Neurological Saviors You Need to Try

Last month, I wrote about the importance of maintaining the integrity of the myelin sheath, the insulation that covers neurons throughout the body. In that article, I repeatedly mentioned multiple sclerosis (MS) as an example of one of the neurological diseases that is becoming so common in our society. It’s only one example. As I’m sure you know, Alzheimer’s is another. Whenever I see any compelling research, I want to pass it on to you as soon as possible. After all, these are horrendous diseases that can be very difficult, if not impossible, to reverse. Here are some additional things you can be doing to protect your neurological health.

Terrific Turmeric

When it comes to neurological diseases, turmeric has some amazing protective and healing powers. Research has shown that it can be very effective for both prevention and treatment.

Our country has the third highest rate of Alzheimer’s disease in the world behind Finland and Iceland. India, where residents consume turmeric on a daily basis, is 116 on the list. One of the active components in turmeric, curcumin, has now been shown to actively aid in the removal of the amyloid plaques associated with Alzheimer’s. (J Alzheimers Dis 2006 Sep;10(1):1–7)

Another study examined the effects of taking 764 mg of turmeric (containing 100 mg of curcumin) daily for 12 weeks. Prior to supplementing with the turmeric, the three Alzheimer’s patients participating in this study experienced very severe cognitive decline. After taking the turmeric powder capsules for 12 weeks, they began to recover from typical Alzheimer’s symptoms, including irritability, agitation, anxiety, apathy, urinary incontinence, and wonderings. Also, their total score on the Neuro-Psychiatric Inventory questionnaire decreased significantly in both acuity of symptoms and burden to caregivers. Two of the individuals came to recognize their family within a year of turmeric treatment. (Ayu 2012 Oct;33(4):499–504)

When you consider how safe and inexpensive turmeric is, it’s a no-brainer that every Alzheimer’s patient should be taking it on a daily basis. Purchased in bulk, a year’s supply at the above dosage would cost less than $10 a patient.

If you shop for turmeric, you’ll notice that many products simply contain 95 percent standardized curcumin extracts. Curcumin is considered the active component. Although I understand the benefits and uses of active components, I still believe there’s a reason various compounds exist together in nature. Sometimes it happens for synergistic purposes or to negate any potential toxic effects. And many times we honestly aren’t smart enough to understand why it happens.

This is why I prefer using complete compounds such as turmeric, or whole turmeric along with

You will observe with concern how long a useful truth may be known, and exist, before it is generally received and practiced on.

— Benjamin Franklin
components like curcumin that have been isolated.

Furthermore, although most “authorities” don’t know this, there’s another little-known component in whole turmeric that is primarily responsible for increasing neural stem cells in the brain.

Exposure to a fat-soluble component in whole turmeric called ar-tumerone has been shown to not only increase the number of neural stem cells but, even more importantly, lead to more fully developed, healthy brain cells.

Several compounds can increase the number of stem cells, but very few substances (drugs or otherwise) have been shown to trigger the next step, which is to cause these stem cells to develop into actual nerve cells. Ar-tumerone has that unique ability, which is the key to actually healing nerve damage. (Stem Cell Res Ther 2014 Sep 26;5(4):100)

Not only is turmeric an essential part of my multivitamin/mineral and joint formulas, I take an additional 2 grams every day. I strongly suggest you do so as well.

Nifty Neem

Researchers at Banaras Hindu University have reported that the aqueous extract of neem leaves (Azadirachta indica) can be “effective in reversing the neurobehavioral changes, attenuating the cognitive deficits, and decreasing the oxidative stress in experimental [Alzheimer’s disease] models.” (Int J Appl Basic Med Res 2013 Jan;3(1):37–47)

I’ve talked about the many uses of neem for years. Neem trees are considered to be of divine origin in Indian Ayurvedic medicine.

Neem is considered safe for topical use, as are the powdered or liquid extracts when used internally and in moderation.

One excellent source for the bulk powder is Banyan Botanicals (banyanbotanicals.com or 800-953-6424). A pound costs less than $20. The dosage of ground leaf powder typically recommended is ¼ to ½ teaspoon twice daily.

If you prefer to grind the leaves into a powder yourself, Dosha Elements packages a pound of dried leaves, which can be purchased online from Vitacost.com for around $8. (This is where a Vitamix blender can save you a little money.)

