

Herbal Product Information Sheet

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This information meets the guidelines and standards of the Cystic Fibrosis Foundation’s Education Committee (4/2021).

Introduction: Cystic Fibrosis

Cystic fibrosis (CF) is a genetic, progressive disease that causes a thick, sticky buildup of mucus in the lungs, pancreas and other organs. This leads to lung infections and, over time, limits the ability to breathe. It also affects other body functions, such as digestion. Your CF doctor may prescribe many medications to help keep your lungs clear, prevent or fight infections, and for some people, help correct the underlying cause of the disease.

This brochure provides an overview of the risks and benefits of some herbs and other supplements. CF patients who are considering the use of these therapies, including herbs and other supplements—should always use caution and discuss it with their care team in advance.

Disclaimer

The general information in this educational tool is only a limited review of herbal products available. It is designed to inform healthcare providers, CF patients and caregivers, but is not an endorsement of any individual therapy or product. An additional resource that many medical centers have is called “Natural Medicines Database.” If there is an item not listed here, you may ask to see if your CF care team has information on the it using this database. This tool should not be used in place of medical advice. Family members, friends or Internet searches may suggest a variety of herbal products. **Always discuss any herbal product you are thinking of trying with your CF care team prior to first use.** It is recommended that patients discuss all medications, herbal products and/or nutritional supplements being taken during each CF clinic visit.

Safety

This handout does not contain a full list of herbal products or nutritional products. Herbal products come from plants and can cause effects on the body, like prescribed medications. The effects, however, are often not well studied. The lack of information on how these products work can pose a safety risk since these products may interact with prescribed medications, over-the-counter drugs and/or nutritional supplements. These products do not require the same Food and Drug Administration (FDA) approval as prescription drugs or research drugs in the CF pipeline. Herbal products may contain unlisted ingredients which may affect health. Some herbal product claims can be misleading.

Always use caution when considering the use of these products and be sure to discuss them with your CF care team first.



PLEASE NOTE: herbal supplements are not evaluated by the FDA and use of some herbal supplements may have potentially severe drug interactions, especially with CFTR modulators such as Kalydeco,[®] Orkambi,[®] Symdeko,[®] and Trikafta.[®] Discuss with your care team if you are considering, or are using, an herbal supplement. Your care team wants to partner with you to ensure safe and effective use of medications, including herbal supplements.

Herbal Products

Betony

Other names include: Bétoine, Bishop Wort, Épiaire Officinale, Hedge Nettles, Tabac des Gardes, Wood Betony, Stachys officinalis

Marketing Claims	Reported Effectiveness	Safety/Risks
For diarrhea, stress/tension, headache, intestinal gas, cough, bronchitis, asthma	Mixed results; lack of reliable information available about the benefits or effectiveness of betony	Possible effects include decreased blood pressure, decreased blood sugar levels, and irritation to the stomach at large doses above manufacturer's listing

Butterbur

Other names include: petasites, purple butterbur, Petasites hybridus

Marketing Claims	Reported Effectiveness	Safety/Risks
For pain relief, stomach upset, gastric ulcers, headaches, chronic cough, chills, anxiety, plague, fever, insomnia, whooping cough, asthma, bronchitis, hay fever, eczema, irritable bladder, appetite stimulant	Mixed results; lack of reliable information available about the benefits or effectiveness of butterbur. Data varies regarding effectiveness for use in hay fever, headache (migraines). Data on lung health benefit is lacking	Common side effects reported include gastrointestinal symptoms (stomach upset, diarrhea, belching), allergic reactions, wheezing or asthma-like symptoms in patients sensitive to related plants such as ragweed

Chamomile

Marketing Claims	Reported Effectiveness	Safety/Risks
For gastrointestinal (GI) symptoms (gas, travel sickness, diarrhea, spasms, colic, indigestion), inflammatory diseases of the GI tract, GI ulcers, menstrual cramps	Some reports support temporary use for diarrhea. Limited data on use for indigestion; studies included other supplements in combination with chamomile	Possibly safe when taken in small amounts in food (such as tea). Side effects can include allergic reactions such as dermatitis, worsened eczema. May interact with medications that cause drowsiness by increasing sedation
Respiratory claims include relief of nasal mucous membrane inflammation, hay fever	Data shows chamomile is ineffective for cold symptoms	
Other uses include eczema, attention deficit-hyperactivity disorder (ADHD), fibromyalgia, anxiety, restlessness and insomnia	Insufficient data to support claims. Data shows chamomile is ineffective for eczema	

