Laura Bridgman, born in 1829, contracted scarlet fever at age two. Although she eventually recovered, her senses of sight, hearing, smell, and taste were permanently lost. The family communicated through simple tactile signals, but Laura was considered to be uneducable and essentially unreachable.

When she was seven years old, her family was approached by the director of the Perkins School for the Blind in Boston, who was eager to teach her. Laura enrolled in the school, and through his experimental methods, she grasped the concept of language and became the first deaf and blind person to learn to read and write.

We all know about Helen Keller, who attended the Perkins School 50 years later, but Laura Bridgman was quite famous in her day and just as inspiring. The overwhelming challenges these women overcame are a stark reminder of how much we depend on our senses—and how we take them for granted until they begin to fade.

Sensory impairment weakens our connections to others and to the outside world. It affects quality of life and interferes with reading, conversing, watching TV, driving, walking, and other activities. It impacts our health, independence, and even how long we live. Various sensory deficits are linked with depression, anxiety, increased risk of falls and injuries, nutritional deficiencies, and cognitive decline.

Changes in sensory perception are inevitable with age, but the underlying degenerative processes can be slowed and in some cases prevented.

The Eyes Have It

Age-related vision changes begin around age 40, when stiffening of the lenses (presbyopia) makes focusing on near objects more difficult. At some point, your inability to focus exceeds the length of your arms and you’ll have to get reading glasses.

After age 65, you have a 50/50 chance of developing cataracts. Surgical removal is a proven procedure, and I wouldn’t hesitate to have it myself. The leading cause of blindness in older people is macular degeneration. It’s one I’m personally concerned about because it affected my father and forced him to quit practicing medicine earlier than he would have liked.

Fortunately, macular degeneration and cataracts haven’t been a problem for me, a fact I attribute to my robust intake of antioxidants for the past 40 years. Multiple studies demonstrate that dietary and supplemental lutein, zeaxanthin, vitamins C and E,
Dear Reader,

I am part Neanderthal. Don't laugh. With the exception of Africans, most humans have some Neanderthal DNA due to the intermixing of this extinct species with our Homo sapiens ancestors after migrating out of Africa tens of thousands of years ago.

I learned about my Neanderthal ancestry from 23andMe, a company that analyzes saliva samples to determine a vast range of genetic variants. I also found out that 100 percent of my genetic ancestry is European and of that, 74 percent is British and Irish. Based on my genes, I'm likely to be lactose tolerant, prefer salty over sweet tastes, find cruciferous vegetables bitter, and drink more than my share of coffee.

I'm liable to have detached earlobes, straight or wavy hair, and few freckles, and unlikely to have a cleft chin, widow's peak, dimples, or red hair.

23andMe also offers a number of medical reports, including carrier status for dozens of inherited conditions such as cystic fibrosis and Tay-Sachs as well as genetic variants linked with increased risk of Parkinson's, late-onset Alzheimer's, and a handful of other diseases. Here's where the controversy comes in. Proponents claim that genetic screening is a useful tool for improving our health, while critics cite potential privacy, financial, and emotional consequences such as "genetic discrimination" by insurance companies and employers as well as undue stress and anxiety.

From a physician's perspective, I believe individuals with a strong family history of genetic disorders can benefit from screening. However, the health challenges most of us face result from the interaction of genes and environment. Knowing about a slightly increased risk of, say, Alzheimer's would motivate some people toward a healthier lifestyle—but make others sick with worry. I have no doubt that as accuracy increases and costs decrease, genetic testing will become a cornerstone of personalized medicine, enabling doctors to predict medication response and side effects, determine frequency of checkups and screening, and even "edit" problematic genes. But I don't recommend routine testing at this time.

From a personal perspective, I have enjoyed learning about my ancestry, and the genetic propensities are interesting and, in my case, spot on—even the Neanderthal part, according to my wife. Who knew that not everyone notices a peculiar smell in their urine after eating asparagus, or that looking at the sun makes many people sneeze? To learn more, visit 23andme.com.

