“Ginger... is right good with meat in sauces, or otherwise in conditures; for it is of an heating and digesting qualitie, and is profitable for the stomac...” wrote John Gerard in his 17th century Herbal. Long before that in the first Western herbal – De Materia Medica – written just after the time of Christ, Dioscorides described ginger as being particularly useful to the digestion because it was a stomach relaxant. Traditional Chinese Medicine (TCM) and Ayurveda have known of the powers of ginger for several millennia.

Almost every recipe in Chinese and Indian cookery includes a small amount of this delicious spice to stimulate the taste buds, improve the digestion and assist the intestines to detoxify meat or fish. Ayurvedic doctors call ginger the ‘universal medicine’, using it to treat digestive and respiratory diseases, as a tonic for the heart, and to ease the inflammation and pain associated with arthritis.

Ginger is one of the top-ranking botanicals in the Chinese materia medica. It is included in at least half of TCM prescriptions, where it may act in several ways. It can add a little warmth when the main herbs in the formula have a cooling effect; it may counter cramps or spasms when the main herbs could cause them, or it may act as a catalyst to boost the assimilation and efficacy of the chief herbs.

Ginger (Zingiber officinale) is an upright, perennial herb with thick, tuberous rhizomes – underground stems and root – from which the aerial stem with its long, lance-shaped leaves grows to a height of around two metres. Headily-scented spikes of white flowers streaked with purple bloom in summer. A native of southern Asia, ginger is now cultivated extensively in the tropics – including Australia. The rhizome is the part used for cooking and therapeutically. Fresh, tender ginger is best for cooking; for healing, old ginger actually produces better results.

According to Michael T. Murray in his book The Healing Power of Herbs, ginger’s numerous pharmacological properties include anti-inflammatory action, positive effects on the liver, cholesterol-lowering and heart tonifying action, numerous beneficial effects on the gastrointestinal tract, and an ability to relieve nausea and dizziness. Ginger’s active compounds include protein (9%), lipids (6-8%) including lecithin, free-fatty acids and a protein-digesting enzyme, volatile oils (1-3%), and vitamins including carotenes and niacin.

The herb has proved itself to be safe, effective and non-toxic in scores of clinical studies involving hundreds of thousands of people. Norman Farnsworth, Ph.D., director of the World Health Organisation Collaborating Centre for Traditional Medicine at the University of Illinois, Chicago, says that ginger is one of the three most thoroughly investigated plants in the history of the world. The other two are garlic and ginseng.

**DIGESTION**

Poor digestion equals poor nutrient uptake, which in turn can lead to illness. Therefore it is vital that we keep our gastrointestinal tract in perfect order. In Europe today, ginger is featured in most proprietary digestive aids, for Twentieth Century scientific research has verified that texts penned thousands of years ago were correct when they recommended ginger to promote healthy digestion. Ginger works in several ways: stimulates the flow of saliva and dramatically increases the concentration of amylase, the digestive enzyme present in saliva. It regulates peristalsis and improves intestinal muscle tone. Peristalsis is the wave-like motion of the muscles that propels food and waste through the digestive tract. Because of this regulatory action, ginger has the power to heal both diarrhoea and constipation. The enzyme zingibain enhances metabolism of fat and protein, helping break down high-protein foods such as meats and beans, and lessening the effects of uric acid formed in the body from eating these foods.

One study conducted by the University of Minnesota found that zingibain was comparable to the papaya enzyme, papain, renowned for its ability to digest protein. Zingibain is so powerful that just one gram can tenderise nine kilos of meat. Ginger promotes the production of beneficial intestinal flora, with a Norwegian study showing that ginger compounded the growth of one lactobacillus species almost five-fold. These friendly bacteria control potentially harmful bacteria including candida and E.coli. Ginger is effective as an antidote for food poisoning because it knocks out five potentially virulent strains of bacteria, including salmonella and E.coli. It clears up gas, flatulence, indigestion, stomach ache and other stomach problems. The Chinese have long used the following remedy to strengthen and tone the stomach and improve digestion. It is especially effective during winter because it has a warming and comforting effect on the stomach that is felt through the entire system.

Place half a cup of white rice in a bowl. Pour in enough boiling filtered water to barely cover rice. Stand overnight to allow rice to absorb water. In the morning, drain any remaining water from the rice. Place rice in a dry frying pan, place over low flame and gradually heat until pan is quite hot. Turn the rice regularly with a spatula to prevent it burning. When the rice is dry and golden brown, place in a jar and seal against moisture. Boil one cup of filtered water. Add one teaspoon of the ‘fried’ rice and a small piece of fresh ginger. Boil for one minute. Remove from flame and let stand for five minutes. Take one teaspoonful once or twice a day.
NAUSEA

