



# Choices Healthy Views

## Choices Favorite Remedies



### The Amazing Properties of Ginger (*Zingiber officinale*)

By Peggi S. Cross PhD and Devin A. Mikles, MD

Ginger has been a go-to remedy that we have both used for years. We recommend its use acutely whenever there is risk of getting a bacterial or viral illness, and recommend daily use especially for joint pain. We have seen ginger cold extract stop cases of food poisoning within a half hour by taking a ginger extract because it kills bacteria. This also means that it will kill the good bacteria in your gut so take care to follow the instructions given below, and if you accidentally get too much (which will cause intestinal cramping), immediately take a probiotic to restore the healthy flora of the gut. Unlike a hot water extract, the cold water extract recommended below keeps helpful ingredients from volatilizing so that they can act as antivirals and antibacterials.

#### Ginger Cold Water Extract

Peel a one inch by one inch piece of ginger, grate it and place it in 2 cups of pure room temperature water. Cover and allow to sit for about 8 hours at room temperature.

Strain the juice and place it in a clean covered jar. Mix the juice in a 25% juice to 75% water ratio and drink 8 ounces twice per day.

#### Healing Properties of Ginger

##### Anti-inflammatory

Cyclooxygenase (COX) inhibitors are used as anti-inflammatory drugs. Extract of ginger was found to inhibit COX-2 (induced specifically during inflammatory, degenerative and neoplastic processes) but not COX-1 (expressed in all tissues) making it a good candidate for inflammation treatment (van Breeman et al., 2011).

##### Antioxidant

A study of the total antioxidants in dietary plants found ginger to be among one of the highest others included Rosaceae (dog rose, sour cherry, blackberry, strawberry, raspberry), Empetraceae (crowberry), Ericaceae (blueberry), Grossulariaceae (black currant), Juglandaceae (walnut), Asteraceae (sunflower seed) and Punicaceae (pomegranate) (Halvorsen et al., 2002).

#### Inside this issue

The Amazing Properties of Ginger (*Zingiber officinale*)

Peggi S. Cross, PhD .and Devin A. Mikles, MD.....1

What's New at Choices.....3

Natural Medicine Store Favorites.....5

Diet News and a tasty treat.....7

### Choices Integrative Healthcare of Sedona

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Continued on page 2

## Complementary Health Practices Available at Choices

- Botanical Medicine
- Chiropractic
- Acupuncture
- Cold Laser Therapy
- Homeopathy
- Intravenous Infusions
- Mind/Body Medicine
- Neural Therapy (NT)
- Neuromuscular Therapy
- Nutritional Therapy/  
Counseling
- Relaxation, Visualization
- Stress Management
- Traditional Chinese Herbal  
Medicine
- Ultraviolet Blood Irradiations and Ozone Therapy

Ginger continued from page 1

### **Antibacterial:**

*Ginger was shown to be antibacterial against Staphylococcus Aureus, Escherichia coli, Staphylococcus aureus (MRSA), Escherichia coli (R), and Klebsiella pneumoniae (R) when the powder was mixed with honey in a 0.125 g/ml (12.5%) ratio (Ewnetu et al., 2014).*

### **Antifungal:**

*A chemical compound in ginger was found to be effective against Aspergillus oryzae, Aspergillus flavus, Aspergillus niger, Aspergillus ochraceus, Fusarium oxysporum and Penicillium chrysogenum (Kubra et al., 2013).*

### **Antiviral :**

*Fresh ginger has anti-viral activity against human respiratory virus and acts to reduce plaque formation in the respiratory cells (Chang et al., 2013). It is also effective against rhino virus (the common cold) Denyer et al., 1994). Ginger essential oil extract (0.004%) exhibited high level of virucidal activity against acyclovir-sensitive and resistant strains of herpes simplex I type virus (Schnitzler et al., 2007).*

### **Arthritis:**

*Ginger performed as well as ibuprofen in reducing pain and swelling in osteoarthritis (Leach and Kumar, 2008).*

### **Cholesterol:**

*Consumption of ginger reduced triglycerides and LDL cholesterol and atherosclerotic lesions (from oxidation of LDL) in mice (Fuhrman et al., 2011).*

### **Diabetes:**

*Ginger has glucose lowering ability by increasing insulin sensitivity and glucose uptake and improving carbohydrate and lipid metabolism. It has multiple protective effects of diabetic complications as shown in the figure on page 4 (Li et al., 2012).*

