



Northern California Indian Development Council, Inc. (NCIDC)

www.ncidc.org

## California Native Food and Nutrition Program



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### Soy Foods Month

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#### Good Soy, Bad Soy

Soy products have been a part of the standard diet in China, Japan, Indonesia, and other countries for centuries. In these countries, it is known from personal experience that soy products play an important role in disease prevention. On the other hand, heavily-processed, genetically-manipulated (non-organic) soy, or overuse of soy can be unhealthy.



*Roasted Soy Nuts*

Traditional soy products such as tofu, tempeh, and soy milk are very high in protein. Tempeh has the highest percentage of protein of the traditional soy products providing approximately 22 grams of protein for each 4 ounce (113 gram) serving. Tofu provides approximately 9 grams of protein for a similar small serving size.

It is important to keep in mind, however, that the balance of amino acids (protein building blocks) in soy is not the same as meat. Because soy foods does not have an ideal balance of amino acids, some experts recommend taking in a little extra soy foods and/or combining soy products or legumes with a whole grain dish at meals where other protein (e.g., eggs, fish) is not eaten. The amino acids in whole grains combine well with amino acids in soy and legumes to make a more ideal balance of amino acids. If a person's diet is reasonably-balanced, however, there is usually no need to be concerned about getting enough protein.

#### Examples of "Good Soy":

**Edamame** -- Immature soybeans picked while still green and eaten directly from the pod. Salted and served either hot or cold, they are often eaten in Japanese restaurants as an appetizer.

**Miso** -- A paste made by cooking soybeans and then fermenting the beans with salt in wooden tubs for one to three

years. There are several forms of miso depending upon what grain added to the product (e.g., barley, brown rice). In general, the longer the miso is aged, the darker the color and stronger the flavor.

Miso contains a large amount of beneficial bacteria and enzymes. However, unpasteurized miso must be purchased in order to get the beneficial bacteria. Miso is particularly useful as an aid to improving digestion and the health of the intestinal tract. There is some scientific evidence that fermented products with beneficial bacteria can help to prevent some forms of cancer.

Miso is used in soups, sauces, dressings, stir fries, and spreads. Only a small amount is used. In general, lighter forms of miso are used more frequently in the warmer months and darker forms in the colder months. Miso should be kept refrigerated. Unpasteurized miso made with organic soybeans can be found at almost all health food stores.

**Natto** -- Natto is a traditional Japanese fermented food made by fermenting boiled soy beans with *Bacillus natto*. It can be used as a topping for rice or put in vegetable dishes or soup. Some people do not like the strong taste. Natto can be found in some health food stores or Asian supermarkets.

**Soy Cheese** -- A cheese substitute made from soy milk. It is often found on casseroles, pizza and other dishes which commonly contain cheese. It is important to note that some commercial products which contain soy milk or soy cheese also contain dairy proteins such as whey or casein (caseinates) that some people want to avoid due to allergies or diet preferences.



*Tempeh*

**Soy Milk** -- A milk substitute made by soaking organic soybeans, cooking and blending the soybeans, and finally straining off the soy milk. Often, vanilla or honey is added at the end of the process. Almost all soy milk on the market is made from organic soybeans.

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Soy milk can be used for drinking, cereal, and in cooking. Keep in mind, however, that of the healthier soy products available, soy milk can be difficult to digest for some people. If this is the case, rice milk can be used to replace soy milk in recipes and easily-digestible soy products such as tempeh and tofu can be used to obtain soy protein and other beneficial aspects of soy. It is important to note that some commercial products which contain soy milk or soy cheese also contain dairy proteins such as whey or casein (caseinates) that some people want to avoid due to allergies or diet preferences.

**Tamari** -- A soy sauce made from soybeans, water and sea salt. It has a slightly stronger flavor than shoyu. Organic soybeans are commonly used and no MSG or artificial additives are added. It can be used in small amounts in stir fries, soups, dressings, sauces, and other dishes. Tamari can be found in most health food stores.

**Tempeh** -- A cake of soybeans that is made by removing the hull of cooked, organic soybeans, mixing with a culture, and aging for a day or two. The culture helps hold the soybeans together in a cake form. It is common to find tempeh made with added ingredients such as vegetables or grains. Tempeh cakes are cut up and added to stir fries, vegetable dishes, and casseroles. Tempeh is high in protein and rich in calcium. Tempeh can be found at almost all health food stores.



