

# Food as Medicine: Further examples of using foods as medicine

## Ginger

Ginger has been used as an ingredient added in fresh or dry form to herbal medicines for centuries in India, China and other countries throughout South East Asia. During the Vedic period in India (500-1,500 BCE) ginger was called maha aushadhi or 'the great medicine'(1). The active ingredients in ginger are not well understood, but they include pungent gingerols (mainly in fresh ginger) and shagaols (predominantly in dry ginger) (2).

In the present day, the best researched use for ginger is in the treatment of nausea and vomiting. There are also claims that it can help reduce blood glucose, lipids and blood pressure, that it will aid blood clotting, and that it has anti-inflammatory, analgesic and antioxidant properties (1, 3).

So what does the evidence say?

Ginger is a popular treatment for nausea and vomiting as it seems to avoid many of the side effects such as a headaches, dry mouth, dizziness and constipation that are sometimes associated with pharmacological treatments (4, 5). The use of ginger has therefore been researched in many different conditions that can cause nausea and vomiting.

For chemo-therapy induced nausea and vomiting, some trials indicate favourable results, but the evidence overall (6) suggests that ginger is not any more effective than taking a placebo or a pharmacological treatment. Ginger has also been considered for the treatment and prevention of nausea and vomiting induced by pregnancy. The best current evidence suggests that here ginger indeed may be of help (2, 7). Evidence is also emerging that ginger may be a useful treatment for period pain (8). Other effects of ginger have predominantly only been examined in rats or mice and therefore human trials are needed to confirm any promising findings (1).

Ginger is a very versatile spice as it can be used as the fresh root or as a powder for either savoury or sweet dishes. Ginger can also be used in a hot drink. A hot tea made from grated ginger can be used as a relief for the symptoms of colds. The flavour of ginger brings an element of warmth without the burn of a chilli. What is your favourite ginger recipe?

## Honey

Honey has a rich recorded history. It was first documented as a form of medicine through its use in surgery. Ancient Egyptian surgical textbooks dating 2,600-2,200 B.C.E. describe how honey was used to aid surgical wound healing (9). Hippocrates, often referred to as the father of western medicine, recorded that honey could be used as a treatment for pain, thirst and fever. The medicinal use of honey also stretches beyond the medical field as religious texts such as Christian Bible and the Islamic Qur'an both reference the beneficial properties of honey (9).

In the present day, honey is frequently used for the common cold, to soothe sore throats and to ease a cough. Honey is believed to prevent the growth of bacteria, viruses, yeast and prevent inflammation (10). In the scientific literature, there are limited high quality studies that consider the use of honey. However, the best evidence suggests that for children honey is more effective than using no treatment for cough relief (10). It should be noted that because honey can sometimes harbour a harmful bacterium, *Clostridium botulinum* that causes a serious illness known as botulism, it is recommended that honey is not given to infants under the age of 12 months (11). Another use of honey that relates to its antibacterial properties, is the use of honey in modern medicine for wound healing. It has been shown that for partial thickness burns honey is able to heal the burn 4-5 days quicker than conventional treatments (12).

Honey is a food with many different culinary and medicinal applications. Next time you have a sore throat or cold you may want to try out this home recipe that has been in my family for generations:

Use of honey as a comfort drink:

Juice of 1 Lemon

A good spoonful of honey (1-2 Tbsp)

Fill the rest of the mug with hot water.

(add a knob of ginger for spice if you like)

## Cabbage leaves for breast engorgement

Cabbage leaves form the basis for many 'in trend' fermented superfoods such as sauerkraut (German) and kimchi (Korean). However, the recognised medicinal properties of cabbage spans back much further than these foods. In the past cabbage leaves were often used for the alleviation of breast engorgement during breast feeding.

Breast engorgement occurs during breastfeeding when there is a build-up of milk, blood and other fluids in the breast tissue. When the breast becomes engorged, it feels heavier, warm and often uncomfortable. Cold cabbage leaves placed on the surface of the breast are reported to alleviate the pain.