### **Liver:**

*Ginger decreased liver fibrosis in a rat model of liver cirrhosis (Bardi et al., 2013).*

### **Nausea and vomiting:**

*Studies indicate that ginger is effective in reducing nausea and vomiting (Chrubasik et al., 2005). 1000-2000 mg also reduces nausea from motion sickness (Lien et al., 2003).*

### **Migraine and pain:**

*Studies indicate that ginger is curative and preventive for migraine attack, decreases rheumatoid knee pain (Chrubasik et al., 2005). An analysis of 18 studies indicated that Zingiberaceae extracts are clinically effective hypoalgesic agents and the available data show a better safety profile than non-steroidal anti-inflammatory drugs, however care must be taken if there is a risk for bleeding (Lakhan et al., 2015).*

### **Parkinson's disease**

*6-Shogaol, a compound isolated from ginger showed neuro-anti-inflammatory effects on in vitro dopamine neurons and in vivo studies on mice during a Parkinson's disease model study (Park et al., 2013).*

### **Possible Contraindications:**

#### **Alzheimer's:**

*Ginger activates acetylcholinesterase an enzyme that breaks down acetylcholine which is low in Alzheimer's. This is counter to the strategy of trying to inhibit the enzyme so that acetylcholine levels will increase and help attention levels (Ali et al, 2013). It should be noted that this property will make ginger effective in treating exposure to an acetylcholine esterase inhibit based pesticides.*

#### **Potential Drug Interactions:**

*All three gingerols in ginger potentially inhibited CYP2C9 activity, exerted moderate inhibition on CYP2C19 and CYP3A4, and weak inhibition on CYP2D6 (Li et al., 2013). This should be considered if taking any medications that use these enzymes to metabolize them. Ask your doctor for this information.*

Continued on page 4



*Ginger continued from page 2...*

Possible mechanisms related to the glucose-lowering effect of ginger

Peripheral tissues:  
Insulin sensitivity ↑  
Glucose uptake ↑

Digestive system:  
α-glucosidase activity ↓  
α-amylase activity ↓

Pancreatic β-cell:  
Cell viability ↑  
Intracellular ROS ↓  
Insulin release ↑

Lipid profile:  
Cholesterol ↓  
Triglyceride ↓  
Free fatty acid ↓



Protective effects of ginger on diabetic complications

Liver:  
LDL receptor ↓  
HMG-CoA reductase ↓  
TNFα and IL-6 ↓  
NF-κB activity ↓  
ROS products ↓

Kidney:  
G6PD, SDH, MDH, and GDH activities ↑  
Restore glomeruli  
Regenerate tubules  
Reduce fatty infiltration

Brain:  
SOD, CAT, GPx, and GR ↑  
Antioxidant defence ↑

Eye:  
Aldose reductase activity ↓  
Sorbitol and galactitol accumulation ↓  
CML-KLH and MGO-derived AGE ↓

**Summary of the mechanism of anti-hyperglycemic and protective effect of ginger. (Li et al., 2012)**

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**Continued on page 6**

\*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

## Choices Natural Medicine Store Favorites:

By Brian Whitney



Cellular Respiration is the set of metabolic reactions and processes that take place within our cells to convert biochemical energy from nutrients into adenosine triphosphate (ATP). The production of ATP translates into what we feel as energy and vitality. In this issue we look at two supplements that not only assist with energy production by way of supporting mitochondria health, but that you can actually feel working.

**MegaHydrate** is the key that unlocks the potential of water as the medium for nutrient replenishment and waste removal at the cellular level. In a state of dehydration, body cells cannot assimilate nutrients and remove waste and relief pain from conditions like arthritis or fibromyalgia. **MegaHydrate** also helps fight the negative effects of alcohol, stress, and free radicals as part of aging. In addition to hydration, **MegaHydrate** is the most powerful known antioxidant food. Since it is a "pure" antioxidant that does not turn into a free radical itself, taken daily, **MegaHydrate** delivers far more Hydrogen ions than eating pounds of raw fruits and vegetables or drinking gallons of "healing waters," also known as "glacial milk." Humans need Hydrogen to survive. It is the key to long life and anti-aging. However, due to mass food production, mineral deficient soil, pesticides, chemical fertilizers, over-processing of foods, chemical preservatives, and drinking over-chlorinated and over-fluoridated water, people do not get enough Hydrogen ions daily. Body cells become damaged, hydration levels decrease and cells age. In summary, **MegaHydrate** challenges the symptoms of dehydration and minimizes the process of aging.

