

Natural treatment for nausea and vomiting: A short message

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Abstract: When the stomach's muscle walls contract, a significant portion of the stomach's contents rise and return to the esophagus, resulting in vomiting. In the medical field, nausea and vomiting are frequent complaints. While the majority of acute nausea and vomiting cases that have a specific cause can be easily managed, other cases, like chemotherapy-induced nausea and vomiting and particularly chronic unexplained nausea and vomiting, can be challenging to manage. This can result in a substantial reduction in the patient's quality of life and higher medical expenses due to repeated hospital stays. Presenting the effects of medicinal herbs and natural methods as a remedy for vomiting is the goal of this article.

Introduction

Common symptoms like nausea and vomiting (N/V) can be a chronic or recurrent problem, yet they are frequently challenging to treat. N/V can happen in several clinical contexts, including the post-operative phase. They are frequently linked to the use of chemotherapy drugs or gastrointestinal (GI) illnesses or dysfunctions, such as motility abnormalities [1, 2]. Vomiting happens when the stomach's contents push upward and flow back into the esophagus through the mouth (or nose) as a result of the contractions of the stomach's muscle walls. Some of the food and liquids will unintentionally return to the mouth since they are moving upward [3, 4]. Infants frequently vomit or spit up food, which is not a very concerning condition. However, vomiting can be harmful if it results in significant fluid loss, which could cause the infant to become dehydrated [5]. About 75% of pregnant women experience N/V, making them the most prevalent problems in pregnancy. This issue often arises four to eight weeks after menstruation, peaks at week nine then start to lessen and normally resolves by week 14, though 2.0% of pregnant women may experience it for the whole of their pregnancy [6, 7]. Women are reluctant to use medicines during pregnancy due to concerns about teratogenic effects. Limitations on drug usage during pregnancy were taken seriously after the thalidomide disaster and numerous birth defects [8]. However, problems, headaches, and other pyramidal consequences of hypertension are linked to the widespread use of industrial vomiting medicines [9]. The movement towards non-chemical and non-industrial treatments has grown as a result of these medications' harmful side effects. The use of herbal medicine as the active element in complementary and alternative pomegranates is one of the fundamental and low-risk approaches in this field. According to the World Health Organization (WHO) statistics, its use has garnered a lot of attention in the last ten years. 80.0% of people worldwide treat their illnesses using natural treatments [10]. Therefore, it is crucial to prevent vomiting and treat it using safe methods. Over 80.0% of people worldwide receive their medical care from complementary and alternative therapies, demonstrating the widespread use of these treatments [11-13]. Nowadays, medicinal plants are of interest to people worldwide,

particularly in developing nations [12, 14]. It has been demonstrated that these plants are effective in treating a variety of illnesses and creating novel medications [15]. In this sense, medicinal plants have long been utilized and are primarily found in a variety of traditional systems. The creation of antiemetic treatments has benefited from traditional knowledge about the use of medicinal herbs.

The mechanism behind the etiology of N/V in the GI tract: The GI tract's chemoreceptors and mechanoreceptors are sensitive to a variety of mechanical (distension) and chemical (acids, irritants, and poisons) stimuli. This signal is sent to the emesis center by afferent fibers, mostly through vagal pathways (**Figure 1**). The enterochromaffin cells are responsible for detecting these different stimuli, and they then release mediators that activate the vagal pathways described above [16]. Numerous chemical mediators are at play, including as cholecystikinin, substance P acting on the NK-1 receptor, and 5-HT acting on the 5-HT₃ receptor. The effects of these early mediators are enhanced or attenuated by a variety of other mediators. GABA (B receptors), VIP, and somatostatin, for instance, limit 5-HT release, while acetylcholine (M₃ receptors), norepinephrine (B receptors), histamine (H₂ receptors), and 5-HT itself promote 5-HT release [17]. Antiemetic drugs are based on the antagonism of these different chemical mediators. Whether or whether the GI tract is the source of N/V, the functions of the autonomic and peripheral nervous systems, as well as the enteric nervous system, are still not fully understood [18]. Although different changes in the brain-gut axis have been linked to functional gastrointestinal disorders, which are a category of chronic unexplained gut syndromes, they have historically been thought to have no pathology and no known etiology. Since gastroparesis and functional dyspepsia share similar symptoms, such as delayed stomach emptying and nausea, they are frequently misdiagnosed. There is growing evidence that the illness process involves minor intestinal abnormalities and immunological activation. When antigens, such as microbial antigens, are presented to the mucosa in genetically predisposed hosts, intestinal immune activation and mild inflammatory alterations are induced. Local intestinal hypersensitivity and motor dysfunction are the results of this inflammation, which also alters the structure and function of neurons. The prevalence of these functional problems is higher in women, which may be explained by immune activation. Because intestinal immune activation causes cytokine release, functional gastrointestinal disorders are frequently linked to extraintestinal symptoms like anxiety and exhaustion [19].

