
- 3/4 cup water
- 1 Tbs soybean oil
- 5 ounces canned pears, drained and chopped
- 4 oz dried cranberries

Combine flours, sugar, baking powder, cinnamon, orange peel and salt; mix well.

Make a well in center of dry ingredient mixture and add eggs, soymilk, water, oil, pears and cranberries; mix only until moistened.

Spoon mixture into oiled muffin tins.

Bake at 400°F for 12 to 15 minutes or until wooden pick inserted near center comes out clean.

Yield: 12 muffins. Per muffin: 159 calories; 3.6 g fat (1.5 g sat fat), 23 g cholesterol, 193 mg sodium, 28 grams carbohydrate, 5 g protein (1.5 g soy protein), 1.6 g dietary fiber .

Spritz Butter Cookies

These traditional cookies really stand out when dipped in chocolate or sprinkled with sugar.

- 1 1/2 cups all-purpose flour
- 1/2 cup soy flour
- 2 tsp baking powder
- 1 cup unsalted butter, softened
- 1 cup powdered sugar
- 1 egg
- 1 tsp vanilla extract
- 1/2 tsp almond extract
- Colored sugar for garnish (optional)

Preheat the oven to 350°.

Mix together the all-purpose flour, soy flour, and baking soda. Set aside.

Cream the butter and powdered sugar in a large mixing bowl until light and fluffy. Beat in the egg, vanilla, and almond extracts.

Gradually add the flour mixture to the creamed mixture and mix well.

Fill a cookie press with the dough and press cookies onto ungreased cookie sheets. If desired, top with colored sugar.

Bake for 10 -12 minutes, or until edges are just starting to turn brown. Cool slightly on cookie sheet and then remove to a rack to cool completely.

Yield: 6 dozen cookies. Per serving (2 cookies): 66 calories, 6 g fat (3.3 g sat fat), 19 mg cholesterol, 25 mg sodium, 4 g carbohydrate, 1 g protein (0.4 gram soy protein), less than 1 g dietary fiber.

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Soy Turkey Soup

- 3 cups boiling water
- 2 cups texturized soy protein (TSP)
- 2 pounds ground turkey breast
- 3 cups onions, chopped
- 3 cups green peppers, chopped
- 1 Tbs garlic, minced
- 1 Tbs soybean oil (vegetable oil)
- 10 oz canned diced tomatoes, including liquid
- 1 1/2 quarts canned tomato sauce
- 4 oz canned green chilies, diced (1/2 cup)
- 5/16 cup chili powder
- 2 tsp salt
- 1 Tbs jalapeno peppers, minced
- 3 quarts water

In a large bowl, pour boiling water over soy protein.

In a 14-quart pot, sauté turkey, onions, peppers and garlic in oil over medium high heat until turkey is no longer pink.

Add rehydrated soy protein and remaining ingredients. Bring to a boil; reduce heat and simmer uncovered for 45 minutes.

Serve with assorted condiments such as shredded lowfat Cheddar cheese, yogurt, sour cream or minced onion.

Yield: 24 serving. Per 1 cup serving: 97 calories, 1.3 g fat (.5 g sat fat), 27 g cholesterol, 144 mg sodium, 7.5 g carbohydrate, 16 g protein (8 g soy protein), 3.1 g dietary fiber.

Mexican Soup Olé

No one will guess there are soybeans in this popular Mexican soup! Make the dish as fiery as you wish by adjusting the chili powder and salsa

- 1 onion, chopped
- 2 tsp minced garlic
- 1 Tbs vegetable oil
- 1 can (15 oz.) soybeans, rinsed and drained
- 2 cups vegetable or chicken broth
- 1 can (15 oz.) refried beans
- 1 can (14.5 oz.) diced tomatoes, undrained
- 1 cup salsa
- 1 tsp chili powder

  Optional garnishes: shredded soy cheese, crushed tortilla chips

Sauté the onion and garlic in the oil in a large saucepan or soup pot.

While the onion is cooking, purée the soybeans in the blender with about 1 cup of the broth. Add the puréed mixture, the rest of the broth, and the refried beans to the soup pot and stir until smooth.

Add the remaining ingredients (except optional garnishes) and bring to a boil. Reduce heat and simmer about 15 minutes to let the flavors blend. Garnish individual bowls with cheese and crushed chips, if desired.

Yield: 8 servings. Per 1 cup serving: 148 Calories, 5 g fat (0.6 g sat fat), 0 mg cholesterol, 800 mg sodium, 19 g carbohydrate, 9 g protein (6 g soy protein), 4 g dietary fiber.