Sincerely,
zinc, and beta-carotene as well as omega-3 fatty acids (EPA/DHA) provide significant protection against degenerative eye disorders.

Vision-targeted supplements have helped many of my patients and subscribers halt and even reverse progression. Nutritional therapies are also helpful for other conditions that are more pronounced with age such as glaucoma, diabetic retinopathy, dry eyes, and glare sensitivity.

**Lend Me Your Ears**

A quarter of Americans over age 64 and half of those 75 and older have serious hearing loss. Avoiding long-term use of ibuprofen and acetaminophen and treating hypothyroidism and heavy metal toxicity help stave off hearing loss. However, the main cause is exposure to loud noises, which damage the tiny hair cells in the inner ear that convert vibrations into signals the brain interprets as sound. Antioxidants offer some protection. Higher intake of vitamins C, E, beta-carotene, and magnesium was associated with reduced risk of hearing loss in one study, and supplemental zinc, N-acetyl-cysteine, vitamin D, vitamin B12, and folic acid are also protective.

No drugs have been approved for hearing loss, and although the above nutrients may reduce further damage, don’t expect miracles. Hyperbaric oxygen therapy may be helpful for sudden sensorineural hearing loss and cochlear implants for profound deafness, but the best option overall is hearing aids. Unfortunately, fewer than one in five people who have trouble hearing use them. Hearing aids can be purchased only from licensed professionals and cost an average of $4,700 for both ears. Medicare doesn’t cover them, so many people just go without.

This prompted a research team to evaluate “personal sound amplification products” (PSAPs), which are far less expensive and available over the counter. They found that some of these devices work quite well for mild to moderate hearing loss. For example, Sound World Solutions CS50+, Soundhawk, Etymotic BEAN, and Tweak Focus PSAPs, which cost $270–$350 per ear, were almost as effective as the $1,910 Oticon Nera 2 hearing aid.

**Intertwined Taste and Smell**

Therapies for restoring smell and taste are limited to addressing contributing factors such as nasal congestion and polyps, dry mouth, a handful of medications, and deficiencies in vitamins B12, A, and zinc.

You can make food tastier with spices, citrus, salsa, and umami (the strong, savory flavor in foods like meat, soy and tomato sauce, and Parmesan cheese). But avoid the common mistake of adding extra salt and sugar to compensate for reduced taste. Pay attention to food expiration dates, keep smoke detectors in order, and if your appetite is depressed, take supplemental protein along with a daily multivitamin to fill any nutritional gaps.

**Our Most Intimate Sense**

Our sense of touch is orchestrated by the nervous system, and anything that impairs nerve function can affect perception of temperature, pressure, vibration, body positioning, and pain.

Nerve dysfunction due to stroke, brain injury, diabetic neuropathy, and some types of dementia may be improved with hyperbaric oxygen therapy. But maintaining an acute sense of touch is primarily about prevention.

Keep your cardiovascular system in tiptop shape, as age-related declines in blood flow to the brain and nerves is one common cause of impairment. Take vitamin B12 supplements, as deficiency is also associated with sensory deficits. And to really perk up your sense of touch, treat yourself to a massage.

Above all, don’t let sensory loss get you down. Be thankful for what you have, do your best to stay active and engaged, and remember Helen Keller’s words, “The best and most beautiful things in the world cannot be seen or even touched. They must be felt with the heart.”

**References**


**Dear Dr. Whitaker**

**Q** A couple of my friends are now on lectin-free diets and swear it’s the greatest thing. Are you familiar with this diet? — J.B., Irvine, CA

**A** Lectins are proteins that are especially abundant in beans, legumes, whole grains, and nightshades (tomatoes, peppers, potatoes, etc.). Advocates of this diet say these compounds cause digestive disorders, joint pain, brain fog, malabsorption—you name it. It’s true that raw kidney beans, for example, contain levels of lectins that could cause food poisoning-like symptoms. But who eats raw kidney beans? Properly cooked, these foods have acceptable lectin counts and do not negatively impact health. A strict lectin-free diet would require avoiding not only beans, grains, and nightshades but also peanuts, cashews, pumpkin seeds, squash, corn, excessive fruit, and even dairy products, according to some proponents. That just doesn't seem sustainable or enjoyable. Plus, by cutting back on these foods you’re also missing out on their multiple health benefits, which include lectins' demonstrated anti-cancer properties.