The scientific evidence surrounding this topic reports mixed results. Trials that have been conducted are generally small with no control. However, a systematic review of the literature concluded that we are still not sure if it the coolness of the applied chilled cabbage leaf that aids the pain and swelling, or a component in the cabbage leaf is having an effect (13). When cooled gel packs and cooled cabbage leaf compresses were compared, no difference was seen. Furthermore, no difference was found using hot versus cold cabbage leaves (13). So the evidence at present suggests that a cold cabbage leaf compress will not necessarily help to alleviate breast engorgement. The Australian Breastfeeding Association however, still recommend that a chilled washed cabbage leaf placed on the breast after a feed may reduce some pain and swelling (14). If you are experiencing any of these symptoms it is recommended that you talk to your preferred health care professional.

## Turmeric

In the Vedic culture in India, dating almost 4,000 years ago, turmeric was used as a culinary spice with cultural significance (15). Turmeric is a root of the ginger family that when fresh, has a wonderful vibrant orange colour. When dried, turmeric can be identified as a beautiful bright yellow powder. The flavour of turmeric is slightly bitter but also has aspects of citrus and ginger and hence lends itself to use in both savoury and sweet dishes.

Traditionally turmeric has been used medicinally for many different purposes from skin conditions such as acne and nappy rash to ulcerative colitis and arthritis. Turmeric has been studied by scientists since 1972 (16) and its active component has been identified as curcumin. It has been shown that curcumin has the ability to block inflammation, by interacting with signalling molecules that bring immune cells into the inflammatory site (17). In particular, turmeric can lower the levels of an inflammatory molecule called interleukin-6 (IL-6) (18). This means that turmeric has considerable potential for use as an anti-inflammatory agent. Some of the best available evidence for this comes from one study with 89 participants, n=45 in the control group and n=44 in the intervention group, where a dose of 2g curcumin per day was shown to be an effective treatment to maintain remission in Ulcerative Colitis. Ulcerative colitis is a severe inflammatory disease of the digestive tract. In this study, the curcumin was taken together with conventional pharmacological agents such as Mesalamine or Sulfasalazine (19). However, claims that turmeric can lower blood lipid levels have not been upheld. Turmeric has been shown to have no effect on blood cholesterol (20). As for other claims attributed to turmeric, more studies need to be conducted to produce a clear and accurate recommendation.

Turmeric is a wonderful addition to stir-fry dishes and curries. Dishes such as these often have many different vegetables included in them as well, adding fibre and many vitamins and minerals. More recently the 'turmeric latte' or 'golden milk' has also become available in trendy cafes. So if you haven't tried turmeric maybe try it in a vegie-filled stir-fry tonight or maybe try a turmeric latte a substitute for your coffee in the morning.

## Garlic

Garlic is a staple in most kitchens around the world. This history of garlic used for medicinal purposes dates back to the ancient Egyptians who fed it to their labourers building the pyramids (21). The Christian bible also indicates the significance garlic had in Jewish cuisine. The Jews kept as slaves in Egypt remembered garlic with fondness when it was no longer available to them (Num 11:5). Ancient Greece and Rome also have documented the use of garlic to improve strength. Hippocrates often referred to as the 'Father of Medicine' used garlic in his practice. In Asia records suggest that garlic was prescribed as part of a healthy diet and as a preservative for food (21).

Garlic is anecdotally reported to be useful as a treatment for conditions such as the common cold, cancer, blood pressure, heart health and general improved immune function. The active ingredient in garlic appears to be a component called allicin. The best evidence suggests that although garlic may help prevent the common cold however, once a cold has started, taking garlic will not significantly reduce the length of the cold (22). However, this study is of high quality, it is only one study and the authors state that many of the claims made about garlic is of effectiveness are based on poor-quality evidence (22). In some small trials, evidence suggests that garlic may reduce both systolic and diastolic blood pressure in those with high blood pressure (23, 24) but strong recommendations cannot be made on these initial results. If you have any blood pressure symptoms it is always best to consult your doctor before taking any garlic as part of your treatment.

