



Aging Well, Aging Healthy...a continuing series

As almost 10,000 Baby Boomers officially become senior citizens each day, the focus on preventing and treating age-related ailments becomes distinctly more urgent. *HealthWise* presents an ongoing look at research that provides valuable insights to help today's seniors – and the generations set to follow – create a vibrant next chapter. We began with strategies to keep the aging brain healthy, and continue in this issue with a look at how your senses, specifically taste and smell, are affected by the aging process. Look for the latest on safeguarding your sight and sound in future editions.

A Taste of the Future

Savoring the sweetness of a rich chocolate, breathing in the scent of a fresh burger on the grill...taste and smell trigger the delights of eating by matching odorous molecules in the air with memories stored in your brain.

Taste buds have helped humans since the beginning of time identify foods as sweet, salty, sour, bitter or savory, and provide a warning not to ingest toxic substances. Forever intertwined with smell, food molecules travel through the rear of the nasal cavity to olfactory receptors in the roof of the nose – that is why if you hold your nose and put chocolate in your mouth, you will not taste the chocolate.

45% *Percentage of seniors who could not detect the warning odor in natural gas*

Source: Science of Aging Knowledge Environment study

An effortless process for most, recognizing tastes and odors is actually cognitively demanding, and for older people, can be extremely challenging, as these capabilities greatly diminish as we age. Although new neurons continue to form in the olfactory region of the brain into adulthood, by age 50, the sense of smell starts to deteriorate rapidly as the number of sensor cells that detect aroma decrease...by age 80, smell detection is reduced by almost 50 percent. There is also a weakening of the nerves that carry the signals to the brain, and in the olfactory bulb, which processes them. In addition, the sense of smell may be diminished by reduced production of mucous, thinning of the nose lining and hormonal changes.

At the same time, the tongue's taste buds are on the wane, dwindling from a high of 10,000 to just 5,000

in older adults. Dry mouth, caused by a reduced flow of saliva that is commonly seen in the elderly, or from medications such as antihistamines or antidepressants, also cause a loss of taste perception.

Why this matters: The ability to detect odors from spoiled foods, gas leaks and smoke is critical to safety. Taste issues means food becomes less appealing, and unhealthy amounts of sugar or salt may be added to food to make it more palatable, or less food is eaten, potentially leading to nutrition problems.



Preserve, protect and adapt

While there may not yet be a way to completely halt the decline, experts recommend a number of strategies to sharpen your senses of smell and taste and keep them working longer and better.*

- ◆ Take brisk walks daily...exercise heightens the smell sense.
- ◆ Conduct your own sniff therapy by inhaling the scent of items such as peppermint and cinnamon first thing in the morning, sparking different receptors in the nose to work.
- ◆ Quit smoking...tobacco smoking impairs the ability to identify odors and diminishes the sense of taste.
- ◆ Reduce your risk of head injury by wearing protective helmets during sports and seat belts when riding in the car...trauma to the head can damage olfactory nerves.
- ◆ Treat nasal or sinus infections promptly, a

An Early Warning System

A damaged sense of smell is now well established as an early indicator of neurodegenerative diseases such as Alzheimer's and Parkinson's, according to experts. Smell is the first sense to be affected by Alzheimer's, with protein tangles appearing early in the olfactory bulb, reports a 2015 Columbia University study. As a result, scratch-and-sniff smell tests that require identification of 40 different scents may soon become a routine part of primary care for older patients, reports *Scientific American*.



primary cause of smell problems. The same advice holds for treating nasal polyps, small, non-cancerous growths in the nose or sinuses that can block the ability of odors to reach olfactory sensory cells.

- ◆ Consider a change in medications that may be affecting your sense of smell, such as anti-allergy medicines.
- ◆ Choose foods that are naturally stronger flavored, such as mustard, pickles, radishes and peppers; add herbs and spices instead of salt. Use sun-dried tomatoes, vinegars, concentrate fruit sauces, extracts of almond, vanilla, citrus juice and peels to enhance tastes. Eat a variety of foods and textures, and change it up at every bite to keep your taste buds firing.
- ◆ Get an annual flu shot to help you avoid respiratory and ear infections that can interfere with taste.
- ◆ Practice good oral hygiene...take care of gum disease, inflammation or infections in the mouth, which can cause taste problems.

Finally, buy safety products, such as a gas detector that sounds an alarm you can hear.

Sources: Smell and Taste Center at the Univ. of PA, US National Library of Medicine

From the desk of David A. Chappell, MD

Dear Patient:

The beginning of a new year, full of promise and resolutions...is there a better time to set a new course for healthier living? We hope you will find some valuable tips in this issue of *HealthWise*, in which we explore the latest strategies for preserving your sense of smell and taste, take a look at the ongoing calcium controversy and share the just-updated federal nutritional guidelines. You may notice the link connecting all is the pivotal role food plays in keeping us not only well-nourished but in preventing disease throughout our lifetime.

Wishing you a year of good eating and good health,

David A. Chappell, MD

Did you know?

- **54 Million** - Americans age 50+ affected by osteoporosis and low bone mass, more than half of the total adult population

Source: National Osteoporosis Foundation

- **5,000** - Number of taste buds in older adults, decreased from 10,000 in youth



Got Milk? Or Calcium Supplements? Or Neither?

Calcium, so essential to strong bones and teeth, as well as nerve transmission, muscle contraction and blood clotting, can be in short supply as we age. Exactly how much is needed of this important mineral, and Vitamin D, its companion to ensure optimal absorption, has been the subject of intense scrutiny over several decades. However, a clear cut consensus has yet to be reached from data that is by turns contradictory, reassuring or confusing. A cluster of respected studies have cast doubt on the efficacy of calcium – either in supplements or from dietary sources – in reducing the risk of osteoporosis or bone fractures. Some reports cast supplements in an even more negative light, pointing to potential side effects that range from gastrointestinal issues to increased risk of cardiovascular disease.

