Low-Lectin and Lectin-Free Diets
by Kristina Moses
© January 2018

What are lectins?
Lectins are a group of proteins found in most plant foods. Because lectins transfer when eaten, even animals that eat high-lectin foods will have those lectins in their meat! It is believed that plants evolved to have lectins as a defense against being eaten – or in cases such as unripe fruit, simply being eaten at the wrong time.

Why should we avoid lectins?
Not all lectins are bad. One of the problems that we have today is that we are eating more lectins than ever before. Modern farming techniques give us year-round access to handfuls of foods we previously would have only had seasonally, or could only harvest a small amount of.

Today, we have far too much access to “bad lectins”, some of which can cause inflammation all over the body and may even trigger autoimmune disorders. Some lectins can also have toxic reactions in nerves and other cells, interfere with nutrient absorption in the gut, and affect blood pressure. They can even cause hormone disruption, pain and weight gain.

According to Dr. Gundry, author of The Plant Paradox, the type of lectins found the seeds of the grass family induce heart disease in experimental animals. (The grass family includes wheat, corn, rice, oats, rye, millet, teff, wild rice, etc.)

Because there are lectins in so many foods, it is impossible to completely avoiding them; just do your best to reduce them wherever possible. The more symptoms and conditions you have, the more diligent you should be in avoiding them.

What foods contain lectins?
The following foods should be completely avoided as they have the highest lectin-levels: Corn, grain-fed meats and animal products, peanuts, cashews, red kidney beans, soybeans (if they are not fermented), and casein A1 milk.

Other foods that are high in lectins are:
All legumes - nuts, beans, peas, lentils, etc.,
Grains - barley, oats, rice, buckwheat, millet, quinoa, wheat, etc.,
Nightshades - all tomatoes, all potatoes (but not sweet potatoes), all peppers, eggplants, goji berries,
Fruit (if it’s not local and picked at the peak of ripeness), and
Members of the gourd family (squash, zucchini, pumpkin, etc.).
**Are there ways to reduce lectins in foods that have high lectin content?**

The lectin content of certain foods can be reduced by soaking, sprouting and cooking (particularly with a pressure cooker), or by removing the skins and seeds. See the below section on proper preparation and cooking for lectin-foods. *If a person is struggling with very ill health, all high-lectin foods should be avoided completely,* but if one is just having only mild symptoms then these can be properly prepared and eaten in small amounts.

Oddly contrary to common practice in the holistic world, Dr. Gundry suggests that opting for white rice over brown will also reduce your exposure to lectins.

**Are there foods that don’t have lectins?**

When it comes to lectins, the best foods to eat are asparagus, garlic, onions, celery, mushrooms, cooked root vegetables (like sweet potatoes, yucca and taro), leafy greens, cooked cruciferous vegetables (like bok choy, broccoli, Brussels sprouts, cabbage, cauliflower, collard greens, radishes, turnips, etc.), olives and high-quality extra-virgin olive oil, a small amount of local and ripe fruit (it has to be ripe at the time of picking). A small amount of grass-fed meats and pasture-raised corn-free chicken are good. If you like and tolerate dairy, casein A2 milk, goat’s milk and buffalo milk are all good, as is organic raw cheese from grass-fed cows.

Remember that not all lectins are bad. Avocados contain high amounts of lectins, but these lectins are safe and even healthy.

See the list of lectin-free foods at the bottom of this article.

**Proper Preparation and Cooking For Lectin-Foods**

**Sprouting**

The lectins in some seeds, grains and beans are primarily in the seed coat. Sprouting “eats” the coat which dramatically reduces the lectins.

In general, the longer the sprouting continues, the more lectins are deactivated. There are some exceptions to sprouting. For instance, sprouting actually increases the lectins in alfalfa, therefore we recommend always avoiding alfalfa and alfalfa sprouts.

**Soaking**

This is probably the most traditional method of preparing beans and grains.

**Beans** - Soak the beans in water with baking soda for at least 12 hours. Change the water frequently, always adding more baking soda with each change of water. Rinse the bean really well before cooking. Bring the cooking water to a rapid boil and cook the beans for at least 15 minutes. The best cooking method for beans is a pressure cooker.
**Cautions for beans:** NEVER eat raw or undercooked beans. Never use water that beans have been soaking it; always discard it. Never eat beans that have been cooked at a low temperature as this can actually increase the toxicity of the beans. Do not use dry bean flour in recipes.

