

# THE EPOCH TIMES

# MIND & BODY

NEUROTOXIN

## Aluminum

### The Brain Toxin Found Everywhere



Reducing our aluminum exposure requires attention to our food, drugs, cosmetics, and more

Aluminum foil and cookware is a particularly poor choice for acidic foods such as tomatoes because it can lead to more aluminum content in the food.

#### A COMMON CONTAMINANT

We are exposed to aluminum routinely through a variety of medicinal and consumer products.

##### Vaccines



Vaccines that contain aluminum include those for hepatitis A and B, diphtheria tetanus containing vaccines, measles, mumps, rubella, rubella, varicella, rotavirus, and many more.

##### Pharmaceutical Products



Aluminum is found in common pharmaceutical products such as aspirin, antacids, phosphate binders, and dialysis fluid.

##### Makeup



Aluminum is found in many known brands of makeup, included as an antiperspirant in deodorants, and added to emulsify facial and body creams.

MARINA ZHANG

Feeling confused, weak, or losing your memory and concentration? You may be suffering from aluminum toxicity.

Aluminum is an omnipresent metal, found not only in your cookware—as most people already know—but also in vegetables, water, meat, and even vaccines and drugs.

Aluminum accumulates in your organs—especially the brain.

#### Aluminum Is Omnipresent

Sitting behind oxygen and silicon, aluminum is the third-most prevalent element in the natural environment and the most prevalent elemental metal in the earth's crust.

Aluminum is highly reactive and soluble. It's in the air, soil, water, and plants that absorb the water, including common vegetables. It's therefore also in the animals that eat the plants.

Plants such as spinach, tea, and some herbs and spices are naturally high in aluminum.

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## New Research in Plant Bioactives May Offer Hope for COVID Long-Haulers

CHRISTY PRAIS

Many COVID-19 long-haulers, including myself, suffer from lung damage and prolonged lung issues after the virus.

Chronic obstructive pulmonary disease is a lung condition characterized by breathing difficulty, coughing, and excess mucus production. It's caused by long-term exposure to irritants, such as tobacco smoke but is also triggered by respiratory infections such as COVID-19.

Another potential complication of COVID-19 is the development of lung scarring (pulmonary fibrosis). COVID-19 can trigger an immune response that leads to inflammation in the lungs, which can cause scarring. Like any scar on our body, there's a thickening of the tissue and a reduction in flexibility. When breathing, it's harder for the tissue to expand and contract, leading to less oxygen in the bloodstream. More energy is required to breathe, and this additional energy demand leads to shortness of breath and fatigue.

Darcy Schack, co-founder of Zestt Wellness, suffers from an infection-triggered inflammatory autoimmune disease called sarcoidosis. Sarcoidosis severely affects his lungs and other organs and has similar symptoms as long COVID. Schack describes the feeling of pulmonary fibrosis as "like trying to breathe through a straw."

Research has shown that anthocyanins—bioactive compounds found in purple fruits and vegetables—help to protect the lungs from damage caused by oxidative stress and inflammation. Research has also shown that specific anthocyanin compounds can inhibit the attachment of the spike glycoprotein of SARS-CoV-2 with the host cell receptor ACE2.

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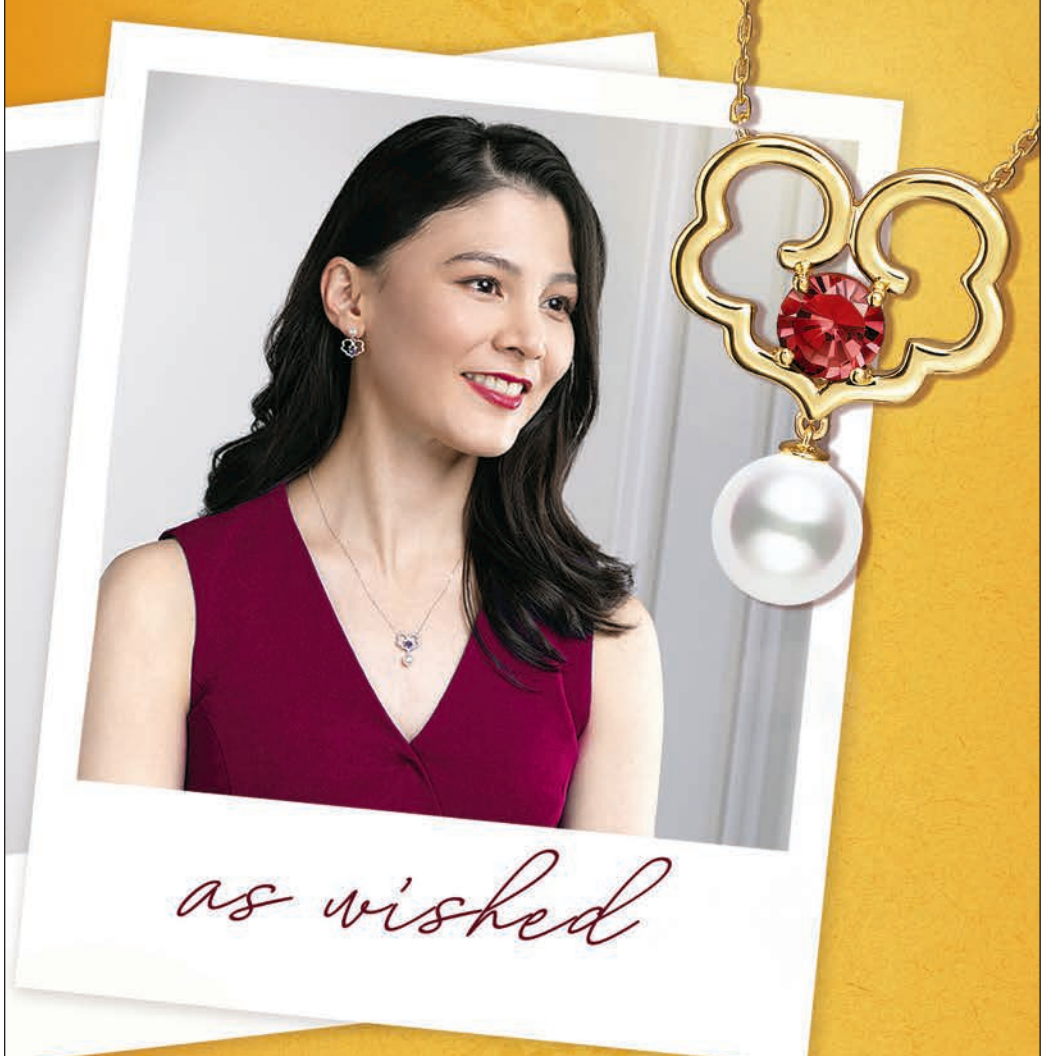
#### ANTHOCYANINS

Bioactive compounds found in purple fruits and vegetables—help to protect the lungs from damage caused by oxidative stress and inflammation.





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# Testing Continues on Non-Hormone Treatment for Hot Flashes



## THE SOURCE OF HOT FLASHES

Hot flashes appear to arise due to changes in the brain rather than hormone levels, research suggests.

Researchers may have found a safer drug for hot flashes but natural remedies are also available

HEATHER LIGHTNER

The dreaded hot flash is a sudden rush of incapacitating heat in the upper body, especially to the chest, neck, and face that's sometimes accompanied by anxiety and rapid heartbeat. Hot flashes are an intense sensation experienced by many women who are transitioning into menopause.

Any woman who has experienced a hot flash, or its "cousin," night sweats, knows it's an unpleasant sensation but few may know the mystery of these feverish feelings has been a focus for some scientists.

**Hot Flashes—It's All in Your Head**  
Although hot flashes and night sweats are linked with the decrease of estrogen a woman's body experiences during perimenopause and menopause, the exact cause driving hot flashes is still unknown.

For years, scientists had hypothesized that a part of the brain, the hypothalamus (which controls hormone secretion), also played a role in hot flashes and night sweats since one function of the hypothalamus is body temperature regulation—but were unsure how.

Researchers got a clue over 30 years ago, Dr. Naomi E. Rance, professor of patholo-

gy, cellular and molecular medicine, and neurology at the University of Arizona, said in an email to The Epoch Times. Rance, whose research on the topic was pivotal, noticed that there was a group of neurons in the hypothalamus of post-menopausal women that were increased in size due to a loss of estrogen.

Rance and her colleagues learned that the set of neurons, nicknamed KNDy neurons, release three different substances—kisspeptin, neurokinin B, and dynorphin—that each bind to a receptor. They also discovered that KNDy neurons contain estrogen receptors, meaning the neurons are estrogen sensitive. In response to decreased levels of estrogen, the KNDy neurons become more active and release neurokinin B. Once released, neurokinin B binds with neurokinin 3 receptors (the primary receptor for neurokinin B) on the KNDy neurons and in the part of the hypothalamus that controls body temperature.

Studies in rats and mice showed that an increase in the activity of KNDy neurons (due to a loss of estrogen) could lead to "hot flushes" by releasing neurokinin B into an area of the hypothalamus that controls body temperature, Rance said.

Further studies showed that blocking neurokinin 3 receptors could result in a decrease in hot flashes and night sweats

related to menopause. In fact, a 2017 phase 2 clinical trial demonstrated that women taking a daily neurokinin 3 receptor antagonist (blocker) had a significant reduction in the number of hot flashes they experienced.