A quick look at research highlights, beginning with the study that arguably set the stage for use of calcium supplements in seniors, illustrates why there is still a considerable amount of debate:

- ◆ **1992:** Over 18 months, a trial of elderly French women finds the **number of fractures was reduced** by up to 43 percent among women treated with 1200 mg of calcium and 800 units of vitamin D daily. In subsequent years, the significant levels of vitamin D deficiency of the subjects in this study created uncertainty about applying the results to healthier adults.
- ◆ **1994: Guidelines vary.** National Institutes of Health recommends 1500 mg of calcium and 600-800 units of vitamin D per day for post-menopausal women; Institute of Medicine recommends 1200 mg of calcium and 400-600 units of vitamin D daily for those over 50.
- ◆ **2006: Fracture risk not reduced.** A report from the Women's Health Initiative showed that 18,000 postmenopausal women who took calcium supplements and vitamin D were no

less likely to break their hips than an equal number who took a placebo pill, although the density of their hip bones increased slightly.

- ◆ **2010: Mixed results on heart issues.** A report from the Women's Health Initiative showed no significant increase in heart problems among 36,000 women who were taking calcium supplements. However a study in the *British Medical Journal (BMJ)* reported they were associated with an increased risk of heart attack, concluding that "a reassessment of the role of calcium supplements in the management of osteoporosis is warranted."
- ◆ **2012: No-supplement recommendation.** The U.S. Preventive Services Task Force, a panel that advises doctors on matters of public health, stated there is not enough conclusive evidence to recommend taking calcium or vitamin D supplements to prevent fractures in healthy women.
- ◆ **2015: The case against supplements builds.** According to a meta-analysis in the *BMJ*, additional calcium from supplements may build up in the arteries or kidneys, causing heart disease or kidney stone formation. An accompanying editorial reads: "The weight of evidence against such mass medication of older people is now compelling."

Confusing, to be sure. While the optimal dose has yet to be determined, today's best guidelines call for calcium intake below 1,600 mg a day for women over 50 and men over 70, and 1,000 mg a day of calcium for those under 50, along with appropriate amounts of vitamin D to enhance absorption. However, experts agree, more is not necessarily better, and supplements should be considered only if the daily goal cannot be met through food sources. In addition, strength training, for arms and upper spine, and weight-bearing exercise such as walking



A Calcium-Rich Grocery List

Before reaching for a supplement, try to meet the daily calcium requirement through dietary sources, including:

- ◆ Dairy products such as low-fat and non-fat milk, cheese, and yogurt
- ◆ Calcium-fortified juices (caution: this may add excessive calories to your diet), drinks and cereals
- ◆ Soy products such as tofu
- ◆ Canned salmon and sardines, with bones
- ◆ Collard, dandelion, mustard and turnip greens, kale, okra, Chinese cabbage



Source: National Institutes of Health

or stair climbing, for legs, hips and lower spine, are essential to build and maintain bone density.

Remember: every patient has different needs, and these can change over time...we urge you to call our office if you have questions about your optimal calcium intake.



Nutrition Corner

Step Up to the Plate: Nutritionists Weigh in on Healthy Eating

Picturing a healthy meal has never been more accessible, thanks to the ubiquity of visual aids such as MyPlate, successor to the well-known Food Pyramid of the '90s. A quick scan of the plate's quadrants enables users to see at a glance proportions of vegetables, proteins and other foods recommended for a nutritionally balanced day of eating. Hailed as a significant breakthrough when it debuted in 2010, for many dietitians and health experts, MyPlate did not go far enough in revamping the American diet. For instance, Harvard's Healthy Eating Plate limited red meats but not healthy oils, while the American Institute of Cancer Research's New American Plate relied even more heavily on vegetables and fruits, accounting for fully two thirds of the plate. The most recent federal guidelines, just issued for 2015-2020, now emphasize shifts needed to choose nutrient-dense foods and beverages in place of less healthy options, and the interconnected relationships between each dietary component. Illustrated at right are what a healthy, and even healthier meal, can look like at your table this year.



MyPlate breaks it down:

- ◆ A variety of vegetables from all of the subgroups—dark green, red and orange, legumes (beans and peas), starchy, and other
- ◆ Fruits, especially whole fruits
- ◆ Grains, at least half of which are whole grains
- ◆ Fat-free or low-fat dairy, including milk, yogurt, cheese and/or fortified soy beverages
- ◆ A variety of protein foods, including seafood, lean meats and poultry, eggs, legumes (beans and peas), and nuts, seeds and soy products
- ◆ Oils
- ◆ Limited saturated fats and trans fats, added sugars and sodium (less than 2,300 milligrams per day)
- ◆ Alcohol in moderation, up to one drink per day for women and up to two drinks per day for men
- ◆ Physical activity: Weekly, strive for 150 minutes of moderate-intensity activity (brisk walking) and 75 minutes of vigorous-intensity aerobic activity (swimming laps)



The American Institute of Cancer Research (AICR) offers a portion-controlled diet based on fruits, vegetables, whole grains and other plant-based foods that provide an array of cancer-protective compounds while serving as a powerful weight-management tool. According to the AICR, the fiber and water in plant foods gives a feeling of satiety with a minimum of calories. Their main message: maintaining a healthy weight is one of the most important steps you can take to reduce your risk of cancer.