



## Dietary Supplements & OTC Nasal Sprays/Drops

### Definitions:

**Herb:** a plant or plant part valued for its medicinal, savory, or aromatic qualities.<sup>1</sup>

**Vitamin:** any of various organic substances that are essential in minute quantities to the nutrition of most animals and are present in natural foodstuffs or sometimes produced within the body.<sup>1</sup>

**Mineral:** an inorganic substance; neither animal nor vegetable.<sup>1</sup>

**Drug:** a substance intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease.<sup>1</sup> Remember many of our most helpful drugs are derived from natural sources. Aspirin comes from the bark of the white willow, digoxin (common heart medication) comes from the beautiful foxglove plant, penicillin is derived from a naturally occurring mold and hemlock is the agent Socrates drank to end his life.

**Holistic medicine:**

**Homeopathic medicine:**<sup>1</sup>

**Note:** *When an herb is used for its medicinal properties it is by definition a drug; however, it is marketed and perceived by the general public as a dietary supplement.*

### Are Dietary Supplements Scientifically Valid?

The medical community has recognized that a large amount of patients are utilizing dietary supplements and have performed some research in an attempt to investigate the potential value as well as risks of popularly used **substances**. **The following discussion is a collaboration of information that we have gathered on some dietary supplements. This information should not be construed as a recommendation or promotion of any of these products unless otherwise clearly stated.** Many other available dietary supplements with purported positive effects are not mentioned because evidence to support their use is miniscule, highly controversial, perceived as potentially dangerous or alternately they may be just like snake oil!

### Safety Considerations

Prescription drugs must undergo clinical testing and receive the FDA's (Food and Drug Administrations) full review for safety and effectiveness before they are sold. Dietary supplements are NOT required to undergo government testing or review before they are marketed. Even a product labeled "natural" can have risks and adverse effects and can interact with medications. Some dietary supplements can be dangerous in some people with certain medical conditions. Some vitamins and minerals consumed in excessive quantities can cause problems. Because of lack of regulatory review, some supplements are marketed fraudulently. Common health fraud targets are people who are overweight, or have serious medical conditions which there are no cures, including MS, diabetes, Alzheimer's, Cancer, Immune Disorders, Fatigue, and arthritis (Information provided by FTC and FDA). In 1989, a naturally occurring dietary supplement intended as sleep aid, L-tryptophan, was pulled from the market by the Center for Disease Control once they discovered it was responsible for a severely disabling and even deadly condition called eosinophilia myalgia syndrome.

**Echinacea:** is purported as having immune-stimulating effects and has been used as supportive therapy for colds and respiratory infections. Studies have looked at the efficacy of echinacea, none have been definitive. One of the most recent studies, in Dec 2003 (JAMA), was performed on children. This study found that echinacea made no dent in duration or severity of upper respiratory infections; however it increased the number of rashes. One unexpected outcome; however, indicated that there were fewer second or third colds in the echinacea group which may indicate the herb may still have a role in prevention. Another study done in August of 2000 reported that the labeling of echinacea matched the actual contents in only 52% of samples. This means that what you see on the label may not be what you get. The most recent evaluation of echinacea in the New England Medical Journal published in July of 2005 indicates no validity to its use. **Safety Consideration:** Echinacea should not be used in people with progressive systemic and autoimmune disorders, such as Cancer (may have a negative effect on treatments for lymphoma and leukemia), Tuberculosis, Connective Tissue disorders, collagenosis, and related diseases such as lupus, AIDS.

**Vitamin C:** is important to the body because it helps protect cells and keep them healthy. It also helps the body to absorb Iron. Adequate Vitamin C levels can be obtained by eating a balanced, healthy diet. Vitamin C supplementation has been linked to preventing the common cold and fighting cancer; however, no conclusive data is available. Recent studies are looking at the possible benefits of Vitamin C on the immune response and the body's response to stress. Perhaps, in the future, we will have a better understanding of this Vitamin. In general, most healthy people can safely take up to 1000 mg/day or less of Vitamin C. **Safety Considerations:** People with kidney disease should avoid Vitamin C supplementation. It is believed associated with the development of kidney stones. (Kathy ?True?) Large amount of

<sup>1</sup> (Merriam-Webster's Collegiate Dictionary)



Vitamin C can cause stomach pain, diarrhea, and flatulence. Some studies have shown that Vitamin C may enhance chronic inflammation.