*Edamame*

**Tofu** -- A white soybean cake made from cooked soybeans and nigari (magnesium chloride). Tofu contains a significant amount of protein and is rich in calcium. It is an easily digestible form of soy. Tofu is used in soups, stir fries, sauces, dressings, burgers, and many other types of dishes. Tofu tends to absorb the flavors/seasonings added to the dish. Tofu is made with organic soybeans and can be found in almost all health food stores.

### **Potential Problems Related to Soy:**

A number of recent articles have been published about potential dangers of soy. A person who occasionally ingests traditionally-processed soy products (miso, tempah, natto, tofu) and otherwise has a balanced, healthy diet and lifestyle will not have to be overly-concerned with the potential dangers of soy. However, those who eat soy regularly, especially products with heavily-processed or genetically-manipulated soy ingredients should pay close attention to the issues relating to the potential dangers of soy products.

Avoid heavily-processed soy ingredients such as soy protein isolate, soy protein concentrate, hydrolyzed soy protein, and texturized soy protein. Instead use traditionally-processed soy products such as miso, tempeh, tofu, natto, and soy milk.

Use soy products occasionally. Eating miso soup several times per week and having tempeh or tofu in a dish a couple of time per week is fine.

### **Examples of Soy Products to Avoid:**

**Hydrolyzed Soy Protein** -- The extraction process of hydrolysis involves boiling in a vat of acid (e.g., sulfuric acid) and then neutralizing the solution with a caustic soda. The resultant sludge is scraped off the top and allowed to dry. In addition to soy protein it contains free-form excitotoxic amino acids (e.g., MSG) and other potentially harmful chemicals including potential cancer-causing chemicals in many cases. A newer method of hydrolysis involves the use of bacteria by itself or in addition to the chemical processes described above. There is a possibility that genetically-manipulated bacteria may be used.

The food industry sometimes uses large amount of hydrolyzed proteins as a "taste enhancer" because it contains significant amounts of MSG (monosodium glutamate). This is what is known in the food industry as "Clean Labels" -- adding MSG to food, without having to list it as "MSG" on the label.

In almost all cases, hydrolyzed soy protein contains a significant amount of genetically-manipulated soy. The hydrolyzed protein products currently added to foods may be a detriment to one's health. There are much healthier sources of soy protein and soy nutrients.

**Soy Protein Concentrate** -- A processed concentrate made from defatted soybean flakes. It contains largely soy protein, but retains some soy fiber as well. It is usually made from genetically-manipulated (non-organic) soy. Soy protein concentrate is commonly found in frozen "soy" burgers. Despite heavily-hyped claims about soy protein concentrate in relation to heart disease, osteoporosis, etc., health-conscious consumers will probably want to limit this processed, genetically-manipulated form of soy and rely largely on healthier soy choices such as soy milk, tempeh, tofu, tamari, natto, etc.

**Soy Protein Isolate** -- A highly-processed protein isolate where the soy protein is removed from defatted soybean flakes. Soy protein isolate contains over 90% soy protein. It commonly contains genetically-manipulated soy. While the soy protein in the isolate is easily-digestible, the use of genetically-manipulated soy and the heavy processing which removes much of other elements of the soybeans make soy protein isolate a product to avoid where possible. Tofu and tempeh can be used instead as they contain easily-digestible forms of soy protein as well as all of the other beneficial aspects of the soybean.

Much of the information in this article has been summarized from: [www.soyinfo.com](http://www.soyinfo.com)



# CFNP Soy Cook Off!



Hello everyone, we decided to play with soy. Yes, you read it right soy. More than half of our newsletter team knew nothing about soy. So the few who knew about this bodacious bean decided to make some recipes that included soy. The key was to make each recipe tasty and easy to make. This is how the first ever CFNP Soy Cook Off came to be. We had a potluck lunch with the NCIDC staff.



All of the dishes looked great and smelled even better. There were many other healthy foods at our lunch that didn't include soy. Everyone was anxious to try the dishes. During the lunch we asked everyone to rate the soy dishes as they ate them. The best overall dish would be picked from the staff's ratings.

