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HEALTHWISE

News to enrich your lifestyle

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A Quick Spin on Dizziness, Vertigo and Other Balance Disorders

Common, rarely life-threatening, but very unsettling, an attack of dizziness or vertigo can send your world into a spin with simple acts like turning around to back up a car, bending down to tie a shoe or looking up at the sky.

A range of sensations may keep you off balance, from tilting, swaying, whirling and floating, to feeling light-headed, or conversely, heavy-headed. The swirl of symptoms may seem similar, but there are important differences that define these conditions:

- **Dizziness:** lightheadedness, faintness
- **Vertigo:** spinning, a sense that the room is moving, akin to the tipsy feeling from too much alcohol
- **Disequilibrium:** unsteadiness, a feeling you are about to fall

While dizziness or vertigo represent some of the most frequent reasons people visit their doctors - an estimated one out of four adults has sought treatment for the condition at some point - getting to the root cause can sometimes be a frustrating experience, say experts at the Vestibular Disorders Association. That is because numerous issues can trigger dizziness/ light-headedness, from cardiovascular concerns such as arrhythmia, atherosclerosis and low blood pressure or conditions such as dehydration, low blood sugar or anemia. Vertigo is caused by head injuries/trauma, disorders of the vestibular system (parts of the inner ear and nervous system that control balance) or rarely, the cerebellum. In addition, aging itself can affect the vestibular system's function by decreasing the number of nerve cells, and diminishing blood flow to the inner ear.



Out-Maneuvering Vertigo

Vertigo is a frequently seen condition, particularly the vestibular disorder called benign paroxysmal positional vertigo (BPPV). To understand BPPV, picture a pouch in the inner ear that contains about 1,000 little pebbles made of calcium carbonate which send signals to the brain whenever we move our heads. When the debris is heavier than normal, these "pebbles" can cause the body to think it is moving when it is not, causing the feeling of vertigo. The spinning feeling can also be accompanied by nausea, headache, sensitivity to light or noise, a racing heartbeat and shortness of breath, so it is not surprising that an episode of BPPV can be all-consuming.

Antihistamines, anti-nausea or sedative medicines are often prescribed, but it is the canalith repositioning procedure, such as the Epley maneuver, that has gained attention for its rapid, positive outcomes. First introduced in the 1980s, and extensively tested over the

years, the guided series of simple head movements shifts the collection of calcium into a part of the ear where it is harmlessly reabsorbed. The approximately 15-minute procedure relieves vertigo in 80 percent or more of patients. As Johns Hopkins experts note: "The discovery of this simple treatment is gratifying...BPPV can be diagnosed and treated successfully with no tests, no pills, no surgery and no special equipment."

Other vestibular disorders

- **Ménière's disease** most often strikes middle-aged adults, and is caused by a change in fluid volume in the inner ear. In addition to intense vertigo, patients experience hearing loss, nausea, tinnitus and a feeling of fullness in the ear. Anti-nausea medications or sedatives are used to relieve symptoms.
- **Vestibular neuritis** is caused by some cold viruses which produce inflammation of the vestibulo-cochlear nerve (responsible for sending balance and hearing information from the inner ear to the brain). Treatment includes drugs to reduce nausea and dizziness, and when appropriate, anti-viral medications and steroids.
- **Vestibular migraine.** Vertigo or dizziness may accompany a migraine headache, and is treated similarly to migraines.

While most episodes of dizziness or vertigo are not serious, seek help if symptoms are accompanied by headache, fever, vision/speaking/hearing problems, weakness in an arm or leg, numbness, tingling or chest pain.

From the desk of Casey Pickerill, MD

Dear Patient:

While we all believe with age comes wisdom, it also brings a unique set of cognitive challenges as we become a little slower to pick up new skills and a bit more forgetful of names and dates. Years of research are now revealing a promising truth: this decline is far from inevitable, and it is possible to keep the brain vibrant and flourishing throughout your lifespan. Like most important journeys, it begins with a single step, and in this *HealthWise*, we look at the powerful effects of exercise - specifically, walking - on the aging brain. Of course, there is more than one road that leads to healthy aging, and in the next issue, we continue our series with the latest findings on the intellectual stimulation that matters most.

We all like a medical success story, and treatment of vertigo has given us a very satisfying one. Read on to learn how a series of simple head movements discovered in the 1990s has helped thousands of patients eliminate the symptoms of this common condition.

Finally, our Nutrition Corner features options for healthy summertime eating on the run, whether at the ballpark, carnival, picnic or your own backyard. Let us help you make a few judicious swaps to eat well this summer... and feel better all year.

Wishing you good health,

Casey Pickerill, MD



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The Healthy Aging Brain: Making Strides by Taking Strides

“Walking is man’s best medicine.” Hippocrates

Put away the handheld brain games and turn your focus from lifelong learning to lifelong walking. The road to sustaining brain health is an active one and taking that first step, followed by thousands more on a daily basis, can make an enormous difference in quality of life in your later years. Arthur Kramer, PhD, director of the Beckman Institute for Advanced Science and Technology at the University of Illinois, has amassed decades of research that clearly points to the prescience of Hippocrates’s ancient wisdom. His studies have become a focus of public health policy as well, sparked by 10,000 Baby Boomers crossing the over-65 threshold each day for the next 15 years, each hoping to age with vigor and dignity intact. We checked in with Dr. Kramer for an update on how physical activity keeps the brain healthy over the lifespan.

