

Support for Healthy Lung Function

Developed and reviewed by the clinical, chiropractic, and naturopathic members of the Standard Process team

Lung Health and Function

The lungs perform the vital task of gas exchange — taking the oxygen needed for cellular energy production from the air and expelling carbon dioxide as a waste product of metabolism. Millions of alveoli facilitate gas exchange across a capillary network with the ultimate purpose of tissue perfusion.

As the organ with the largest surface area in the body, the lungs interface with the external environment and face ongoing chemical, mechanical, biological, immunological, and xenobiotic stress. Lung pathology often stems from the improper modulation of the immunological and inflammatory pathways, oxidative stress, and dysfunctional remodeling of the lung extracellular matrix. Common chronic lung pathologies include asthma, chronic obstructive pulmonary disease (COPD), pulmonary hypertension, and occupational lung diseases.

Airway neutrophilia is a common feature of many chronic inflammatory lung diseases. Neutrophils are key mediators of inflammatory changes and have been shown to cause many of the pathological features associated with diseases like COPD, emphysema, and mucus hypersecretion. Symptoms associated with chronic lung impairment include shortness of breath, cough, wheezing, fatigue, frequent lung infections, chest pressure or tightness, and increased sputum production.

Lifestyle and nutrition interventions can support healthy lung function by modulating inflammatory, immunological, and oxidative processes. They can also limit exposure to toxins and activities that act as lung stressors.

Supportive Lifestyle Practices

Recommend breathing exercises to support healthy lung function in conditions like COPD. Techniques like pursed lip breathing, belly breathing, and alternate nostril breathing

can improve exercise endurance, dyspnea, respiratory muscle strength, and quality of life measures.¹

Recommend acupuncture to support chronic lung conditions like asthma. Acupuncture has been shown to modulate the balance of Th1 and Th2 cells, block inflammatory cells and mediators, improve airway remodeling, and regulate HPA axis function.²

Whole Foods Nutritional Recommendations

Encourage the consumption of foods rich in the omega-3 fatty acids EPA and DHA such as salmon, cod liver, tuna, and calamari. These fatty acids are precursors of the specialized pro-resolving mediators resolvins, protectins, and maresins. They can support lung function by regulating neutrophil infiltration, modulating cytokine and chemokine production. They can also help support healthy clearance of apoptotic neutrophils by macrophages.³

Ensure patients consume foods rich in preformed and provitamin A such as leafy green vegetables, carrots, sweet potatoes, dairy, and eggs. Retinoic acid — the active metabolite of vitamin A — plays a role in the modulation of the lung immunological and inflammatory response and helps maintain homeostasis of the epithelial tissues and mucosa.⁴

Recommend that patients with lung conditions cook with the spice turmeric. Compounds in turmeric can support lung health through the modulation of alveolar epithelial thickness, airway remodeling, and the regulation of reactive oxygen species production.⁵

Dietary Supplement Regimen



ResCo®

Suggested Use: **1 tablet 3-4 times daily**

ResCo® is a respiratory support formula containing Licorice, Mullein, Euphorbia, Grindelia, Ginger, Fennel & Thyme essential oil to support healthy mucous membranes.* These herbs have been traditionally used in herbal preparations to:

- Support healthy mucous membranes within the respiratory tract*
- Encourage healthy mucus function*
- Support the body's normal cough reflex*
- Encourage normal secretion removal from the respiratory system*
- Soothe mucous membranes*



Tuna Omega-3 Oil

Suggested Use: **2 softgels twice per day with meals**

Tuna Omega-3 Oil helps bridge the gap in dietary omega-3 intake and supports the body's natural inflammatory response function.*



Emphaplex®

Suggested Use: **2 capsules per meal**

Emphaplex supports the respiratory system.*

- Helps maintain healthy mucous membranes*
- Supports cellular energy*
- Supports central nervous system function*
- Contains a combination of key ingredients from Catalyn®, Drenamin®, Pneumotrophin PMG®, Phosfood® Liquid, and Protefood®
- Excellent source of vitamin A, riboflavin, and niacin
- Good source of vitamin B6 and vitamin D



PulmaCo

Suggested Use: **1 tablet 3 times daily**

PulmaCo contains Chinese Skullcap, Malabar Nut Tree leaf, Grindelia, Turmeric, Ginkgo and Fennel to support healthy respiratory tract function.* These herbs have been traditionally used in herbal preparations to:

- Support the body's normal cough reflex*
- Support the body's natural ability to break up and expel respiratory secretions*
- Support healthy respiratory tract function*
- Provide antioxidant activity*

Assessing Healthy Lung Function

In Office/Physical Exam

- Vital Signs including pulse oximetry
- Lab Studies: complete blood count with differential (CBC), comprehensive metabolic panel (CMP), c-reactive protein (CRP)
- Physical Exam: Lung and cardiac exam. Assess for respiratory distress, respiratory accessory muscle use, and abnormal chest shape. Spirometry testing and

additional pulmonary function tests as indicated.

- Signs/Symptoms like cough, dyspnea, wheezing, exercise intolerance, sputum production, peripheral edema, mood and mental status alterations
- Medical History: Smoking, occupational exposure, atopy, alpha-1 antitrypsin deficiency
- Imaging in appropriate patients

REFERENCES

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3. Duvall, M. G., & Levy, B. D. (2016). European journal of pharmacology, 785, 144–155
4. Gozzi-Silva, S. C., et al (2021). Frontiers in nutrition, 8, 674258.
5. Safari, S., et al (2023). Health science reports, 6(3), e1145.