



## GINGER

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*The information below was originally published in April 2015 in the Millhouse Integrative Newsletter, a monthly publication, primarily designed for clinic patients, highlighting useful strategies which may help prevent disease and improve health.*

### Spice Medicine

In other Fact Sheets we have learned that a spice is a dried seed, fruit, bark or flower of a plant or herb that is used in small quantities to flavour, colour or preserve food, and that many spices are used in traditional medicine. Spices were the most valuable items of trade from ancient times through to the medieval period, and only in recent years has modern medicine rediscovered their importance in preventing illness and treating disease. Here I discuss the importance of GINGER in health and its use in disease.



### About Ginger

*Zingiber officinale* is a herbaceous flowering perennial plant which annually grows stems about a meter tall bearing narrow green leaves and yellow flowers, and also has a rhizome root which has been used as a spice and medicine for over 5000 years.

Ginger originated from south China, spreading across Asia, to West Africa then to the Caribbean. It was exported to Europe in the first century AD. Ginger is a hot fragrant spice added to sweet and savoury dishes. The fleshy young roots can be used raw or squeezed for juice. They can be steeped in boiling water to make a tea, pickled in vinegar, frozen or dried to grind into a powder for later use. Ginger's characteristic pungent smell is due to the *gingerol* volatile oils, one of more than 100 chemical compounds contained in the rhizome.

Like turmeric, ginger has a long history of medicinal uses in the ancient Asian medical traditions; it is employed to treat many disorders including gastrointestinal (nausea, indigestion, diarrhoea, constipation, motion sickness, morning sickness in pregnancy), arthritis, heart disease, headache and chronic infections.

#### Ginger's medicinal effects may be helpful in:

- Gastrointestinal symptoms - relieving nausea, motion sickness & morning sickness in pregnancy
- Pain & swelling - arthritis, bursitis, muscle and joint sprains & strains.
- Diabetes - improving glucose control, increasing insulin sensitivity promoting the absorption of glucose into cells.
- Obesity - improves metabolic rate and decreases absorption of calorie dense foods.
- Heart disease - reducing platelet stickiness & lowering lipids
- Alzheimer disease - appears to inhibit plaque deposition in the brain.
- Cataracts - may delay the onset of cataracts.
- Anti-bacterial effect for coughs & colds and helicobacter pylori.
- Anticancer effect - less inflammation, may normalise cell division and inhibit cell growth

### Ginger in diabetes

In 2013 a group of Iranian medics reported a randomised blinded trial<sup>i</sup>, with 64 non-insulin adult diabetics who were given 2g freshly ground ginger daily, to determine whether taking ginger could improve their diabetic state. After eight weeks those on [ginger showed a significant improvement](#) in blood glucose with a lowering of HbA1c, which indicates less glucose damage to red blood cell protein. The researchers also found that insulin levels, triglycerides (white fat) and LDL cholesterol were less and the blood inflammatory markers had improved. Two patients reported minor indigestion, the only side effect noted in the study. This is the first human study that showed the consumption of ginger improved diabetic control and lowered the 'bad' oxidised cholesterol. Previously only animal studies had demonstrated ginger's lipid lowering effect.

Ginger can also thin the blood through its antiplatelet action and may assist in lowering blood pressure; these are added benefits for the diabetic who is at greater risk of having artery disease. Animal experiments also suggest that ginger has neuroprotective action that may delay the onset of Alzheimer's disease, a condition from which diabetics increasingly are suffering.

### Ginger in arthritis

The anti-inflammatory effects of ginger have been known for centuries. A retrospective study<sup>ii</sup> with rheumatoid and osteoarthritis patients demonstrated [improved joint pain](#). One trial<sup>iii</sup> in knee arthritis showed [significant symptom relief](#) but



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another study showed only initial improvement. Despite that study's lack of proven long-term effect, a trial of ginger therapy is worth considering for arthritis relief. (I suggest use in combination with turmeric and cayenne pepper)

Ginger's action is similar to non-steroidal anti-inflammatory drugs but it has additional neutralising effects via other inflammatory pathways (inhibits cytokine release from the 'clean-up' macrophage cells). Ginger may cause gastro-intestinal symptoms but much less than NSAID medication.

### **Ginger in nausea, motion sickness and morning sickness**

Ginger has been found to be superior to Dramamine in relieving motion sickness. In 2014 researchers<sup>iv</sup> reviewing all studies on [ginger's use in pregnancy](#) concluded that taking 1gm daily for at least four days was effective in relieving the nausea and vomiting of morning sickness. No adverse effects were observed with ginger during pregnancy.

Ginger may also be used to prevent nausea & vomiting after surgery.

Ginger can be used in combination with other therapies in treating cancer. It also has antimicrobial effects which may support the eradication of helicobacter stomach infection.



#### **Simple ways to use ginger**

There are endless ways to use ginger in cooking and drinks.

- Fresh ginger root can be peeled, grated, minced or sliced thinly and used in savoury & stir-fried dishes, curries & omelettes, or sprinkled on baked/roasted meats & fish.
- Thin slivers of ginger root can be roasted with vegetables.
- Add fresh ginger to any drink.
- Use ground dried ginger in baking.

#### • **Traditional Cold-Relieving Tea**

Add 2-3cm of peeled or grated ginger root to 2 cups of water, boil then simmer 5 minutes. Add lemon and honey to taste.

1/2 tsp cayenne pepper, 1-2 cloves of crushed garlic and turmeric may also be added, simmer for a further 5 min.

Cool and strain.

- **Ginger essential oil** rub applied to sore and painful muscles.

**Remember** 6-parts fresh ginger = 1-part dried ginger but use more according to taste.

**Store** fresh ginger root in the fridge. It can also be frozen, pickled in vinegar or alcohol.

Ground ginger should be replaced frequently as with other spices it quickly loses its potency when powdered.

Consider combining ginger with the spices, turmeric, cayenne, cinnamon and garlic for greater beneficial effect. *Caution: due to its blood thinning effects, take care when consuming lots of ginger with anticoagulant medication such as aspirin, warfarin, or dabigatran (Pradaxa).*

***Ginger has been used as a spice and medicine for over 5000 years.***

<sup>i</sup> Mahluji et al [Int J Food Sci Nutr](#). 2013 Sep;64(6):682-6.

<sup>ii</sup> Srivastava et al in *Medical Hypotheses* 1992 39:342-349

<sup>iii</sup> Altman et al in *Arthritis Rheum* 2001 44:2531-8

<sup>iv</sup> Thomson et al *JABFM* 2014 27:1 115-122