Garlic can be used as an addition to many different dishes. If you avoid garlic in fear of offending the people around you with your breath, it is reported that roasting the garlic can reduce or even remove its influence on bad breath. The garlic can be roasted in its skin as a whole bulb of garlic. After roasting, each clove can then easily be squeezed out its skin like a paste. The roasted garlic will have a slightly sweeter taste with less odour.

## Cinnamon

Cinnamon has been reported to be a highly valued spice from before 2,000 BCE when it was imported from China into Egypt (25). In ancient Rome, it was reported that around 70 A.D Emperor Nero burnt as much cinnamon as he could find at the funeral of his second wife, to atone for his role in her death (25). This highlights how cinnamon has been viewed for centuries as a luxury product and was an extremely expensive spice.

Traditionally cinnamon was used as a culinary spice. More recently cinnamon has been recognised to contain polyphenols that can lower blood glucose by increasing uptake of glucose from the blood into skeletal muscle and body fat. Cinnamon thus appears to mimic the action of the hormone insulin (26, 27)

Evidence suggests that doses of cinnamon between 1-6g per day may decrease both fasting blood glucose and HbA1c. HbA1c or glycated haemoglobin is a marker of blood glucose over a period of about three months (26). While the results of studies on cinnamon are positive, we would always recommend seeing a health professional before you make any dietary changes. Cinnamon should only make up one part of a healthy diet designed to improve your diabetes.

Cinnamon can be easily added in to your routine. If you have yoghurt with fruit or muesli a sprinkling of cinnamon adds an element of spice and warmth. If you are more a toast person for breakfast, maybe try toast with peanut butter, banana and a sprinkling of cinnamon. Cinnamon is also good sprinkled on a glass of warm milk. The great thing with these ideas is you are getting many other nutrient rich foods along with your cinnamon.

## Cocoa

The history of cocoa dates back thousands of years. One of the first recorded instances of cocoa being considered to have medicinal properties was in the Mesoamerican civilisations, where cocoa was considered a life sustaining substance (28). The Aztecs would grind cocoa and mix it with water and cinnamon to make a strong, bitter drink. Aztec physicians have documented the use of cocoa for many disorders including prevention of constipation, removal of dental tartar, and treatment of dysentery, fatigue, gout, haemorrhoids and indigestion. In the early 1600's Spanish conquistadors brought cocoa back from the Americas to Spain where it caused debate as to whether chocolate could be thought of as a medicine. Valverde Turicies argued that because chocolate changed the constitution of a person, it could therefore be considered a medicine (28). Cocoa as a medicine did not reach Britain until much later in the 17th century when Charles II's doctor prescribed chocolate for hypochondriac melancholy (28). This doctor also believed that chocolate would purify the blood and re-establish balance between all the body fluids. At the time cocoa was extremely expensive and so it was not widely used. It was not until the 19th century when chocolate became more available through mass production and processing. This processing however, saw many other ingredients such as sugar and sources of saturated fat added to chocolate, which reduced its medicinal properties.

In the modern day, most of us would love to think consuming a whole block of chocolate could be beneficial and useful medicine. However, due to the high sugar and fat content of modern chocolate the medicinal properties are greatly decreased. Chocolate has become an energy dense snack that can easily provide excess calories. The beneficial ingredient in chocolate comes from the cocoa. Chocolate with the highest cocoa content will provide the greatest health benefit which comes from cocoa polyphenols and magnesium. One polyphenol found in cocoa has the ability to dilate blood vessels, which causes a decrease in blood pressure. The best available evidence on cocoa and blood pressure suggests that in the short term, cocoa can cause small decrease in blood pressure (29). Longer term studies are needed to determine the long term benefits of cocoa on blood pressure.

An important consideration is that blood pressure should be managed through diet, exercise and weight control. If you have any questions about your blood pressure management it is advised to speak to your healthcare professional.

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