



July 24, 2011 – Grand Rapids, MI

## Wheat: Friend or Fiend?

Since I did the series on Legit or Not, I've been getting more emails asking my opinion about what others have written. My goal in writing the series was to give you the skills to interpret things for yourself. I've decided to handle one more, but I'm not going to make this a regular feature; there's too much interesting science that's positive, and I want to write about that. But because this was written by the Internet's self-appointed health expert with a supposed million and a half readers, I'll do it one more time. The article lead was "3 Ounces of This a Day May Be Harming Your Brain." Let's see what was said and if there's any evidence to support it.

### The Article

The first part of the article is a summary of articles on wheat from Green Web. The people who run the Green Web website seem to believe that wheat is harmful and should never be eaten. The articles on that website are long and seemingly well referenced. The author of two articles on wheat believes wheat should be eliminated from our diet because it's toxic. Okay, I get it. But in the section where the writers for the website explain what their website is about, they state that they're going to present only supporting documentation for their positions about health and will omit those "which do not provide support for these properties or may indicate adverse effects." I've never actually read anything stated so blatantly. Most health gurus do that, but don't really state it so straightforwardly.

That also means the opposite must be true. When they're opposed to something, they present only research that supports the position that it's bad while omitting research that suggests it may be good. Their position is that all wheat and wheat products are bad, and they present only data that supports that position. The people at Green Web are telling you upfront that their site is biased, so why you would give what they say any credence is beyond me.

### WGA

The rest of the article is a commentary by the self-appointed expert on one aspect of wheat: its ability to cause brain problems from schizophrenia to Alzheimer's disease. The primary culprit in wheat is not gluten but another part of the wheat germ called wheat germ agglutinin (WGA). This is a lectin, a special type of protein that acts to protect the seed from bacteria and fungi.

Here are a couple of problems. Both the Green Med article and the expert's article cite numbers—3 ounces of bread is enough to cause brain damage; 500 mcg WGA per slice of bread; 16.7 trillion individual molecules of WGA in one kernel of wheat—but there's not a single reference to support those numbers. I have no clue how they were calculated. Here's what I found when I ran "wheat germ agglutinin" through PubMed, the scientific database. There were 6,489 articles published with those key words when I ran it. When I added bread or flour to the key words, no results were produced. I limited the search to the key words in clinical trials on humans. Five articles came up and only one actually used WGA (1).

The study used wheat germ to treat a water-borne infection caused by *Giardia lamblia*. Wheat germ contains 13 to 53 micrograms of WGA per gram; the subjects were given just two grams of wheat germ three times per day or a placebo. Some subjects were symptomatic while others had the infection without symptoms. Those who took the wheat germ did better than those who took the placebo.

That's it folks. That's the only clinical trial on humans, and it had a positive effect from the WGA. Every thing that was written on Green Med and by the expert was on animal or test-tube trials, and as I've said before, the same thing may happen in humans or it may not. I don't know how that proves brain damage by eating bread, but I guess all you really need are headlines to get attention.

## The Bottom Line

Don't think for a moment that I don't recognize the problem with gluten intolerance or celiac disease—I do. About 1% of the population has the genetic tendency for celiac and must avoid wheat and most grains. But that means that 99% of us won't have a problem with wheat. The real problem is that we eat highly refined grains and not whole grains. The wheat is not a fiend; it's the form in which we eat it that's the problem. What we really don't need is self-appointed experts hand-picking research to support their position. What's healthy about that?

If you want to know more about what I found, listen to tonight's *Straight Talk on Health*. Believe me—it will take the entire show to tell it all.

What are you prepared to do today?

## Dr. Chet

### Reference:

1. Am J Trop Med Hyg. 2001 Dec;65(6):705-10.

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