

Consumer Information and Education

Provided by your
Health Care Professional
Based on
Natural Medicines



Ginger

What is it?

Ginger is a plant with leafy stems and yellowish green flowers. The ginger spice comes from the roots of the plant. Ginger is native to warmer parts of Asia, such as China, Japan, and India, but now is grown in parts of South American and Africa. It is also now grown in the Middle East to use as medicine and with food.

Ginger is commonly used for many types of nausea and vomiting. It's also used for menstrual cramps, osteoarthritis, diabetes, migraine headaches, and other conditions, but there is no good scientific evidence to support many of these uses.

In foods and beverages, ginger is used as a flavoring agent.

In manufacturing, ginger is used as for fragrance in soaps and cosmetics.

One of the chemicals in ginger is also used as an ingredient in laxative, anti-gas, and antacid medications.

Is it Effective?

Natural Medicines rates effectiveness based on scientific evidence according to the following scale: *Effective, Likely Effective, Possibly Effective, Possibly Ineffective, Likely Ineffective, Ineffective, and Insufficient Evidence to Rate.*

The Effectiveness ratings for **Ginger** are as follows:

Possibly Effective for...

- **Nausea and vomiting caused by drugs used to treat HIV/AIDS (antiretroviral-induced nausea and vomiting).** Research suggests that taking ginger daily, 30 minutes before each dose of antiretroviral treatment for 14 days, reduces the risk of nausea and vomiting in patients receiving HIV treatment.
- **Menstrual cramps (dysmenorrhea).** Research shows that taking ginger powder 500-2000 mg during the first 3-4 days of a menstrual cycle modestly decreases pain in women and teens with painful menstrual periods. Ginger was given for approximately 3 days starting at the beginning of the menstrual period or at the beginning of pain. Some research shows that taking ginger seems to work about as well as some pain medications, like ibuprofen, mefenamic acid, or Novafen. Adding ginger to medicines such as mefenamic acid also seems to be helpful.
- **Osteoarthritis.** Most research shows that taking ginger by mouth can slightly reduce pain in some people with osteoarthritis. There is some evidence that taking ginger by mouth works as well as ibuprofen 400 mg daily for pain in hip and knee osteoarthritis. But most research shows that applying ginger gel or oil to the knee doesn't improve pain in people with osteoarthritis.
- **Morning sickness.** Taking ginger by mouth seems to reduce nausea and vomiting in some pregnant women. But it might work slower or not as well as some drugs used for nausea. Also, taking any herb or medication during pregnancy is a big decision. Before taking ginger, be sure to discuss the possible risks with your healthcare provider.

Possibly Ineffective for...

- **Muscle soreness caused by exercise.** Research shows that taking ginger does not reduce muscle pain during exercise. Also, taking ginger doesn't seem to help

treat or prevent muscle pain after exercise.

- **Motion sickness.** Most research suggests that taking ginger up to 4 hours before travel does not prevent motion sickness. Some people report feeling better, but actual measurements taken during studies suggest otherwise. But in one study, ginger appears to be more effective than the drug dimenhydrinate at reducing stomach upset associated with motion sickness.

Insufficient Evidence to Rate Effectiveness for...