I asked Hakekta Jealous-Of-Him, what she thought of soy before and after our luncheon:



"I have always known that soy came from beans and that tofu had a bland taste unless you knew how to cook with it, which I didn't know how to do. When I tried some of the dishes my co-workers prepared for the *Soy Cook-Off*, I was impressed. I really enjoyed the hot dishes and salad prepared using tofu as an ingredient. I also found I like the soybeans

(edamame), that were lightly salted and baked."

*-Hakekta Jealous-of-Him, Oglala Lakota*

## And the winner is....

### Andre's Soylicious Spaghetti

This is one of those recipes that is not strictly vegetarian. I first started from the idea that adding soy into my families diet is a good thing as it adds lean protein nutrients and vitamins without many of the health concerns of a pure meat recipe. Tofu, a soy product is used in this recipe in addition to meat to provide some extra nutrition.

#### Ingredients:

- 1 small can tomato paste
- 1 medium can tomato sauce
- 2 fresh (organic if available) tomatoes
- 1/2 lb mushrooms (I prefer wild tan oaks)
- 3 cloves garlic diced fine
- 1/2 onion, chopped
- 1/2 lb pork sausage (cooked and drained)
- 1/2 lb firm tofu (pressed & drained), I found meatless "meatballs" at Grocery Outlet
- Add fresh herbs to taste, oregano, basil, rosemary or dried Italian seasonings work also.
- 1/2 tsp black pepper

Combine all ingredients and simmer for 1 hour. Add sauce to pasta, rice or into your lasagna. This is a one-course meal that you can serve with garlic toast if you like.



For added nutrition you can add foods like corn, spinach, zucchini, shredded carrots, wheat germ, leeks, asparagus tips, artichoke hearts and olives.



## Senior Section: Soy & You

Research on the benefits of soy protein show that an intake of 25 grams per day of soy protein can have a significant effect in lowering cholesterol, reduce the risk of coronary heart disease, delay bone loss and even help prevent memory loss. Soy products are protein dense. They pack plenty of energy, and retain moisture; making the foods they're used in more tender and palatable. This makes soy products ideal



recipe ingredients for seniors, who often don't take in enough protein, calories, and fluid to stay healthy.

Soy products abound in the health food market, and can also now be found at neighborhood grocery stores. Here are some easy ways to add soy to your regular diet:

- Use tofu as a substitute for meat in your meals, or as a filler in casseroles, stir fry, soups, or shakes. Tofu is relatively inexpensive as well as an excellent source of protein. Purchasing tofu that has been set in calcium can provide an excellent source of that nutrient.
- Snack on soy nuts or soy crisps, they come in an ever increasing variety of flavors - roasted, salted, barbecue, ranch, even chocolate covered.
- Be willing to try new items. Products to try range from the whole edamame bean plant (source of soy protein), to soy milk, tofu corn dogs and chicken nuggets.

Enjoy the adventure, and appreciate the health benefits.

### TIPS:

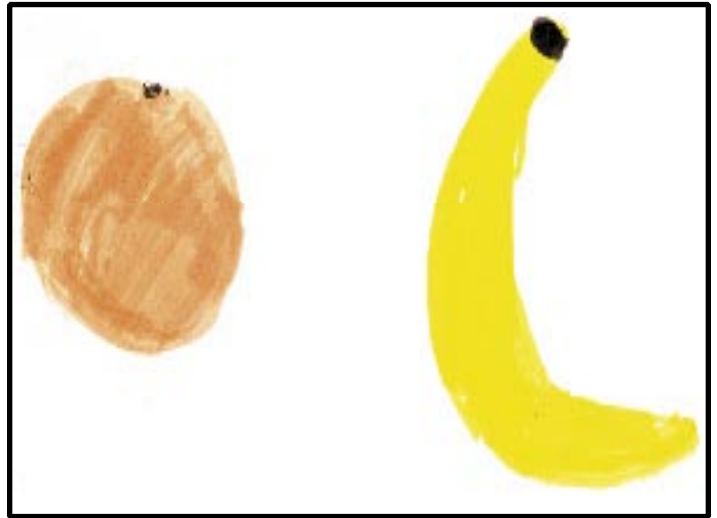
- If you want to make traditional soy foods a part of your diet, try edamame. They are large soybeans that taste sweet and can be eaten as a snack or as a vegetable.

- You can make soy smoothies by blending two (2) ounces of tofu, one (1) banana, one (1) tablespoon of frozen apple juice concentrate.
- You can make variations by adding vanilla yogurt, cinnamon, or different fruit combinations.
- This can also help you get your "Five-a-Day" fruits and vegetables.