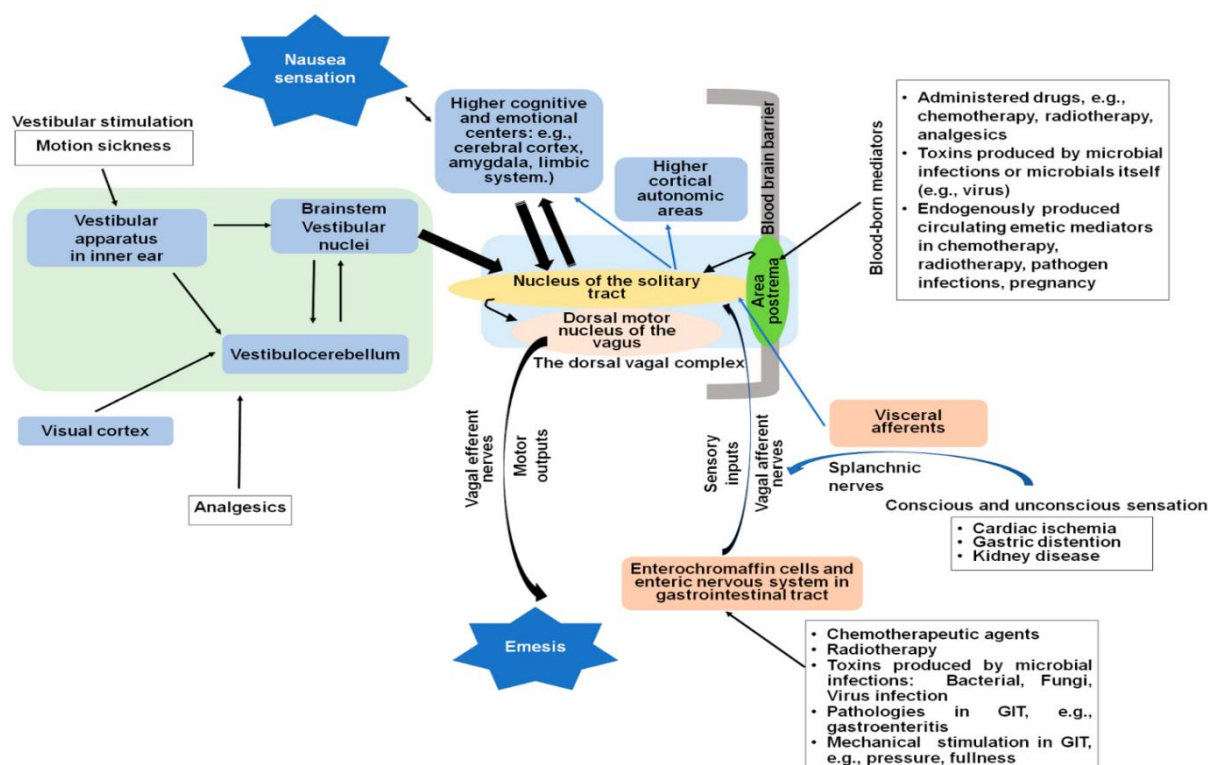


Figure 1: Mechanism for nausea and vomiting [20]

Few natural ways are effective against N/V: Ginger: According to the German Pharmacopoeia, ginger is used to make anaesthetics and is one of the herbal treatments that effectively treats N/V without having any negative side effects. Gingerols and shagaols, two of the plant's active components, are the main pharmacological activity of ginger, which is scientifically known as ginger bird afisinel. Several mechanisms, including those of gingerol and shagules, which decrease gastric contractions but promote GI activity and have anti-5-HT effects, allow ginger products to have an anti-vomiting effect [21]. Some stomach issues, such as vomiting, are treated using *Zingiber officinale* root. Actually, one of the best natural herbal remedies for vomiting is *Z. officinale*. Phenols in *Z. officinale* relax stomach muscles and have effects on stomach tissue that are comparable to those of relaxants. Additionally, phenols alleviate nausea by speeding up the passage of toxins and digestible foods through the digestive tract [22]. Few medicinal herbs including ginger used against N/V are shown in (Figure 2).