The study participants—women experiencing seven or more hot flashes a day—saw a 45 percent reduction in weekly hot flashes while on the neurokinin 3 receptor antagonist. Unfortunately, clinical trials also demonstrated that the risks associated with the medication exceeded the benefits it provided. Additionally, an elevation of liver enzymes was noted in study participants and further studies were discontinued.

**A Cool New Treatment**

Research on the role of the hypothalamus and KNDy neurons has led to the development of an experimental drug that could serve as a new, nonhormonal treatment for hot flashes. Fezolinetant, a medication created by Astellas Pharma Inc., is currently under review by the U.S. Food and Drug Administration (FDA) and works by blocking neurokinin 3 receptors. If approved, the drug may be available to patients in 2023.

Phase 3 clinical trials regarding fezolinetant's effectiveness appear promising. Studies have shown that fezolinetant is effective in reducing the frequency and severity of hot flashes at both the 30 mg and 45 mg daily doses of the drug. Research data on fezolinetant also showed that the drug reduced hot flashes by 2.5 to 4 episodes per day.

While efficacy is important so is safety. SKYLIGHT 4, the most recent phase 3 clinical study studying the long-term safety of fezolinetant, confirmed the results of two previous phase three studies: SKYLIGHT 1 and SKYLIGHT 2.

Research has shown that a plant-based diet that includes soybeans and limits foods high in fat may have a therapeutic effect on women.

45%  
REDUCTION  
in hot flashes for women experiencing seven or more hot flashes a day while on the neurokinin 3 receptor antagonist.

In a press release from October 2022, Dr. Genevieve Neal-Perry, chair of the UNC School of Medicine Department of Obstetrics and Gynecology, was quoted regarding the SKYLIGHT 4 study results. Neal-Perry is one of the researchers who participated in clinical trials of fezolinetant. She explained that the results "demonstrate the long-term safety and tolerability" of the drug and provide "further support for its potential use as a treatment" for hot flashes and night sweats.

On the day following the press release, Neal-Perry shared initial results from the SKYLIGHT 4 phase 3 clinical trial at the North American Menopause Society's (NAMS) annual meeting, again showing that fezolinetant is a safe and effective treatment for hot flashes.

As with any medication, there's a cost-benefit ratio—fezolinetant is no exception. The study concluded that the side effects of fezolinetant were "generally mild to moderate in severity," with headache named as one of the most common adverse events. Side effects were also reported with a similar frequency in participants receiving the placebo.

A small number of participants also experienced an increase in liver enzymes; however, according to the SKYLIGHT 4 trial, they were isolated and temporary, and usually resolved during or after treatment.

**How to Manage Symptoms in the Meantime**

Kecia Gaither is double board-certified in OB/GYN and maternal-fetal medicine, as well as the director of perinatal services/maternal-fetal medicine at NYC Health + Hospitals/Lincoln in the Bronx. She explained that access to a non-hormonal treatment for hot flashes and night sweats could be a boon to women navigating perimenopause and menopause.

The new drug could potentially be "a game changer for peri/postmenopausal women" who suffer from hot flashes and night sweats, Gaither said in an email to The Epoch Times. "As of this time, a paucity [few] of non-hormonal therapies exist."

Prior therapy for hot flashes included hormone replacement therapy, "which carries certain health risks—like breast cancer, thrombotic phenomena, heart attacks and strokes," Gaither said.

Perimenopausal and post-menopausal women have been prescribed hormone therapy for many years to help alleviate a wide variety of symptoms—however, there are mixed opinions regarding its safety.

A 2002 study conducted by the Women's Health Initiative (WHI) showed an increased risk of breast cancer, stroke, cardiovascular disease, and blood clots in women who were taking estrogen and progesterone, which made many women refuse hormone treatment.

Today, both types of hormone treatments are considered safer than the WHI suggests. The 2022 North American Menopause Society's (NAMS) official position on hormone therapy states: "For women aged younger than 60 years or who are within 10 years of menopause onset and have no contraindications, the benefit-risk ratio is favorable."

For women who begin hormone therapy

10 or more years from the start of menopause or age over 60 the risk associated with taking hormones is generally higher. Women in this group who are receiving hormone therapy have an increased chance of developing coronary heart disease, strokes, clots, and dementia.

Antidepressants have also been used to treat hot flashes. Clinical studies have shown that venlafaxine (Effexor), desvenlafaxine (Pristiq), paroxetine (Paxil), fluoxetine (Prozac), citalopram (Celexa), gabapentin (Neurontin), and pregabalin (Lyrica) may all help women get some relief from hot flashes. Of course, these drugs come with their own side effects.

Although no woman wants to have hot flashes or night sweats, not every woman wants to take medication to manage them.

Supplements aren't without risk and aren't regulated by the FDA. Women should consult their physicians before taking any supplement product.

Dietary changes can also help women manage hot flashes. Research has shown that a plant-based diet that includes soybeans and limits foods high in fat may have a therapeutic effect on women. Avoidance of alcohol, caffeine, and spicy foods are easy diet changes that can also help reduce hot flashes.

Other alternative methods that may help lessen the frequency and severity of hot flashes and night sweats include



A portable fan can be a handy way to cool off.

controlled breathing, relaxation techniques, and acupuncture. Lifestyle changes can also help women stay cool. For women experiencing night sweats, keep the bedroom cool and layer bedding so it can be easily adjusted if things start feeling hot. To help manage hot flashes women can also:

- Dress in layers
- Have a fan on at night and use a portable fan during the day
- Quit smoking

According to Gaither, maintaining a healthy body weight may also help lessen hot flashes.

"Heavier women tend to report having hot flashes more so than thinner women as body fat serves to act as an insulator and inhibits heat dissipation."

**The Takeaway for Women's Health**

Insight into the mechanisms behind hot flashes and the potential of a non-hormonal therapy to treat them is an important step forward in women's health—one that couldn't come soon enough for women suffering hot flashes and night sweats due to perimenopause and menopause.

Rance believes it's important to continue to fund research for issues that affect women's health.

"In the case of hot flashes, for example, estrogen was the only effective treatment despite considerable controversy on the benefits versus the risks of this treatment," she explained.

Now that scientists have a better understanding of the pathways in the brain that cause hot flashes, "we have the opportunity to develop new targeted treatments that do not rely on estrogen replacement," Rance said.



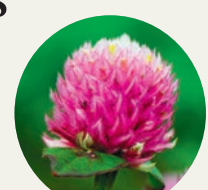
Hormone therapy is commonly used to treat menopausal symptoms but there are risks.




Dressing in layers can help you manage hot flashes when they occur.

## Home Remedies for Hot-flashes

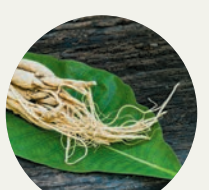
A variety of natural remedies are also available to women suffering from hot flashes and night sweats including, but not limited to:




Red clover.



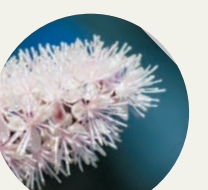
Dong quai.




Ginseng.



Magnesium.



Black cohosh.



Evening primrose.

## What Athletic Performance Diets Can Teach Us

GABE MIRKIN

Short-term, high-protein diets may hinder muscle endurance and short-term, high-carbohydrate diets may increase endurance, a new study finds.

The study, published in the American Society for Microbiology's journal "mSystems," found that what elite long-distance runners ate determined which types of bacteria lived in their colons. A diet high in fruits and vegetables (high-carbohydrates) was associated with improved time-trial runs in highly trained competitive runners by 6.5 percent, while a high-meat diet (high-protein) was associated with a per-

formance reduction of 23.3 percent.

The runners who had the least changes in the bacteria in their colons had the greatest improvement in time trial performance. The study found that:

- The high-carbohydrate diet that improved performance was associated with less change in the types of colon bacteria and an increase in the healthful types.
- The high protein diet that slowed exercise performance changed the types of bacteria in the colon (microbiome), reduced the number of different bacteria (diversity), and raised the levels of some types of viruses and bacteria.

**How Diet May Influence Athletic Performance**

Your muscles use primarily carbohydrates and fats for energy. The limiting factor for how fast you can move is how long it takes for oxygen to go from your bloodstream into the exercising muscles.

Carbohydrates (sugar) require less oxygen to make energy than fats do, so as you start to run out of your limited sugar supply, you have to slow down. You have an almost endless amount of fat in your body, but only a meager amount of sugar stored in your muscles and liver. Restricting carbohydrates for a short period can increase the ability of your muscles to store extra sugar when you eat carbohydrates days later.

You need some extra protein to stimulate muscle growth for exercise. Therefore, many competitive athletes manipulate their training by restricting carbohydrates

A healthful plant-based diet appears to build endurance by increasing the number and diversity of healthful bacteria in your colon.

and increasing protein for a week or two and then eating a high-carbohydrate diet for a few days before they compete. During the high-carbohydrate period, you shouldn't "carbhydrate load," where you force yourself to eat a tremendous amount of carbohydrates such as pasta or bread.

Your muscles can store only a limited amount of sugar, so you can increase sugar storage in muscles only a little bit. Excess

carbohydrates are converted to fat, and you don't need extra fat for exercise. In 1973, I reported the case of a marathon runner who suffered a heart attack after carbohydrate-loading in the days before a marathon.

