



Healthy Sleep, Healthy Eyes

Obstructive sleep apnea (breathing pauses during sleep) may increase the risk of vision-robbing glaucoma by about 67 percent. Researchers from Japan's Hokkaido University say sleep apnea may damage the optic nerve, which carries signals from the eyes to the brain, by reducing oxygen in the bloodstream. Treating sleep apnea could help manage glaucoma and, for those who already have the condition, keep vision from worsening.

Source: *Investigative Ophthalmology and Vision Science*



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Adolescents with migraine?

**You now have a non-pharmacologic effective
treatment option!**

Migraine is a prevalent and debilitating disease, affecting approximately 9% of children and adolescents. It is associated with poorer performance and absence from school and social activities during a particularly formative time in life.

Providing teens with more effective and engaging treatments for migraine can have positive effects over the course of their lives. Current acute treatments for adolescents with migraine are mostly pharmacological, which may cause side effects, and their frequent use may potentially lead to medication overuse headache and migraine cornification. Thus, there is a great, unmet need for new safe and effective acute treatments for adolescents with migraine headaches.

Remote Electrical Neuromodulation (REN) is a non-pharmacological, non-invasive neuromodulatory treatment of migraine that stimulates nociceptive nerve fibers in the upper arm to activate an endogenous descending pain inhibition mechanism termed Conditioned Pain Modulation (CPM).

A recent study published in *Headache* demonstrated that REN provides clinically meaningful relief of migraine pain in adolescents aged 12-17 years. The follow-up study published in *Pain Medicine*, included 35 chronic and episodic migraine adolescent patients, and compared their response to migraine medications (over the counter analgesic medications or oral triptans) to their response to REN (administered by the Nerivio device).

The study found statistically significant differences in post 2-hour pain freedom and pain relief outcomes, in favor of REN: 37.1% patients achieved pain freedom during the REN phase as compared to 8.6% in the medication phase. The results were statistically significant. In addition, 71.4% achieved pain relief with REN as compared to 57.1% with medications.



These results suggest that REN may have higher efficacy than certain standard-care medications for the acute treatment of migraine in adolescents. Combined with its low rate of side effects, REN may thus offer a novel alternative for current pharmacological treatments for teenagers with migraine.

How to Tell if Your Food Is Still Fresh

The right way to decode those sell-by and use-by dates on packages

With the holidays around the corner, you're probably making your shopping list for the big feast. While checking your cupboards for supplies, you find a bag of stuffing mix with a "best by" date of Aug. 1, 2021. Is it still safe to use on Thanksgiving? Surprisingly, yes. In most cases, eating food that has been on the shelf – or even in the fridge – past the date on the package won't put you at high risk for foodborne illness.

Then why are best-by, sell-by, use-by, and other dates plastered all over food packaging? Most consumers don't realize that they're really more about food quality than food safety. A food may not be at its peak after the date on the package, but staleness, color changes, and the like are quality problems, not safety concerns. Foods may develop mold, become rancid, or spoil in other ways, but they are likely to look, smell and taste disgusting before they become unsafe.

When it comes to safety, though, you can't automatically assume that chicken or ground beef is guaranteed not to contain harmful bacteria before the label date. The truth is, the bugs responsible for the annual 48 million illnesses and 3,000 deaths from foodborne pathogens don't cause spoilage. If they're in a fresh food, they'll be there even when it's fresh. And unlike mold, sliminess, and other signs of spoilage, you can't see or smell them.

DEFINING DATES

The federal government doesn't require foods except for infant formula to carry a date label, and the concern there is nutrients, not safety. Several states have regulations, but the guidelines used to set the dates and the meaning of terms vary from state to state. To help consumers, the USDA offers these general definitions:

"Sell by." Manufacturers suggest that retailers remove the product from shelves by this date. The goal: to assure quality for a period of time after the consumer buys it. That can be several days to several weeks, depending on the food. For instance, milk, assuming proper refrigeration, should last five to seven days past the sell-by date before turning sour.

"Best by" and "use by." These terms tell the consumer when to eat (or freeze) a food for best quality. For example, a jar of salsa may not taste as fresh and tangy as it's supposed to or crackers may be soft instead of crispy after those dates.

But in the majority of cases, manufacturers decide on their own terms and dates – based on their own product testing. According to a report from the Natural Resources Defense Council and Harvard University, manufacturers use a number of methods, such as lab tests and taste testing, to set them, but consumers have no way of knowing how the dates were determined. In many cases, the dates are conservative and you may notice no quality difference – especially if the date recently passed. They are better used as general suggestions, not hard-and-fast deadlines, so if something you have at home is past the date, don't be so quick to toss it.

(continued in next column)

How to Tell if Your Food Is Still Fresh *(continued)*

FOOD-SAFETY SMARTS

Focus on these five tips to stay safe during the holidays and throughout the year:

Watch out for mold. Some types cause allergies or respiratory problems; others can produce mycotoxins that can make you sick. Even if the mold is in one spot, discard the food. (Skip the sniff test; certain spores can be inhaled.) There are some exceptions. Surface mold on hard salami and dry-cured country hams can be scrubbed off. Also, for hard cheeses (such as cheddar and Parmesan), firm vegetables (such as bell peppers and carrots), and cheeses made with mold (such as Gorgonzola), you can cut off the mold and about an inch around it and use the rest of the food.

Know how to battle the bad bugs. Keep raw meat cold (37° F or colder) and cooked meat warm (140° F or warmer) to prevent bacterial growth. Defrost meat in the fridge, cook thoroughly, and refrigerate leftovers within 2 hours. Don't let raw meat or its juices touch other foods, and wash your hands, cutting boards, and utensils in warm, soapy water.

Use a meat thermometer. Tricks such as wiggling the turkey leg, checking the color of roast beef, and piercing chicken with a fork to see whether the juices run clear are unreliable. You need to be sure that meat has reached a safe temperature: 145° F for beef roasts, pork roasts, and fresh ham (140° F for precooked hams you reheat), and 165° F for chicken and turkey.

Consider avoiding certain foods. Refrigeration slows the growth of most pathogens, such as E. coli, norovirus, or salmonella, but not listeria. Deli meat is a top source of listeria. The meat may not contain enough of the bacteria to make you sick when you first buy it, but the bacteria multiply with time, so you want to eat it within a few days. Older adults, pregnant women, and people with weakened immune systems are more susceptible to listeria infection, and the USDA recommends that they avoid eating deli meats and hot dogs unless those foods first reach a temperature of 165° F. Ready-to-eat refrigerated foods, smoked seafood, pates, meat spreads, and blue-veined and soft cheeses such as Brie, feta and queso fresco are also risky.

Use your eyes and nose. Regardless of the package date, avoid food that's obviously spoiled. If your eyesight or sense of smell can't be trusted, have a friend or family member check out the food for you, or simply discard it when you're in doubt. Never taste a food that you suspect has gone bad.