Cinnamon

Marketing Claims	Reported Effectiveness	Safety/Risks
Antimicrobial activity against <i>Pseudomonas aeruginosa</i>	Cinnamaldehyde, one of the major components of cinnamon oil, was found to prevent the production of a bacterial-signaling protein essential for bacteria communication and biofilm formation in one laboratory study (not a human subjects study). Insufficient data to support claims	There is no data to show safe to use via inhalation (essential oil, powder, etc.), thus not recommended for use. Possibly unsafe in high oral doses, long term, since ingestion of large amounts with broad definitions reported between 50 to 7000 mg/day of cinnamon, in general, has been reported to be associated with hepatotoxicity
Prediabetes	Insufficient data to support claims in treating prediabetes, preventing onset of diabetes	

Curcumin

Other names include: turmeric, Indian saffron

Marketing Claims	Reported Effectiveness	Safety/Risks
To decrease inflammation, heartburn and upset stomach	Mixed results; ongoing studies	May increase bleeding when used with blood thinners, including warfarin, clopidogrel and aspirin. May lower blood sugar when used with diabetes drugs. Using long-term or above the manufacturer's recommended dose may lead to stomach ulcers
Antioxidant effects	Ongoing studies, not confirmed recommendations	

Echinacea

Other names include: purple coneflower, coneflower, American coneflower

Marketing Claims	Reported Effectiveness	Safety/Risks
Boosts the immune system in healthy people	Claim not supported	Risk of allergic reaction for people allergic to plants in the daisy family, including ragweed. People with autoimmune disorders should not use echinacea
Prevents the common cold in children	Mixed results; ongoing studies	
Treats upper respiratory infections	Insufficient data to support claims	



Eucalyptus Leaves

Marketing Claims	Reported Effectiveness	Safety/Risks
Expectorant (to increase cough and bring up mucus) when composed of 70-85% cineole/eucalyptol	Insufficient data to support claims. Some data in adult bronchitis, but requires high dose, which may not be safe	Do not give eucalyptus to young children. Ingesting as little as 3.5 mL of undiluted oil can be fatal
For infections, asthma, fever	Insufficient data to support claims	Some strains of eucalyptus can cause infections (because of plant source). Signs of toxicity include stomach pain, nausea, vomiting, dizziness, muscular weakness, constricted (smaller) pupils, a feeling of suffocation, convulsions

Garlic

Marketing Claims	Reported Effectiveness	Safety/Risks
For high blood pressure, high cholesterol, heart disease	Possible data to support its use (not alone) in managing cardiac conditions such as high cholesterol, high blood pressure; however, data varies	Topical use (on the skin) may be safe, however it may irritate skin, especially raw garlic. Eating garlic as part of diet is safe; however garlic supplements are not regulated by the FDA, so safety is not controlled
For cystic fibrosis, diabetes, osteoarthritis, hay fever, infection	Data on using garlic oil macerate (625 mg) daily for 8 weeks shows it does not improve lung function, symptoms, or reduce the need for antibiotic treatment. Studies also show its ineffectiveness in diabetes, common cold, allergic rhinitis, infection	

Ginger

Marketing Claims	Reported Effectiveness	Safety/Risks
Treats nausea and vomiting	Supported claim	May increase risk of bleeding when used with blood thinners, including warfarin, clopidogrel, and aspirin. Also has been reported to cause increased menstrual bleeding. May lower blood sugar when on diabetes drugs. May cause drowsiness
Treats motion sickness	Mixed results; ongoing studies	



Ginkgo Biloba

Other names include: ginkgo, fossil tree, maidenhair tree, Japanese silver apricot, baiguo, yinhsing

