

My Take on the News

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Listen Up: There's a New Treatment for Tinnitus



A small device could help treat tinnitus (chronic ringing in the ears) according to recent findings.

The study examined 45 tinnitus sufferers who used a device developed by Neuromonics for two or more hours each day. In the six months after treatment, participants reported an average 26-point reduction in tinnitus-related distress. The device plays calming music that contains an embedded, almost inaudible, sound—determined by the frequency of each patient's tinnitus. Listening to the device daily seems to re-train the brain to filter out the ringing caused by tinnitus. Therapy can cost \$3500 to \$6000, and appears to be most beneficial for those experiencing severe symptoms. (American Academy of Audiology Conference, April 2009)

My take This is an interesting development for a condition that can seriously affect quality of life and is often resistant to treatment. However, the device is costly, and I'd like to know more about long-term efficacy before recommending it.

Genetic Link Between Diabetes and Alzheimer's

Prior evidence has shown that type-2 diabetics are twice as likely as others to develop Alzheimer's disease, and now researchers have discovered a clear link between the two conditions. The connection is a single gene known as *peroxisome proliferator-activated receptor-gamma coactivator 1* (PGC-1). This gene regulates glucose content in the body and its activity

is reduced in type-2 diabetics. The study found that PGC-1 is also less active in patients with Alzheimer's-related dementia. (*Archives of Neurology*, March 2009)

My take I find this study very intriguing. Diabetes causes accelerated aging and diabetics tend to develop age-related diseases decades before those with normal metabolism. These findings are in line with another study in the April 15 issue of *JAMA*, which found that diabetics with episodic low blood sugar are more prone to dementia. Clinical applications, such as restoring PGC-1's activity, are still in the future, but these findings are promising.

Home Teeth Whiteners May Weaken Enamel



A study of five popular at-home-teeth-whiteners found bleaching decreases enamel hardness and

tooth-surface resilience. Researchers exposed 55 human tooth samples to the various whitening strips and gels and left five samples untreated. This was the first study of its kind to measure results at the nano level (as small as one-billionth of a meter), revealing an average loss of 1.2 to 2.0 nanometers on bleached teeth and reduced resiliency of tooth surface. (*Journal of Dentistry*, March 2009)

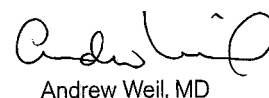
My take The results of this study are not surprising. Many people who use at-home whiteners experience tooth sensitivity—a clear indication of a weakening effect on enamel. I would suspect that the same is true of gel and laser treatments offered by dentists, since they're even more powerful. Use caution with any of these products.

Dear Reader The Evolutionary Medicine Concept

It may be counterintuitive to think that many of our modern medical challenges—treating chronic diseases, obesity, and cancer—might be better understood using fossils rather than futuristic technologies. In fact, scientists are piecing together anthropological evidence from the earliest humans to help us better understand our bodies' natural defenses. This emerging field of "evolutionary medicine" was the topic of a recent National Academy of Sciences colloquium in Washington, DC, and is the subject of the new book *Evolution Rx* (Perigee, 2009), by William Meller, MD. Though I disagree with some of Dr. Meller's advice, his book clearly explains the interesting fundamentals of this new concept.

Evolutionary medicine provides a useful perspective to evaluate modern epidemics, such as obesity. For thousands of years, the human race depended on the ability to store fat in times of plenty in order to survive winters and times of scarcity, influencing how the body's metabolism functions today.

Scientists are also gleaning more evidence about evolving pathogens, now able to withstand some of our strongest antibiotics. This knowledge might change the way we treat illness in the future. For instance, learning why our ancestors spiked a fever—their bodies' attempt to make a less hospitable environment for pathogens—might make us less eager to turn to aspirin to treat low-grade fevers. I think this is a fascinating field, and I look forward to continued discoveries about the past that could affect our health in the future.


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Andrew Weil, MD, is the founder and director of the Arizona Center for Integrative Medicine at the University of Arizona in Tucson. The author of *Healthy Aging*, *8 Weeks to Optimum Health*, and *Spontaneous Healing*, Dr. Weil is a graduate of Harvard Medical School. He also established The Weil Foundation, a nonprofit organization that supports integrative medicine by funding training for practitioners, research, innovations in patient care, and policy reform.