

## **Chest Congestion And Infusions Of Ginger, Honey, Tulsi, Black Pepper And Other Home Remedies As OTC Dispensed Pharma Products**

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### **Abstract**

Antibacterial and anti-inflammatory qualities abound in black pepper, making it useful for warding off infections and alleviating pain, respectively. Crushing the peppercorns releases their full medicinal potential. Congestion in the nasal passages and the lungs may both be eased by black pepper. As honey is a natural cough reducer, black pepper combined with honey is an established tonic throughout Indian homes. In this study, we developed a cough suppressant and cooling preparation and tested it across a range of conditions.

**Keyword:** Cough, Herbal drugs, Home remedies, Gastroesophageal reflux disease

### **Introduction:**

One of the greatest common health issues is a persistent cough. Other causes of coughing include asthma, tuberculosis, and lung cancer, as well as the common cold, acute asthma, pneumonia, pertussis, and the flu. Acute coughs, defined as coughs lasting less than a month, are often attributable to the common cold. The role of pertussis in causing persistent coughing in adults is becoming well understood. Coughing may cause irritation in the throat, chest discomfort, and mucus buildup. Inflammation and pain brought on by chronic coughing only serve to encourage the behaviour.

Coughing is a reflex action that helps rid the major airways of mucus, irritants, foreign particles, and bacteria. Coughing may be abrupt or recurrent. The brain interprets discomfort or obstruction in the throat or upper airway as the presence of a foreign object, prompting a reflexive coughing response.

Coughing is a very natural bodily function. Coughing may help remove mucus and other irritants from the throat. But persistent coughing might be an indicator of other health issues. The intake, the forceful exhale against a closed glottis, and the abrupt expulsion of air from the lungs followed opening of the glottis are the three stages that make up the cough response, which is often accompanied by a characteristic sound. You may choose to cough or you could be forced to.

One way to lessen the severity of allergy attacks is to avoid the triggers that bring them on in the first place. Tree pollen, dust mites, animal dander, bug spores, and animal hair are just a few of the most common allergies. A person's coughing may be triggered by a wide variety of microbes, including bacteria and viruses, and can aid in the transmission of illness. Infections of the respiratory tract are the most common cause of chronic coughing, but choking, smoking, pollution in the air,

asthma, GERD, postnasal drip, persistent bronchitis, lung tumours, heart failure, and medications like Angiotensin-converting enzyme (ACE) inhibitors can also cause the condition. Asthma, persistent cough without any underlying medical conditions, idiopathic chronic obstructive pulmonary disease, and cystic fibrosis are only few of the respiratory diseases linked to gastro-oesophageal reflux.

Postnatal drip, allergies, eosinophilic bronchitis, and gastric reflux illnesses account for more than 90% of instances of chronic cough in adults, defined as a cough lasting longer than 8 weeks. People who have a persistent cough for no apparent reason may have GERD. This happens when stomach acid travels back up the oesophagus. More than half of those who suffer with GERD-related cough have no additional symptoms, despite the fact that heartburn, a sour taste in the mouth, or a sense of acid reflux in the chest are classic indicators of the condition. A pH monitor placed in the oesophagus is definitive evidence of GERD. Cough-related respiratory illnesses including asthma and bronchitis may be further complicated by GERD. Medication to reduce stomach acid and adjustments in diet and behaviour are the first lines of defence, with surgery reserved for severe cases. An effective treatment for this cough is a proton pump inhibitor. Tobacco smoke, irritating gases, and indoor humidity are all examples of air pollutants that may trigger coughing attacks. Poor air quality has far-reaching impacts on human health, particularly affecting the respiratory and cardiovascular systems. When people work out in the open air on hot, smoggy days, they increase their exposure to air pollution. If the cough began all of a sudden while the patient was eating, a foreign body may be to blame. Coughing may be caused by sutures that are left behind in the branching

bronchi. Dryness from mouth breathing or frequent aspiration of food through the windpipe in those with swallowing difficulty may both bring on a cough.

Bronchiectasis, a condition called cyst intestinal lung disease, and sarcoidosis are among lung disorders that may induce symptoms similar to coughing. Lung tumours and mediastinal masses, whether benign or malignant, may also cause symptoms of chronic coughing. Coughing may also be caused by external auditory canal infections (wax, for example) due to nerve irritation. Heart failure, pulmonary infarction, and aortic aneurysm are among cardiovascular disorders linked to coughing. When the heart fails, there is an enhanced volume shift to the pulmonary circulation, which leads to pulmonary edoema and, ultimately, a nighttime cough.