Marketing Claims	Reported Effectiveness	Safety/Risks
For Alzheimer's disease, dementia, cerebral vascular disease	Ongoing studies, not confirmed recommendations	Reports of concerns for toxic and carcinogenic (cancer causing) effects in animal studies. Fresh ginkgo is not safe; consuming as much as 10 seeds/day can cause difficulty breathing, weak pulse, seizure. Short-term use only. Do not use while pregnant
For cough, asthma, bronchitis	Clinical research shows that use of products containing ginkgo does not improve lung function, symptoms, or quality of life	

Horehound

Other names include: white horehound

Marketing Claims	Reported Effectiveness	Safety/Risks
For cough, to boost appetite	Insufficient data supporting this claim	Intake above manufacturer's recommended dose may lead to heart problems. Do not use while pregnant

Licorice Root

Other names include: glycyrrhiza, licorice, liquorice, sweet root, gan cao, gan-zao, Chinese licorice

Marketing Claims	Reported Effectiveness	Safety/Risks
Treats stomach problems, nausea, stomach ulcers and inflammation	Insufficient data supporting this claim	Intake above manufacturer's recommended dose may cause salt and water retention, and low potassium. Do not use if on diuretics (drugs to increase urine output). May increase side effects from steroids and MAOIs (a class of antidepressant). Avoid large amounts and long-term use, as these increase risk for toxicity such as high blood pressure, heart problems and kidney problems
Expectorant (to increase cough and bring up mucus)	Insufficient data supporting this claim	

Milk Thistle

Other names include: Mary thistle, holy thistle, silybum marianum

Marketing Claims	Reported Effectiveness	Safety/Risks
Improves liver function	Mixed results; ongoing studies	May slow the breakdown of other drugs and nutrients. Do not use while pregnant

Mushroom Powder Supplements

Other names include: reishi/lingzhi, maitake, cordyceps, shiitake, lion's mane, turkey tail, chaga

Marketing Claims	Reported Effectiveness	Safety/Risks
Liver detoxification, liver health	Insufficient data supporting this claim	Unknown content of products; unregulated. Some mushroom products may actually cause liver toxicity

Peppermint/Peppermint Oil

Marketing Claims	Reported Effectiveness	Safety/Risks
For respiratory infections including common cold, pharyngitis (swelling in the back of the throat) and sinusitis	Insufficient data supporting this claim	If taken by mouth can cause heartburn, nausea and vomiting, anal or perianal burning, abdominal pain, belching, dry mouth, diarrhea. Topically (on the skin), peppermint oil can cause skin irritation and contact dermatitis * The CF Foundation strongly recommends against using peppermint oil with nebulizer therapy
For irritable bowel syndrome (IBS), cramps, spasm associated with endoscopy procedures, indigestion, gas	Insufficient data to support claims	
For tension headache	Insufficient data to support claims	

Rose Hip

Other names include: rose hep and rose haw

Marketing Claims	Reported Effectiveness	Safety/Risks
High vitamin C content	Does contain vitamin C; however amounts can vary	Vitamin C levels vary by product. Does not work better than manufactured vitamin C
For osteoarthritis, menstrual cramps	Insufficient data supporting this claim	

Slippery Elm

Other names include: ulmus rubra

Marketing Claims	Reported Effectiveness	Safety/Risks
Expectorant (to increase cough and bring up mucus), soothes cough	Insufficient data supporting this claim	Risk of allergic reactions for people allergic to plants in the Elm tree family. May slow absorption of drugs