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Healthy Foods Picture By: Kiana

Age: 9

Tribe: Karuk



Why is this food your favorite?

Because it's healthy food.

What other foods are good for you?

Grapes and apples.

What foods are bad for you?

Candy, sugar and cake.

*Those of you with thyroid problems should see your doctor before including soy in your diet. Eating soy has been shown to worsen thyroid problems by inhibiting thyroid peroxidase and this disrupts proper thyroid functions. Eating more than 25 grams of soy a day can lead to goiters, cause dehydration and constipation. Always check with your doctor before making any dietary changes. For more information please visit: <http://thyroid.about.com/>*

# Dr. Coyote\*

Answers on food and exercise



Dearest Dr. Coyote:

Riddle me this: My Husband is pushing me to eat more soy-bean products (tofu, soy milk, etc.). My parents ate meat at every meal and never touched a soybean that I can recall and they both lived into their late 40's. Shouldn't this be good enough for me? Signed One Who Hates Tasteless Foods

Dear Tasteless:

I never met a food I didn't like. Heck I have eaten grubs, prickly pear, trout (brains, eyes, fins and all), roots, worms, bugs, choke-cherries, salmon cheeks, and worst of all, mutton. You name it and I can choke it down. I might make an exception for soy. A big blob of jiggly white goo does not seem like a meal, but then again with enough ketchup and hot sauce I will try anything (how do you think I learned to like liver, a big red blob of jiggly goo?). I have found a great item in the frozen section called TOFFUTTI which tastes just like ice cream. So bring over a case of that and we can discuss this matter in depth (I prefer the chocolate cheesecake supreme). <http://www.tofutti.com/>

Reasonable Response:

Soy is grown all over the world. Although soybeans have been eaten as a staple in Asian diets people in America are just starting to include this healthy product into their diet. Soybeans are high in protein, have less fat than most meat, and as a bonus doesn't have saturated fat, which can lead to heart disease. Look for non-GMO, enriched (things like calcium and vitamins added) and organic sources.

Items such as Miso (very tasty in soup) soy milk, extra firm tofu, and raw soybeans contain nutrients that may prevent heart disease, cancers and are healthy products all around. Experiment with different recipes and add soy a bit at a time until you find what you like. Soy is very versatile and if you use it with spices and add it to your regular meals it will give you a nutritional boost and does not alter the taste. One important note is that many medical sources suggest

since soy is high in phyto-estrogens, women who are pregnant should consult their doctor about a soy-rich diet.

*\* Dr. C is a Native trickster. Follow his advice with great caution. He is Old-Man Coyote in most tribes, Raven in northwestern Indian tradition, or, more generically, "The Tricky One" (such as Wakdjunkaga among the Winnebago or Manabozho among the Menomini), but he has many other disguises as well. Trickster does not always speak the truth, but nonetheless you can learn a lot from him. If you have any health questions about this column please talk with your own medical advisor.*

## Higher BMI Can Lead to Health Risks

Body Mass Index, or BMI, is a new way that most doctors calculate the health problems associated with being heavy. Your BMI is a number gotten by using height and weight measurements. BMI is very accurate and does not consider, gender, frame size or body type.

The table below has already done the math and metric conversions. To use the table, find the appropriate height in the left-hand column. Move across the row to the your weight. The number at the top of the column is the BMI for that height and weight. Or, use a BMI calculator. <http://www.halls.md/body-mass-index/bmi.htm>



Normal BMI is between 18 and 25, At Risk range is from 25-29, and Obese is anything above 30.

