

# Real Foods That Heal



Weekly bulletin, volume 2, #9  
June 21, 2008

## **Ginger: “non-smoking” for your brain**

Last week, we began a series of bulletins on food’s role in reducing risk of brain disease, including dementia. It was fitting to initiate that series with an issue about fish, and we chose to highlight Atlantic mackerel as a food high in omega-3 fatty acids, low in contaminants, and eco-friendly for the oceans. Remember that other species of mackerel can be a problem in those areas. This week, we take a refreshing look at a food which is also a spice, which also has been used as a natural medicine for centuries: ginger.

Ginger has the botanical name *Zingiber officinale*, indicating its “official” place in the historical pharmacy of natural medicines. The root of the plant is the part we consume, and it was first widely cultivated and used as a medicinal food in China and India. It was brought to Europe centuries ago on the early spice trade routes, and because of its value was cultivated as a commodity on colonial islands in the Caribbean. We know it has been used for perhaps 2000 years in traditional Chinese medicine for nausea and improving digestion, has been thought in Ayurvedic medicine to prevent heart disease and treat arthritic complaints, and is generally seen as a “warming” remedy for illnesses and conditions associated with cold. In the modern era, we have learned that ginger has potent anti-inflammatory properties, reducing production of prostaglandins and leukotrienes which circulate in higher levels in the blood during inflammatory states.

Now, what does this have to do with preventing brain disease? We know that Alzheimer’s dementia is associated with increased inflammatory markers in the brain, and that specifically a compound called TNF-alpha increases its activity in the brain in Alzheimer’s. A 2004 article in the *Journal of Alternative and Complementary Medicine* (authored by some researchers from my alma mater, Johns Hopkins) showed that a ginger extract has the potential to slow the progression of brain cell loss in Alzheimer’s disease. Here’s how: a hallmark of Alzheimer’s disease is the formation of plaques between brain cells, called neuritic plaques, made from beta amyloid peptide. This beta amyloid is very irritating to its surroundings, provoking an inflammatory response from immune cells in the brain called microglial cells. The inflammatory chemicals are many, including TNF-alpha and others. It is thought that those inflammatory chemicals contribute to brain cell loss. And the researchers in this paper showed in the laboratory that a ginger extract inhibits the production of those inflammatory chemicals from immune cells which are exposed to beta amyloid peptide. So while this has not yet been demonstrated in human studies, the data suggest that

a ginger extract could prevent some of the damage to brain cells that marks the progression of Alzheimer's disease.

While I personally prefer to take my medicine as food, I am frequently asked "how much ginger should I take?" There are no definitive dosing guidelines, but if you want to take a powdered ginger extract in capsules, a minimum dose would be 250mg four times daily (with meals and bedtime). If you like the crystallized ginger, one cube is probably 1000 mg of ginger, and one or two a day would be a good dose. This is a very safe herb with virtually no toxicity or interaction with drugs. But why not enjoy its delicious and pungent flavor and aroma in food? Exploring new tastes by adding ginger to familiar foods can bring excitement to a meal, so just enjoy it, and feel free to ignore its medicinal qualities which will benefit your body while you just focus on the flavor!

### Ginger stir-fry

Take one fresh ginger root, peel it and grate about one tablespoon into a one cup glass container. Add 2 cloves of crushed garlic, ½ tsp black pepper, 2 tsp olive oil, and 1/3 cup of soy sauce. Mix well and pour the mixture over your choice of cubed extra firm tofu or chicken breasts cut into bite sized pieces. Let marinate in refrigerator for one hour at least. Then in a large wok, heat sufficient olive oil to coat the surface, and stir fry the tofu or chicken until browned and the chicken is cooked, set aside. Then in the same pan, stir fry a mix of your favorite vegetables, pre-cut. Suggested ingredients include: onions, carrot slices, shitake mushrooms, broccoli, and cabbage. Once softened but still bright in color, mix in the already cooked chicken or tofu, stir well, and serve hot over brown rice, adding hot pepper sauce to taste if you so choose!

And remember, someone you know needs this information so that they can also benefit from the healing powers of foods. Please forward this bulletin to them by using the link below.

To your health,

Robert Pendergrast, M.D.

[www.realfoodsthatheal.com](http://www.realfoodsthatheal.com)

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