



Eat More Whole Grains

CHALLENGE
Eat 3 or more
servings of
whole grains
daily.

Requirements to complete this HEALTH CHALLENGE™

1. Read about the health benefits of whole grains.
2. Each day, keep a record of how many servings of whole-grain foods you eat.
3. To complete the Challenge, you must eat 3 or more servings of whole grains, 22 days or more this month. Use your monthly **Health Challenge™ Calendar** to keep track.
4. Keep records of your completed Challenge in case your organization requires documentation.

What's a whole grain?

All grains are whole grains in their natural state. They are seeds made up of three components: the bran, the germ, and the endosperm. A grain can be eaten whole, cracked, split, or ground and still be a “whole grain” – as long as all three components are present.

Refining or processing grains strips away the bran and germ, which contain most nutrients, dietary fiber, essential fatty acids, and antioxidants – all of which protect your health. Bleaching (to make flour white) further reduces the nutritional content.

Sometimes manufacturers replace a few of the lost vitamins and minerals, which is why you may see products labeled “enriched.” However, most vitamins, minerals, and other protective factors (e.g., dietary fiber) are still lacking.

Health benefits of whole grains

Whole grains are good sources of fiber, vitamins, minerals, and key nutrients needed by the body for good health. Numerous studies show that people who eat primarily whole grains have less obesity,

diabetes, heart disease, colon and pancreatic cancer, hypertension (high blood pressure), high cholesterol, macular degeneration, and possibly even less acne. People eating whole grains live longer, healthier lives!

On the other hand, a high intake of refined grains (e.g., white flour, white rice) increases the risk for many of these same health problems. Let's look at the evidence.

Whole grains protect the heart

A study of 26,000 people living in California looked at bread consumption and heart health.¹ Those people who ate primarily whole-wheat bread, compared to those who ate white bread, reduced their risk of heart attack by 46%. Something as simple as switching from white bread to whole-grain bread

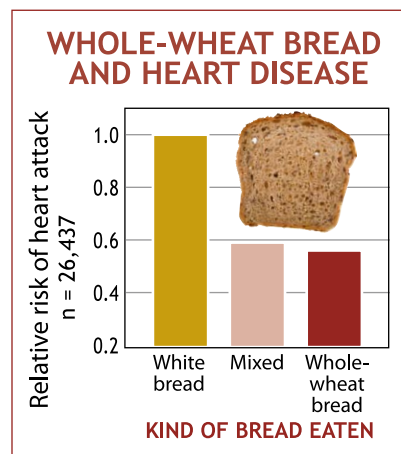
could cut your risk of heart attack in half!

In another study, this time of 21,376 male physicians followed for almost 20 years, Harvard researchers found that eating whole grains daily reduced the risk of heart disease by 28%.²

A third study involving more than 75,000 women saw a 25% reduction heart attack risk in those who ate the most whole grains (3 servings/day) compared to women eating the least (less than 1 serving/day).³ When only nonsmokers were considered, the risk of a heart attack dropped to 50%! One simple way to reduce your risk of a heart attack is to eat at least 3 servings of whole-grain breads and cereals daily.

Whole grains help people maintain a healthy weight

Whole grains are absorbed more slowly and have higher fiber than white bread and other refined grains. They tend to decrease blood insulin levels and improve satiety (feeling full), thus decreasing the tendency to overeat and store excess fat. A diet which includes whole grains is linked to a lower weight and smaller waist circumference.^{6,7,8}



Whole grains help prevent diabetes

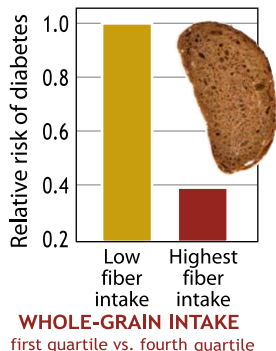
Harvard School of Public Health researchers reviewed six studies totaling 286,125 participants and found that eating just two servings a day of whole grains was associated with a 21% decreased the risk of type 2 diabetes.⁴

A nutrition study in Finland looked at the intake of whole grains and the risk of getting diabetes in over 4,000 men and women.⁵ After 10 years, those who ate the most whole grains were 35% less likely to develop diabetes than those who ate mostly refined grains. When considering the extremes, those eating the most whole grain fiber reduced their risk of diabetes by 61% compared to those eating the least. That's an amazing difference. The fiber in whole grains slows the absorption of sugar and other carbohydrates, lowering blood sugar levels and the risk of developing diabetes.

People who eat whole grains live longer

It's true! A study of 15,000 people looked to see who lived the longest.¹² They found that those people who ate the most whole grains (top 20% of the group) had the lowest mortality during the study. Compared to those eating the least whole grains (bottom 20%), the whole-grain eaters cut their risk of dying from any cause nearly in half (48%).¹² When nearly 42,000 postmenopausal women were followed for 17 years, researchers found that whole grains were protective against early death.¹³

WHOLE-GRAIN INTAKE AND DIABETES RISK



Whole grains decrease cancer risk

A study looked at diet and the risk of rectal cancer in more than 2,000 people. Researchers found that eating a lot of all these high-fiber foods reduced the risk by 66%. When looking at whole grains alone, the risk was reduced 31%.⁹

A more recent study by the National Institutes of Health of more than 291,000 men and 197,000 women aged 50 to 71 showed that whole-grain fiber, and not fiber from other food sources, was associated with a 35% reduction in colorectal cancer risk among those in the highest compared with the lowest quintile of whole-grain intake.¹⁰

Whole grains included high-fiber, ready-to-eat cereals, whole-grain breads, cooked cereals, whole-grain pancakes, brown rice, whole-grain tortillas, whole-grain pasta,

When researchers compared the diets of 532 pancreatic cancer patients with 1,701 people who were cancer free, they suggested that eating at least 2 servings of whole grains each day may cut the risk of this deadly cancer by as much as 40%.¹¹

Choose a variety of whole grains daily

Be sure you get 3 or more servings of whole grain bread or cereal daily. It is a simply way to improve your nutrition, your health, and your chances for living a long, healthy life!