Another reason not to load on meat: A very high-meat diet contains sulfated amino acids such as cysteine and methionine, and fermentation of these acids in your colon can produce ammonia, phenols, and hydrogen sulfide which can damage the lining of your colon and change the types of bacteria in your colon.

**My Recommendations**

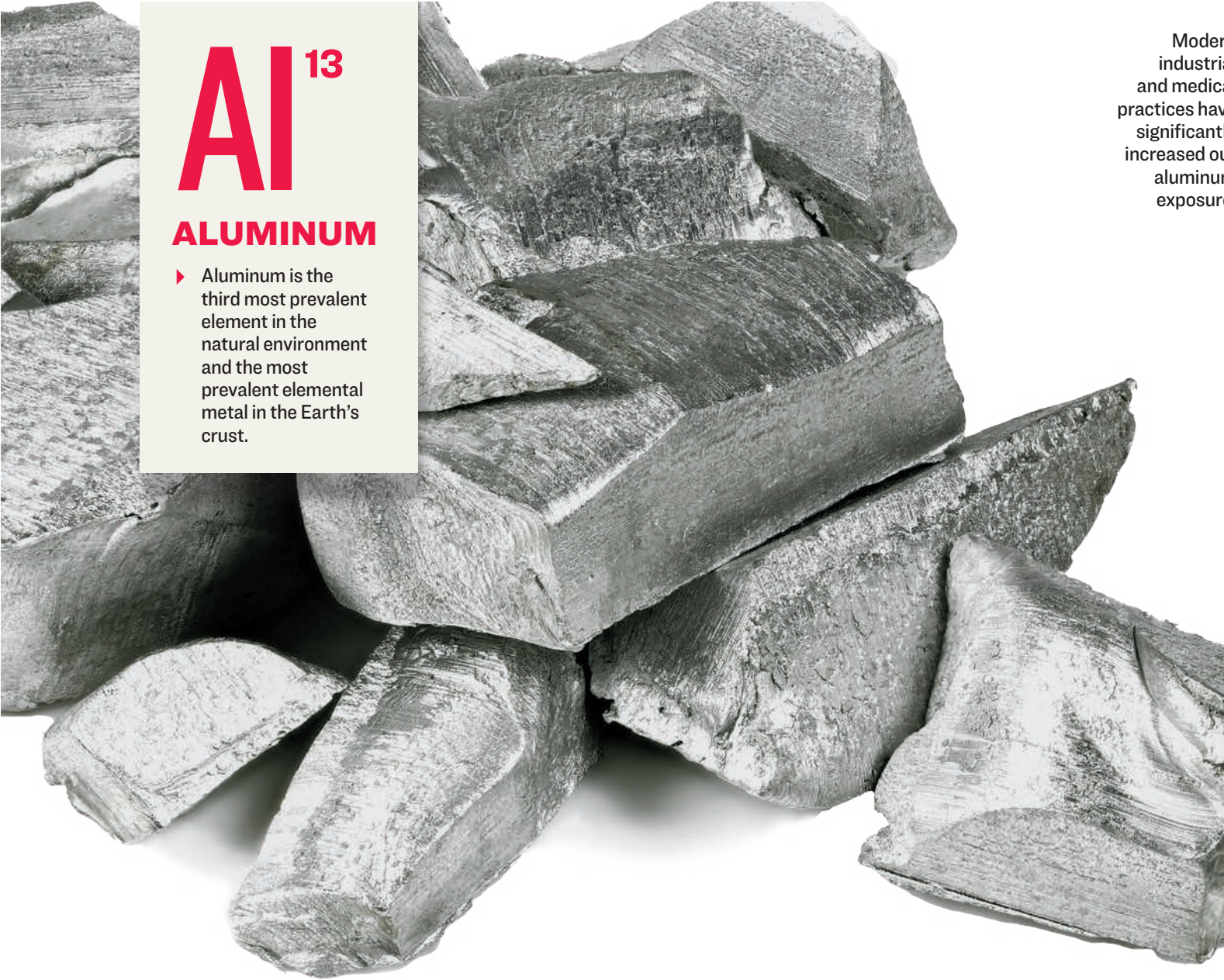
Recent papers are showing that exercise may improve health by increasing the number of healthful colon bacteria and decreasing the number of harmful bacteria. A healthful plant-based diet appears to build endurance by increasing the number

and diversity of healthful bacteria in your colon, so eating lots of fruits, vegetables, whole grains, beans, and nuts may make you a better athlete.

To find the studies mentioned in this article, please see the article online at TheEpochTimes.com

Sports medicine doctor, fitness guru and long-time radio host Gabe Mirkin, M.D. brings you news and tips for your healthful lifestyle. A practicing physician for more than 50 years, Dr. Mirkin is a graduate of Harvard University and Baylor University College of Medicine. He is one of a very few doctors board-certified in four specialties: sports medicine, allergy and immunology, pediatrics and pediatric immunology. Republished from DrMirkin.com





**AI<sup>13</sup>**  
**ALUMINUM**  
▶ Aluminum is the third most prevalent element in the natural environment and the most prevalent elemental metal in the Earth's crust.

▶ Modern industrial and medical practices have significantly increased our aluminum exposure.



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intravenous nutrition and pharmaceuticals that contain aluminum, including dialysis and vaccinations, must have a warning label, stating that for people with impaired renal function, such as premature infants, “parenteral levels of aluminum at greater than 4 to 5 micrograms/kilogram/day accumulate aluminum at levels associated with the central nervous system and bone toxicity.” Vaccines generally contain no greater than 0.85 milligrams/dose, and some studies indicate that the body clears out most of them. Other products also generally have very low levels of aluminum with low bioavailability. However, when you use many aluminum-containing products, the amount you’re exposed to can surpass the body’s excretory capacity—it’s then that aluminum can accumulate and symptoms begin to manifest. Our human bodies have no use for aluminum. Aluminum actually disturbs and impedes the natural flow of the body’s mechanism.

**Aluminum and Alzheimer’s Disease**  
In 1965, the aluminum hypothesis was kicked off by a Polish study, which posulated that aluminum contributes to Alzheimer’s disease. The hypothesis reasons that Alzheimer’s is a disease of old age because the older a person is, the greater the exposure to aluminum, the greater the aluminum accumulation. Three scientists found that injecting aluminum into rats’ brains caused the fibers in their neurons to degrade and form tangle-like structures that are commonly seen in Alzheimer’s disease patients. Another 1973 study collected brain samples from people who died with Alzheimer’s. The study found higher levels of aluminum in the brains of people who died with Alzheimer’s than in people who died of other conditions. However, in larger group studies, the findings have been a bit more conflicted. One analysis found that exposure to more than 100 micrograms of aluminum per liter of drinking water or occupational exposure increased the risk of Alzheimer’s by 71 percent. A 2011 review evaluated 13 studies on high aluminum levels in drinking water and found nine of them demonstrated a correlation between Alzheimer’s and high aluminum levels. However, a large analysis has found that though aluminum exposure may pose a risk factor, it’s less significant compared to other

factors such as physical inactivity, depression, and Type 2 diabetes. In July 1988, 20 tons of aluminum sulfate was accidentally discharged into drinking water tanks that supplied the town of Camelford, England. This incident increased the aluminum concentration of drinking water by more than 500 times the allowable limit, and as a result, 20,000 people were exposed to very high concentrations of aluminum from their water supply. The UK government followed the population over the years, intending to investigate the health impacts of the water contamination. The government later concluded that there was no proof relating the 1988 Camelford accident to later health impacts. However, several studies published several years later described the cognitive and neurological decline of some people in the town. One example told of a 49-year-old man, who started to suffer from memory loss six years after the accident. His memory problems worsened after five years along with dysphasia, hallucinations, and jerks. He died at the age of 69. Post-mortem analysis showed that he’d suffered from myriad neurodegenerative diseases, including Alzheimer’s disease, and high aluminum levels were also found in the rear region of the brain.

**Aluminum Is a Neurotoxin**  
Aluminum mainly comes in the form of a compound such as aluminum hydroxide and aluminum citrate, rather than the pure metal. When aluminum is in these compounds, the metal has a highly reactive plus-3 charge. It’s highly oxidative and potentially destructive. Not all aluminum is absorbed equally. Elemental aluminum is absorbed very poorly in the gut, but aluminum citrate can easily cross the gut and enter the brain, said a senior researcher at the Massachusetts Institute of Technology, Stephanie Seneff. In the central nervous system, aluminum activates genes that reduce neural energy and activity, increase inflammation, and promote neural dysfunction and even death. Aluminum also reduces neural growth and can accelerate the formation of tau proteins commonly found in Alzheimer’s disease. Aluminum may react with lipids that form the boundaries of cells causing the lipids to degrade. These cells then lose their boundaries and become stressed, inflamed, and potentially die. This has been demonstrated in studies on brain cells from rats as well as from humans.



▶ Studies found more aluminum in the brains of people who died with Alzheimer’s than in people who died of other conditions.

