

# GRAINS: Sustenance of Health? Or High Sugar Inflammatory Irritant?

*“Recent clinical trials have failed to support a role for whole grains in promoting weight loss or maintenance” (Karl & Saltzman 2012)*

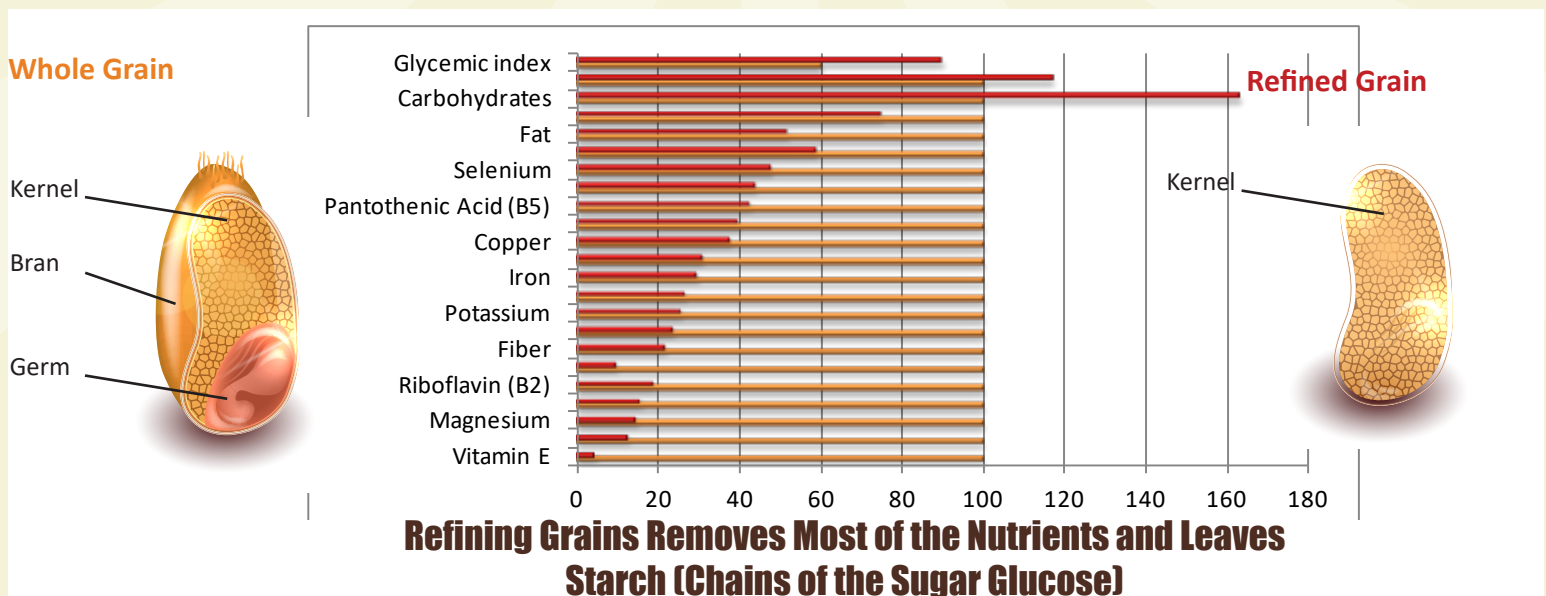
*“A diet free of grains and dairy caused more weight and fat loss than one that included recommended amounts of whole grains.” (Genoni 2016)*

*“Studies do not demonstrate a clear effect of increased whole-grain consumption on C-reactive protein or other markers of inflammation” (Lefevre & Jonnalagadda 2012)*

*“There is no association between whole grain consumption and improved cardiovascular disease, diabetes, weight gain, or overall mortality. There may be an increased rate of cancer” (Williams 2012)*

**There is no protein, vitamin, mineral, or fiber that you can get from grains that you can't get in better quantities elsewhere.**

**When grains are refined; nutrient density is even less.**



**Grains** are the seeds of plants. **Cereal grains** are the seeds of plants from the grass family: wheat, corn, rice, oats, barley, rye...

**Whole grains** contain all parts of the grain, including the bran, kernel (endosperm) and germ.

**Bran** forms the protective, outer seed layer. Bran is a rich source of niacin, thiamin, riboflavin, magnesium, phosphorus, iron and zinc. The bran also contains the majority of the seed's fiber.

**Germ** is the future new plant and a concentrated source of niacin, thiamin, riboflavin, vitamin E, magnesium, phosphorus, iron and zinc. The germ contains most of the seed's protein and fat.

**Kernel** (endosperm) makes up the bulk of the seed and is mostly long chains of the sugar glucose making it a starch (carbohydrate).