**Q** Do you have any recommendations for hyperthyroidism? My daughter has recently been diagnosed with this condition. — Bess S., Eureka, CA

**A** A few natural therapies may improve symptoms and slow progression of hyperthyroidism (excessive production of thyroid hormones). A 2017 study found that patients with mild hyperthyroidism who took 500 mg of L-carnitine and 83 mcg of selenium daily had significant improvements in symptoms and quality of life. Earlier research showed that higher doses (selenium 100–200 mcg and L-carnitine 2,000–4,000 mg) are also helpful. If she has Graves’ disease, an autoimmune disorder and common cause, I also recommend diet changes, LDN, vitamin D, and supplements for inflammation and gut problems. Anti-thyroid medications, radioactive iodine, or surgery may eventually be required. In addition to symptoms such as anxiety, weight loss, and insomnia, untreated hyperthyroidism can lead to serious cardiovascular, bone, and eye problems.

**Q** Have you reversed your position on taking curcumin and berberine for blood sugar control? I could have sworn you recommended both of them in a newsletter. If I do not need them both, I would like to know so I can cut back and save money. — Nancy D., via email

**A** I did report on studies that link curcumin with reduced risk of developing diabetes, likely by inhibiting inflammation. However, berberine is my number-one supplement for managing blood sugar. I also recommend curcumin, a potent natural anti-inflammatory, but most of the research on this plant compound has focused on inflammatory conditions, improving joint pain, and warding off neurodegenerative disorders. The suggested dosage of berberine is 500 mg two to three times a day. Curcumin absorption is notoriously poor, so look for an extract with enhanced bioavailability such as Meriva or Longvida, and take as directed.

**From My Blog**

**Even More Benefits of Extra-Virgin Olive Oil**

Need another reason to make extra-virgin olive oil your go-to cooking oil? In addition to reducing risk of heart disease, stroke, diabetes, and some types of cancer, this monounsaturated, polyphenol-rich fat also appears to be protective against Alzheimer’s disease. Epidemiological studies have long shown that people who follow a Mediterranean diet that includes olive oil and other healthy foods have a lower risk of developing dementia. And a recent study found that when laboratory mice that typically develop Alzheimer’s disease ate regular chow enriched with extra-virgin olive oil, they performed better on tests of memory and learning. Furthermore, their brains were significantly less likely to develop beta-amyloid plaques and neurofibrillary tangles, which are telltale signs of Alzheimer’s disease. To learn more about the multiple health benefits of olive oil as well as tips on choosing good brands, visit drwhitaker.com.

Read more Q&As at drwhitaker.com, and send your own questions to drwhitakerquestions@drwhitaker.com.

Get the rest of this story at drwhitaker.com.
Works for Me…

- **Trauma and Bruising** I was assaulted last week while on a walk by myself late at night. I got punched hard in the face and eye. I started taking Wobenzym N the next day and my bruises healed much faster than expected. — J.G., San Jose, CA

What a horrible experience—but glad to hear you recovered rapidly. Wobenzym N is a blend of proteolytic enzymes that reduce swelling, curb inflammation, and speed recovery from injuries, joint and muscle pain, and surgery. Take on an empty stomach, as directed.

- **Colds and Flu** I have three children in elementary and preschool, and it seems like they’re always coming down with colds, which they inevitably pass around to the whole family—including mom and dad. Last school year, we started taking Lypo-Spheric Vitamin C, which contains 1,000 mg vitamin C and 1,000 mg essential phospholipids. For the first time in years, neither of us got sick. — Catherine B., Austin, TX

- **Neuropathy** I have diabetes and neuropathy and a friend recommended 10 mg of biotin daily. Since starting it, the painful neuropathy in my feet has gotten much better. — M.M., San Diego, CA

Biotin has been shown to improve not only neuropathy but also insulin resistance. Most multis contain microgram dosages of this B-vitamin. A biotin supplement will be required to get 10 mg.