St. John's Wort

Marketing Claims	Reported Effectiveness	Safety/Risks
For behavioral health including depression, mood disturbances and other symptoms of menopause, somatization disorder, premenstrual syndrome (PMS), attention deficit-hyperactivity disorder (ADHD), social phobia, obsessive-compulsive disorder (OCD), and seasonal affective disorder (SAD)	Some data showed extracts may be more effective than placebo for mild depression.	<p>Major risk of drug interactions with other medications which includes CFTR modulators such as ivacaftor (Kalydeco), lumacaftor/ivacaftor (Orkambi), tezacaftor/ivacaftor (Symdeko), and elexacaftor/tezacaftor/ivacaftor (Trikafta).</p> <p>St. John's Wort may significantly decrease effectiveness of CFTR modulators.</p> <p>**St. John's Wort should NOT be used by persons taking CFTR modulators (i.e., Kalydeco, Orkambi, Symdeko, Trikafta).</p> <p>**St. John's Wort can cause major interactions with other various medications that persons with CF use, e.g., omeprazole (decreased levels of and effect of omeprazole); thus, it strongly recommended to screen for any possible drug interactions if considering or are using products with St. John's Wort.</p>

Thyme

Marketing Claims	Reported Effectiveness	Safety/Risks
Expectorant (to increase cough and bring up mucus), treats cough, bronchitis	Insufficient data to support claims	Relatively safe; often given as 1 tsp thyme/8 oz. of water. Safety of larger amounts is not well studied

Nutritional Supplements

Fish Oil (containing Omega 3-fatty acids)

Marketing Claims	Reported Effectiveness	Safety/Risks
For high cholesterol, cardiovascular disease	Data supports claims, but should be used in addition to standard therapies	Generally regarded as safe in recommended doses. Doses less than 3 grams per day by mouth can be safely used by most people (adults).
Cystic fibrosis (counters the inflammation in chronic inflammatory diseases)	Mixed results; ongoing studies	

Magnesium

Marketing Claims	Reported Effectiveness	Safety/Risks
For asthma	It is used intravenously (IV) for asthma exacerbations (worsening symptoms) in the emergency department; however oral use of this supplement doesn't seem to improve forced expiratory volume in one second (FEV1) or reduce the need for bronchodilator use in patients with chronic asthma	Magnesium is generally well tolerated when used in appropriate doses (such as those listed on antacid or milk of magnesia product labels). Magnesium can cause gastrointestinal irritation, nausea, vomiting, and diarrhea
For constipation, GERD	It is found in milk of magnesia, which is used for constipation as well as in antacid products over the counter	

Probiotics

Marketing Claims	Reported Effectiveness	Safety/Risks
Helps restore "good" bacteria in the gut that may be lost by frequent use of antibiotics. Helps reduce diarrhea. Has immunomodulatory (modifies the immune response) and anti-inflammatory properties which may help lung function and rate of worsening symptoms	Mixed results; more research needed. Data suggests that probiotics may improve respiratory and gastrointestinal outcomes in stable CF patients. Lack of data to show which probiotics are helpful (several types used, with variable results)	Content of products can vary. There is not enough evidence at this time to recommend a specific brand or dose of probiotic as likely to be of significant benefit Potential risk of infection in patients with a central line

Selenium

Marketing Claims	Reported Effectiveness	Safety/Risks
For asthma, cancer, liver disease	Insufficient data supporting this claim	Higher doses and/or chronic use may not be safe due to accumulation and may result in development of diabetes and even death, especially with intravenous (IV) use



Vitamin C

Marketing Claims	Reported Effectiveness	Safety/Risks
For asthma, bronchitis	Mixed results (asthma); more research needed. Insufficient data supporting bronchitis claim. One small study showed no effect on bronchitis symptoms or duration	Should not be used as primary treatment for asthma control
Improved iron absorption	May be helpful in improving iron supplement absorption	Doses as per labels are generally safe. High doses of vitamin C (>2,000 mg) have been associated with health problems including kidney stones, severe diarrhea, nausea, and gastritis. Rarely, flushing, faintness, dizziness, and fatigue have been noted

Whey Protein

Marketing Claims	Reported Effectiveness	Safety/Risks
Enhanced antioxidant effect	Increase in lymphocyte glutathione (an antioxidant produced in response to inflammation in the lungs) levels in one study with CF patients; however, no clinical change was observed. Limited data; more research needed	Doses shown on product labels are generally safe. High doses of whey protein may cause some side effects, such as increased bowel movements, nausea, thirst, bloating, cramps, and reduced appetite
For COPD, asthma	Not shown to improve lung function. Insufficient data supporting this claim	

References and Additional Resources

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