

SOUND information
for your hearing health

SOUND information
brought to you by your local audiology professional



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Healthy Diets Support Healthy Hearing

Treatment for hearing loss comes in many forms, including the well-known use of hearing aids. Now a wealth of information from recent studies has suggested that adding specific vitamins, minerals, and nutrients to patients' diets may head off the need for such devices later in life. Folic acid, a water-soluble B vitamin that aids in DNA synthesis and formation of healthy red blood cells, is one such vitamin that may also play an important role in preserving hearing health later in life.

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According to a 2007 study published in the *Annals of Internal Medicine*, folic acid supplementation may slow age-related hearing loss in older adults. Scientists from Wageningen University conducted a double-blind, placebo-controlled study on 728 men and women between the ages of 50 and 70 living in the Netherlands. At the initial screening, all participants had either healthy hearing or hearing loss solely related to age, and they presented with low levels of folic acid (approximately 50 percent lower than those found in the U.S. due to the Netherlands' prohibition of the folate fortification of food). Participants also had high homocysteine levels, which are directly affected by folic acid and can be reduced with folate supplementation.

Over the course of the three-year study, half of the participants took a folic acid supplement of 800 micrograms per day, while the other half received a placebo. **At the end of the three-year trial, the participants who had received folic acid had less low-frequency hearing loss than those who had received the placebo, suggesting that folate may play a role in slowing the progression of hearing loss.**

This hypothesis is supported by additional studies, including research from 1999 by the *American Journal of Clinical Nutrition*. The study was conducted on 55 healthy Caucasian females between the ages of 60 and 71. The results found that women with presbycusis had significantly lower levels of vitamin B12 and folate than women with normal hearing, indicating that along with folic acid, vitamin B12 may play an important role in auditory health.

With no single known cause for the pervasiveness of hearing loss in older adults, and no known cure, hearing loss prevention is crucial. Educating patients on which nutrients aid in the deterrence of presbycusis, where to find them, and how to integrate them into their daily dietary intake is one simple approach.

Folic acid and vitamin B12 can be taken in the form of a supplement or increased naturally through basic dietary changes. Foods that naturally contain folic acid include leafy green vegetables, citrus fruits, and legumes. Since 1998 folic acid has also been added to an array of foods such as breakfast cereals, breads, flours, and pastas, which are labeled "enriched."

Along with having the potential to preserve hearing health, vitamin B12 plays an essential role in protecting the brain and central nervous system. It is found in fortified foods like breakfast cereal and soy products, and it occurs naturally in fish, milk, and eggs.

Folic acid and vitamin B12 aren't the only nutrients that have been found to help thwart hearing loss. While using protective devices such as earplugs is the only proven method of preventing noise-induced hearing loss (NIHL), studies have

shown that taking a mixture of vitamins C, E, A, and magnesium can reduce the damage caused by excessive noise. **According to a study published in 2007 by *Free Radical Biology & Medicine*, taking the vitamin mixture both prior to and after exposure to high levels of noise may significantly minimize the effects.** It is believed that the mixture's success is derived from the fact that the vitamins are antioxidants with the ability to fight free radicals. Free radicals (destructive molecules that begin to form in the ear before and after exposure to excessive noise) are thought to destroy the inner-ear hairs or sensory cells, damaging the inner ear and, thus, hearing.

Vitamins C, E, A, and magnesium can be taken in supplemental form or found naturally occurring in the following foods:

- **Vitamin C:** oranges, chili peppers, and broccoli
- **Vitamin A:** carrots, sweet potatoes, and mangos
- **Vitamin E:** almonds, Swiss chard, and kale
- **Magnesium:** bananas, cashews, and edamame

Many of the aforementioned vitamins and minerals are found in the same and complementary foods and can easily be worked into a balanced diet supported by daily supplements. By integrating healthy food choices and well-balanced meal planning into patients' daily lives, hearing health will be supported and protected while overall health is improved. ■

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