- **Foot Pain/Fatigue** Years ago, I ordered some socks I read about in your newsletter that are supposed to increase circulation and reduce fatigue. I work in retail and am on my feet all day long, and these are the most comfortable socks I have ever had. I also wear them when I fly and my feet do not swell up. My son-in-law, who is very active but has problems with his feet, also gives them a thumbs-up. The brand is Achieve O2 Celliant. — L.S., via email

Celliant, the fiber used in these socks, is also used in medical wraps, bedding, and athletic apparel. The manufacturer’s claims that they increase circulation, decrease pain, boost oxygen levels, and balance temperature appear legitimate. You can find them online at achieve-O2.com.

Do you have a Health Tip to share? We'd love to hear it! Send it to worksforme@drwhitaker.com.

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Healing Tip

Want to make your morning smoothie more filling? Add a teaspoon or two of MCT oil. Studies suggest that medium-chain triglycerides, derived from coconut oil, boost satiety, metabolism, and fat burning—and may assist in weight loss efforts over the long term.

Like my Facebook page at facebook.com/WhitakerMD to receive daily healing tips and join the conversation.

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Monthly Health Quiz

**Prostate Health: True or False**

A) The average healthy prostate is about the size of a walnut.
B) Prostate cancer is the leading cause of cancer death in men.
C) One in six men will be diagnosed with prostate cancer.
D) Radical prostatectomy is the best treatment for prostate cancer.

**Answer:**


**Options Evaluated:**

Recommended PSA testing for men age 50+ or older. Options: 

- True
- False

- Prostate cancer is second most common cancer among men.

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Notable Quote

“Life is what happens to you while you’re busy making other plans.”

— John Lennon, 1940–1980

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No computer? Mail your question or health tip to Health & Healing, 6710-A Rockledge Dr., Ste. 500, Bethesda, MD 20817.

September 2017

For more health advice and solutions, visit drwhitaker.com
Retrain Your Brain With Neurofeedback

During Hans Berger's military service, he was thrown by a horse and narrowly escaped serious injury. That same day, he received a telegraph from his father, sent at the request of his sister who had a feeling something bad had happened.

This incident, which he described as “a case of spontaneous telepathy,” inspired him to become a psychiatrist and embark on an obsessive search for “the correlation between objective activity in the brain and subjective psychic phenomena.” Although he never fulfilled his quest—and endured much skepticism along the way—Dr. Berger discovered that electricity emanates from the brain and, in 1926, invented a device for recording it.

That device, the electroencephalogram (EEG), is used in neurology to this day to diagnose seizures and other brain disorders. It is also the basis of a remarkable therapy for a broad range of emotional, behavioral, and cognitive challenges: neurofeedback.

All About Brainwaves

To understand how neurofeedback works, you need to know a bit about brainwaves. The brain does indeed generate electricity—enough, it has been speculated, to power a light bulb.

Electrical impulses are created within neurons as positively or negatively charged ions move across cell membranes. When activated, impulses called action potentials travel along the nerve cell body to the synapses (the gaps between neurons). This prompts the release of neurotransmitters that “jump” across the synapses and, like signals traveling along biological wires, activate other neurons. Brainwaves are simply rhythmic patterns created by large groups of activated, electrically charged neurons in specific areas of the brain.

Brainwaves, as measured by EEG, come in four distinct frequencies that are related to various cognitive and behavioral states. When you are physically active or mentally aroused, engaged in animated conversation, logical thinking, quick decision-making, or other cognitive tasks, your brain generates beta waves—it is the dominant frequency during our waking hours. Alpha is also an alert state but it's a slower frequency, present during quieter, more relaxing activities such as reading, chatting, listening to music, or planning your day.

Theta brainwaves, which are even slower, are typical of mental relaxation, daydreaming, meditation, or that pleasant state we quickly pass through when falling asleep or waking up. Creativity and eureka moments often occur when we're in theta. Delta, the slowest frequency, is associated with sleep, though brainwaves often increase to theta frequencies during active dreaming.

