

## Ginger الزنجبيل

قَالَ تَعَالَى { يُسْقَوْنَ فِيهَا كَأْسًا كَانَ مِزَاجُهَا زَنْجَبِيلًا }  
[الإنسان : ١٧].

Ginger is a tropical plant that has green-purple flowers and an aromatic underground stem (called a rhizome). It is commonly used for cooking and medicinal purposes.

**Latin Names:** Zingiber officinale,

**Family** –Zingeberaceae.

Ginger has long history of medicinal use dating back 2,500 years in china and India for conditions such as headaches, nausea, rheumatism and colds. characterized in traditional Chinese medicine as spicy and hot, ginger is claimed to warm the body and treat cold extremities.

### Active constituents

Ginger contains number of pungent constituents [gingerols which can be converted to shogaols , zingerone and paradol] and volatile oil [Zingibrene]. the compound 6-gingerol responsible for its characteristic taste. Zingerone and shogaols are found in small amount in fresh and larger in



dried or extracted products.

### Mechanisms of Action

The mechanism of ginger's antiemetic activity is not clearly understood ,but the aromatic, spasmolytic ,carminative and absorbent properties of it suggest it has direct effects on GIT. studies don't indicate that ginger has influence within the vestibular or oculomotor system. A mechanism involving the CNS cant be ruled out, considering several of ginger's components antagonize serotonin type-3 receptor however this hasn't been clearly demonstrated.

### Clinical Indications

### Special points of interest:

- \* Active constituents of Ginger.
- \* Mechanism of action of Ginger.
- \* Clinical indications of Ginger .
- \* Safety of Ginger.
- \* Dosage of Ginger.

### Inside this issue:

- Ginger.
- Migraine Headache.



**Motion sickness** randomized, double-blind, placebo controlled study was performed to assess the effect of ginger extract on motion sickness and gastric slow wave dysrhythmias induced by circularvection. Ginger improved each of these parameters, prolonging the latency period before nausea onset and shortening the recovery time aftervection cessation. Five other double blind studies have shown that ginger as effective as many traditional antiemetic pharmaceuticals as dimenhydrinate, domperidone, scopolamine, cyclizine and meclizine.

### **Nausea and Vomiting in Pregnancy**

Double-blind, placebo controlled randomized clinical trial was conducted on 26 women in first trimester of pregnancy they ingested one tablespoon of ginger syrup containing 1 g ginger or placebo four times daily. vomiting ceased in 8 of 12 women in the ginger group by the sixth day, while only 2 of 12 in the placebo report cessation of vomiting. at the end of study, 20 women [77%] consuming ginger reported significant decrease in nausea while 20% in placebo reported improvement.

**Osteoarthritis** Ginger extract studied as alternative to NSAIDs for arthritic conditions. Randomized, placebo-controlled, crossover study compared it and ibuprofen on 75 patients with osteoarthritis of hip or knee., patient received 170 mg ginger extract, 400 mg ibuprofen Three times daily at the study's end there was no difference in the improvement of symptoms in patients on ginger and ibuprofen. no side effects were noted in the ginger group compared to ibuprofen group who prompting removal from the study.

### **Chemotherapy-induced Nausea**

Cancer chemotherapy can cause severe nausea, vomiting and abdominal discomfort which can limit therapy. Anticancer agents [cisplatin, cyclophosphamide and methotrexate] slow gastric emptying rate causing nausea and vomiting. in a double blind study of chemotherapy induced nausea, 41 patients with leukemia received either ginger or placebo after administration of compazine the results showed significantly greater symptomatic benefit from ginger compared to placebo.

### **Drug-Ginger interactions**

No drug interactions are known however due to its effect on platelets it should be used cautiously in patients using anticoagulants.

### **Side Effects and Toxicity**

Ginger is on the FDA list generally recognized as safe [GRAS].

### **Dosage**

For most purposes typical dose of ginger is 1-4 g daily taken in divided doses. To prevent motion sickness it is best to begin treatment 1-2 days before the trip and continue dosing through the duration of travel.

### **Reference:**

1. **Alternative Medical Review, Volum 8, Number 3, 2003 Zingiber officinale monograph.**

## **Migraine Headaches**

### **What causes migraine headaches?**

Migraine headaches seem to be caused in part by changes in the level of serotonin. Serotonin plays many roles in the body, and it can have an effect on the blood vessels. When serotonin levels are high, blood vessels constrict (shrink). When serotonin levels fall, the blood vessels dilate (swell). This swelling can cause pain or other problems. Many things can affect the level of serotonin in your body, including your level of blood sugar, certain foods and changes in your estrogen level if you're a woman.

### **What does a migraine feel like?**

Migraines cause severe pain on one or both sides of the head, upset stomach, and, at times, disturbed vision. People often describe migraine pain as pulsing or throbbing in one area of the head. During migraines, people become very sensitive to light and sound. They may also become nauseous and vomit. Women are more likely than men to suffer migraines.

### **What are kinds of migraine headaches?**

**Classic migraines** start with a warning sign, called an aura. The aura often involves changes in the way you see. You may see flashing lights and colors. You may temporarily lose some of your vision, such as your side vision. You may also feel a strange prickly or burning sensation, or have muscle weakness on one side of your body. You may have trouble communicating. You may also feel depressed, irritable and restless. Auras last about 15 to 30 minutes. Auras may occur before or after your head pain.



### **Common migraines**

don't start with an aura. Common migraines may start more slowly than classic migraines, last longer and interfere more with daily activities. The pain of common migraines may be on only one side of your head.

### **How long do migraines last?**

may last from 4 to 72 hours. They may happen only once or twice a year, or as often as daily. Women are more likely to have migraines than men.

### **What things that may trigger migraines?**

Strong or unusual odors, bright lights or loud noises, Being tired, stressed or depressed, Missing meals or fasting, Menstrual periods, birth control pills or hormones, Intense physical activity, including sexual activity, Smoking, Changes in weather or altitude, Certain foods especially those that contain tyramine, sodium nitrate or phenylalanine [ Aged cheese, Caffeine (in excess), Chocolate, Coca

buttermilk and sour cream, Nuts and peanut butter, Onions, except small amounts for flavoring, olives and pickles, and some snack foods, Avocados, Figs, Lentils.

### **How are migraines treated?**

Some treatments are used to relieve the headache pain, Nonprescription medicines that can help relieve migraine pain include **aspirin**, **acetaminophen** combination (one brand name: **Tylenol**), **acetaminophen**, **aspirin and caffeine** combination (one brand name: **Excedrin Migraine**), **ibuprofen**, **naproxen and ketoprofen** .Most of these treatments should be started as soon as you think you're getting a migraine. People who have more severe pain may need prescription medicine. **ergotamine** can be effective alone or combined with other medicines. **Dihydroergotamine** is related to ergotamine and can be helpful. **sumatriptan**, **zolmitriptan** ,**naratriptan**, **rizatriptan** , **almotriptan** ,**eletriptan** and **frovatriptan** .

### **Tips on reducing the pain**

Lie down in a dark, quiet room. Put a cold compress or rag over your forehead. Massage your scalp using a lot of pressure. Put pressure on your temples.

### **References:**

*Www.familydoctor.org, American Academy of Family Physicians*

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