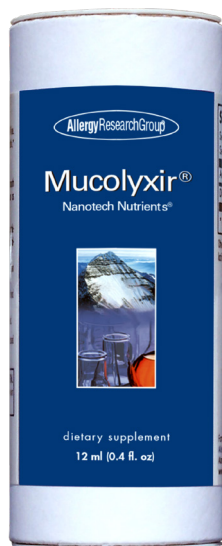


# Mucolyxir<sup>®</sup>

## Nanotech Nutrients<sup>®</sup>

**Mucolyxir<sup>®</sup>** is a liquid nutritional supplement, formulated from double-stranded deoxyribonucleic acid (DNA) derived from wild Pacific salmon. The small amount of DNA in Mucolyxir<sup>®</sup> may balance mucus levels via a regulatory mechanism.\* Based on pre-clinical investigations and clinical trials, Mucolyxir<sup>®</sup> appears to support cilia motion, and liquification and elimination of mucoid substance.\*



#75360  
12 mL (0.4 fl. oz.)

### Key Features

- Supports normal, healthy viscosity of mucus and sputum\*
- May support healthy movement of fluid mucus\*
- Supports healthy respiratory capacity\*



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It is thought that the viscous sputum that occludes airways may be partially the result of accumulated DNA. This excess DNA gathers in part from the activity of the immune system, as it tries to eliminate bacteria from the lungs. Mucolyxir® appears to work by providing a feedback mechanism that reestablishes homeostasis relative to the various components of the immune response.\* This more balanced response can result in a more fluid (less viscous) sputum, enhancing the natural eliminatory activity of the body.\*

The viscosity of mucus may be partially attributed to excessive DNA resulting from a build-up of lysed white blood cells from the body's failed attempt to eliminate foreign material. DNA in bacteria can induce interleukin-8 (IL-8), which in turn promotes release of phagocytic cells that can destroy the bacteria. But if the lungs are unable to eliminate the DNA residues of this immune activity, then the airways can become congested. The immune response becomes partially a compensatory mechanism for the body's failure to eliminate the DNA build-up through the normal process of expectoration. As the phagocytes continue to work, phagocytic DNA is added to that from the bacteria. This combined accumulation of DNA also augments the likelihood that the immune system will become increasingly sensitized to DNA. The result is that the natural power of the immune response gets directed into a cycle of increasing ineffectiveness, as its own activity creates conditions that call for more immune response.

The small amount of DNA in Mucolyxir® may balance mucus levels via a neutralization or feedback mechanism, just as a small amount of ragweed extract is used to down regulate or balance immune response to environmental factors.\* Mucolyxir® appears to interrupt the DNA build-up cycle by helping to reduce the excess production of IL-8, decreasing the intensity of phagocytic activity while simultaneously increasing its effectiveness.\*

Mucolyxir® also appears to have another mode of action. Based on pre-clinical investigations, patents, and clinical trials, it appears that Mucolyxir® may increase the strength and frequency of the beat of cilia, tiny, hair-like projections on epithelial cells that line the bronchial tree.\* Research has shown that phosphorylated nucleotides, small pieces of DNA containing phosphate, can bind to the P2Y receptors on the cells, and the cilia appear to respond to this stimulation by beating faster and stronger. This enhances the movement of mucus through the bronchial tree and enables the mucus to be naturally expelled.\* Although nucleotides are thought to be the key element in this observed promotion of mucociliary clearance, there are three possible modes of enhancement: increasing ciliary movement on epithelial cells lining the bronchial tree, promoting secretion of mucus from goblet cells, and supporting the movement of water into and out of epithelial cells.\* Mucoïd fluid may then experience alteration of liquid and solid portions of the mucus in favor of the liquid, resulting in increased expectoration with decreased effort, supporting the body's mechanisms for clearance of fluid.\*

By supporting regulation of the anti-DNA activity of the immune system, and by stimulating mucociliary clearance, Mucolyxir® may support two distinct and complementary functional pathways that then may result in decreased mucus viscosity, enhanced expectoration, increased aeration and healthy bronchial function.\* More recently, it has been found that the receptors in the ear canal can be stimulated by Mucolyxir® as are receptors in the respiratory tract, and can experience the same increased efficiency of fluid movement and elimination.\*

Mucolyxir® does not affect gene transfer and is completely different from other DNA-based developments. It utilizes the activity of the physical DNA from a food source, not modifications within the DNA molecule.

Minor side effects in clinical trials were comparable to those of the placebo used, and no serious adverse events were reported.

## Supplement Facts

Serving Size 1 Drop (0.05 mL)  
Servings Per Container 240

Amount Per Serving	% Daily Value*
DNA (from Salmon)	0.3 µg †

† Daily Value not established.

\* Percent Daily Value are based on a 2,000 calorie diet

Other ingredients: Deionized water, glycerin, sodium chloride, lactic acid, potassium sorbate.

**Suggested Use:** As a dietary supplement, 1 or 2 drops, placed in mouth slowly, then swallowed, one to four times per day, or as directed by a healthcare practitioner. To avoid dilution, do not eat or drink for 5 minutes after taking.

**First time use:** To get liquid flowing, follow this one-time procedure. With uncapped bottle upright, carefully pull out plastic insert from top of bottle, and then replace it securely.

### Additional Usage Notes:

At the start of use, individuals may take more, as follows:

Day 1: Take 1 drop every fifteen minutes for one hour. Then take 1 drop every hour until bedtime.

Days 2 and 3: Take 1 drop after each meal and before bed (4 times total).

Day 4 and beyond: Maintain schedule or use only as needed.

**Caution:** Some individuals may experience increased mucus excretion with only 1 or 2 doses.