It's fairly uncommon for individuals to cough before delivering a speech, entering a residence, or calling attention to themselves in social situations. Psychogenic coughing is distinct from both habitual and tic coughing. It's important to differentiate between coughing and cleaning one's throat while discussing tic disorders like Tourette syndrome. Of the 14 various respiratory disorders that may be treated with medicinal plants, the most prevalent are the common cold and cough, followed by a whooping asthma, nosebleeds, and bronchitis. In children, treating a cough requires determining what is causing it. Half of children recover in 10 days without therapy, and 90% do so in 25 days. Children with a persistent cough may benefit from antibiotics or inhaled steroids for the treatment of persistent bacterial bronchitis or asthma [9]. In the United States, coughs are the leading cause of doctor visits. Below, we'll go through the most common herbal medications prescribed for coughs.

Traditional remedies and homemade herbal remedies: Tulsi, black pepper extract with honey, and other similar therapies have all been reported as having been used extensively as folk medicines for a variety of medical ailments. The ancient herb tulsi has beneficial effects on the respiratory system. Tulsi, often known as holy basil, has been shown in a scientific investigation to be useful in breaking up phlegm. Coughing associated with asthma, eosinophilic lung disease, and allergic bronchitis may also be alleviated. Tulsi has been used both orally and externally, and its therapeutic effectiveness comes from its seeds, leaves, and roots.

Tulsi has excellent therapeutic properties. Tulsi has been demonstrated to help with diabetes by lowering blood sugar levels in studies. Total cholesterol levels were also shown to be significantly lowered by using Tulsi in the same research. Another research confirmed that the antioxidant properties of Tulsi are responsible for its favourable impact on blood glucose levels. If you're suffering from severe acute Respiratory Syndrome, the Rama Tulsi is the herb you need. The leaves may be juiced for an antitussive effect on the common cold, flu, bronchitis, and cough.

If you have a sore throat from the flu, a virus, or environmental irritants, try taking one half of a teaspoon of honey with a sprinkle of black pepper powder. When it comes to relieving a cough or a cold, the spice is a miracle worker. Honey & black pepper both serve as antioxidants and have antibacterial and antiviral qualities. A cough may be calmed with honey's help. According to folklore, honey may cover the inflamed mucous membranes and relieve a sore throat. Black pepper's anti-congestive and expectorant properties come from nature. For easier breathing, try some black pepper, which helps thin mucus.

- i. Black pepper, or *Piper nigrum*, is the fruit of a plant in the Piperaceae family. Western Ghats in Kerala (Southern India) and Sarawak state, Malaysia, are two of the most important regions for the cultivation and discovery of black pepper. *P. nigrum* dried fruit has been called "The King of the Species" due to its culinary and therapeutic versatility. Herb is used to treat a wide variety of conditions, including digestive issues, malaria, respiratory issues including colds and coughs, skin cancer, scabies, nerve pain, and more. It has "anti-apoptotic, anti-microbial, anti-pyretic, anti-analgesics, anti-tumor, anti-depressant, anti-inflammatory, anti-arthritis, anti-thyroid, anti-platelet, anti-fungal, anti-diarrheal, immuno-modulatory, and larvicidal properties". Future applications of pepper *nigrum*, its biological significance, and medical purposes were the primary emphasis of this research. Due to its expectorant and anti-inflammatory qualities, pepper is an effective therapy for respiratory disorders.
- ii. Honey has long been used as a treatment for throat pain. It is more effective in relieving coughs than other cough suppressants like dextromethorphan. If you have a sore throat, try drinking some tea or warm lemon water sweetened with honey. Honey has been suggested as a potential treatment for coughs. Honey is commonly accessible and inexpensive, so it may be worth a go. If you're suffering from a dry cough or chest discomfort due to persistent coughing, try drinking some hot milk sweetened with honey. Drinking it before bedtime maximises its effects. A spoonful of simple honey taken on an empty stomach may help with pain thanks to its

natural analgesic effects. The mucus in the throat will be cleared and the throat soothed. The varied symptoms of a cough may be alleviated with these home remedies, and you won't have to worry about the negative consequences that come along with taking medicines or using cough syrups. A doctor should be seen if a person's cough lasts longer than two weeks.