If you prefer the liquid extract, I recommend Neem Aura Certified Organic Triple Strength Neem Leaf Extract. I’ve seen excellent results with this particular product and it is readily available in many health food stores and online. It runs about $10 for a 1-ounce bottle and the recommended dosage is five drops one to three times daily.

There is no recommended or exact dosage for treating Alzheimer’s disease. Although it has been used for thousands of years for dementias, there are no definitive studies that specifically address dosages in humans. And there probably never will be. Because of the enormous costs and legal hurdles, no one would undertake such a task knowing that recouping the costs involved with studying an unpatentable product would be impossible. And the pharmaceutical industry certainly has no interest in promoting a natural remedy. We’re on our own.

Fortunately, countries such as India continue to test and learn more about their traditional Ayurvedic remedies. We know that neem is very safe when taken properly, and it’s a remedy that has been used since antiquity.

Neem consumption has traditionally been contraindicated in pregnant women, infants, children, anyone trying to conceive (it acts as a contraceptive), and in those allergic to plants in the mahogany family or individuals exhibiting extreme wasting.

Several years ago, the National Research Council published a 140-page report, “Neem, A Tree For Solving Global Problems.” If you
really want to learn just how amazing neem products are, I suggest giving the paper a read. It covers the history of the tree, exactly how to use it medicinally and as a safe, natural insecticide or fungicide. It’s an amazing publication and provides a wealth of useful information. The entire report is available online at http://pdf.usaid.gov/pdf_docs/PNABN264.pdf.

**Sensational Stem Cells**

Another related update: Researchers at the University of Utah have seen some remarkable changes in MS-disabled mice when given human stem cells.

The spinal cords of the mice, whose myelin sheaths had been destroyed by MS, were injected with human neural stem cells. These animals were paralyzed and couldn’t even right themselves.

The researchers expected to see no benefit from the treatment, thinking the body would reject the cells, much like an organ transplant. However, within just three weeks, 80 to 85 percent of the mice could actually walk and run again.

After six months, the mice were back to normal and showed no signs of slowing down. Apparently the human cells sent chemical signals that instructed the mouse’s own cells to repair the damage to the myelin sheath. *(Stem Cell Reports 2014 May 15;2(6):825–37)*

Stem cell treatment will be a true game changer when it comes to healthcare, and researchers seem to be working down that path as quickly as possible. In this particular case, Dr. Tom Lane, the lead researcher, hopes to start human trials within two to three years. I can’t wait to see where it goes, and I’ll be sure to keep you updated. ■

**Adjust to Your Shrinking Stature**

Have you noticed as you’ve gotten older that there are some activities or skills that you can no longer perform? It may be because you’ve gotten shorter. As we age, we shrink.

Not too long ago, a couple of my family members brought out a measuring tape. (Obviously they were preteens and teenagers who were still excited about growing bigger.) Everyone backed against a wall and we used a pencil to mark the date and record our heights.

I was a little disheartened to see that, despite the fact that I’d been 5’10” for my entire adult life, I could now only stretch out to 5’9.5”—and to be honest, a quarter-inch was probably due to my negotiating skills rather than my actual height.

Starting around age 40, you typically lose about 0.4 inches every decade. Most of the height loss comes from gravity that continually compresses the gel-like discs or cushions between the vertebrae in the spine. The discs tend to dry out and become thinner.

Additional loss of height occurs from osteoporosis or bone loss in the spine and other bones. The weaker bones sustain small compression fractures and can cause the collapse, resulting in a curvature of the spine and further loss of height. The spine can also curve excessively from front to back due to a loss of tone in the abdominal muscles. Finally, it’s not uncommon for your foot arches to flatten, making you even shorter.

**The Importance of Proprioception**

Since this shrinking occurs gradually over decades, not only do we visualize ourselves as being our original height, our brains do so as well. The subconscious awareness of your body’s orientation and movement is called proprioception. Based on signals from the inner ear and nerves in the muscles and joints, the brain determines the location of your hands and feet, even in complete darkness. Much like being able to place your hands in the proper location to catch a ball, accurate proprioception is learned through experience. And when something like your height changes, your proprioception is compromised.