Neurofeedback Normalizes Brainwaves

Although no particular frequency is better than another—there's a time to sleep and a time be alert—certain patterns in specific areas of the brain correlate with emotional and behavioral disorders. For example, researchers have discovered that anxious individuals tend to have extremely high-frequency beta waves. Children with attention deficit disorder usually have more theta waves and fewer beta waves in the frontal region. Head injuries are associated with excessive theta or delta activity while awake and alert.

Neurofeedback doesn't change your brain or introduce new thoughts or information but simply helps restore healthier brainwave patterns. It works on the principle known as operant conditioning, pioneered by psychologist B.F. Skinner. Dogs sit or roll over when they get treats after responding to commands. Children change their behavior when they're praised or rewarded. Similarly, the brain adopts favorable patterns when desirable responses receive positive reinforcement.

The reinforcement in neurofeedback is subtle, intuitive, and subconscious. But like any training program, the more you “work out” your brain, the better you get. Some people notice differences after one or two treatments and most see progress after a dozen. But enduring improvements, which studies suggest last for years, require an average of 30 sessions.

A Typical Treatment

Neurofeedback at Whitaker Wellness starts with a quantitative EEG (qEEG). A special electrode-embedded cap placed over the head relays electrical impulses from various areas of the brain to a computer that converts them into a “brain map.” Based on this information and guided by clinical assessment of symptoms, problem areas are identified and personalized protocols developed to target treatment.

Then the training begins. You sit comfortably in front of a computer screen, and electrodes are
strategically placed on your scalp. If, for instance, your brain map shows that alpha wave activity in your frontal lobe is lower or higher than normal, electrodes are placed in that area to coax it up or down into the optimal range.

Some neurofeedback systems require playing video games. However, we have found that the system we use, which simply involves watching a program or movie on the computer, is quite effective and more enjoyable. For 30 minutes or so, as you relax and watch your show, the electrodes relay signals to and from the computer which, per your protocols, gently nudge your brainwaves toward healthier patterns.

As images and sounds on the computer monitor fade in and out, the brain naturally struggles to correct them by subconsciously making adjustments in activity where the electrodes are placed. When desirable results are achieved, you’re “rewarded” with a clearer picture and sound. You probably won’t notice much, other than possibly feeling more relaxed or alert. Nevertheless, these fluctuations, occurring continuously over the session, create a real workout for the brain, which over time learns to stay within these parameters on its own.

A Bright Future

A newer type of neurofeedback uses real-time or functional magnetic resonance imaging (fMRI) to monitor blood flow and metabolic activity in the brain. This highly accurate tool is great for researching brain function, neuroplasticity, and confirming the efficacy of neurofeedback. It’s also good for treatment, but MRI equipment’s exorbitant cost makes it unrealistic for clinical use at this time.

The good news is that thousands of studies have demonstrated the benefits of neurofeedback for anxiety, stress, post-traumatic stress disorder, insomnia, compulsive behaviors, anger outbursts, traumatic brain injuries, ADHD, autism, migraines, attention/retention problems, and more. In addition to these therapeutic uses, neurofeedback is gaining momentum as a tool for “peak-performance” training among elite athletes, US Special Forces, executives, and others seeking to improve focus, creativity, motivation, and skills.

As you can see, neurofeedback has a very bright future and deserves consideration from everyone dealing with any of these problems. To learn more about neurofeedback, call 800-851-1550 x142. To receive treatment at Whitaker Wellness, contact us at 800-488-1500.

References

These are some of the comments we’ve received from patients who were treated with neurofeedback at Whitaker Wellness.

