

## Preparing Grains, Legumes, Nuts & Seeds

Grains and pulses have been a part of the human diet for thousands of years. One trait of a healthy diet is that when grains, legumes, nuts, and seeds are included they are properly soaked and prepared. The ancients understood that in order to properly digest and fully utilize the nutrients contained in the pulses, special care and time needed to be taken in their preparation. Some 2400 years ago Hippocrates taught that the body is affected differently by bread according to the manner in which it is prepared.

Seeds, grains, legumes, and nuts should be soaked, sprouted, fermented, or naturally leavened. These processes neutralize the various toxins or “anti-nutrients” that are present in all pulses. Enzyme inhibitors in these seeds can block digestion, having the opposite effect of food enzymes, making digestion more difficult. Phytic acid is an acid naturally present in grains and legumes in which phosphorus is stored. Phytic acid must be neutralized in order to prevent it from interfering with mineral absorption. Tannins and lectins, which are also present, can be very irritating and damaging to the digestive tract. Traditional preparation processes break down the complex sugars, starches, and proteins in seed foods and also begin the breakdown of cellulose, which is impossible for humans to digest. Therefore, proper preparation makes grains, legumes, nuts, and seeds more digestible and their nutrients more available.

### Grains

The addition of grains to the diet can add the benefits of many valuable nutrients, provided grains are prepared in a manner that makes those nutrients available for absorption. Traditionally grains were consumed whole and after being soaked or fermented. Modern science has been able to discover the importance of this ancient practice. All grains contain phytic acid (an organic acid in which phosphorus is bound). Unreleased phytic acid binds to certain minerals such as calcium, copper, iron, magnesium, and zinc preventing their absorption in the intestinal tract. This can over time lead to conditions such as irritable bowel and leaky gut syndromes, and eventually much more serious disorders. Soaking allows enzymes and probiotic organisms to break down and neutralize phytic acid. It is important that soaking occur in warm acidulated water. This can be accomplished through the use of real yogurt, homemade whey, lemon juice, or raw apple cider vinegar. We prefer the use of raw fermented yogurts, homemade liquid whey, or raw apple cider vinegar.

Grains should be soaked in the following way: 1 cup grain to 1-1 ½ cups warm filtered water plus 2 tablespoons yogurt, whey, fresh lemon juice, or raw apple cider vinegar for 7 to 24 hours. Prior to cooking, drain water and proceed to cook per recipe. *Nourishing Traditions* by Sally Fallon offers a nice selection of delicious grain recipes.

Rice and millet are the lowest in phytic acid and therefore their soaking times are lowest. Cooking in bone broth will also neutralize the amount of phytic acid. Quinoa contains saponins, which can be extremely irritating to the gut so be sure to rinse quinoa at least once during its soaking time.

Unsoaked grains in the form of commercial breads, pastries, granola, and dry cereal are never recommended. True sourdough breads are a nice alternative to homemade bread. Gruels and porridges made from properly soaked grains provide a healthy replacement for boxed dry cereals. Don't forget the butter.



## Soaking times:

*Rice and millet:* 7 hours minimum

*Quinoa:* 24 hours minimum and rinse at least once

*All other grains:* 12-24 hours minimum

Neutralizer and water amount:

1:2 ratio grain: water except for quinoa, which is 1:3.

For one cup of grain use two cups of water with 2 tablespoons of neutralizer, except for quinoa. Add to one cup of quinoa three cups of water and one tablespoon of neutralizer.

Cooking times: 45 to 60 minutes

## Basic Oatmeal

*1 cup oats*

*1 cup purified warm water plus 2 tablespoons neutralizer such as homemade whey, yogurt, kefir or buttermilk (raw apple cider vinegar may be used for those with dairy allergy)*

*½ teaspoon Celtic sea salt*

*1 cup purified water*

Mix oats and 1 cup purified warm water and 2 tablespoons of neutralizer. Allow to soak for 24 hours. Bring 1 cup of purified water and Celtic sea salt to a boil and add soaked oats. Lower heat, cover and simmer for ten minutes. Serve with plenty of butter or ghee, small amount of raw honey or maple syrup, cinnamon, crispy nuts and/or berries.