Another study found that aluminum also potentially damages the human “energy factory.” In a laboratory study, the longer the neurons were exposed to aluminum, the greater the toxicity. After the neurons were exposed to aluminum for 48 hours, the neurons no longer had any mitochondrial activity. The mitochondria produce more than 90 percent of the energy the body and its cells need. Aluminum also introduces changes to the human DNA, predisposing these cells to cancer. Further, aluminum has been shown to cause neuroinflammation by killing and activating astrocytes. These are “cleaners of the brain,” mopping up debris and dead neurons. When overactivated, however, they start destroying neurons. It’s unsurprising that aluminum exposure is linked with memory loss and cognitive decline. Aluminum is strongly associated with dementia and encephalitis (neuroinflammation) as a result of aluminum toxicity from dialysis in renal-impaired patients. Many studies have also linked aluminum exposure to other neurodegenerative diseases such as Parkinson’s disease and amyotrophic lateral sclerosis, though research has been contradictory. Environmental toxicologist Albert Donnay wrote to The Epoch Times that he thinks the correlation exists. “[Amyotrophic lateral sclerosis] killed my brother Robert J. Donnay and many other men that fought in the Korean war,” Donnay wrote. Data from the U.S. Department of Veteran Affairs has shown that veterans deployed to World War II or the Korean War have the highest rate of amyotrophic lateral sclerosis, however, a cause hasn’t been identified. “Some researchers including me believe the cause is high exposure to aluminum from cooking pots, mess kits everyone ate from, and the canned food they ate,” which was a lot of tomato products that leached out aluminum, wrote Donnay.

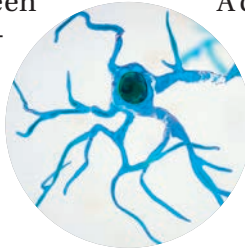
### How to Cleanse Aluminum from the Body

**Help Your Body**  
Your body has systems to detoxify itself and you can support them.

  
**High-Fiber Vegetables**  
Vegetables like broccoli that contain sulfur are natural chelators.

  
**Chelation**  
Drugs bind to metals in your body and help you excrete them.

  
**Silica-Rich Mineral Water**  
This beverage can help remove aluminum from your body.



▶ Astrocytes clean the brain but can destroy neurons when overactivated.

  
Turmeric may contain natural chelating properties.

**How to Remove Aluminum**  
A common treatment option for aluminum toxicity is chelation. The patient is given drugs, through a pill or intravenously, that bind to the toxic metals. The drug and the metal are then excreted through the urine. Chelation comes with some side effects, including burning at the injection site, nausea, headaches, and fever. Since it can also be used to remove essential minerals from reaching toxic levels, chelation therapy may also reduce beneficial minerals. Some food in the diet may be natural chelators, this includes vegetables that contain sulfur such as broccoli and garlic. Turmeric has also been suggested to contain natural chelating properties. Insoluble dietary fiber such as wheat bran, vegetables, and whole grains may also remove toxic metals, as studies have shown that the greater the level of insoluble dietary fiber consumed, the lower the level of toxic metals in the blood. Drinking silica-rich mineral water is also another way of removing aluminum from the body. Though aluminum and many toxic metals are hard to avoid, people can try to reduce their overall exposure by taking steps to avoid aluminum-containing products and choosing products without aluminum. Taking supplements such as vitamins A, C, and D to support the gut microbiome may also help. The gut serves as the first line of defense against food and drinks that contain many toxic metal products, and therefore it must be supported so that toxic metals ingested can be cleared out.

*To find the studies mentioned in this article, please see the article online at TheEpochTimes.com*

#### NEUROTOXIN

# Aluminum: The Brain Toxin Found Everywhere

Continued from Page 1

Some plants benefit from aluminum. Tea plants, for example, rely on aluminum as an essential nutrient for growth. The place where aluminum is stored in plants can also affect how much aluminum we are exposed to. Spinach and tea, for example, tend to store aluminum in the leaves. In man-made products, aluminum is everywhere. It’s particularly favored in manufacturing as a form of wrapping and packaging, as it’s very malleable and conductive to heat and electricity. It’s in cooking utensils such as aluminum foils and pans. Since aluminum dissolves more readily in acidic solutions, when aluminum foil is cooked with acidic products such as tomatoes, it can cause greater aluminum content in the food. Aluminum stimulates the immune system. It’s toxic and stimulates specific immune cells, creating a stronger immune response. Therefore, some vaccinations contain aluminum as adjuvants to enhance effectiveness. Vaccines that contain

**In man-made products, aluminum is everywhere.**

*One analysis found that exposure to more than 100 micrograms of aluminum per liter of drinking water or occupational exposure increased the risk of Alzheimer’s by 71 percent.*

aluminum include those for hepatitis A and B, diphtheria-tetanus containing vaccines, measles, mumps, rubella, varicella, rotavirus, and many more. Depending on the aluminum molecule, its presence can induce a slower release of drugs and even neutralize acids. It’s, therefore, also found in common pharmaceutical products such as aspirin, antacids, phosphate binders, and dialysis fluid. In cosmetic products, aluminum is in mineral sunscreens to prevent the loss of titanium, which helps the skin to block out the sun, it’s present in many known brands of makeup, included as an antiperspirant in deodorants, and added to emulsify facial and body creams. Aluminum complexes are also used extensively in processed food. It’s a raising agent in baking soda and an emulsifier in many processed cheeses. According to the Agency for Toxic Substances and Disease Registry, a healthy person can tolerate from 5 to 10 milligrams per kilogram of aluminum. Since 2000, the U.S. Food and Drug Administration has implemented a rule that

## New Research in Plant Bioactives May Offer Hope for COVID Long-Haulers

Continued from Page 1

Schack and his partner at Zestt Wellness, Anna Campbell, who holds a doctorate in plant biotechnology, have been studying the effects of bioactive compounds in plants for years. It was Schack’s personal struggle with his autoimmune disease that underpinned their company’s drive to create scientifically proven products to help others who are similarly suffering. “Several years after my diagnosis with sarcoidosis, I was driving home with a shopping bag full of prescription medications that I was supposed to take daily. I realized at that moment I had to take my life into my own hands and do my own research to find out absolutely everything I could about my illness. I put my background in science to work, and after reading thousands of research articles, two things were clear; first, inflammation is quite possibly the genesis of every disease that exists today; and second, the gut microbiome is more important than anyone has given it credit for,” Schack

Smoothies are an easy way to eat more disease fighting fruits and vegetables.



ALL PHOTOS BY SHUTTERSTOCK

told me in a recent interview on the Discovering True Health podcast. Campbell explained that “from what we’ve seen, sarcoidosis and long COVID have extreme similarities.” “Research shows that the inflammatory pathways between the two chronic illnesses are almost identical,” she said. “So we developed a product based on our extensive research of bioactives to help those experiencing lung issues.” Schack said, “If we can mitigate the chronic inflammatory process, then we potentially can give our bodies a chance to heal.” The pair said the threat of the COVID-19 pandemic accelerated their product launch. **What Are Anthocyanins and How Can They Help?** One of the main bioactive compounds in purple fruit and vegetables is a group of pigments called anthocyanins. Anthocyanins are what make these fruits and vegetables purple, and they have antioxidant and anti-inflammatory properties. Examples of fruits and vegetables that contain anthocyanins are boysenberries, black-

currants, blueberries, purple grapes, elderberries, eggplant, red cabbage, beetroot, and purple kumara. “Anthocyanins are free radical scavengers, so they are an antioxidant. What’s important about that is, once you have a chronic inflammatory process triggered, the anthocyanins can help mitigate some of that inflammatory response,” Campbell said.

“**If we can mitigate the chronic inflammatory process, then we potentially can give our bodies a chance to heal.**”

*Darcy Schack, co-founder of Zestt Wellness*

The consumption of cyanidin, an anthocyanin in fruits such as blueberries and boysenberries, was found to significantly reduce airway inflammation and mucus production, reduce collagen deposition from chronic inflammation, assist the repair of damaged tissue, and prophylactically prevent airway inflammation in studies using animals and human cell lines. Blackcurrants are another rich source of an-

thocyanin that have several potential health benefits, such as:

**Reducing inflammation.** Black currants have been shown to reduce inflammation in the airways and lungs, which may be beneficial for people with asthma, chronic obstructive pulmonary disease, and other respiratory issues.

**Improving lung function.** Some studies have suggested that blackcurrants may help to improve lung function in people with asthma and other respiratory issues. For example, one animal study published in the journal Molecular Nutrition and Food Research in 2017 found “supplementation with New Zealand blackcurrant is effective in reducing lung inflammation.” Another study found that New Zealand blackcurrants were shown to increase maximum oxygen use and the total running distance in elite athletes by 10.6 percent.

**Protecting against respiratory infections.** The anti-inflammatory, antiviral, and immune-boosting properties of blackcurrants may also help to protect against respiratory infections. For example, one study published in 2012 found that blackcurrant extract is effective in inhibiting the growth of several types of respiratory tract pathogens, including Streptococcus pneumoniae and Haemophilus influenza. A more recent study, published in 2021,

tested 18 dietary molecules belonging to the subclass of anthocyanins to see if they were potential inhibitors of the main protease and spike glycoprotein of SARS-CoV-2 that plays a vital role in the attachment and replication of the virus. It found specific anthocyanins that are found in many common berries (pelargonidin-3-glucoside, pelargonidin-3-rhamnoside, and cyanidin-7-arabinoside) can inhibit the attachment of SARS-CoV-2 with the host cell receptor ACE2. These compounds had a high drug-likeness per criteria used in medicinal chemistry to predict the oral bioavailability of a drug compound.