- **A sudden and serious lung condition (acute respiratory distress syndrome or ARDS).** Research suggests that administering 120 mg of ginger extract daily for up to 21 days increases the number of days without ventilator support, the amount of nutrients consumed, and reduces the time spent in intensive care units in people with sudden respiratory system a failure. However, ginger extract does not seem to affect death rates in people with this condition.
- **Hay fever.** Early research shows that taking ginger extract helps reduce runny nose as well as the prescription drug loratadine in people with hay fever.
- **Lack of appetite in people with cancer.** Taking ginger for 2 weeks might improve appetite, nausea, reflux, and other stomach problems in people with this condition.
- **Nausea and vomiting caused by cancer drug treatment.** Taking ginger along with anti-nausea medicine doesn't seem to prevent delayed nausea and vomiting in people treated with cancer drugs. This type of nausea and vomiting occurs a day or more after cancer therapy. Most research also shows that taking ginger along with anti-nausea medicine doesn't prevent sudden nausea and vomiting due to cancer drugs. But some research shows it helps with sudden vomiting when used at doses of less than 1 gram over at least 3 days. It's possible that ginger helps only at lower doses or when nausea or vomiting is caused by only some cancer drugs. It's also possible that ginger helps reduce nausea caused by cancer drugs only when used with anti-nausea medicines that don't work very well on their own.
- **A lung disease that makes it harder to breathe (chronic obstructive pulmonary disease or COPD).** Research shows that taking two capsules of a specific combination product (AKL1, AKL International Ltd) containing ginger twice daily for 8 weeks does not improve respiratory symptoms in people with COPD.
- **Diabetes.** Taking ginger seems to lower blood sugar in some people with diabetes. Doses of at least 3 grams of ginger per day seem to be needed. Lower doses might not help. And ginger might need to be taken for at least 3 months before benefits are seen. Taking ginger might also lower blood sugar by a small amount in women with diabetes during pregnancy (gestational diabetes).
- **Indigestion (dyspepsia).** Research suggests that taking a single dose of 1.2 grams of ginger root powder one hour before eating speeds up how quickly food empties out of the some in people with dyspepsia.
- **Hangover.** Early research suggests that taking a combination of ginger, pith of Citrus tangerine, and brown sugar before drinking decreases symptoms of alcohol hangovers, including nausea, vomiting, and diarrhea.
- **High levels of cholesterol or other fats (lipids) in the blood (hyperlipidemia).** Research suggests that taking 1 gram of ginger three times daily for 45 days lowers triglyceride and cholesterol levels in people with high cholesterol.
- **High blood pressure.** Drinking black tea with ginger might lower blood pressure by a small amount in people with diabetes and high blood pressure.
- **Insect bite.** Early research shows that applying Trikatu to the skin, which contains ginger, long pepper, and black pepper extracts, does not reduce mosquito bite size.
- **Nausea and vomiting during surgery.** Early research shows that taking ginger before a C-section might help reduce nausea, but not vomiting, during the procedure.
- **A long-term disorder of the large intestines that causes stomach pain (irritable bowel syndrome or IBS).** Taking ginger alone doesn't seem to improve IBS symptoms. But taking ginger along with other herbal ingredients might help. Whether the benefit of these combination agents is due to ginger or the other ingredients is unclear.
- **Joint pain.** Research shows that taking capsules of a specific combination product (Instaflex Joint Support, Direct Digital, Charlotte, NC) containing ginger for 8 weeks reduces joint pain by 37%. But this product does not seem to reduce joint stiffness or improve joint function.

- **Abnormally heavy bleeding during menstrual periods (menorrhagia).** Taking ginger might reduce menstrual bleeding in some young women with heavy menstrual bleeding.
- **Migraine.** Some reports suggest that taking ginger or a combination of ginger and feverfew might reduce the length and intensity of migraine pain. But it is not clear if the effects are from ginger, feverfew or the combination. Taking ginger alone doesn't seem to prevent migraine pain.
- **Build up of fat in the liver in people who drink little or no alcohol (nonalcoholic fatty liver disease or NAFLD).** Some research shows that taking ginger daily for 3 months can improve cholesterol and blood sugar levels in people with NAFLD.
- **Obesity.** Taking ginger alone doesn't seem to help obese people lose significant amounts of weight. Taking a ginger with other herbs does not result in consistent improvements in weight loss.
- **Childbirth.** Early evidence suggests that bathing in water containing ginger oil does not shorten the length of labor.
- **Nausea and vomiting after surgery.** The research for using ginger to prevent nausea and vomiting after surgery is unclear. Some clinical research shows that taking ginger by mouth one hour before surgery reduces nausea and vomiting during the first 24 hours after surgery. But not all research agrees. Taking ginger by mouth doesn't seem to have added benefit when used with prescription medications for nausea and vomiting. Keep in mind that most patients are not supposed to eat or drink anything before surgery, so talk to your doctor first if you are interested in taking ginger before surgery. Ginger aromatherapy has also been studied. Placing ginger oil on patients' wrists or on a gauze pad before surgery seems to prevent nausea in some patients.
- **Recovery after surgery.** Early research shows that taking ginger by mouth might help reduce pain and improve wound healing in children who've had their tonsils removed.
- **Rheumatoid arthritis (RA).** Early research shows that ginger might be helpful for decreasing joint pain and swelling in people with RA.
- **Trouble swallowing.** Evidence suggests that spraying a product containing ginger and clematix root in the mouth improves severe problems swallowing in stroke victims. However, it is not beneficial in people with less severe problems swallowing. Also, taking a single ginger tablet doesn't help people with trouble swallowing due to aging.
- **Liver damage caused by chemicals.** Some drugs used to treat tuberculosis can cause liver damage. Taking ginger along with these drugs might help prevent liver damage in some people.
- **A type of inflammatory bowel disease (ulcerative colitis).** Early research shows that ginger might be helpful for improving overall disease activity in people with ulcerative colitis. But it doesn't seem to improve quality of life, stool frequency, stomach cramps, or gas (flatulence).
- **Dizziness (vertigo).** Taking ginger might reduce nausea in people with vertigo. But it doesn't seem to improve vision problems in people with vertigo.
- **Erectile dysfunction (ED).**
- **Anorexia.**
- **An infection of the intestines that causes diarrhea (cholera).**
- **Baldness.**
- **Bleeding.**
- **Colds.**
- **Flu.**
- **Loss of appetite.**
- **Toothaches.**
- **Other conditions.**

More evidence is needed to rate ginger for these uses.