- iii. Assuaging a cough or clearing up congestion with a jaggery remedy might be helpful. Congestion of the chest and the whole respiratory system may be caused by sputum accumulation; cough and congestion are relieved when the sputum is coughed out. After boiling a few peppercorns in water for around 20 minutes, the resulting liquid is flavoured with cumin and sweetened with jaggery (*Canesugar of Saccharum officinarum L.*, family *Poaceae*). To help cough up phlegm, cut an onion in half, preserve a little of jaggery in the hollowed-out centre, and chew on the two halves together.
- iv. Fruits of the lemon tree (*Citrus limon (L.) Burm. F.*, *Rutaceae*) have been used for centuries to alleviate coughs. Lemons have anti-inflammatory and antimicrobial properties. Two teaspoons of lemon juice and one teaspoon of honey make an effective cough syrup. Take this nutritious syrup many times daily. Drinking a mixture of lemon juice, honey, and cayenne pepper is another another method of using lemons.
- v. The demulcent and expectorant properties of licorice root work in tandem to relieve congestion by softening mucus and relaxing the muscles around the air passages. Inflammation of the neck may be reduced as well. Glycyrrhizin, its primary active ingredient, is to blame for most of its beneficial benefits. It inhibits the enzyme 11-hydroxysteroid dehydrogenase and is 30–50 times sweeter as sucrose (table sugar). The conversion of cortisol to cortisone is slowed because this enzyme controls the availability of glucocorticoid (a steroid hormone) to steroid receptors. The anti-inflammatory effects of cortisol are enhanced in this way. The perennial plant known as marshmallow (*Althaea officinalis L.*, family *Malvaceae*) blooms throughout the summer months. For coughs and sore throats, people have been using the herb's leaves and roots for centuries. The mucilage of the marshmallow plant covers the throat and calms inflammation. It is not suggested that youngsters consume marshmallow root, which may be taken as a tea or in capsule form.
- vi. One of the easiest home treatments for a cough is onion (*Allium cepa L.*, *Amaryllidaceae*). Inhaling the potent vapours has been shown to alleviate coughing. Honey, comfrey tea, and baked onion juice are the main ingredients of a cough syrup. If you suffer from a dry cough, try drinking it every day. Half a teaspoon of onion juice combined with a full teaspoon of pure honey is another alternative. Take this remedy by mouth at least twice daily to ease a cough and calm an irritated throat.
- vii. The beneficial effects of probiotic bacteria on human health have been studied extensively. Even while they don't stop coughing immediately, they do aid in keeping the gut healthy. This may help the body's immune system work better. Dairy contains a bacteria called lactobacillus,

which helps lessen susceptibility to allergens like pollen and the severity of cold and flu symptoms. Lactobacillus is abundant in fortified milk. However, care must be taken, since dairy products may increase mucus production.

- viii. The oil of the eucalyptus tree (*Eucalyptus citriodora* Hook., family Myrtaceae) and the leaves of the peppermint plant (*Mentha piperita* L., Lamiaceae) are both well recognised for their therapeutic effects.
- ix. Peppermint's menthol content has decongestant and mucus-thinning properties. Peppermint tea is beneficial, as is taking a steam bath with peppermint essential oil. Coughs may be soothed by using an ointment made from Eucalyptus oil, coconut oil, and beeswax.
- x. For respiratory issues, you may utilise thyme (*Thymus vulgaris* L., Lamiaceae). Thyme leaf extract is useful for treating coughs and acute bronchitis. The leaves contain flavonoids, which calm inflamed throat muscles and relieve coughing. To make thyme tea, all you need is two tablespoons of dried thyme leaves, crushed, and one cup of hot water. After covering the cup, steeping time is 10 minutes and then straining. Thyme helps to open airways by relaxing muscles in the trachea and bronchi. There will be less hacking and more relaxation as a consequence.
- xi. A dry cough may be alleviated with the use of the plant turmeric (*Curcuma longifolia* L., Zingiberaceae). One tea spoon of ground turmeric and one of ground black pepper are cooked together in a half cup of water. Some people like to add cinnamon sticks. A mixture of one teaspoon of honey is made. A daily dose is taken till the patient's health improves. Or, you might boil a cup of water with a teaspoon each of turmeric powder and carom seeds until you're left with half a cup of herbal tea. Take this herbal mixture twice or thrice day with honey. Turmeric may also be used once the root is roasted and then ground into a fine powder. It should be taken twice day in a mixture of water and honey. Coughing may be alleviated by drinking warm milk flavoured with half a teaspoon of turmeric powder. Gargling with turmeric has the same beneficial effects. Half a teaspoon of turmeric powder and half a teaspoon of salt are dissolved in a cup of boiling water. If you have a cough, try gargling your throat with this drink. A dry cough may be alleviated by taking a teaspoon of turmeric powder with three to four teaspoons of honey three to four times daily.
- xii. One spoonful of turmeric powder is added to four cups of boiling water to make turmeric tea. Hold for a while, then filter and serve with honey and lemon. Inhaling the dhoomapaan, or smoke produced by burning turmeric, is also said to be helpful for treating coughs and colds. Inhale the smoke after burning a dried piece of turmeric root. As an alternative, you may put some hot charcoal in a mud pot and then set the pot in a cup of water. Sprinkle some dried turmeric leaves and a tablespoon of turmeric powder over the coals. Inhale the smoke produced by gently blowing on the turmeric powder.
- xiii. One of the most well-known herbal remedies for coughs is ginger (*Zingiber officinale*, Zingiberaceae). Water is boiled with fresh ginger that has been crushed. If you suffer from a sore throat, persistent