**Not All Purple Plants Are Created Equal**  
The purple color in fruits and vegetables has an important biological function for plants. One of its biological functions is to defend against stressors such as high UV light. This means that the higher the UV levels in a geographic location, the higher the levels of metabolites plants will produce as a defense mechanism. For example, New Zealand has high rates of UV light compared with similar latitudes. Peak UV levels can be 40 percent higher than peak UV levels in similar North American latitudes. In response, New Zealand plants have

developed higher levels of plant metabolites as a defense mechanism.

**Can We Improve Lung Function Once Damaged?**  
Can one improve his or her lung function once it’s been damaged? “Yes,” Campbell said. “There is groundbreaking new work showing that lungs can improve. A study done by my brother, Dr. Peter Campbell, a medical doctor, scientist, and cancer geneticist who heads up Sanger Institute in the UK, looked into cell regeneration from lung damage in smokers. The study found what they called, ‘bunker cells’ in the lungs. The study showed that once they stopped exposing the lungs to the physical damage, even though there were damaged cells around them, these bunker cells were able to regenerate and slowly start to grow.” There has been a long debate around the question of whether scarring and lung damage can be reversed. This evidence shows that it may not be fully reversible, but you can improve lung mobility and the lungs will start to regenerate after they’ve been damaged. “Also, anthocyanins in boysenberries activate M2 macrophages in our immune system; these M2 macrophages then nibble away

at some of the inflammation in our lungs,” Schack said. Schack and Campbell now market a product to take advantage of the medicinal qualities of these plants. “We used anthocyanins from blackcurrant and boysenberry extract both sourced from New Zealand,” Schack said. “Our lung formula also contains zinc and quercetin. Zinc powers—and is the foundation of—the immune system. Quercetin is another powerful antioxidant, antiviral, antimicrobial, and a zinc ionophore [helps transport zinc into the cells].” There are also many other products on the market that take advantage of the science that’s backing these nutrients. Of course, one of the most pleasant ways to obtain our nutrients, including those that may help us recover from long COVID, is to consume fruits and vegetables. It’s best to seek out locally grown foods since these are likely fresher and have preserved more of their nutrient profile. It’s also wise to choose organic foods, which won’t expose you to problematic herbicides and pesticides.

*Christy A. Prais received her business degree from Florida International University. She is founder and host of Discovering True Health, a YouTube Channel and podcast dedicated to health and wellness, and contributing journalist for The Epoch Times. Prais also serves on the advisory board at the Fostering Care Healing School.*



# Going Barefoot

## Helps Strengthen Feet, Improves Balance and Health

AMY DENNEY

Our feet have the ability to communicate a great deal of vital information, not just about the world around us but also about our own bodies and how we navigate through space. But it's hard to hear what they have to say when they're shoved into shoes most of the day.

Feet have more nerve endings per square centimeter than nearly any other part of the body. Their job is to gauge the grade, slope, texture, and temperature of the earth below our feet. This information is then rapidly communicated to our brains to help us respond in a way that assists in how we walk and keeps us standing upright.

But with shoes interfering, we might be getting dulled or muted messages and limiting the body's ability to heal. Those are a couple of reasons Susan Milton, 54, ditched her shoes for a full-time barefoot lifestyle a decade ago. On the very rare occasion when she wears shoes now, the lack of sensation on her soles feels foreign.

"I really value that extra input in my envi-

ronment," she said. "It's more information coming in about what my surroundings are. I just really enjoy it. It makes what I'm doing a richer experience. It's amazing."

For some Americans, it's offensive—and perhaps even crass—to be in public places without shoes. And yet research is increasingly clear that most footwear options are damaging our feet, and by extension, our bodies, by putting too much burden on the lower joints.

Most shoes are elaborately designed to absorb shock but they also dull sensations. Going barefoot—for at least part of the day—and learning how to nourish the nerves of the feet can help anyone with or without foot injuries support natural foot function. But for those with existing foot problems, starting slow may be vital to avoid additional pain.

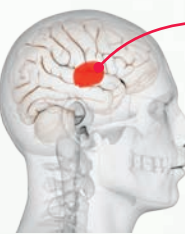


Our feet are packed with nerves that enjoy being activated when our feet roam free.

Going barefoot—for at least part of the day and learning how to nourish the nerves of the feet can help anyone with or without foot injuries support natural foot function.



Some companies make insoles meant to stimulate your feet, but usually they are not textured enough to have much effect.



Feet are part of the somatosensory system that the brain uses to get information about body position, movement, temperature, and more.



Feet have more nerve endings per square centimeter than nearly any other part of the body.



The wrong shoes can interfere with how our feet communicate important information to our brain about the state of our body.

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### Why Surfaces Matter

Knowing about vibration and its usefulness to our feet, in addition to the ways it can be harmful, can optimize how we approach movement. Key considerations are the surfaces that we move on, what we are doing, previous injuries, and the state of our feet.

Shoe cushioning can be important to alleviate the vibration—periodic back-and-forth motion of particles—from artificial surfaces such as concrete, marble, and tile. These surfaces offer less springiness than natural surfaces such as dirt and wood. That makes them harder on the body.

Vibration is how feet perceive impact force and determine how hard to strike the ground. Shoes fulfill their purpose to absorb shock and sudden or harsh vibrations, but they don't distinguish between surfaces, leaving all vibrations dampened.

"For the most part, people need vibration, and if you're taking away all of the vibration and you're never inducing a vibration stimulation to the nervous system, your feet are inherently getting weaker and weaker," Dr. Emily Splichal, functional podiatrist, told The Epoch Times.

Worn with intention, shoe cushioning can be beneficial, Splichal said. Strenuous activities repetitively done on hard surfaces may require support to avoid shin splints and plantar fasciitis. Those who are recovering from an injury may also find it painful to go barefoot or in minimal shoes for extended periods of time.

For others, however, minimal shoes offer a useful step toward walking barefoot.

"The lack of cushion in minimal shoes is allowing the vibration to transmit into the foot to stimulate foot muscle contractions and to stimulate the nerves in the feet and therefore bring back natural foot function," Splichal said.

Generally speaking, it is healthier to experience vibration from all surfaces because it builds bone density, strengthens foot muscles, improves balance, and increases circulation. While many activities might seem odd done barefoot, it's not unusual for yoga and dancing to be done shoeless.

For those who can't go barefoot or want to accelerate healing, Splichal uses a vibration platform called Power Plate. Tiny vibrations are sent through the feet to activate muscles, improve circulation, and assist in recovery.

### Part of Our Sensory System

Feet are part of the body's somatosensory system, which conveys information about the state of the body to the brain. The neural network in this system decodes data that allows us to experience texture discrimination, object recognition, and temperature discernment, as well as understand the relationship of our body in space, called proprioception. Most of the time, the input from our feet is the only part of our nervous system that keeps us upright.

This complicated system relies on mechanoreceptors, nerves in the bottom of the feet (they're also in palms) that live between the dermis and epidermis, as well as deeper within the dermis.

"These nerves are very important to movement and balance, how we stand statically without falling over, but then how we move dynamically and are able to transfer energy and release high amounts of power," Splichal said. "This stuff is fascinating, and it's very beneficial. It helps the layperson understand their body more."

These tiny building blocks of the nervous system pick up messages and send that information to the thalamus, a part of the brain responsible for interpretation that also discerns all other sensory information except smell. The thalamus relays messages of pain and touch in a layered process that then allows us to instantaneously process and integrate it in a way that dictates our ongoing voluntary behavior.

Without mechanoreceptors in our feet, our bodies wouldn't have the ability to react to pain, pressure, and temperature. They offer vital information to our brain about the location, duration, and intensity of the stimulus, including the surfaces we stand and move on.

This feedback loop largely functions without much regard until it's disturbed. It can become impaired due to injury, age, or disease. This is where recovery comes into play, which might involve strategies, products, or practices to improve standing balance. Others may choose to nurture this highly sensitive system at the first sign of disruption to prevent damage.

“People need vibration, and if you’re taking away all of the vibration and you’re never inducing a vibration stimulation to the nervous system, your feet are inherently getting weaker and weaker.”

Dr. Emily Splichal, functional podiatrist



A vibration platform can encourage healing for those who can't go barefoot.

### Healing Your Feet

No matter the approach to foot care, going barefoot more often—potentially as much as possible—appears to offer the most benefits, not for just the feet but the entire body.

Milton's interest grew when she went backpacking with a friend who was barefoot the entire hike. Milton had knee pain on and off for decades and different approaches and diverse shoes didn't offer relief.

"I just took off my shoes when we got back to the campsite and really loved it," she said. "It absolutely did feel better on my body. The pain went away."

It's not strictly anecdotal. A study showing that shoes are burdensome on joints was published in 2006 in Arthritis and Rheumatology. Shoes might be the cause of some osteoarthritis cases, which is why the subject warrants additional research.

Besides improving the functionality of feet, there's evidence that barefoot walking allows the human body to connect with electrons in the earth, and that can promote physiological changes like less pain and better sleep. Called earthing or grounding, research published in a 2012 issue of the Journal of Environmental and Public Health suggests that this practice could be equated to sunshine, clean air, water, nutrition, and physical activity as an essential part of human wellness.

Trail running or hiking on paths with a lot of irregular surfaces, either barefoot or in minimalist shoes, is also a good practice, Splichal said. The variability in surfaces and stimuli is exercise for both the feet and the brain.

"That requires you to pay attention," she said. "One of the greatest benefits I've seen in research of trail running in minimal shoes... is a cognitive increase post trail run. It forces you to be present."