How does it work?

Ginger contains chemicals that may reduce nausea and inflammation. Researchers believe the chemicals work primarily in the stomach and intestines, but they may also work in the brain and nervous system to control nausea.

Are there safety concerns?

When taken by mouth: Ginger is **LIKELY SAFE** when taken appropriately. Ginger can cause mild side effects including heartburn, diarrhea, burping, and general stomach discomfort. Some women have reported more menstrual bleeding while taking ginger.

When applied to the skin: Ginger is **POSSIBLY SAFE** when applied to the skin appropriately, short-term. It might cause irritation on the skin for some people.

Special Precautions & Warnings:

Pregnancy: Ginger is **POSSIBLY SAFE** when taken by mouth for medicinal uses during pregnancy. But using ginger during pregnancy is controversial. There is some concern that ginger might affect fetal sex hormones or increase the risk of having a baby that is stillborn. There is also a report of miscarriage during week 12 of pregnancy in a woman who used ginger for morning sickness. However, most studies in pregnant women suggest that ginger can be used safely for morning sickness without harm to the baby. The risk for major malformations in infants of women taking ginger does not appear to be higher than the usual rate of 1% to 3%. Also there doesn't appear to be an increased risk of early labor or low birth weight. There is some concern that ginger might increase the risk of bleeding, so some experts advise against using it close to your delivery date. As with any medication given during pregnancy, it's important to weigh the benefit against the risk. Before using ginger during pregnancy, talk it over with your healthcare provider.

Breast-feeding: There is not enough reliable information about the safety of taking ginger if you are breast feeding. Stay on the safe side and avoid use.

Children: Ginger is **POSSIBLY SAFE** when taken by mouth for up to 4 days by teenage girls around the start of their period.

Bleeding disorders: Taking ginger might increase your risk of bleeding.

Heart conditions: High doses of ginger might worsen some heart conditions.

Surgery: Ginger might slow blood clotting. It might cause extra bleeding during and after surgery. Stop using ginger at least 2 weeks before a scheduled surgery.

Are there any interactions with medications?

Cyclosporine (Neoral, Sandimmune)

Interaction Rating = **Minor** Be watchful with this combination.

Talk to your health provider.

Taking ginger two hours before taking cyclosporine (Neoral, Sandimmune) might increase how much cyclosporine (Neoral, Sandimmune) the body absorbs. This might increase the side effects of cyclosporine (Neoral, Sandimmune). However, ginger does not seem to affect how much cyclosporine (Neoral, Sandimmune) the body absorbs when taken at the same time.

Losartan (Cozaar)

Interaction Rating = **Moderate** Be cautious with this combination.

Talk to your health provider.

Taking ginger with losartan might increase the concentration of losartan in the blood and increase its effects.

Medications for diabetes (Antidiabetes drugs)

Interaction Rating = **Minor** Be watchful with this combination.

Talk to your health provider.

Ginger might increase your insulin levels and/or decrease blood sugar. Diabetes medications are also used to lower blood sugar. Taking ginger along with diabetes medications might cause your blood sugar to go too low. Monitor your blood sugar closely. The dose of your diabetes medication might need to be changed.

Some medications used for diabetes include glimepiride (Amaryl), glyburide (DiaBeta),

Glynase PresTab, Micronase), insulin, metformin (Glucophage), pioglitazone (Actos), rosiglitazone (Avandia), and others.

Medications for high blood pressure (Calcium channel blockers)

Interaction Rating = **Minor** Be watchful with this combination.

Talk to your health provider.

Ginger might reduce blood pressure in a way that is similar to some medications for blood pressure and heart disease. Taking ginger along with these medications might cause your blood pressure to drop too low or cause an irregular heartbeat.

Some medications for high blood pressure and heart disease include nifedipine (Adalat, Procardia), verapamil (Calan, Isoptin, Verelan), diltiazem (Cardizem), isradipine (DynaCirc), felodipine (Plendil), amlodipine (Norvasc), and others.

Medications that slow blood clotting (Anticoagulant / Antiplatelet drugs)

Interaction Rating = **Moderate** Be cautious with this combination.

Talk to your health provider.

Ginger might slow blood clotting. Taking ginger along with medications that also slow clotting might increase the chances of bruising and bleeding.

Some medications that slow blood clotting include aspirin, clopidogrel (Plavix), diclofenac (Voltaren, Cataflam, others), ibuprofen (Advil, Motrin, others), naproxen (Anaprox, Naprosyn, others), dalteparin (Fragmin), enoxaparin (Lovenox), heparin, warfarin (Coumadin), and others.