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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.
- 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 expirations 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.

Black Bean Salad

- 1 black soybeans (16 oz. can), drained and rinsed
- 1 cup drained canned or cooked corn kernels
- 1 cup sliced celery
- 1/2 cup diced sweet red peppers and green peppers
- 1/4 cup sliced green onions and ripe olive
- 1/4 cup soybean oil (vegetable oil) and white wine vinegar, each
- 3/4 teaspoon salt
- 1/2 tsp chili powder

Combine drained soybeans, corn, celery, sweet peppers, green onions, olives and hot peppers in a large bowl; toss to mix. Combine remaining ingredients in a small bowl and whisk to blend all ingredients or in a cruet and shake until blended. Add freshly ground pepper to taste. Pour dressing over soybean mixture and marinate at least 1 hour.

Yield: 6 servings. Per serving: 180 calories, 10.8 g fat (0 g sat fat), 0 mg cholesterol, 983 mg sodium, 15.5 g carbohydrate, 6.7 g protein (6 g soy protein), 5 g dietary fiber.

Layered Tofu Salad

Salad

- 2 large heads iceberg lettuce, shredded
- 3 medium red onions, thinly sliced
- 3 quarts bean sprouts
- 9 medium tomatoes, cut into 1/2 inch cubes
- 3 lbs silken tofu, cut into 1/2 inch cubes
- 1 1/2 lbs canned red salmon or light tuna
- 3 cups watercress (3 oz.), cut into 1-inch pieces (optional)

Warm Soy Sauce Dressing

- 1 cup soy sauce
- 1 1/2 cups soybean oil (vegetable oil)
- 1 1/2 cups green onions, minced
- 9 cloves garlic, mashed
- 1 1/2 tsp sugar
- 3/4 tsp bottled hot pepper sauce

For buffets, layer salad ingredients in order of listing in a large shallow bowl or serving platter. Just before serving, heat ingredients for Warm Soy Sauce Dressing. Toss salad and serve.

For a sit-down meal, toss salad and serve about 2 cups per serving. Garnish with choice of cherry tomatoes, sliced red onions, sweet red or yellow peppers, sugar pea pods or sliced cucumbers.

Yield: 12 servings. Per serving: 395 calories, 21 g fat (1 g sat fat), 25 mg cholesterol, 1787 mg sodium, 27 g carbohydrate, 29 g protein (16 g soy protein), 6 g dietary fiber.

Wild Green Salad with Raspberry Walnut Vinaigrette

Raspberry Walnut Vinaigrette

- 1/2 cup soybean oil
- 1/2 cup raspberries, fresh
- 1/4 cup walnuts, toasted, chopped
- 1/4 cup balsamic vinegar
- 1/4 cup water
- 3 Tbs red onion, minced
- 2 tsp sugar
- 1/4 tsp salt
- 1/8 tsp black pepper, ground

Wild Green Salad

- 6 cups mixed wild greens (a 5.5 oz. bag of greens yields 6 cups)
- 1/4 cup gorgonzola cheese, crumbled
- 1/4 cup walnuts, toasted
- 1/2 cup raspberries, fresh

To make dressing, place all Raspberry Walnut Vinaigrette ingredients in food processor or blender. Process until smooth; refrigerate. Makes 1 1/4 cups dressing.

Place greens in large bowl. Pour 1/2-cup Raspberry Walnut Vinaigrette dressing over salad; toss until blended. Sprinkle cheese, walnuts and raspberries over salad. Serve immediately.

Yield: 4 servings. Per serving: 210 calories, 20 g fat (4 g sat fat), 5 mg cholesterol, 106 mg sodium, 8 g carbohydrate, 4 g protein, 3 g dietary fiber.

Tuna Edamame Salad

- 1 cup edamame, cooked according to package directions
- 1 cup cherry tomatoes, cut in half
- 1 cup shredded carrots
- 6 oz tuna, water packed, drained (6 oz can)
- 1/2 cup golden raisins
- 1/4 cup diced red onion
- 1/4 cup bottled Italian salad dressing, reduced fat

Mix edamame, tomatoes, carrots, tuna, raisins and onion in medium bowl. Pour dressing over salad and toss until combined.

Serve with pita bread halves or whole grain crackers, if desired.

Yield: 4 servings. Per serving: 210 calories, 3 g fat (0 g sat fat), 25 mg cholesterol, 350 mg sodium, 27 g carbohydrate, 16 g protein (12 g soy protein), 4 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.