This commonly occurs when teenagers go through growth spurts. As their bodies change rapidly and proprioception lags behind, movements and activities can become awkward. Their longer legs may make running look spastic. Their longer arms may make it harder to catch objects that were once easy to catch. But with time and continued activity, the neurological pathways are retrained and reestablished.

As most people age, however, they don’t always stay active.
Alternatives

enough to retrain their neurological pathways. Proprioception ability diminishes. This is one of the reasons falls are so common in the elderly. Poor proprioception also causes you to bump into furniture, run into doorways, misjudge the height of steps, trip over items, bang your head, drop objects, jam your toes and fingers, etc.

Movement and awareness exercises are so beneficial because they help reestablish neurological pathways and reset proprioception. When you see pictures of elderly individuals in China performing tai chi and wonder how in the world it could help anything...now you know. Tai chi is promoted as a way to meditate, reduce stress and anxiety, and increase flexibility. But one of its most valuable effects is its ability to improve balance by enhancing overall proprioception. Yoga can do this as well.

As your spine shrinks or curves, your reach changes, you walk differently, your center of gravity shifts, the range of motion in your shoulders, lower back, and neck changes, and your agility and sense of balance decrease. As your body continues to change with age (and this happens to everyone), it's important to perform activities that retrain nerve pathways so your brain can keep you upright and balanced in your activities.

Recalibrating Your Proprioception

If human bodies came with an owner's manual, "Recalibrating Proprioception Procedures" would definitely be one of the chapters. When you read about studies that can predict longevity based on how long a person can stand on one leg or their ability to get up out of a chair, they are in large part based on proprioception. If you've tried some of these tests (balancing on one foot with your eyes open and then closed, getting up and down unassisted from a chair, etc.), you know most of them aren't that easy to do. And part of the reason for the difficulty is that most of us haven't really recalibrated our proprioception since we were kids. Childhood running, climbing, sports, and general play automatically recalibrate and reset proprioception. Sitting at a desk and working on a computer, or "vegging" on the couch watching television, do not.

Recalibrating your proprioception and developing the neurological pathways that make it automatic takes some effort and repetition, but it's well worth it. Not only does it improve your mobility and lengthen your life, it can give you an excuse to play again and actually have fun.

Years ago I recommended using a piece of exercise equipment called the Power Plate. (I still use mine.) It's basically a platform that vibrates at a high frequency. While it vibrates, you stand on the platform and perform various exercises. The constant vibration combined with the changing position of your joints and muscles triggers a flood of nerve impulses to and from the brain. Hundreds of times a second, the brain is trying to ascertain the orientation of the body and what movement is taking place. Using the Power Plate is one method to accelerate the formation of nerve pathways involved in proprioception. A balance board and mini-jogging trampoline are low-tech, self-powered methods that can help you achieve the same results. And you can accomplish the same thing, although somewhat more slowly, with very simple exercises you can perform at home.

As you progress, you can find dozens of advanced balance exercises by searching online, but these are a few of my favorites to get you started. Begin slowly and only progress to a level that makes you comfortable. If you have questions or concerns, get advice and guidance from your doctor.

Make sure you are either barefoot or wearing flat-bottomed shoes. In addition, use an armless chair or the kitchen counter to hold on to and stabilize yourself, if necessary. The only other item you need is a roll of blue painter's tape.

- While holding on to the chair or counter (with one or both hands, whatever is necessary), try balancing on one leg for as long as you can, and then switch legs. Time yourself. Try to work up to one minute. It's not a race. It might take days or even weeks. Once you reach one minute, or your maximum, then try stabilizing yourself by using just one hand to hold the chair or counter, and then just one finger, and then let go completely.

- Place a 10- to 12-foot straight line of the blue painter's tape on the floor down a hallway, across a room, or on the floor running alongside a kitchen countertop. Stand on the tape with one foot in front of the other (heel to toe). Walk slowly, placing one foot in front of the other, touching the heel of one foot to the toe of the other. (You've probably seen this same exercise being done by someone performing a sobriety test.) Don't get discouraged; this isn't easy to do (and downright impossible when under the influence). If necessary, start by holding on to a counter, a wall, or someone's hand.
If and when this exercise becomes easy, try the same movement backwards. For extreme difficulty, try walking forward heel to toe while reading out loud from a magazine held slightly down and to the side.