coughing, or even congestion, try taking this herbal remedy three to four times daily. It might benefit from the addition of honey and lemon juice. Fresh raw ginger may be chewed on and off all day long to ease a persistent cough. Coughs may also be treated with the combination of ginger and tulsi (*Ocimum sanctum*). Take one teaspoon of a combination made from the crushed leaves of ten tulsi plants, the juice taken from a tiny piece of ginger, and an equal amount of honey three times day to alleviate coughing. Chewing a piece of fresh ginger that has been sliced, salted, and chewed for a few minutes will help alleviate the dry cough that has been plaguing you. Even if you don't like the spicy, fragrant flavour of ginger, you can still enjoy a cup of ginger tea. One cup of water and the pounded ginger are cooked until the liquid is reduced by half. Coughs may be soothed by drinking the strained liquid with a spoonful of honey added and consumed while still warm.

**Herbal Drugs Presentation and Sale :** There is substantial evidence that folk medicines are used to treat a variety of medical issues. Cinnamon, ginger, cloves, which are cardamom, sesame seed oil, poppy seeds, honey from bees lemon, salt, eggs, and curd were all part of the treatment plans. From the typical cold and flu to more serious ailments like asthma, jaundice, and heat stroke, people of all stripes turn to traditional treatments. Numerous over-the-counter medications are available for the treatment of coughs caused by the common cold, allergies, and sinus infections. However, for people who would rather not use drugs, the following natural therapies have been shown to be effective in reducing coughing:

- i. The nutritional characteristics of almonds (*Prunus amygdalus*Batsch, Rosaceae) actively contribute to relieving cough symptoms. Five or six almonds should be soaked for eight to ten hours. Blend the almonds and butter together until they form a creamy paste. Consume it thrice daily till your condition improves.
- ii. Bromelain is an enzyme combination found in the pineapple (*Ananascomosus* (L.) Merr., Bromeliaceae) that helps break down proteins. Coughing is reduced, mucus in the throat is loosened, and sinusitis and allergy-related sinus difficulties are alleviated. If you or your kid takes a blood thinner, you shouldn't use a bromelain supplement. When combined with honey, the medication had a noticeable effect right away.
- iii. Native to both Europe and northern Iran, *Bryonia alba* L. (Cucurbitaceae) may be found there. When the sputum is crimson or frothy, this Homoeopathic treatment works wonders for bronchitis, coughs, and aches. It's best to administer it gradually over a short period of time. It works as well on fever as any sedative, and it relieves pain and coughing almost immediately. In addition to helping with abdominal discomfort, sciatica, colic, gas, indigestion, heart headaches, the flu, sprains, and strained ligaments have all benefited from its usage.
- iv. Cayenne pepper, often known as red pepper, has been shown to alleviate chest discomfort brought on by persistent coughing. It's energising and warming at the same time. Cayenne pepper, ground ginger, honey, apple cider vinegar, and two tablespoons of water are combined to



make a cough syrup. You should take the syrup thrice day.

- v. The vitamin and mineral content of carrots (*Daucus carota* ssp. *sativus* (Hoffm.) Schubl et G. Martens, Apiaceae) may aid with a variety of cough symptoms. Water is added to the fresh juice of four or five carrots. One spoonful of honey is added for sweetness. Three or four times daily until symptoms subside, the juice is consumed.
- vi. Grapes (*Vitis vinifera* L., Vitaceae) act as an expectorant, helping to clear mucus from the lungs. The quicker mucus is expelled, the quicker coughing stops. Grapes are consumed either by itself or in the form of fresh grape juice. Grape juice with a little honey added to it can help.
- vii. Wound infections, malaria, cough, pulmonary tuberculosis, high blood pressure, sexually transmitted illnesses, mental sickness, kidney and liver problems, asthma, and diabetes are only few of the ailments that garlic (*Allium sativum*) is used to prevent. It has been shown to have anticancer and chemopreventive properties as well as the ability to ward against the common cold and flu. Other preparations may increase oxidation, but aged garlic extract has been shown to be neuroprotective, hepatoprotective, and antioxidative. Potentially improved immune cell activity after taking a garlic extract.

## Conclusion

Cold but cough are frequent symptoms of respiratory tract illnesses, and there are many potential causes. If not caught and treated early, it may develop into a life-threatening

illness. Correct diagnosis allows treatment with a wide variety of over-the-counter medications, either alone or in combination. Herbal medicines have the least negative side effects and the most positive long-term effects.

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