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.

Easy Microwave Lasagna

1	lb lean ground beef
32	oz spaghetti sauce
10 1/2	oz lite silken soft tofu
1	egg
1/2	cup water
10	lasagna noodles
2	cups part-skim milk mozzarella cheese, shredded

In microwave colander, crumble and brown ground beef for 5 - 6 minutes on high power. This should be drained well.

Add the beef to the spaghetti sauce. Set aside.

In a small bowl, combine tofu, egg and water; beat well.

In bottom of a 9" x 13" microwave safe dish, spread a small amount of the spaghetti sauce mixture to keep the noodles from sticking. The noodles do not have to be cooked. Break them into the dish to fit, making one layer.

Pour half the tofu mixture over the noodles and top with half the spaghetti sauce mixture. Sprinkle half the cheese over this and repeat the layers.

Cover the dish tightly or use plastic, wrapping the dish in both directions.

Cook on high power for 8 minutes. Continue to cook an additional 32 minutes on medium high.

Let stand 15 minutes and serve.

Yield: 12 servings. Per serving: 243 calories, 11.6 g fat (4.7 g sat fat), 35 mg cholesterol, 493 mg sodium, 18.7 g carbohydrate, 16 g protein (5 g soy protein), 2 g dietary fiber.

Southwestern Pork Tenderloin with Soy Succotash

Southwestern Pork Tenderloin

2 Tbs brown sugar
- 1 tsp paprika, ground
- 1/2 tsp cumin, ground
- 1/2 tsp cayenne pepper, ground
- 1/2 tsp salt
- 1 lb pork tenderloin
- 1 Tbs soybean oil

Soy Succotash
- 2 cups edamame, cooked, drained
- 2 cups cherry tomatoes, cut in half
- 1 cup frozen corn, thawed, drained
- 1/4 cup red onion, diced
- 2 tsp garlic, minced
- 1 tsp cumin, ground
- 1/2 tsp salt
- 1/4 tsp cayenne pepper, ground
- 2 tsp soybean oil

Southwestern Pork Tenderloin:

Preheat oven to 350°F.

Mix brown sugar, paprika, cumin, cayenne pepper and salt. Sprinkle mixture over pork tenderloin.

Heat oil in large ovenproof frying pan over medium high heat. Add pork; cook for 1 minute on each side, until brown.

Place frying pan in oven and bake 10 to 15 minutes until pork reaches an internal temperature of 155°F. Remove from oven and cool 5 minutes before slicing into medallions.

Soy Succotash:

Mix edamame, tomatoes, corn, onion, garlic, cumin, salt and cayenne pepper in medium bowl.

Heat oil in medium frying pan over medium heat. Add edamame mixture and cook, stirring constantly, for 1 to 2 minutes or until warm. Makes 4 cups succotash.

Blend filling mixture with silken tofu, lime juice and lime zest in food processor or blender until smooth and creamy. Filling will be thick. Spoon into crust. Refrigerate at least one hour before cutting.

Yield: 4 servings. Per serving: 380 calories, 14 g fat (2.5 g sat fat), 75 mg cholesterol, 680 mg sodium, 29 g carbohydrate, 34g protein (16 g soy protein), 7 g dietary fiber.

Tofu Alfredo Sauce

- 1 package (12 oz) firm silken tofu
- 1/2 cup Parmesan cheese
- 1/4 cup skim milk or plain soymilk
- 1 Tbs oil
- 1 Tbs dried parsley
- 1 1/2 tsp dried basil
- 1 tsp Kosher salt (or less to taste)
- 1 tsp onion powder
- 1 garlic clove, minced
- 1/4 tsp black pepper
- 16 oz pasta, cooked and drained
- 16 oz frozen chopped broccoli

Combine ingredients except broccoli and pasta in a blender and blend until smooth. Warm in the microwave 3-4 minutes on high, or until hot. Cook pasta. In the last 5 minutes of cooking time, add frozen broccoli to cooking water. Drain and toss with Alfredo Sauce.

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Yield: 4 servings. Per serving: 155 calories, 10 g fat (3 g sat fat), 0 mg cholesterol, 771 mg sodium, 1 g carbohydrate, 13 g protein, 1 g dietary fiber. Reprinted with permission from the Illinois Center for Soy Foods.

Soy - For your heart

The Food and Drug Administration (FDA) says 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."

For more information, go to www.cfsan.fda.gov/~dms/fdsoypr.html.

Soyfoods for the rest of us












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