You might even consider going barefoot on a treadmill. In a study of balance recovery for seniors published in November 2022 in BMC Geriatrics, those whose therapy was done barefoot (versus the group with shoes) created a more stable gait.

Nerves can be stimulated either barefoot or by wearing shoes with textured insoles. Splichal said the products matter, though, as the



Going barefoot in the winter may sound unusual, but quick walks in soft snow may provide a unique and pleasurable experience.

actual textures must be spaced appropriately to activate the mechanoreceptors; otherwise, they may feel like just one blob.

"This is not just an arbitrary textured pattern. People assume anything bumpy is texture," she said. "It's not just little nubs creating this effect on the nervous system."

The enjoyment of texture is part of the addictive nature of barefoot walking, according to Milton, who heads up the Barefoot Alliance, an organization that educates and supports people living a barefoot lifestyle.

Many members will go barefoot year round, even in the cold and snow. In fact, winter may be the ideal time to kick off shoes a bit more often as lower temperatures cause tissue contraction, which may stimulate and strengthen muscles to alleviate joint pain and inflexibility, as well as improving blood circulation. When the temperature is below 45 degrees, Milton often puts on wool socks.

What took the most adjustment, she said, was undoing a long habit of putting on shoes before she walked out the door. But reinforcing to herself that shoes are cumbersome and not really that amazing helped Milton make the shift. It's become so natural that the only time she thinks about it is if she has to wear shoes and misses the sensory input that going barefoot offers.

"It's another sense like seeing and hearing. I'm touching everything all the time. It's really important to me," Milton said. "Once you do it, it's pretty enjoyable."

# Meditation's Surprising Effect on Cancer

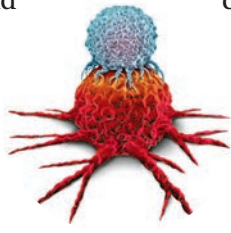
The mind's profound effect on the body is especially crucial amid illness

JAMES TEMPLETON

Cancer leaves many wounds. And while we have a tendency to focus only on the physical effects that cancer causes, anyone who has battled cancer will tell you that the emotional scars can be just as jarring.

Beginning the first day you hear those words, "You have cancer," the world as you knew it was suddenly turned upside down. In a matter of minutes, your mind races to comprehend the impact of the words you just heard. And for days afterward—and any number of long, sleepless nights—a thousand thoughts may come and go, along with a crushing cascade of emotions.

"Please, walk me down from the emotions of love and joy"—said no one ever. There are as many chemical reactions in the body tied to these positive, desirable emotions as there are to the negative, undesirable emotions of fear, anxiety, and stress. And either way you go, emotions are powerful influences that affect the state of our health.



Mindfulness can spur T-cells to attack cancer cells.

LIGHTSPRING/SHUTTERSTOCK

well-researched. Scientists like to try to boil human experiences down to chemical reactions. A case in point is an article published in the International Journal for Modern Trends in Science and Technology which describes emotions as "complex chemical reactions in the body's nervous system characterized by neurophysiologic changes associated with thoughts and behavioral responses." In the scientific view, emotions are made up of chemicals and are a direct result of the thoughts we think.

That latter part is important. Sometimes emotions give us insight into what's going on inside of us that may have escaped our conscious attention. And that could give us an opportunity to do something about them.

No one would want to be emotionless, as they enrich our life experience. If we pay attention to our emotions, we can gain insight into how our body is translating the experiences we face. That translation can also leave a lasting impact on our health.

When there's a prolonged imbalance of negative emotions, our body may become overwhelmed and

Emotions are powerful influences that affect the state of our health.



CULTURA RM EXCLUSIVE/MIKE TITTEL/GETTY IMAGES

respond in a negative, unhealthy manner. Put another way, a preponderance of negative emotions can result in a preponderance of chemical reactions that, over time, can damage the physical body.

One of the most obvious and easy-to-understand emotions—and its physical consequences—is the emotion of fear. Fear is a survival response. And fear is very physical. Fear begins when you perceive (in your mind) a threat. In order for your body to handle the perceived threat, myriad physiological responses happen within milliseconds:

- The amygdala (your middle brain) springs into action, alerting your nervous system with an all-hands-on-deck emergency alert;
- Cortisol, adrenaline, and other stress hormones are immediately released into your body;
- Your heart rate rises;
- Your blood pressure goes up;
- You breathe faster;
- And believe it or not, your blood flow changes direction—it flows away from your heart and into your extremities just in case you need to run fast to outdistance an enemy.

In other words, your body is pre-

paring itself for fight-or-flight. It's doing what it was designed to do.

The emotion of fear is all too real for cancer patients and it can continue for long periods of time. Depression is another emotion that cancer patients often experience. According to The National Cancer Institute (NCI), 1 in 3 cancer patients experience mental or emotional distress with a reported 42 percent of breast cancer patients and 41 percent of head and neck cancer patients leading the way.

Also according to the NCI, 25 percent of cancer survivors experience symptoms of depression, 45 percent experience anxiety, and many also experience PTSD symptoms. Sadly, cancer survivors are twice as likely to die by suicide.

**Turning the Tables on Negative Emotions** So, how do we deal with these emotions that are a very real reaction to the physical threat we face—the threat of cancer? In a fascinating study reported in the Clinical Journal of Oncology Nursing, mindfulness-based stress reduction was demonstrated to be a significant intervention for breast cancer survivors.

Mindfulness simply refers to a practice that uses meditative and attention-directed exercises to minimize stress and increase awareness of the present.

The goal of mindfulness is to purposefully disengage from beliefs, thoughts, or emotions and to focus instead on the present moment. If you can teach yourself to detach yourself from the thoughts and emotions you are experiencing, you can discover a power you never even knew you had.

In another study, Evidence for the Role of Mindfulness in Cancer: Benefits and Techniques published in the journal Cureus, researchers evaluated the effects of various mindfulness techniques on cancer patients. Their conclusions?

- Cancer-related sleep disorders: Results indicated a notable decrease in insomnia and other sleep disturbances commonly experienced by cancer patients.
- Radiation therapy: Participants who actively practiced mindfulness-based stress reduction (MBSR) experienced significant improvement as compared with those who did not practice the technique.
- Mindfulness and Immune Response: T-cells of participants in the group that participated in MBSR were more readily

activated. These T-cells are the heroes of the immune system, effective in fighting cancer cells and other unwanted intruders.

Changing the landscape of your mind often isn't an easy process. Just as it takes time and effort to get the body into better shape, the same holds true for the mind. If you're facing a difficult diagnosis, that effort is especially worthwhile.

Start by steering your mind toward positive thoughts. It can take a little practice because the natural tendency is to stray from the thought at hand. When you notice your mind doing this, stop, breathe, focus, and redirect your thoughts. Allow yourself to envision a healthier body, a body without cancer.

In order to stay as positive as possible,

you may find, as I did, that I needed to disengage from certain people and find like-minded people who encouraged me and understood what I was going through.

If that is the case for you, too, realize that this may be an opportunity for you to give yourself permission to focus on what you need to fight the battle you're fighting. And make no mistake—cancer is a battle. Why not try incorporating the art of mindfulness into your arsenal of cancer-fighting techniques?

*Republished from TempletonWellness.com*

*James Templeton founded Uni Key Health Systems in 1992 and now the Templeton Wellness Foundation as a way of giving back and helping others achieve the health and wellness they are seeking.*

PAVLO S/SHUTTERSTOCK

## MBSR Techniques

- Practice Sitting Meditation:** Sit in a comfortable position and direct your full attention to the sensation of breathing.
- Perform Your Own Internal Body Scan:** Focus awareness on individual parts of your body.
- Practice Being Non-judgmental:** Pay full attention to whatever is occurring at the current moment, but don't judge it.
- Have Patience:** Accept the fact that events unfold in their own time.

- Develop a Beginner's Mind:** Try to see everything as if it were happening for the first time.
- Trust Yourself:** Learn to honor your feelings rather than suppress or distrust them.
- Avoid Striving Too Hard:** Practice having no goal other than meditation itself, accepting what thoughts come and go.
- Learn to Let Go:** Try not to hold onto—or reject—your experience.
- Practice Kindness:** Practice being kind and warm in the face of difficulties while

- avoiding being self-critical.
- Develop Your Innate Curiosity:** Investigate whatever appears in your experience, without automatic judgment.
- Develop the Art of Acceptance:** Practice being objective as you calmly examine all thoughts, feelings, sensations, and beliefs that come and go in your mind's process.





# The 5 Major Factors of Fatigue

If you are plagued with fatigue, knowing its type is key to getting your energy back

HEALTH 1+1 & WU KUO-PIN

The busy modern person has much to do and worry about every day. Many of us work long hours and get little sleep. For many, it's even difficult to eat three proper meals a day. Various life pressures exhaust the body and mind, and issues such as insomnia, memory loss, anxiety, fear, and depression wear more and more people down.

Fatigue haunts us.

Many people think that getting more sleep and rest is the answer to all of these ills, but actually, this isn't the answer to fatigue, as we learned from Dr. Wu Kuo-Pin, director of Taiwan Hsinyitang Chinese Medicine Clinic.

But isn't sleep the cure-all we were led to believe?

"There are many causes of fatigue. We need to understand which type of fatigue we have so that we can prescribe the right remedy to get the best results," Wu said.

## 1 Physiological Fatigue

Physiological fatigue is physical fatigue, which is caused by the body being overworked and unable to properly handle the metabolites produced by the hard work.