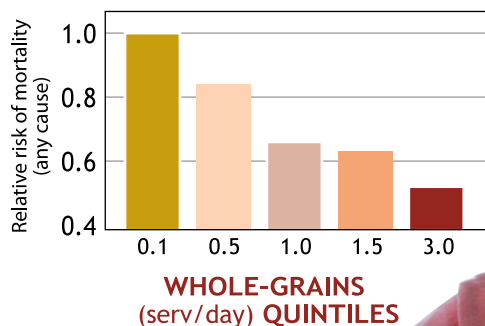
A serving is 1 slice of 100% whole-grain bread, 2/3 cup whole-grain ready-to-eat cereal such as shredded wheat, or 1/2 cup cooked whole grains such as oatmeal, brown rice, or whole grain pasta. Coarsely ground or stone-ground is best when available. It helps keep blood sugar levels low.

Look for whole-grain alternatives to your favorite foods.

Use brown rice instead of white. Try whole-grain pasta. Use whole-grain flour in place of white. Read food labels to make sure it says 100% whole wheat or 100% whole grain. Labels that read "wheat flour" or "enriched flour" mean white, refined flour. Don't be fooled.



WHOLE-GRAIN INTAKE AND MORTALITY RATES



MORE



But I'm allergic to wheat...

People with wheat allergy can have skin problems, congestion, and digestive problems caused by an abnormal immune system response. Some people who think they are allergic to wheat actually have a problem with gluten, a protein found in wheat, barley, and rye. In this case, the immune system attacks and damages the small intestine or skin. As many as 1 in 133 Americans could have this condition, called celiac disease. Symptoms include abdominal bloating and pain, gas, chronic diarrhea, weight loss, joint pain, and in some cases, skin problems.

If you have one of these conditions, you should talk with your doctor. You might need to avoid gluten. But there are still plenty of whole grains that you can eat. In place of wheat pasta, use brown rice or quinoa pasta. When baking, use brown rice, corn, potato, millet, amaranth, and arrowroot flours instead. These flours cook differently than wheat, so look for recipes specifically calling for these ingredients. For a list of gluten-free grains, see the sidebar.

The Internet contains a lot of information about celiac disease, which may or may not be accurate – unless you use a reliable site such as the National Institutes of Health. Check with your doctor.

Grains with Gluten	Gluten FREE Grains
Wheat <ul style="list-style-type: none">• Spelt• Emmer• Faro• Einkorn• Kamut• Durum• Bulgur• Semolina• Wheatberries	Amaranth* Buckwheat* Corn <ul style="list-style-type: none">• Whole cornmeal• Popcorn Millet Montina (Indian rice grass) Quinoa* Brown rice Wild rice Sorghum (milo) Teff Oats**
Barley Rye Triticale Oats**	
<p><i>*These "Pseudo-grains" are included with true cereal grains because their nutritional profile, preparation, and use are so similar.</i></p> <p><i>**Oats are inherently gluten-free, but are frequently contaminated with wheat during growing or processing.</i></p> <p><i>Source: Whole Grains Council. 2008.</i></p>	

Find gluten-free recipes on the Celiac Sprue Association website: www.csaceliacs.org/recipes.php

Sources:

- (1) *Archives of Internal Medicine*. 1992 Jul;152:1416.
- (2) *Archives of Internal Medicine*. 2007 Oct;167:2080-2085.
- (3) *American Journal of Clinical Nutrition*. 1999;70:412-419.
- (4) *PLoS Medicine*. 2007 Aug 28;4(8):e261.
- (5) *American Journal of Clinical Nutrition*. 2003 Mar;77:622-629.
- (6) *American Journal of Clinical Nutrition*. 2007 Dec;86(6): 1745-1753.
- (7) *American Journal of Clinical Nutrition*. 2004 Nov;80(5):1237-1245.
- (8) *American Journal of Clinical Nutrition*. 2003 Nov;78(5):920-927.
- (9) *American Journal of Clinical Nutrition*. 2004 Feb;79(2): 274-281.
- (10) *American Journal of Clinical Nutrition*. 2007 May;85(5):1353-1360.
- (11) *American Journal of Epidemiology*. 2007 Nov;166(10):1174-1185.
- (12) *American Journal of Clinical Nutrition*. 2003 Sep;78(3):383-390.
- (13) *American Journal of Clinical Nutrition*. 2007 Jun;85(6):1606-1614.
- (14) *National Institute of Diabetes and Digestive and Kidney Diseases*. 2008.





Eat More Whole Grains

Instructions

1. Post this calendar where you will see it daily (bathroom, kitchen, bedroom, etc.).
2. Make a notation each day you eat 3 or more servings of whole grains.
3. At the end of the month, total the number of days you were able to meet the goal. You must meet this goal at least 22 days during the month to complete the Challenge. Then keep up this healthy practice for a lifetime of good health!
4. Turn in your Health Challenge™ form to Whole Wellness Within to earn your wellness points.

CHALLENGE
Eat 3 or more
servings of
whole grains
daily.

MONTH: _____							HC = Health Challenge™ ex. min. = exercise minutes
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	Weight & weekly summary
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_____ Number of days this month I ate 3 or more servings of whole grains

_____ Number of days this month I got 30+ minutes of physical activity such as brisk walking or biking

Last 4 digits of Employee Soc. Sec. # _____

If you are a spouse, check here _____

Date _____