Ginger is approved in Germany for indigestion and anti-motion sickness, with some 400,000 capsules of the herb sold annually. I discovered just how effective ginger was in overcoming motion sickness some years ago. I love mountain scenery, but hate the curvy roads twisting around them. Now, I always carry a bag of crystallised ginger pieces on my travels because munching them alleviates any feelings of nausea. They also happen to be a delicious and not-too-unhealthy snack! Nature’s anti-nausea drug, as Jean Carper dubbing ginger in her book Miracle Cures, was scientifically validated in a 1982 study published in The Lancet. Utah psychologist Daniel Mowrey, Ph.D., placed volunteer students, chosen because of their susceptibility to motion sickness, in rotating chairs. They were blindfolded, then spun for as long as they could cope with it, up to a maximum of six minutes. One third of the group had been dosed with 100 mg of Dramamine, the most popular anti-motion-sickness drug, before starting. One third were given a placebo and the third took about half a teaspoon of powdered ginger. Those who were given Dramamine were unable to last more than six minutes without feeling nauseated and vomiting. More than half of those who took ginger lasted more than 6 minutes.

Ginger’s ability to relieve vomiting is thought to be through the action of its oils – gingerols and shogaols – which relax the intestinal tract and mildly depress the central nervous system. For those who suffer severely with motion sickness, ginger capsules work extremely well in approximately 90% of cases. According to Mowrey in his book Scientific Validation of Herbal Medicine, the secret is to take the first capsules before the journey starts – about thirty minutes before. You also need to take enough capsules so that you experience a distinct aftertaste and mild burning sensation in the throat and/or stomach. He suggests 2 to 4 capsules ahead of time, then 2 to 4 capsules every hour or so, or immediately the symptoms start to reappear. Boat rides require closest attention to proper maintenance.

Ginger can help alleviate morning sickness associated with pregnancy, although studies produce inconsistent results. 70% of women involved in one Danish study reported feeling significantly less nauseated when they took 250 mg of ginger capsules four times a day than when they took a placebo. Daniel Mowrey reports a 75% success rate in women who took between 3 and 8 capsules on waking, then remaining in bed and taking more capsules – up to 8 or 10 – until any feelings of nausea disappeared. During the day, when the women experienced even the slightest hint of sickness, they would take 3 to 5 capsules and sit quietly until they felt better. Scientists have raised concerns about prescribing ginger to pregnant women because, historically, the herb has been used to stimulate menstruation and they fear it may lead to miscarriage, although there have been no recorded incidents of this. Herbalists say that the amount prescribed for stimulating menstruation is far greater – around 5 gm – and believe the small amounts taken for morning sickness will do no harm.

Ginger helps overcome post-operative nausea. One British study involving sixty women who had undergone various gynaecological surgeries found that one gram of powdered ginger offered as much relief as the prescribed anti-nausea drug, Metoclopramide – without the associated side-effects which include depression and involuntary muscle spasms. Patients undergoing chemotherapy in a University of Alabama study found that, when ginger was added to their regular dose of the anti-nausea drug Compazine, their symptoms were reduced more effectively than when the drug was used alone.

And of course for the bacterial infections and ‘stomach bugs’ that strike most of us periodically, ginger comes up trumps.

Colds AND FLU

At the first slightest symptom of an impending cold – stuffy nose, sniffles, blocked sinus – Asian people take immediate action to reverse the problem and prevent it from penetrating deeper and weakening them. They “sweat it out” – which in traditional medicine means clearing away toxins and congestion such as excess phlegm.

This is achieved by taking a diaphoretic cold remedy such as ginger and cinnamon tea, perhaps with chopped spring onion added to clear the sinuses. This tea also builds defensive qi. It’s important to rest, for becoming fatigued weakens the body’s defences, as does eating cold, raw foods, taking long baths or having a deep massage.

Heating herbs such as garlic and ginseng should be avoided as they will send the cold deeper. How do you know if the diaphoretic herbs have achieved the desired results? If the tea gave you chills for a few minutes, but made you feel much stronger afterwards, you have probably reversed the chill.

For an excellent cough remedy grate fresh whole ginger, and extract the juice by tying it in a square of cheesecloth and squeezing the juice into a bowl. You’ll need a lot of ginger to make a little juice. Combine with a little raw honey in a cup of boiling water. Drink a cup of mixture three times a day.

One of my favourite remedies is to steep a green teabag, four thin slices of ginger and a cinnamon stick broken in half in a covered mug of boiling water for five minutes, then sip it slowly. Ginger capsules work well too, as does chewing thin slices of very young ginger. The secret is to start the ginger at the very first sign of nausea – sooner, if you suspect you may be in for a bout. Continue with the regimen until the sickness passes – and again, be generous with the doses. Try this simple nausea-relieving tea – grate fresh old ginger and boil it in water for ten minutes. Drink like tea.
**CARDIOVASCULAR SYSTEM**

Ginger stimulates blood circulation and reduces serum cholesterol through its action of improving liver function. Japanese research has shown ginger to be as effective as *digitalis* - a popular heart herb, used for centuries - in slowing the heart rate, at the same time increasing the force of contractions. Other research, also from Japan, has found ginger to be one of nature's most potent antioxidants, containing at least twelve constituents that are each more powerful than heart-disease-preventing vitamin E.