BMI Height Metric	21	22	23	24	25	26	27	28	29	30	31	32	33
	Weight (pounds)												
4'10"	100	105	110	115	119	124	129	134	138	143	148	153	158
4'11"	104	109	114	119	124	128	133	138	143	148	153	158	163
5'0"	107	112	118	123	128	133	138	143	148	153	158	163	168
5'1"	111	116	122	127	132	137	143	148	153	158	164	169	174
5'2"	115	120	126	131	136	142	147	153	158	164	169	175	180
5'3"	118	124	130	135	141	146	152	158	163	169	175	180	186
5'4"	122	128	134	140	145	151	157	163	169	174	180	186	192
5'5"	126	132	138	144	150	156	162	168	174	180	186	192	198
5'6"	130	136	142	148	155	161	167	173	179	186	192	198	204
5'7"	134	140	146	153	159	166	172	178	185	191	198	204	211
5'8"	138	144	151	158	164	171	177	184	190	197	203	210	216
5'9"	142	149	155	162	169	176	182	189	196	203	209	216	223
5'10"	146	153	160	167	174	181	188	195	202	209	216	222	229
5'11"	150	157	165	172	179	186	193	200	208	215	222	229	236
6'0"	150	157	165	172	179	186	193	200	208	215	222	235	242
6'1"	150	166	174	182	189	197	204	212	219	227	235	242	250
6'2"	163	171	179	186	194	202	210	218	225	233	241	249	256
6'3"	168	176	184	192	200	208	216	224	232	240	248	256	264

(Weight is measured with underclothes and no shoes.)

In 2005, 65% of adult Americans are overweight or obese, and 16% of American children are overweight. Native peoples have even higher rates of these problems. Carrying this extra weight puts you at risk for many diseases, especially heart disease, stroke, diabetes, and cancer. Losing this weight helps to prevent and control these diseases. The National heart Blood and Lung Institute, (NHLBI) guidelines provide you with a new approach for the measurement of overweight and obesity and a set of steps for safe and effective weight loss. <http://nhlbisupport.com/bmi/bmicalc.htm>



## Food Source: On Your Own Organic Gardens

Wouldn't you like to eat food you grew yourself? Even better how about food that you grew organically. Organic foods and products are easier to find today than they were ten years ago.

Your success in organic gardening depends in large part on your soil. Look at your native soil. Whether you have it tested or you draw your own conclusions, decide if your soil needs a fertilizer that has nitrogen, phosphorus, and potassium.

Improve your earth by adding organic matter to gain two important benefits: more water retention and better drainage. Use animal manures for their mixture of organic matter and nutrients, along with at least one other natural material, such as compost, ground bark, leafs, yard clippings or peat moss. Compost can help build up soils that are too sandy or have too much clay.

Be sure when using fertilizer in your soil, that you read the labels carefully and apply the recommended amount for your garden size. Use this rule of thumb for adding organic matter: 3 inches of soil can usually do best with 4-6 inches of combined manure, compost and so on. Rake your organic soil mix into beds or rows and water it well. Wait a couple of weeks or so for the different parts to mellow, then it will be ready for planting. Items such as night crawlers or worm castings are excellent soil strengtheners.

Check for local organic fertilizers at garden centers, health food stores and farm supply stores, as well as organic farms, horse barns and chicken producers. Compost any raw manures for at least six months be-



## Kidz : Brainy Breakfasts

### How Breakfast Can Improve School Performance

Breakfast means just that: break the overnight fast. Eating breakfast allows you to restock the energy stores that have been depleted overnight and begin the day with a tank full of the right fuel. Sending your child to school without breakfast is like trying to use a cordless power tool without ever recharging the battery. Indian families traditionally enjoyed hearty morning meals to give them energy all day long.

If you don't refuel your child's body in the morning after an overnight fast, the child has to draw fuel from their own energy stores until lunch-time. The stress hormones necessary to mobilize these energy reserves may leave the child feeling irritable, tired, and unable to learn or behave well.

If you want your child to rise and shine rather than limp along sluggishly at school all morning, make sure your child's day gets off to a nutritious start.

### Balanced Breakfasts

An ideal, nutritious breakfast contains a balance of complex carbohydrates and protein. Think grains, plus dairy, plus fruits. Examples of balanced breakfasts are:

1. Granola cereal, yogurt, a sliced apple
2. Scrambled eggs, toast, orange juice
3. Veggie omelet, bran muffin, fruit & yogurt
4. Whole-grain pancakes or waffles topped with berries and/or yogurt, milk
5. Whole-wheat zucchini pancakes, topped with fruit,
6. French toast with fruit, orange juice or milk
7. Low-fat cream cheese melted on toast with a fruit
8. Peanut butter and banana slices on an English muffin

*The contents of this newsletter are for information purposes only and should not be used for diagnosing or treating a health problem or disease. It is not a substitute for professional care. If you have or suspect you may have a health problem, you should consult your health care provider. Additional information, research, resources and links can be found at: [www.ncidc.org/food/pdfs.html](http://www.ncidc.org/food/pdfs.html)*