## Legumes

Legumes should be soaked for 7-24 hours, changing the water every 7 hours. Soak in a neutralizer (also known as a “deactivator”) such as homemade whey, lemon juice, raw apple cider vinegar, or baking soda.

### Neutralizer guidelines:

*Lentils and garbanzos:* Use whey, raw apple cider vinegar, or lemon juice. Add 2 tablespoons of neutralizer to one cup of lentils or garbanzos.

*Kidney-shaped beans (kidney beans, pintos, Anasazi, navy, white, black bean):* Use baking soda; a pinch baking soda for one cup of kidney-shaped beans.

1. Do not use cold water for soaking legumes. Bring purified water to a simmer so that you begin with room temperature or slightly warm water.
2. Rinse legumes every 7 hours and at least once to three times during the soaking process when soaking beyond 7 hours. Each time you rinse, add newly simmered water and another dose of the neutralizer.
3. The longer you soak your legumes, the shorter your cooking time.
4. Avoid using a pressure cooker. The extremely high temperature and pressure will denature the protein and can destroy other nutrients in the legumes.
5. Be sure to skim and discard the scum that may appear after beans are first brought to a boil. Lower the heat and simmer. Do NOT boil beans. This will cause them to become tougher and more difficult to digest.
6. Do NOT add salt to the cooking water as it will toughen the beans.



7. A strip or two of kombu can be added to the cooking water, especially of kidney-shaped beans, and will help break down the oligosaccharides, minimizing gastric distress. Kombu also adds minerals to your legumes.

**Soaking guidelines:**

*Lentils:* soak for 7 hours or more

*Kidney-shaped beans:* 18-24 hours

*Garbanzos:* 24-48 hours

**Cooking guidelines:**

*Lentils:* cook 45-60 minutes

*Kidney-shaped beans:* cook 2-4 hours

*Garbanzos* (also known as chickpeas): cook 4-6 hours

**Nuts & Seeds**

Certain enzyme inhibitors found in nuts and some seeds make them more difficult to digest, especially when eaten in large amounts. Soaking nuts in warm, purified water with Celtic sea salt added overnight (or on average at least for 7 hours) neutralizes these enzyme inhibitors. For four cups of nuts or seeds, use one-tablespoon Celtic sea salt in enough warm, purified water to cover nuts or seeds by an inch. After draining water, place in a dehydrator at 120°F or in a warm oven under 150°F for 12 to 24 hours, depending upon crispness. *Nourishing Traditions* by Sally Fallon has some scrumptious recipes for nuts and seeds.

Please note that “raw” cashews are not truly raw. They have been heated in an oven at 350 degrees Fahrenheit while in their shell in order to neutralize a toxic oil called cardol. Soaking at this point will not enhance the enzymes but will still make them more digestible. Soaking longer than 6 hours will make them soggy. Bake at 200-250°F for 12-24 hours stirring 2-3 times during the process.

If you are dehydrating in an oven, please turn nuts several times during the dehydrating process. We recommend TSM or Excalibur dehydrators.

**Soaking Time Chart**

Raw Nuts or Seeds	Soaking Time in Hours
<b>Almonds</b>	7-8
<b>Brazil nuts</b>	4-6
<b>Cashews</b>	3-6
<b>Filberts (hazelnuts)</b>	7-8
<b>Flax seeds</b>	7-8
<b>Macadamia nuts</b>	6-7
<b>Pecans</b>	7
<b>Pine nuts</b>	7
<b>Pistachios</b>	4
<b>Pumpkin seeds</b>	7-8
<b>Sesame seeds</b>	7-8
<b>Sunflower seeds</b>	4
<b>Walnuts</b>	6

