Based on historical research, grains such as quinoa, chia, flax, farro and sorghum were among the most prized foods consumed by the first people on the Earth. Around the world, many have relied on these grains as a dietary staple, given their versatility, dependable harvest yields, nutritional benefits and valued flavor. Now known as “ancient grains,” these valued grains are coming into clear focus for mainstream America, with their names becoming part of common vernacular, and more products arriving at market shelves due to consumer demand.

**Overall nutrition**

Though each grain has its own individual sets of health benefits, many of the ancient grains are relatively higher in protein, fiber and minerals than modern grains; many are also gluten free. As such, they make excellent alternatives for boosting nutrition while exploring new taste and flavor profiles. For example many recipes may use red and black rice, barley, couscous and quinoa in place of white rice. In others, amaranth and spelt can be used in place of wheat flour. Chia seeds, flaxseed and legumes provide additional ways to boost nutrition and fiber content.

**Cardiometabolic Markers**

Looking at some of the most popular ancient grains, there are positive cardiovascular health impacts linked to their consumption. Diseases of the cardiovascular system can be monitored in many ways including blood pressure, blood lipids, oxidative stress and inflammatory markers. A table of the positive cardiometabolic impacts are listed to the left.

**Research Highlights**

While ancient grains have been around for thousands of years, research on their health benefits is still burgeoning. Here are some of the topline findings:

- Soluble fibers in some of these grains have been shown to lower LDL blood cholesterol by interfering with the absorption of dietary cholesterol.\(^1\)
- Daily supplementing with 30 grams of milled flaxseed daily over six months demonstrated reduced systolic and diastolic blood pressure.\(^7\)
- Daily quinoa consumption at a 25 gram level saw reduction of total cholesterol by 10 points and LDL by eight points.\(^7\)
- Eight weeks of replacing semi-whole grain wheat with Kamut lowered blood glucose levels, total cholesterol by four percent and LDL by nearly eight percent.

**Food Allergy/Intolerance**

Up to 15 million Americans are affected with food allergies, including one in 13 children. There are only eight foods responsible for nearly 90 percent of allergic reactions in America. One of those foods is wheat.\(^4\) Additionally, a significant percentage of the general population report problems caused by wheat and/or gluten ingestion, even though they do not have celiac disease or a wheat allergy.\(^1\)

This is known as non-celiac gluten sensitivity.\(^1\) In either case, people living with food allergies and intolerances have found a logical fit with ancient grains, as many of them are both whole grain and free of gluten.

**Diabetes**

Many ancient grains have been linked through research with a healthy blood sugar response.

- Research on flaxseed powder and quinoa shows they can play a role in the therapeutic management of type 2 diabetes, helping to manage blood sugar spikes.\(^8,9\)
### How much fiber is in common grains, seeds and starches?

<table>
<thead>
<tr>
<th>Grains, Seeds and Starches</th>
<th>Total Fiber (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barley, pearled, cooked, 1 cup</td>
<td>6</td>
</tr>
<tr>
<td>Bread, white, 1 slice</td>
<td>.6</td>
</tr>
<tr>
<td>Bread, wheat, 1 slice</td>
<td>1</td>
</tr>
<tr>
<td>Chia, 1 ounce or 2 Tbsp</td>
<td>10</td>
</tr>
<tr>
<td>Couscous, cooked, 1 cup</td>
<td>2</td>
</tr>
<tr>
<td>Farro, 1 cup</td>
<td>28</td>
</tr>
<tr>
<td>Flaxseeds, whole, 1 Tbsp</td>
<td>3</td>
</tr>
<tr>
<td>Kamut, cooked, 1 cup</td>
<td>7.5</td>
</tr>
<tr>
<td>Millet, cooked, 1 cup</td>
<td>2.5</td>
</tr>
<tr>
<td>Pasta, cooked spaghetti, white, 1 cup</td>
<td>1.8</td>
</tr>
<tr>
<td>Potato, baked with skin, 1 cup</td>
<td>3.9</td>
</tr>
<tr>
<td>Quinoa, cooked, 1 cup</td>
<td>5</td>
</tr>
<tr>
<td>Rice, cooked brown, 1 cup</td>
<td>3.5</td>
</tr>
<tr>
<td>Rice, cooked white, parboiled, 1 cup</td>
<td>.7</td>
</tr>
<tr>
<td>Red Rice, cooked, 1 cup</td>
<td>8</td>
</tr>
<tr>
<td>Sorghum, white, dry grain, 1 cup</td>
<td>13</td>
</tr>
</tbody>
</table>

• Noodles containing millet have been measured to have nearly 30 percent lower glyemic index than average refined white starch noodles.¹

• An Indian study found that glycemlic response to pearl millet and barley was significantly lower than glyemic response to white bread, particularly in individuals who did not already have type 2 diabetes.⁵

• Rolled barley supports more controlled diabetes management; postprandial glucose and insulin levels continue to trend lower after replacing a serving of white rice with 30%, 50% and 100% of rolled barley.

### Digestive Benefits

Ancient grains are generally higher in fiber than modern day grains, many of which have been stripped of their outer germ and bran layers to achieve longer shelf-life and to create softer textures while cooking and baking. As with many things, this subject has come full circle as we now fully recognize the health benefits of leaving the grain intact, which includes the support of healthful digestion. Dietary fiber content – including both insoluble and soluble fibers are important for gut function. Soluble fibers absorb excess fluids, slow digestion (and thereby blood sugar response in the body), and aid with the satisfaction of feeling full.⁶ Insoluble fibers help move the bowels more smoothly and with less reabsorption of water.¹

### Key messages for consumers

• Research on ancient grains demonstrates a beneficial relationship with a multitude of health markers that can prevent chronic disease.

• Varying familiar grain choices and recommending trial of unfamiliar grain choices can foster benefit for improved blood pressure, blood lipids, oxidative stress, inflammatory markers, diabetes management, digestive health.

• Nutrition guidelines suggest people consume 25 grams (for women under age 50) to 38 grams (for men under age 50) of fiber per day. One cup of quinoa provides 8 grams and can help achieve that goal with ease.⁷

### Ancient Grains Brought To Present Day

Until recently, grains like quinoa, millet and chia have been mostly enjoyed by those with health food lifestyles or grain allergies. As times have changed, and so has demand, these ancient grains are no longer limited to health food or specialty stores. Ancient grains are now mainstream and on the shelves in most grocery aisles. The UNCLE BEN’S® and SEEDS OF CHANGE® brands are proud to supply rice blends and pilafs that include black and red quinoa, red and brown rice, and couscous. Please visit www.unclebens.com and seedsofchange.com for the most current flavored grain blends. In addition, Registered Dietitian Nutrition professionals can always be a resource for strategies and cooking tips for bringing ancient grains into present day.

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⁶ Food & Function. 2013:4(11);1602-8.