Figure 2: Common herbs and remedies for vomiting

Chamomile: In ancient medical and medicinal books, as well as in Iranian and Islamic medicine, chamomile-one of the most well-known medicinal herbs of chicory-has a special place. It has been cited for its therapeutic benefits about respiratory, GI, and neurological disorders. This plant has several species, and the essential oils it contains are recognized and utilized in pharmacies. In a study by Modares and others. [23], chamomile, ginger, and vitamin B6 had the same effect on pregnancy-induced nausea, however, chamomile oral capsules were more effective than ginger and placebo in reducing pregnancy-related N/V [24].

Lemon: Citrus lemon is frequently used to cure N/V since it contains vitamin C, antioxidants [25], and a lovely scent. Slice it into tiny pieces and keep them close by so the scent can take an effect [26].

Mint: After being excited, the stomach is soothed with *Mentha piperita*. Also, it is a well-known home remedy for vomiting that rapidly gets rid of N/V. Breathing in the scent of *Mentha piperita* lessens nausea [27].

Cumin: The seeds and powder of *Cuminum cyminum* can help with nausea. Among the primary home remedies for N/V, *C. cyminum* is arguably the most well-known. In a glass of warm water, add half a teaspoon of *C. cyminum* seeds, let it brew, and then smooth it. Finally, drink the resulting tea to prevent vomiting [28].

Behavioral therapy: Patients who received bone marrow transplants were randomly randomized to receive either control, therapist contact control, cognitive behavioral therapy, or hypnosis training before they started transplantation conditioning. The therapy groups did not significantly differ in terms of opioid use, N/V [29]. Another study investigated at how visual imagery and music therapy affected N/V brought on by chemotherapy. Between their second and third rounds of chemotherapy, patients were trained in guided visual imagery, which involved watching five nature paintings while listening to music. Visual imagery and music therapy were found to considerably lessen the intensity and duration of N/V brought on by chemotherapy [30].

Control breathing: Inhaling through your nose for three counts, holding your breath for three counts, and then exhaling for three counts is a typical breathing technique that could be helpful. According to a 2020 study, six days of breathing exercises considerably reduced chemotherapy-induced N/V and retching [31].

Staying hydrated: It is crucial to stay hydrated by regularly drinking tiny sips of water if nausea is followed with vomiting. To replenish the sugars and salts lost during vomiting, it may be beneficial to consume salty meals or a sugary, non-carbonated beverage [32].

Acupuncture: According to a 2020 study, acupuncture may lessen the intensity of chemotherapy-induced N/V. According to the experts, acupuncture can, on average, decrease N/V brought on by chemotherapy [33].

Cardamom: *Elletaria cardamomum* is the scientific name for cardamom. Cineole, limonene, terpinyl acetate, sabinene limonene, and linalool are the primary chemical constituents of cardamom. Known as the spice queen, cardamom belongs to the ginger family. Cardamom's topical effects on the gastrointestinal wall are what cause its anti-nausea effects, in contrast to the majority of anti-nausea drugs that act on the central nervous system. Cardamom is frequently used to prevent and cure GI diseases, sore throats, lung congestion, and oral infections, and to reduce coughing, itching, and dyspepsia. Relieving N/V is one of its applications. Standard anti-N/V drugs can lessen the intensity of pregnancy-related nausea with the use of cardamom inhalation aromatherapy.

Modify diet: Nausea can be completely avoided by being aware of and avoiding foods that cause it. Add meals that are easier to digest, such as skinned boiled potatoes, white rice, crisp crackers or toast, bananas, unsweetened applesauce, and clear chicken broth. Eat six smaller, more nutrient-dense meals, separated by two to three hours, as opposed to three large ones. By boosting beneficial bacteria, taking a probiotic supplement helps relieve gastrointestinal inflammation and poor digestion.

Conclusion: Numerous edible plants are useful in treating a range of ailments, including nausea and vomiting. Few important natural remedies discussed in this article helps prevent nausea and vomiting. To determine which of these medicinal plants are best suited for treating nausea and vomiting in a clinical setting, more research is necessary.

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