The antioxidant potential of one of those constituents proved to be forty times greater than vitamin E. Additionally, ginger demonstrates an aspirin-like action of inhibiting platelet action in clotting, without the side effects associated with the drug.

Studies from Denmark, Japan and India have shown that ginger possesses five elements that positively influence substances called eicosanoids. Eicosanoids are derived from dietary fats. The body breaks them down into various compounds including different types of prostaglandins. Some of these prostaglandins increase blood 'stickiness' and cause inflammation.

Scientists now recognise that the correct balance of prostaglandins is the key to healthy circulation, as well as keeping the inflammatory processes common to migraine headaches and rheumatoid arthritis under control. Although ginger can benefit the cardiovascular system, people taking heart medication should limit its use because ginger can increase the effect of these drugs.

**ARTHRITIS**

Arthritis is not a single disease but rather an umbrella term for around one hundred conditions that affect the joints or surrounding supportive tissue. There is no natural cure for arthritis - the non-steroidal anti-inflammatory drugs (NSAIDS) prescribed by doctors may ease the pain and inflammation, but always with the risk of side effects. NSAIDS work by blocking the formation of inflammation-inducing hormone-like substances. Ginger works by blocking the formation of both prostaglandins, and other inflammatory substances called leukotrienes. Indian Ayurvedic physicians have long prescribed ginger to treat rheumatic and musculo-skeletal diseases.

Internationally renowned researcher, Dr Krishna C. Srivastava, of the Odense University, Denmark, has conducted several studies using ginger to alleviate arthritis pain. Jean Carper, in her book, *Food, Your Miracle Medicine*, relates Dr Srivastava's story of a fifty-year-old Asian motor mechanic who, on being diagnosed with rheumatoid arthritis, started eating 50g of fresh ginger per day, lightly cooked with vegetables and meats. Within one month, his symptoms diminished. In 3 months, he was completely free of pain, inflammation and swelling - and 10 years later remained that way!

This drink helps ease joint pain through its action of cleansing the liver and stimulating digestion, elimination and circulation to rid the body of toxins. Combine one slice of raw ginger with one teaspoon apple cider vinegar (choose a brand that contains the 'mother') and drink the mixture in a glass of warm water first thing in the morning. Barbara Griggs, author of *The Green Witch*, recommends ginger baths to improve circulation, ease muscle soreness and inflamed, aching joints. Combine one litre of water with two teaspoons of powdered ginger or several thin slices of fresh ginger. Simmer until water turns yellow. Run a warm bath, then swirl in the ginger mixture. Enjoy a good soak. When you dry yourself, gently exercise the sore joints for a couple of minutes, then wrap up warmly and go to bed. This remedy is particularly effective for what Asian medicine terms 'wind-chill-damp' joint pain, which often turns into the more serious rheumatoid arthritis.

Symptoms of rheumatoid arthritis include pain that migrates all through the body, and is aggravated by cold weather and humidity and by ice-cold foods and phlegm-producing foods such as dairy products. Warming herbs such as ginger, along with an anti-phlegm cleansing diet, are prescribed as treatment. For inflammatory pain associated with osteoarthritis, cooling herbs such as licorice are given.

Twentieth Century science has confirmed what Asian traditional medicine has known for thousands of years: ginger is beneficial in numerous ways. If fresh ginger is not currently part of your herb and spice repertoire, pick up a rhizome next time you go to the vegetable markets. Look for firm, heavy 'hands' without too many bumps as they make it hard to peel. Shrivelled or mouldy rhizomes have been stored too long. Young ginger is best for stir-fries while older ginger is good for grating. Store fresh ginger wrapped in paper towels in a plastic bag. While it is best used when fresh, it will keep this way in the fridge for two or three weeks. You can include ginger in just about every savoury dish you make. If the recipe demands onions or garlic, you can certainly toss in some ginger - just remember that ginger should not be cooked for too long as it loses its healing properties. You can also add slices of fresh young ginger to fruit salads, fruit sauces and poached fruit. It particularly complements the flavour of apples and pears. Use powdered ginger in baking.

Ginger is easy to grow in the home garden. Although it prefers the tropics, it does well in frost-free, warm and temperate regions. To propagate it, place a plum chuck of fresh ginger rhizome in a paper bag. Leave it in a warm but sun-free position. After a week, check it for growing buds. Bury the chunk in well-drained, humus-rich soil, in a position that receives light shade. Water well. After about two weeks, shoots will appear. Water and mist every couple of days. Remember, ginger is happiest in a tropical atmosphere, so ensure soil does not dry out. When shoots reach about ten centimetres, pinch back the first set of leaves. Harvest the ginger when plants are around five months old.

The longer ginger is left in the ground, the more flavourous, fiery - but fibrous - it becomes. **IVWH**