What are the most striking results seen in your research?

Our 2006 study was one of the first to report actual increases in brain volume in the prefrontal and temporal cortices of seniors who participated in aerobic exercise. These areas of the brain normally decline with age, but in our group, significant improvements in cognitive performance and memory were noted. We subsequently explored the impact of exercise on white matter, which allows information to be transferred within the brain, and found that connectivity is markedly improved, which is linked to more efficient memory, attention and decision making capabilities. All this points to the fact that age-related cognitive and brain changes are not inevitable, and can actually be reversed.

Why does exercise trigger these changes?

Several theories: increased blood flow, which improves cerebrovascular health; the release of proteins in the brain that stimulate the growth of new neurons; and the benefits of glucose and lipid metabolism which



bring nourishment to the brain.

What type of exercise is most effective?

Only modest increases in physical activity are needed. Walking 40 minutes three times a week for a year, at up to 70 percent of maximum heart rate, resulted in increased volume of the hippocampus, a part of the brain responsible for memory. You don’t have to run marathons – just walk, bike or swim at moderate intensity.

Tell us why you joined an international group of leading scientists who posted a strongly worded statement on the Stanford Center on Longevity website as to the unproven efficacy of ‘brain games.’

We felt that the scientific literature does not support claims made by the manufacturers of software-based brain games...that these can make people smarter, more alert, able to learn faster, and even prevent or reverse Alzheimer’s disease. What we discerned from the research was that when people practice a task

repeatedly, they will get better at that task, but it is not necessarily applicable to real-world functions. The relationship between brain training games and real-world performance and cognition needs to be explicitly tested. Unfortunately, this is rarely done. Further, time spent on brain training can be better used for activities we know improve cognitive functioning – aerobic exercise, learning a new sport or a new language, staying socially connected. Our consensus was that the promise of a magic bullet detracts from the best evidence to date...cognitive health in old age reflects the long-term effects of healthy, engaged lifestyles.

As a contributor to the recent Institute of Medicine report on cognitive aging, what lifestyle modifications do you suggest?

Being physically active is unquestionably a top recommendation for enhancing cognition and longevity. We also noted the critical importance of reducing and managing cardiovascular disease risk factors; staying socially and intellectually engaged; getting adequate sleep and receiving treatment for sleep disorders as needed; and regularly reviewing health conditions and medications that might influence cognitive health with a physician.

What’s on your radar for future research?

We are looking at what types of exercise lead to the largest cognitive and brain benefits. Dance is particularly interesting because it’s physical, social and intellectually complex. Defining the optimal doses of exercise, and how these might differ with age, health and other factors are also a focus. We are working with children, who increasingly suffer from adult diseases like diabetes, due to obesity and inactivity. And we want to determine whether a combination of nutrition and exercise provides greater benefits than either of these factors alone. The definitive answers have not yet been found. We’ll continue to seek them out, to ensure we don’t just live long, but live well.



Nutrition Corner

Summertime Smart Eating

Eating on the run, outdoors, or in your own backyard, can mean a plethora of choices. In our continuing look at smart swaps, *HealthWise* helps you reach for more nutritional options without ever breaking a sweat. Consider it a vacation from unhealthy eating...one that you can stay on year-round.



AT PICNICS...	
PACK THIS:	NOT THAT:
Cut-up veggies with hummus	Potato chips with onion dip
Mixed green salad/cilantro lime cole slaw	Macaroni or German potato salad
Mango salsa and pita chips	Tortilla chips with cheese dip
Grilled chicken sandwich	Fried/broasted chicken
Seltzer water with lemon slices	Soda
Watermelon	Cookies/cupcakes
Almonds	Pretzels
Blueberry compote	Cheesecake
Green tea and vodka	Margaritas
Occasional splurge Arnold Palmer drink (lemonade - iced tea), guacamole	

AT CARNIVALS...	
TRY THIS:	INSTEAD OF:
Frozen chocolate covered banana	Funnel cakes/churros/fried oreos
Pickle on a stick	Fried dough
Corn-on-the-cob	Corn dog
Hot dog on whole grain bun	Chicken fingers
Sunflower seeds	Cracker Jack
Chicken kabob	Giant turkey leg
Snow cones/Italian ices	Ice cream cones/malt cups
White wine spritzer	Frozen daiquiris
Cooked clams, grilled lobster tails	Fried clams, lobster rolls
Unsalted peanuts	Onion rings
Slice of veggie pizza	Personal-sized pizza
Occasional splurge Caramel apples, frozen yogurt, popcorn	

AT THE GRILL...	
COOK THIS:	NOT THAT:
Fat-trimmed ribs with seasoning	Baby back ribs with barbecue sauce
Grilled mahi mahi	Porterhouse steak
Flank steak	Ribeye steak
Portobello mushroom or bison burger	Sirloin burger
Chicken Italian sausage	Bratwurst
Seared romaine spears	Caesar salad
Grilled asparagus	French fries
Grilled peaches	S’mores
Grilled pineapple sundae	Ice cream sundae
Occasional splurge Grilled lamb chops, grilled margherita pizza	