"The more waste accumulated in the body, the more muscle soreness," Wu said. "The lack of adequate nutrient supply to the tissues and organs will lead to weakness and tiredness of the limbs."

This kind of physical fatigue is often an occupational disease, which may be caused by maintaining a certain posture or doing a certain kind of action for a long time, the doctor explained.

"Therefore, in order to improve physiological fatigue, we should pay attention to whether there are deviations or excesses in posture or movement, and do some stretching exercises to loosen up and to prevent and relieve physiological fatigue."

## 2 Mental Fatigue

The main cause of mental fatigue is prolonged mental stress. Rest or sleep alone isn't sufficient to relieve this type of fatigue.

"It requires holistic solutions of both body and mind to release the pressure or suppressed emotions," Wu said. That's why many people seek out therapists.

"In other words, we must take the weight off our mind and thoroughly solve and let go of the disturbance in order to truly eliminate mental fatigue and restore health."

## 3 Brain Fatigue

Brain fatigue is due to long hours of thinking or focusing on something, which generates the feeling of burnout.

"Excessive use of the brain will cause the brain to consume a lot of oxygen, resulting in a lack of oxygen supply to the



**We need to understand which type of fatigue we have so that we can prescribe the right remedy to get the best results.**

Dr. Wu Kuo-Pin, director, Taiwan Hsinyitang Chinese Medicine Clinic

**5 GRAINS**

"The five grains are the main sources for growth; the five fruits provide complementary nourishment; the five livestock are the main sources of energy; and the five vegetables are the main sources of supplement."

brain. Thus, carbon dioxide can not be metabolized smoothly, and brain fatigue will occur, accompanied sometimes by dizziness, headache, nausea, memory loss, and other symptoms," Wu said.

In these cases, sometimes the simple solution of breathing exercises can yield great results.

"When this fatigue occurs, you can stand up and do chest-expanding and deep breathing exercises to inhale a large amount of oxygen into the lungs," Wu said.

"Then move the cervical spine, and comb the hair so that the blood quickly and smoothly flows toward the brain, eliminating the brain fatigue."

But these are short-term and immediate remedies, not long-lasting ones.

"However, the best way is to readjust the pace of life, review your workload and rest time, and strike a balance between the two," Wu said.

## 4 Subjective Fatigue

Subjective fatigue can be described as "exhaustion," a state of feeling powerless about yourself or anything else. Subjective fatigue is usually caused by personal emotions.

"The common situation is that you are very committed to your work over a period of time, but that your efforts are not rewarded or recognized. After a period of time, your enthusiasm and motivation gradually wear off," Wu said. This differs from mental fatigue which may have to do more with being overwhelmed, as subjective fatigue results in more of a loss of motivation rather than an anxious state.

"It is necessary to rekindle the enthusiasm. Try to shift part of your attention to other activities, or change your work style and learning methods," Wu said, adding that it's a time for learning the importance of "letting go" of things.

"Do not care too much about what others may think of you, and follow your own way of life in order to truly get rid of this pain."

## 5 Fatigue Caused by Imbalanced Diet

This fatigue is caused by a long-term preference for a certain type of food or not eating a certain type of food, resulting in nutritional imbalance and

health problems. Large percentages of Americans today have nutritional deficiencies in many essential minerals and vitamins.

Wu said explained an ancient view of a balanced diet.

"An ancient Chinese medical book—'Huangdi Neijing,' which translates to 'The Yellow Emperor's Classic of Internal Medicine'—talks about the importance of a balanced diet and how to combine different types of food in a balanced way."

The book says, "The five grains are the main sources for growth; the five fruits provide complementary nourishment; the five livestock are the main sources of energy; and the five vegetables are the main sources of supplement. The intake of them combined in a balanced way will help the body stay healthy and energetic."

Modern research has also shown that variety is essential to a healthy gut microbiome.

"Huangdi Neijing embodies ancient Chinese wisdom and understanding of the universe and its relationship with the human being. It is the most important ancient text in Chinese medicine as well as a major book of Daoist theory and lifestyle," Wu said.

"Following ancient Chinese wisdom, we need to eat a balanced diet according to each individual's physique to relieve fatigue and to stay healthy."

*Health 1+1 is the most authoritative Chinese medical and health information platform overseas. Every Tuesday to Saturday from 9:00 a.m. to 10:00 a.m. EST on TV and online, the program covers the latest on the coronavirus, prevention, treatment, scientific research and policy, as well as cancer, chronic illness, emotional and spiritual health, immunity, health insurance, and other aspects to provide people with reliable and considerate care and help. Online: EpochTimes.com/Health TV: NTDTV.com/live*

*Dr. Wu Kuo-pin is the superintendent of Taiwan Xinyitang Heart Clinic. In 2008, he started to study traditional Chinese medicine and obtained a bachelor's degree from China Medical University in Taiwan.*

The main cause of mental fatigue is prolonged mental stress.

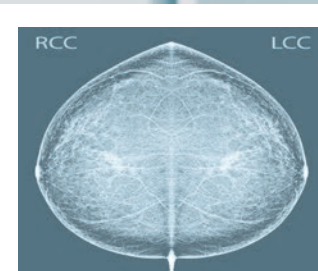


Eating a balanced and varied diet can ensure you have the nutrients you need to avoid unnecessary fatigue.



# The Business of Breast Cancer: Mammogram Risks

OVERTREATMENT



**70 PERCENT**

► of women in the United States older than 40 are having mammograms at least every two years.

Landmark studies have raised concerns that breast cancer screening programs offer little—if any—benefit at the population level.

An epidemic of low-value screenings is driving millions of women to get unnecessary tests, treatments

EMMA SUTTIE

Getting older is a complicated business. As we age, trips to the doctor increasingly conclude with requisitions for different screenings—tests meant to help diagnose potential problems and keep us healthy for the long haul.

Although many tests used to detect cancer have been hailed as lifesaving miracles

of modern medicine, some have a dark side. Concerns over the prolific use of mammograms for detecting breast cancer have been growing in the scientific community as journals publish research revealing that these tests come with their own risks. With roughly 70 percent of women in the United States older than 40 having mammograms at least every two years, it raises questions about their safety, whether information about potential dangers is being obscured, and who might really be benefitting from this widespread testing.

What if millions of women are fueling a billion-dollar industry with ever-increasing profits by using screenings that not only haven't improved outcomes but may be harming the women it's supposed to save?

**The two main concerns of mammography are radiation exposure and overdiagnosis.**

## Cancer in Our Society

Cancer is pervasive and widely feared because of its relentlessness and brutality and also because of the grueling nature of many cancer treatments. The National Cancer Institute spends billions of dollars on cancer research each year and cancer fundraisers are a perennial activity in our communities. Virtually every cancer has a month dedicated to its awareness. October is breast cancer awareness month, which it politely shares with liver cancer awareness in the United States.

As we get older, cancer is something we think about more, and our doctors push us to get tests and screenings to make sure cancer cells haven't been seeded in our bodies.

*Continued on Page 12*

HANIFAHN/SHUTTERSTOCK



Olfactory training and daily doses of B-complex vitamins helped patients restore their ability to smell in a 2021 case study.

COVID-19

# Ways to Regain Sense of Smell After COVID

GEORGE CITRONER

Among the many aftereffects of COVID-19 infection, one that has garnered much attention is the loss of smell or taste. For many people, the condition is long-term and treatment remains elusive.

Why does this happen to some people, and are there effective treatments available to restore one's sense of smell after a COVID infection?

**Loss of Smell Common With Many Viral Infections**  
Our senses of taste and smell work together

to help us enjoy food and drink. The loss of these senses can make meals seem tasteless or bland. More importantly, we may not recognize potentially dangerous situations such as a gas leak or spoiled food.

Losing the senses of taste (ageusia) and smell (anosmia) isn't only an early symptom of COVID-19 infection but also a well-known symptom of long COVID.

However, the condition isn't unique to COVID.

"Loss of smell is common with numerous viral infections, and especially so in COVID," Dr. Jacob Teitelbaum, a board-certified internist and nationally known

expert in the fields of chronic fatigue syndrome, fibromyalgia, sleep, and pain, told The Epoch Times. "In about 95 percent, smell has returned by six months."

In a study from New York University, researchers found that the presence of the COVID-19 virus near nerve cells in olfactory tissue stimulated an influx of immune cells, such as microglia and T cells, to counter the infection.

These cells release proteins called cytokines, which change genetic activity in olfactory cells, even though the virus couldn't infect them.

*Continued on Page 10*

THE EPOCH TIMES

*The Book You've Been Waiting For ... "An eye-opening and sobering read on where we find ourselves today and how we arrived here."*  
— B. Miller

# HOW THE SPECTER OF COMMUNISM IS RULING OUR WORLD

The specter of communism did not disappear with the disintegration of the Communist Party in Eastern Europe



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NATA BENE/SHUTTERSTOCK

Research finds the best way to regain a sense of smell after COVID-19 is to begin olfactory training quickly and practice it diligently.

COVID-19

## Ways to Regain Sense of Smell After COVID

Continued from Page 9

In other scenarios, immune cell activity dissipates quickly; but researchers theorize that COVID-related immune signaling persists in a way that impairs the activity of genes needed to build smell receptors.