**Grains** - Put the grains in a bowl of water and add baking soda. Soak overnight, and then rinse the grains really well before cooking.

**Cooking**
Dry heat (such as baking) will not reduce lectins. It has to be wet heat, such as boiling, steaming or pressure-cooking (which is the best of all cooking methods for lectin-removal). Pressure cooking will reduce the lectins in beans, tomatoes, potatoes and quinoa, but won’t be effective for wheat, rye, barley, spelt or oats. Avoid slow cookers for lectin-foods as the low temperature may actually increase some lectin content. Don’t use raw flours in baked goods unless they are sprouted.

**Fermenting**
When you ferment a food, the beneficial bacteria eat the lectins and other harmful substances. If you are going to eat soy products, eat only fermented soy like miso, tempeh, natto, etc. Traditional sourdough bread is an excellent example of fermented grains and is safest to eat (organic and gluten-free is best, such as Bread SRSLY which you can order online).

**Peeling and De-seeding**
For many foods, the seeds, skins and rinds are where the majority of the lectins are contained. Therefore, peeling and removing the seeds from foods like cucumbers and zucchinis may reduce the lectins sufficiently for you to eat them without suffering negative consequences. You can even remove the skin from almonds to decrease the lectin content.

**NOTE:** These methods don’t completely remove all lectins, particularly in beans and nightshades, so if you are not experiencing relief from a reduced-lectin diet, try a completely lectin-free diet before giving up on this approach.
# Healthful Lectin-Free Foods to Eat

## Vegetables

*Organic is best. Frozen is okay. 70% of your diet should be vegetables. Eat a variety!*

### These vegetables should mostly be eaten cooked (occasionally raw is fine):

<table>
<thead>
<tr>
<th>Arugula</th>
<th>Cassava (in moderation)</th>
<th>Radishes</th>
<th>Turnip greens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bok choy</td>
<td>Cauliflower</td>
<td>Rutabaga (in moderation)</td>
<td>Yams (in moderation)</td>
</tr>
<tr>
<td>Broccoli</td>
<td>Collard greens</td>
<td>Spinach</td>
<td>Watercress</td>
</tr>
<tr>
<td>Brussels sprouts</td>
<td>Daikon radishes</td>
<td>Sprouts (except alfalfa)</td>
<td></td>
</tr>
<tr>
<td>Cabbage (Green, Red, Napa and Chinese)</td>
<td>Kohlrabi</td>
<td>Sweet potatoes (in moderation)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mustard greens</td>
<td>Turnips (in moderation)</td>
<td></td>
</tr>
</tbody>
</table>

### These vegetables can be eaten raw or cooked:

<table>
<thead>
<tr>
<th>Artichokes</th>
<th>Chives</th>
<th>Lettuce (Romaine, Butter, Red leaf and Green leaf)</th>
<th>Perilla</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asparagus</td>
<td>Cilantro</td>
<td>Dandelion greens</td>
<td>Mesclun</td>
</tr>
<tr>
<td>Basil</td>
<td>Dandelion greens</td>
<td>Endive</td>
<td>Mint</td>
</tr>
<tr>
<td>Beets</td>
<td>Dandelion greens</td>
<td>Escarole</td>
<td>Mizuna</td>
</tr>
<tr>
<td>Beet greens</td>
<td>Escarole</td>
<td>Fennel</td>
<td>Mushrooms</td>
</tr>
<tr>
<td>Carrot greens</td>
<td>Garlic</td>
<td>Hearts of palm</td>
<td>Okra</td>
</tr>
<tr>
<td>Carrots</td>
<td>Garlic</td>
<td>Kimchi (raw)</td>
<td>Onions</td>
</tr>
<tr>
<td>Celery</td>
<td>Hearts of palm</td>
<td>Jicama (in moderation)</td>
<td>Parsley</td>
</tr>
<tr>
<td>Celery root (in moderation)</td>
<td>Leeks</td>
<td>Parsnips (in moderation)</td>
<td></td>
</tr>
<tr>
<td>Chicory</td>
<td>Leeks</td>
<td>Leeks</td>
<td>Leeks</td>
</tr>
</tbody>
</table>