- Place a line of objects 12 to 18 inches apart along the painter’s tape. (Those 16-ounce disposable red Solo cups turned upside down work great.) Now walk the line while stepping over each of the objects, trying not to stop or kick any of the cups.

You can increase the difficulty by looking straight ahead instead of down at the tape while walking. Or you can sidestep—stand next to the first object, step over it with one foot followed by the other, and continue down the line.

Don’t Forget Hand/Eye Coordination

In addition to these balance exercises, I strongly suggest doing things that develop hand/eye coordination. If you’re capable of participating in sports such as tennis, golf, or shooting hoops, those are excellent options. And don’t forget about tai chi or yoga.

If none of those interest you, go back to the games you played as a child. You may think of them as a waste of time, but that’s definitely not the case. Without you knowing it, they calibrated your nervous system when you were young, and they can do the same thing now.

Have some fun and improve your proprioception with games/activities such as juggling, jacks, marbles, cat’s cradle, pick-up sticks, Jinga, yo-yo, washers, bean bag toss, darts, slingshot, 7-up or orange crush (where you bounce a ball off a wall and then perform different actions before catching it, such as clapping once, clapping twice, etc.), spinning top, ball and cup, horseshoes, and croquet.

If you’re more technology oriented, don’t forget about the wide variety of Nintendo Wii games. After first writing about them years ago for use in stroke rehabilitation, Wii games have become popular not just in retirement and nursing homes but rehab clinics all over the country. Wii is an easy, interactive, and fun way to exercise and build balance and coordination at home. It’s also a very effective way to track your progress.

Practice Makes Permanent

Although it’s a great goal, achieving perfection isn’t necessary when it comes to improving proprioception. Instead of “practice makes perfect,” think of it as “practice makes permanent.” The goal is to retrain the nervous system to be able to work automatically and subconsciously when the need arises. It takes repetition to reprogram neurological pathways.

You may notice positive changes almost immediately, but expect a minimum of four weeks before you begin to experience permanent improvements. Recalibrating your nervous system and creating neural pathways doesn’t happen overnight. Studies have repeatedly shown that the full benefit of slow-movement exercise only becomes evident when practiced repeatedly over the long term.

Tai chi is a good example. For many, it’s hard to comprehend how the slow, smooth body movements utilized in tai chi can result in so many health benefits. But a recent Chinese study found this ancient form of exercise could be even more beneficial than vigorous exercise when performed over time.

Researchers divided 105 elderly women into three groups according to their form of exercise—tai chi, dance, or brisk walking. Each group exercised once a day for 40 minutes. The researchers measured muscle mass and strength, bone mineral density, and balance at the beginning and again after four, eight, and 12 months.

After four months, those in the dance and brisk walking groups improved in all areas, but those in the tai chi group showed no significant changes.

After eight months, though, there were significant improvements in all three groups. And the positive changes in the tai chi group exceeded those of the walking group.

At 12 months, the effects of tai chi were more significant than in either of the other two groups. In particular, the women performing tai chi experienced the greatest changes in lower limb muscle strength, bone mineral density, and balance. (Int J Clin Exp Med 2014 Jun 15;7(6):1569–76)

Repetition is the key. Professional athletes, fighters, and marksmen know that for the body to instinctively perform a certain action or skill, you need to consciously practice and correctly perform that action 2,000 times. If 2,000 repetitions sounds like too much work, then you’re doing the wrong activity. If you find an activity you enjoy and start playing again, getting to 2,000 will be the last thing on your mind.
**NEWS TO USE from around the world**

**NSAIDs and Cancer**

It seems like every few months we see a new report about how taking aspirin or some other nonsteroidal anti-inflammatory drug (NSAID) can lower the risk of some type of cancer. The latest was colorectal cancer.

It seems simple enough—just pop an aspirin a day and you can avoid cancer. Like most things, though, it isn’t that simple...or always the safest thing to do.

I’ve talked extensively about the seriousness of stomach, intestinal, and retinal bleeding and ulcers caused by aspirin and other NSAIDs. I’m pretty sure this figure is low, but it’s commonly stated that there are more than 100,000 hospitalizations and thousands of deaths each year in the US from bleeding caused by NSAIDs. And regular use of aspirin more than doubles your risk of macular degeneration, the leading cause of blindness in those over 65.