# 1 cup cooked whole grains = 2 servings! Nutrients per 1/2 cup serving:

	Glycemic Load	Calories	Carbs	Fiber	Protein	Allergens/Irritants
<b>Wheat / Ancient</b>	44	340	72g	8g	14g	Gluten*
<b>Corn</b>	35	88	21	2.1	3	Zein*
<b>Rice</b>	11	112	24	2	2	Orzenin*
<b>Oats</b>	28	302	51	2	2	Avenin*
<b>Barley Seed</b>	12	123	29	4	2.3	Horedin*
<b>Rye</b>	33	335	70	15	15	Secalin*
<b>Millet Seed</b>	12	119	24	1.3	3.5	Grass family*
<b>Buckwheat</b>	37	343	72	10	14	Safe
<b>Amaranth / Celosia</b>	9	102	19	2	4	Safe
<b>Quinoa / Kañiwa</b>	9	110	21	3	4.4	Safe if wash well
<b>Breadnut</b>	30	217	50	15	6	Safe

Most people eat 1 cup of **PROCESSED** grains PER MEAL from these sources = **SUGAR:**

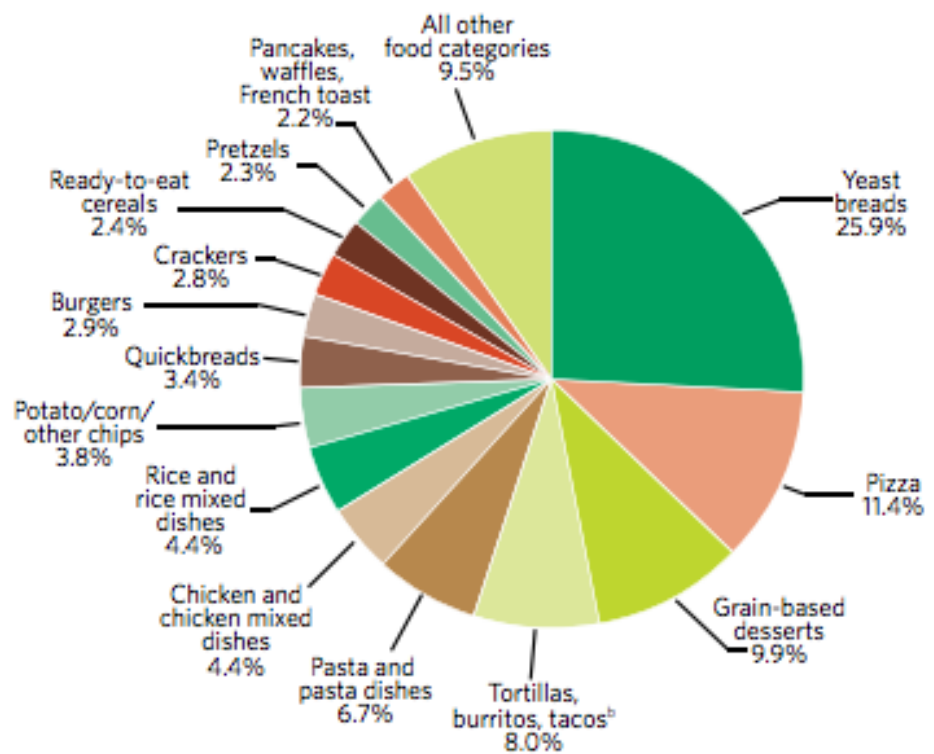
\***Gluten** is one of a **FAMILY** of proteins found in all seeds within the grass family. These proteins all share similarity to each other—and to proteins in your body (especially thyroid).

## We Only Hear About Gluten. Why?

only **1** percent of us have Celiac disease; yet... **5.6%** (18 million) have non-celiac grain sensitivity (it was just 0.2 percent in 1940)

## What's Really Happening?

- ◇ Non-organic grains increase toxic load: pesticides, glyphosate, metals...
- ◇ Nitrogen-based fertilizer lowers nutrient content while increasing gluten content.
- ◇ ALL gluten-like proteins irritate the gut; it can become leaky and inflamed, even autoimmune..
- ◇ Gluten-like proteins (especially avenin in oats) break down into gliadin which looks like proteins found in your thyroid gland. These proteins can trigger autoimmunity.
- ◇ 5X risk of celiac and type 1 diabetes when introduce gluten-like protein before 4 months old in predisposed babies.
- ◇ Sprouting can reduce, but not eliminate, irritants. Sensitive individuals or those with a family history of autoimmune disease should avoid cereal grains entirely.



Data above from NHANES 2003-2004. Additional references:

Aune, D., Keum, N., Giovannucci, E., Fadnes, L. T., Boffetta, P., Greenwood, D. C., ... Norat, T. Whole grain consumption and risk of cardiovascular disease, cancer, and all cause and cause specific mortality: systematic review and dose-response meta-analysis of prospective studies. *The BMJ*. 2016 353, i2716.

Genoni, A., Lyons-Wall, P., Lo, J., & Devine, A. Cardiovascular, Metabolic Effects and Dietary Composition of Ad-Libitum Paleolithic vs. Australian Guide to Healthy Eating Diets: A 4-Week Randomised Trial. *Nutrients*, 2016 8(5), 314.

Lefevre M & Jonnalagadda S. Effect of whole grains on markers of subclinical inflammation. *Nutr Rev*. 2012 Jul;70(7):387-96.

Wu X & Schauss AG. Mitigation of Inflammation with Foods. *J Agric Food Chem*. 2012 Apr 15.

Karl JP & Saltzman E. The role of whole grains in body weight regulation. *Adv Nutr*. 2012 Sep 1;3(5):697-707.

Spreadbury I. Comparison with ancestral diets suggests dense acellular carbohydrates promote an inflammatory microbiota, and may be the primary dietary cause of leptin resistance and obesity. *Diabetes Metab Syndr Obes*. 2012;5:175-89. Epub 2012 Jul 6.

Williams PG. Evaluation of the evidence between consumption of refined grains and health outcomes. *Nutr Rev*. 2012 Feb;70(2):80-99.