## Proteins

*Meats - up to 4oz daily:*

- Grass-fed grass-finished Beef
- Lamb
- Bison
- Wild game
- Venison
- Boar
- Pork

### Other Proteins:

- Pasture-Raised eggs (4 yolks daily or 1 egg white)
- Organic Tempeh (grain-free only)
- Organic Natto

## Dairy

*Organic is best. For cow’s milk products, only eat grass-fed cow products.*

<table>
<thead>
<tr>
<th>Brie (goat’s milk)</th>
<th>Cheese (high-fat French, Italian or Swiss, such as triple-cream brie)</th>
<th>Milk (Casein A2 only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butter (goat’s milk)</td>
<td>Cheese (cow’s milk - 1oz only)</td>
<td>Mozzarella (from buffalo milk)</td>
</tr>
<tr>
<td>Butter (grass-fed French or Italian)</td>
<td>Cream cheese</td>
<td>Sour cream</td>
</tr>
<tr>
<td>Cheese (cow’s milk - 1oz only)</td>
<td>Ghee</td>
<td>Yogurt (coconut)</td>
</tr>
<tr>
<td>Cheese (goat’s and sheep’s milk)</td>
<td>Heavy cream</td>
<td>Yogurt (cow’s milk - 4oz only)</td>
</tr>
<tr>
<td>Kefir (goat’s and sheep’s milk)</td>
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</tbody>
</table>
**Oils** – The best oils for cooking are Rice Bran, Light/Refined Olive Oils and clarified butter/ghee. Try to cook on low heat – do not let oils smoke. For non-cooking oils, grass-fed butter, and expeller- or cold-pressed olive, coconut, avocado, Macadamia, MCT, Perilla, Red Palm, Rice Bran, Sesame, and Walnut Oils are the best. Always store oils in the refrigerator so that they don’t go rancid.

**Fruit** – Avocado is very good and you can eat up to 2 per week. Coconut is acceptable, but easy to overeat, so be moderate. You can sparingly eat: in-season berries, baobab fruit, green bananas or plantains, persimmon, green mango or papaya.

**Sweeteners** – Stevia, Chicory Root, Inulin, Luo han guo (Monk fruit), and Yacon are the best. Sugar alcohols such as Xylitol, Erythritol, etc. can be used as well, but work up slowly. Do not use sugar alcohols if you have seizures or other neurological issues. If a different sweetener must be used, raw honey and pure maple syrup are acceptable, but only in small amounts.

**Nuts, Seeds & Legumes** – Up to ½ cup per serving, no more than three servings per week: Macadamia, Walnuts, Pecans, Pistachios, Pine nuts, Brazil nuts (do not overeat Brazil nuts – no more than 14 per week), Chestnuts, Flaxseeds, Hemp seeds, Pecans, Pine nuts, Sesame Seeds, Tiger nuts, Hemp protein powder, Psyllium.

**Flours** – Up to ¼ cup per serving, no more than three servings per week: Almond flour (not meal), Arrowroot, Cassava, Chestnut, Coconut, Grape seed, Green Banana, Hazelnut, Millet Sorghum, Sesame, Sweet potato, Tapioca from cassava, Tiger nut.

**Breads, Cereals and Noodles** – Cappello’s fettuccine, Pasta Slim, Miracle Noodle Shirataki noodles, Miracle Noodle Kanten pasta, Miracle Rice, Siete brand tortillas, Bread and bagels made with coconut flour by Bakery Paleo Wraps, and Paleo coconut flakes cereal in moderation are good options.

**Desserts** – So Delicious No Sugar Added coconut ice cream, Lily’s Chocolate and other dark chocolates (72% or great with less than 4g of sugar per serving) in moderation are good options.

**Alcohol** – It is better to abstain, but if you have to drink: Champagne (one 6 oz glass per day), Red (one 6 oz glass per day), Aged spirits (1 oz.). Do not mix fruit or other sugary things into it.

**Miscellaneous** – All olives, herbs, seasonings, and vinegars (without added sugar) are absolutely allowed.