It’s not a matter of if these drugs cause bleeding. They do. It’s a matter of how much bleeding they cause, and where. Bleeding is worse in individuals who:
- Bruise easily (12–55 percent of the population)
- Have a vitamin K deficiency
- Have taken antibiotics
- Have diabetes (roughly 10 percent of the population)
- Are postmenopausal
- Take blood thinners
- Had their gallbladder removed and don’t use bile salts
- Suffer from chronic intestinal problems

New research has also revealed that about 9 percent of the population harbors a genetic variant that keeps them from gaining any protection from aspirin. Another 4 percent of the population has one of two genetic variants that makes them even more susceptible to colorectal cancer if they take aspirin or other NSAIDs. (JAMA 2015 Mar 17;313(11):1133–42)

As more research tools, such as genetic testing, become available, we’re bound to relearn the lessons of biochemical individuality, particularly when it comes to drug use.

**Toilet Paper Is That Important**

When I wrote about specific items I think everyone should stock up on in case of an emergency, one was toilet paper. For that little tidbit of information, I received a considerable amount of ribbing. My suggestions came directly from my personal worldwide experiences when I was either caught up in the collapse of a foreign government, a natural disaster, or some catastrophic event where products and services quickly became nonexistent.

Unless you’ve actually experienced these type of events firsthand, you might think the only items you need to survive are clean water and food. While this may be true, I can tell you that toilet paper and soap move up to the top of that list pretty quickly. If you’ve been following what’s taking place right now in Venezuela, you’d know this is true. It’s one of several countries in the world right now where Keeping Up with the Kardashians has taken a back seat to survival.

Roughly 95 percent of Venezuela’s export earnings come from oil revenue. With the worldwide drop in oil prices, Venezuela is currently undergoing one of the most devastating economic situations in modern times. And thanks to price controls, extreme shortages of food and basic necessities are the norm. Two of the items with the highest demand right now are toilet paper and soap.

As strange as it sounds, the Venezuelan government seized and nationalized a toilet paper manufacturer in 2013 in an effort to stop the shortage, but it only made things worse.

In February of this year, the government brokered a deal with Trinidad and Tobago to trade oil for toilet paper, detergent, and other necessary goods. It was humiliating for Venezuela, but they had to do it to help keep order and prevent rioting.

Not only are soap and toilet paper unavailable to ordinary citizens, if you stay in a hotel or resort, you have to bring your own. Venezuela has plenty of oil but very little of anything else.

For the record, milk, butter, coffee, and cornmeal were some of other items to first disappear from the shelves. Cooking oil, flour, eggs, shampoo, paper towels, and sugar were others. Then diapers and deodorant disappeared. Medications of all types are obviously difficult to come by.

All of these items are things we typically use on a regular and continual basis. I suggest checking your pantry again and making sure you have, at the very minimum, a month’s supply of each. (A six-month supply of the non-perishable items would be even better. You’ll eventually use them anyway.) And any excess soap and toilet paper you might have will prove to be some of the best bartering items during times of shortage.
My Views on Vaping

**Question:** Much to my dismay, my son has been a cigarette smoker for some time and recently switched to vaping. I’m happy that he no longer smokes traditional cigarettes, but I’m not sold on the idea that vaping is totally harmless. What are your thoughts?
— Denise T., Houston, TX

**Answer:** There are two categories of vaping consumers. The first group consists of those trying to quit traditional smoking; the second group consists primarily of younger people wanting to try something new.

The connections between smoking, lung cancer, and heart disease are well established. So for traditional smokers, vaping might be a safer alternative. However, vaping is still largely unregulated, and just like in the early days of smoking, we may discover later on that vaping products contain chemicals we don’t know about that could prove to be dangerous. (It appears most vaping liquids consist of ingredients such as vegetable glycerin, propylene glycol, flavoring, and varying amounts of nicotine. However, since many of these liquids come from outside the country, they could contain other ingredients or contaminants.)

That aside, there’s an even bigger issue that isn’t being addressed.

**Nicotine’s Effects on the Brain**

Compared to cigarettes, most of the focus and discussion has been on what effects vaping might have on the lungs and heart. The possible effects of nicotine and possibly other chemicals on the brain are largely ignored. Vaping, like cigarettes, is a nicotine-delivery tool.