Metronidazole (Flagyl)

Interaction Rating = **Minor** Be watchful with this combination.

Talk to your health provider.

Ginger can increase how much metronidazole (Flagyl) the body absorbs. Taking ginger along with metronidazole (Flagyl) might increase the side effects of metronidazole.

Nifedipine (Procardia)

Interaction Rating = **Moderate** Be cautious with this combination.

Talk to your health provider.

Taking ginger along with nifedipine might slow blood clotting and increase the chances of bruising and bleeding.

Phenprocoumon (Marcoumar, others)

Interaction Rating = **Moderate** Be cautious with this combination.

Talk to your health provider.

Phenprocoumon is used in Europe to slow blood clotting. Ginger can also slow blood clotting. Taking ginger along with phenprocoumon might increase the chances of bruising and bleeding. Be sure to have your blood checked regularly. The dose of your phenprocoumon might need to be changed.

Warfarin (Coumadin)

Interaction Rating = **Moderate** Be cautious with this combination.

Talk to your health provider.

Warfarin (Coumadin) is used to slow blood clotting. Ginger can also slow blood clotting. Taking ginger along with warfarin (Coumadin) might increase the chances of bruising and bleeding. Be sure to have your blood checked regularly. The dose of your warfarin (Coumadin) might need to be changed.

Are there any interactions with Herbs and Supplements?

Herbs and supplements that might lower blood sugar

Ginger might increase your insulin levels and/or lower blood sugar. Using ginger along with other herbs and supplements that might lower blood sugar might lower blood sugar too

much. Herbs that might lower blood sugar include devil's claw, fenugreek, guar gum, Panax ginseng, Siberian ginseng, and others.

Herbs and supplements that might slow blood clotting

Using ginger along with herbs that might slow blood clotting could increase the risk of bleeding in some people. These herbs include angelica, clove, danshen, garlic, ginkgo, Panax ginseng, red clover, turmeric, and others.

Are there interactions with Foods?

There are no known interactions with foods.

What dose is used?

The following doses have been studied in scientific research:

BY MOUTH:

- **For nausea and vomiting caused by drugs used to treat HIV/AIDS (antiretroviral-induced nausea and vomiting):** 1 gram of ginger daily in two divided doses 30 minutes before each antiretroviral treatment for 14 days has been used.
- **For menstrual cramps (dysmenorrhea):** 250 mg of a specific ginger extract (Zintoma, Goldaru) four times daily for 3 days from the start of the menstrual period has been used. Also, 1500 mg of ginger powder daily in up to three divided doses, starting up to two days before menstruation and continuing for the first 3 days of the menstruation cycle, has been used. A specific ginger supplement (Vomigone, Dineh Co.) 500 mg daily for 5 days, together with mefenamic acid 250 mg twice daily.
- **For morning sickness:** 500 to 2500 mg of ginger daily in two to four divided doses for 3 days to 3 weeks has been used.
- **For osteoarthritis:** Many different ginger extract products have been used in studies. The dosing used differs depending on the product taken. One ginger extract (Eurovita Extract 33; EV ext-33) 170 mg three times daily has been used. Another extract (Eurovita Extract 77; EV ext-77), which combines a ginger with an alpinia, 255 mg twice daily has also been used. Another ginger extract (Zintona EC) 250 mg four times daily has also been used. Also, a ginger extract (Eurovita Extract 35; EV ext-35) 340 mg daily in combination with 1000 mg of glucosamine daily for 4 weeks has been used.

APPLIED TO THE SKIN:

- **For osteoarthritis:** A specific gel containing ginger and plai (Plygersic gel, Thailand Institute of Scientific and Technological Research) 4 grams daily in four divided doses for 6 weeks has been used.

What other names is the product known by?

African Ginger, Amomum Zingiber, Ardraka, Black Ginger, Cochin Ginger, Gan Jiang, Gingembre, Gingembre Africain, Gingembre Cochin, Gingembre Indien, Gingembre Jamaïquain, Gingembre Noir, Ginger Essential Oil, Ginger Root, Huile Essentielle de Gingembre, Imber, Indian Ginger, Jamaica Ginger, Jengibre, Jiang, Kankyo, Kanshokyo, Nagara, Race Ginger, Racine de Gingembre, Rhizoma Zingiberi, Rhizoma Zingiberis, Rhizoma Zingiberis Recens, Shen Jiang, Sheng Jiang, Shoga, Shokyo, Shunthi, Srungavera, Sunth, Sunthi, Vishvabhashaja, Zingiber Officinale, Zingiberis Rhizoma, Zingiberis Siccatum Rhizoma, Zinzeberis, Zinziber Officinale, Zinziber Officinalis.

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