**Zinc:** is a mineral found in the body, which is responsible for normal enzymatic function in multiple metabolic pathways. Zinc gluconate lozenges and zinc nasal sprays have been utilized in the prevention and treatment of cold symptoms. Again, there are conflicting studies regarding the benefits of zinc.

Whereas some research studies support that zinc gluconate lozenges and zinc nasal sprays reduce the symptoms and severity of the common cold; others show no effect. Zinc can be obtained by eating a healthy, balanced diet. Zinc supplements are usually well tolerated in most healthy individuals. **Safety considerations:** Zinc supplements in large amounts may cause diarrhea, abdominal cramps, vomiting, usually occurring within 3 –10 hours of ingestion of the supplements.

**Acidophilus Supplements:** Lactobacillus acidophilus is bacteria that can normally be found living in our small intestines. Some research suggests that this is a healthful bacterial strain which can stimulate our immune system to protect us against harmful intruders. Additionally using this as a dietary supplement while on antibiotics may reduce the risk of gastrointestinal disease associated with antibiotic use as well as the risk of oral or vaginal yeast infection. **We recommend that each an every time you are prescribed an antibiotic that you supplement your diet with acidophilus.** There are varying forms of this supplement however one of the most reliable ways to add it your diet is to eat 8 ozs. of acidophilus containing yogurt daily. Other commercially available source can be obtained from your health foods store or pharmacists. We are not aware that one brand is superior to another, although there can be significant variability in cost and potency.

**Grapefruit juice:** Drinking grapefruit juice can have an effect on many medications. Ask your doctor if the medication you are on is effected by grapefruit juice. There are some medicines that may be prescribed for your sinus or nasal problems that are affected by grapefruit juice and other citrus drinks. Some of these are: Allegra, Erythromycin, Dextromethorphan, Sporonox (Itraconazole), Medrol .If you are on these medications it is best to completely avoid drinking grapefruit juice for the duration of the prescription.

#### **Supplements that affect allergy testing:**

#### **Over-the-Counter (OTC) Nose Sprays & Drops**

**Nasal saline:** There are many brands which are for the most part are identical. Often they contain a preservative Benzyl Kolonium which can cause nasal irritation in sensitive individuals. It is believed that saline spray bottles which are re-used can become a source of bacterial infection.

**Nasal emollients:** Although some oil based agents intended to moisturize the nasal passages (Ponaris®) can be very soothing, theoretically they can lead to the unwanted condition of lipid pneumonia and should be used cautiously.

**Nasal decongestant sprays:** (eg Oxymetazoline, Phenylephrine) These are generally advised for short-term, intermittent use to reduce swollen nasal passageways. Additionally some report benefit of these medicines to permit the drainage of the sinuses, and to reduce or eliminate ear complaints, facial pain and nasal obstruction especially associated with air travel. Warning: Read the label prior to use for possible dangers. Used for more than 3 days consecutively, susceptible individuals will become readily addicted to these medications. Some individuals can extend their safe use to six days by reserving them for bedtime and by using them in only one nostril on alternating nights.

**Sinofresh Nose Spray:** This is the only OTC, FDA approved nasal spray which kills nasal bacteria, viruses and fungi. Its active ingredient is the same as in Cepacol® mouthwash and theoretically can breakdown accumulations of organisms in your nasal passages. Some patients find it helpful.

**Xlear Nasal Wash:** Xylitol is the active ingredient and is a naturally occurring substance which decreases the ability of bacteria to adhere to mucosal surfaces. In dental disease it has decrease carriage of bacteria. Xylitol reduces experimental sinusitis when administered simultaneously with bacteria. Its effect in established sinusitis is less clear. A role may exist for xylitol in nasal irrigation fluid in human disease. [Brown CL](#), [Graham SM](#), [Cable BB](#), [Ozer EA](#), [Taft PJ](#), [Zabner J](#) Xylitol enhances bacterial killing in the rabbit maxillary sinus. Laryngoscope. 2004 Nov;114(11):2021-4.

**Nose blowing:** It is believed by some researchers that forceful nose blowing may actually contribute to bacterial and fungal growth in the sinuses. Studies have identified spread of material from the back of the throat in the sinus cavity after heavy nose blowing. Instead, it may be beneficial to gently blow after rinsing the nasal passages with salt water spray.