“For nearly a year, I couldn’t focus for more than a few minutes, yet after only four sessions I was amazed to discover that I could concentrate for several hours at a time. My focus and concentration continue to improve, my anxiety has decreased, and I’ve been able to return to the work I love to do. One happy outcome I never expected was that the nightmares which have plagued me all my life have practically disappeared. Some missing memory has also resurfaced. Every one of your treatments not only makes my brain function better, but motivates me to stay on this path to good health.”
— Laurie T., California

“What a drastic improvement in my daughter’s memory!” — Ann M., Michigan

“I’ve been sleeping like a log.” — Linda M., California

“My wife’s stress level is still down from what it was coming into Whitaker Wellness. My chronic anger is very low if not gone, and moments of ‘snap’ anger are almost nonexistent.”
— Dave, Missouri

“It gave me peace of body, mind, and soul.”
— N. Mills, Texas

“It made such a drastic improvement in my post-traumatic stress.” — J.N., New Mexico

“Clear thinking: That’s the world for someone who had brain fog every day for years. I’m also down to two or three cigarettes from a pack a day.” — J.C., California

To make an appointment at the Whitaker Wellness Institute, call 800-488-1500 or visit whitakerwellness.com.
Innovations in Wellness Medicine

NAC for Parkinson’s Disease

An unsteady gait, tremors, rigidity, balance and coordination problems, impaired cognition... Close to 1 million people in the US alone are living with these and other debilitating symptoms of Parkinson’s disease. But the news isn’t all doom and gloom. New research suggests that a nutritional supplement, N-acetyl-cysteine (NAC), may help.

In a pilot study of people with Parkinson’s, half of the participants added 600 mg of oral NAC twice a day along with a weekly intravenous infusion containing 50 mg/kg NAC to their standard drug treatment protocols for three months. The other group continued their standard treatments. Evaluations at the study’s start and at three-month follow up revealed that the group receiving the oral and infused NAC had marked improvements in both mental and physical function. Furthermore, brain imaging showed that NAC protected dopamine transporters, which researchers postulate can slow neurodegeneration and progression of symptoms. If you have Parkinson’s disease, consider adding 1,200 mg of NAC daily (in divided doses) to your treatment protocol. It’s safe, widely available, and may well improve symptoms and quality of life.

Fiber for Osteoarthritis

Fiber keeps us regular, protects against cardiovascular disease and diabetes, and aids in weight loss. But there’s one little-known boon of this versatile macronutrient: It may also reduce risk and progression of osteoarthritis. A recent observational study involving more than 6,000 participants and spanning several years revealed that people who consumed the highest amounts of dietary fiber were much less likely to develop osteoarthritis of the knee—even after controlling for age, weight, activity level, smoking, and other common risk factors. Furthermore, among those who had arthritis, high fiber intake was associated with less knee pain, stiffness, and worsening of symptoms.

Everyone, regardless of health status, should aim for at least 25 grams of dietary fiber daily. Good sources include flaxseed, beans and lentils, vegetables, fruits, and whole grains. One tip: Buy whole flaxseeds and grind them yourself using an inexpensive coffee grinder. Cracking them open releases all their omega-3 oils, lignans, and other beneficial compounds. Pre-ground seeds can become oxidized and rancid, so grind them just prior to use to ensure freshness.

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- Make an Appointment at Whitaker Wellness . . . . . . 800-488-1500 or whitakerwellness.com

Coming in Future Issues

- What to Do If You Have “Prediabetes”
- Supplements for Improving Focus and Attention
- A Remarkable Recovery From Painful Shingles

Did You Know?

- Sun exposure mobilizes nitric oxide and helps lower blood pressure.
- A third of new drugs require additional safety warnings after they’ve been approved.
- In one study, men who drank sodas daily had a 45 percent increased risk of gout.
- Average age of first marriage for US women and men is 27 and 29, compared to 23 and 26 in 1990 and 20 and 22 in 1960.
- Low vitamin D and calcium is associated with increased risk of early menopause.
- A recent study showed that dog owners walked 20 more minutes and 2,760 more steps per day than non-owners.
- Stroke rates are declining among older people but rising in the 25–44 age group.
- Red onions are higher in phytoneutrients than white.
- US students rank 30th in math and 19th in science among 35 developed countries.
- Birth control pills are linked with increased risk of depression.
- Kids whose mothers ate a lot of sugar during pregnancy have a higher risk of allergies and allergic asthma.