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*You can have your cellular hydration levels measured at Choices with a simple, inexpensive test called a Bioimpedence Analysis (BIA).*  
**Dr. Mikles**

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***The most promising natural substance in our body is NADH, which stands for nicotinamide adenine dinucleotide hydride. NADH is the biological form of hydrogen. It reacts with the oxygen present in every living cell, thus producing energy and water. The more NADH a cell has available, the more energy it can produce, the better it functions and the longer the cell (and the entire organism) lives.***

NADH is the active coenzyme form of vitamin B3.

NADH acts as a reducing agent to donate electrons to the electron transport chain for ATP production. One molecule of NADH yields three molecules of ATP.

NADH yields an increase in the production levels of dopamine and serotonin.

NADH provides energy to the brain, nerves, muscles and the heart

NADH is also the co-factor of more than 1000 enzymes in our bodies

\* These statements have not been evaluated by the Food and Drug Administration (FDA). These products are not meant to diagnose, treat or cure any disease or medical condition. Please consult your doctor before starting any exercise or nutritional supplement program or before using these or any product during pregnancy or if you have a serious medical condition.

### ***Ginger References continued from page 4***

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# The Mediterranean Diet Reverses Metabolic Syndrome

Analysis of data from the PREDIMED trial has revealed that the Mediterranean diet may reverse metabolic syndrome. This multicenter, randomized trial was performed between October 2003 and December 2010 and involved men and women (age 55-80 y) at high risk for cardiovascular disease. All participants were randomly assigned to 1 of 3 dietary interventions: a Mediterranean diet supplemented with approximately 2 oz per day of extra virgin olive oil; the same diet supplemented with 30 g mixed nuts per day (15 g walnuts and 7.5g each of almonds and hazelnuts) instead of the olive oil; or advice on maintaining a low-fat diet (control group).

For researchers interested in the effect of diet on metabolic syndrome, data from 5,801 PREDIMED participants were analyzed. Within 4.8 years of follow-up, metabolic syndrome developed in 960 (50.0%) of the 1,919 participants who did not have the condition at baseline. The risk of developing metabolic syndrome did not differ between participants assigned to the control diet and those assigned to either of the Mediterranean diets. More significantly, reversion of metabolic syndrome occurred in 958 of the 3,392 participants who had the condition at baseline and followed either Mediterranean diet. In a nutshell, more than 28% of the participants who had metabolic syndrome at the start of the trial no longer met the criteria for the disease at the end of it.

Metabolic syndrome affects about 25% of the adults worldwide, and these patients experience high blood pressure, high triglycerides, low high-density lipoprotein, excess abdominal fat, and high blood glucose levels. Switching to a Mediterranean diet may reverse these conditions and offer patients a chance for better health.

Source: Babio N, Toledo E, Estruch R, et al. Mediterranean diets and metabolic syndrome status in the PREDIMED randomized trial. *CMAJ*. 2014 Oct 14. pii: cmaj.140764. [Epub ahead of print]

**TRY  
THIS  
TASTY  
TREAT!**

## Power Red, White and Blue Protein Parfait

Base & White Layer:

1/2 cup Plain fat free Greek yogurt

1 Scoop (30 grams) Vanilla Whey Protein powder

1/2-1 cup Unsweetened almond milk

1-2 cups Ice (depending on desired thickness)

Blue Layer: 1 cup Blueberries, fresh or frozen

Red Layer: 1 cup Strawberries (or raspberries), fresh or frozen.

Combine ingredients for the base in a blender. Pour 2/3 of the base into a pitcher or large glass/bowl. To the 1/3 base that is

in the blender, add the blueberries to the base and blend just until the blueberries are smooth, and mixture is blue. Pour the blue layer into the bottom 1/3 of each glass. Pour 1/3 of the white base into each glass to make middle 'white' layer. Add the rest of the base back to blender and add strawberries (or raspberries). Blend until just smooth and divide evenly among each glass to make the red layer. Add a straw to each glass if desired, and enjoy right away, or place in the freezer for up to one hour before serving.