Nicotine is unique from most drugs in that it can act as both a stimulant and a relaxant. Taking shallow puffs results in lower blood levels of nicotine, triggering an increase in alertness. Taking longer, deeper drags produces higher blood levels of nicotine and relaxes the smoker. Low doses of nicotine release the neurotransmitter acetylcholine, making one feel alert, while high doses block its flow. This unique trait is one that contributes to nicotine’s strong addictive properties.

Nicotine has been labeled “the drug for all occasions.” It reaches the brain within seven seconds of being inhaled and peaks about the time a typical cigarette is extinguished. A steady concentration of nicotine can be maintained in the bloodstream throughout the day by smoking 10 cigarettes daily.

Also, after a night’s sleep, smokers inhale deeply the first few cigarettes of the day (to quickly increase blood nicotine levels) and then smoke more lightly after that.

Although the tobacco companies strongly deny the findings, numerous research studies have repeatedly shown that nicotine can be as addictive, or even more addictive, than cocaine or heroin. This is particularly true when nicotine is combined with the mixed cocktail of other components present in tobacco (anatabine, anabasine, cotinine, myosmine, and nor nicotine, to name a few).

Recent studies have found that exposure to nicotine first, and then cocaine within the same 24-hour period, enhances the effects of the cocaine and increases the chance of addiction. Obviously all smokers don’t become cocaine addicts, but nicotine does cause changes in the brain, making it more receptive to experimentation with other drugs. This has earned nicotine the dubious honor of being labeled a potential gateway drug, much like marijuana. (N Eng J Med 2014 Sep 4;371(10):932–43)

To be fair, some research shows that individuals with a history of smoking are at lower risk of developing Parkinson’s disease. Nicotine increases levels of another neurotransmitter called dopamine, which helps control muscle movement. Parkinson’s disease causes profound shaking, which impairs walking, coordination, and normal movement. Dopamine reduces this shaking and helps control aberrant movement. Without a considerable amount of additional research, however, I don’t think it’s justified to use nicotine (and definitely not smoking) as a way to prevent Parkinson’s disease.

Although you didn’t mention the age of your son, most people start experimenting with cigarettes, alcohol, and marijuana around ages 12 to 14. During this period, the brain is still developing and is highly susceptible to risk-taking and addiction. For example, teens who start drinking by age 13 have a

If your son is in his early 20s or older, then vaping is probably a safer alternative to cigarette smoking. But still, I hope he doesn’t just take up vaping as another habit. By gradually decreasing the level of nicotine in the liquid, hopefully he will overcome his nicotine addiction and discontinue vaping as well.

On the other hand, if your son is younger, then I would suggest educating him about brain health and having him quit cold turkey.

Also, keep in mind that nicotine gum, lozenges, toothpicks, sticks, films, mints, etc., aren’t solutions. They are just additional forms of nicotine delivery.

It may not be easy, but the earlier he can stop the consumption of nicotine, the better the odds will be that his brain can mature properly and the less likely he’ll develop future addictions.

**Stomach-Soothing Herbal**

**Question:** I have experienced stomach problems (pain, burning, nausea, belching) for as long as I can remember. I’ve read your past articles, and several of your suggestions have helped tremendously. The technique you described for dealing with a hiatal hernia probably provided the most relief. Digestive enzymes also seem to lessen the problem, but not that much. My endoscopy test shows that everything is structurally normal, and my doctor can’t seem to find anything else wrong. At this point, his only suggestions are either over-the-counter heartburn medicines or the stronger prescription versions. Do you have any additional ideas for natural therapies that I might try? — T.E., Winter Park, FL

**Answer:** If your hiatal hernia is under control and your enzyme production is adequate, then it’s possible that you have an imbalance in energy flow. If this happens to be the case, traditional Chinese medicine can often address and fix the problem.

One effective remedy is called Ban Xia Xie Xin Pian. It’s a blend of seven different herbs used to “harmonize” the stomach. It doesn’t cause any of the side effects typically seen with traditional heartburn medications, and it has safely been used for more than 1,800 years.

You can order it in this country (under the name Gastropeace) from a company called Active Herb (activeherb.com or 888-805-4372). A bottle of 200 tablets costs about $10 and the recommended dosage is five tablets two or three times daily before or with meals. It may take two or three bottles to give you the relief you’re looking for.

Until next month,