Other research found why, for some people, the loss is potentially permanent. Scientists at Duke University, with experts from Harvard University and the University of California-San Diego, used a tissue biopsy (extracted sample) to analyze olfactory epithelial cells, particularly those from COVID patients with long-term anosmia.

The findings indicate that our immune cells may continue reacting even when the threat is gone.

### Viral infections can cause inflammation and swelling around the olfactory nerves.

Analyses revealed widespread infiltration by T cells (immune cells), which caused an inflammatory response in the nose where the nerve cells for smell are located.

"The findings are striking," senior author Dr. Bradley Goldstein, associate professor in Duke University's Department of Neurobiology, said in a statement.

"It's almost resembling a sort of autoimmune-like process in the nose."

#### Steroid Nasal Spray Shows Promise

A study published in the American Journal of Otolaryngology found fluticasone (Flonase) nasal spray helped participants regain their sense of smell.

Researchers looked at 120 people experiencing anosmia due to COVID-19 and split them into two groups—one that received treatment and one that did not.

They found that smell and taste function significantly improved within one week in all patients with COVID-19 who received fluticasone nasal spray.

Teitelbaum said the nasal spray may work because viral infections can cause inflammation and swelling around the olfactory nerves. Fluticasone is an over-the-counter steroid nasal spray that reduces inflammation.

"Once the infection has been gone for a month, the OTC steroid nasal spray Flonase [used] for six to eight weeks may decrease the nasal and nerve swelling," Teitelbaum said.

But he cautioned that this nasal spray shouldn't be used while symptoms of active infection, such as a runny nose, are present.

#### Olfactory Retraining

Anosmia has been studied long before the current pandemic. A 2009 study discovered that the sense of smell could be re-sensitized in people who lost the ability to detect odors.

Researchers exposed participants to one of four odors: cloves, lemon, eucalyptus, and rose.

Patients sniffed the four intense odors twice a day for 12 weeks. They were tested for sensitivity before and after training using "Sniffin' Sticks" of various smell intensities.

Compared to the baseline, patients who trained their olfactories experienced an increase in their sensitivity to smells, according to their Sniffin' Sticks test score. Smell sensitivity was unchanged in patients who didn't receive the training.

Research specifically looking at people with COVID-related loss of smell found that smell training effectively improved their ability to detect odors.

"When begun early and with good compliance, olfactory training was reported to be most beneficial in enhancing olfactory function," Teitelbaum said.

#### Vitamins That May Help

There are many theories as to why COVID infection causes loss of smell, but we still don't know exactly why.

Teitelbaum believes there's likely a mix of several causes, including low levels of certain nutrients such as zinc.

"I give 25 to 50 mg [of zinc] a day for six months [to patients]," he said.

Zinc is critical for immune function, with the key immune system-regulating hormone thymulin being zinc-dependent. Many infections, including AIDS, deplete zinc to worsen immunity. Smell is also zinc-dependent.

Another key nutrient for smell is vitamin A.

"The retinol form of vitamin A at doses of 2500 to 5000 units a day may, along with zinc [at] 25 to 50 mg a day, help smell over time," Teitelbaum said.

However, pregnant women need to be careful when taking this vitamin.

"Vitamin A will cause birth defects in pregnant women at doses over 8000 units," Teitelbaum said.

A case study from 2021 describes how a COVID-19 patient's ability to smell was restored by olfactory training combined with daily doses of these B-complex vitamins:

- 5000 IU of vitamin B1
- 100 mg of vitamin B6
- 5000 mg of vitamin B12

The patient's anosmia was significantly improved at 12 days and his sense of smell was recovered by day 40.



Sea sponge compounds can block viral replication, study finds.

PIOTR KUCZEK/SHUTTERSTOCK

NEW TREATMENTS

## Canadian Sea Sponge Could Hold Cure for COVID-19

Treatments that support cells rather than target virus are especially promising, researchers say



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### NUTRIENT PROFILE

Phytochemicals, protein, magnesium, zinc, potassium, B vitamins, D-chiro-inositol, soluble fiber and resistant starch.

FOOD AS MEDICINE

## Tough Conditions Created This Ancient Himalayan Superfood

Himalayan Tartary buckwheat is gaining ground in US farms as more people recognize its rich phytochemicals

SUSAN C. OLMSTEAD

Himalayan Tartary buckwheat contains:

- Phytochemicals including rutin, quercetin, and the recently discovered 2-HOBA, also known as Hobamine
- High amounts of protein
- Magnesium
- Zinc
- Potassium
- B vitamins
- D-chiro-inositol, a molecule involved in blood sugar regulation and hormone balance
- Soluble fiber and resistant starch

### Using organic methods not only keeps toxic chemicals out of our foods, but it also improves food's nutrition.

#### History

Himalayan Tartary buckwheat was cultivated in ancient China and is mentioned in the "Yellow Emperor's Classic of Medicine," one of the original documents in Chinese literature on therapeutic herbs and plants, Bland said.

Himalayan Tartary buckwheat's immune properties, Bland explained, are a result of the plant's ability to make a series of substances called phytochemicals, specifically polyphenols or flavonoids.

"That portfolio of nutrients is produced in very high levels in Tartary buckwheat," he said.

Despite its name, HTB isn't related to wheat at all.

"It's a fruit seed," Bland says. "It has no genetic relation to wheat, so it has no gluten."

and holyrine A from marine bacteria, all collected from Canadian waters.

After bathing human lung cells in solutions made from these compounds and then infecting the cells with SARS-CoV-2, the researchers found that all three were effective in preventing COVID-19 infection, even in tiny doses.

"The advantage of these compounds is that they are targeting the cells, rather than the virus, blocking the virus from replicating and helping the cell to recover," said Jimena Pérez-Vargas, a microbiology and immunology research associate at the University of British Columbia (UBC).

"Human cells evolve more slowly than viruses, so these compounds could work

"This was seen by our colonial ancestors as a really important food product to bring to the new world. For the first 100 years in America, this was an important staple in our colonial diets."

But the common buckwheat seed—the one that's more familiar to Americans today—gradually edged out Himalayan Tartary buckwheat because the common variety has a higher yield per acre and a milder flavor, Bland said.

So, although Himalayan Tartary buckwheat has 50 to 100 times higher levels of immune-active substances than common buckwheat, its cultivation in the U.S. dwindled over the past 100 years.

That began to change when Bland surveyed U.S. farmers about four years ago to determine if anyone was growing Himalayan Tartary buckwheat. He found only one farmer who was: Sam Beer, a retired research agriculture professor at Cornell University.

Along with his wife, Lucia, Beer began to grow the crop on his small hobby farm in upstate New York after receiving some seeds from the U.S. Department of Agriculture.

"He found that the plant was beautiful," Bland said, who described it as tall and elegant. "And when he harvested the seeds, he found that, lo and behold, it had these unique nutritional characteristics."

The Beers milled the seed on their farm and sold it locally. About three years ago, Bland founded Big Bold Health and partnered with the Beers and a cooperative of upstate New York organic farmers to revive Himalayan Tartary buckwheat in the United States.

"It's really been a fun project for us to bring this crop back to America," Bland said.

#### Organic Methods Produce Hardier Food

"We are not treating Tartary buckwheat as a commodity," Beer said in a video about the superfood. "We care about a host of particular compounds that it has and we

### HIMALAYAN TARTARY BUCKWHEAT CORNBREAD

#### INGREDIENTS

- 1 1/3 cups almond milk or buttermilk
- 1 tablespoon lemon juice (if using almond milk)
- 1 cup cornmeal, medium grind
- 1 cup Himalayan Tartary Buckwheat Super Nutrition Flour
- 3 tablespoons coconut sugar—use more for a sweeter flavor
- 2 teaspoons baking powder
- 1/2 teaspoon baking soda
- 1/2 teaspoon (scant) sea salt
- 1/4 cup coconut oil, melted
- 2 eggs, beaten

#### PREPARATION

If using almond milk, combine it with the lemon juice and let sit for a few minutes to allow it to curdle a bit (this mimics buttermilk and improves leavening). This step isn't necessary if you are using buttermilk.

Combine the milk with the cornmeal in a medium bowl and allow to sit for 10 minutes.

Preheat oven to 375 degrees F. Spray an 8 x 8 baking pan with your favorite oil (coconut oil, avocado, etc.) and set aside.

In a small bowl, mix the Himalayan Tartary buckwheat flour, coconut sugar, baking powder, baking soda, and salt, and add to the milk/cornmeal mixture. Stir in the eggs and coconut oil and mix well.

Pour into prepared pan and bake in preheated oven for about 25 to 30 minutes until golden brown and a toothpick inserted near the center comes out clean. Allow it to cool slightly before serving.

Tastes best when warm!

Reprinted with permission from Big Bold Health.



also care about the way it's farmed."

Using organic methods not only keeps toxic chemicals out of our foods, but it also improves food's nutrition, Bland said. Using herbicides and pesticides lowers stress on a plant, he said, which means it doesn't need to mobilize a strong stress response.

Polyphenols and flavonoid levels are lower in plants that have been treated with agricultural chemicals than in those that have had to "make their own way in a hostile world," he said.

"Food is medicine, right? That's one of the principles behind it. It's worth paying more attention to what you eat ... it's worth investing time and money and eating good food because it's directly related to your health," says Greg Russo, one of the farmers involved in producing Himalayan Tartary buckwheat flour.

Susan C. Olmstead writes about health and medicine, food, social issues, and culture. Her work has appeared in The Epoch Times, Children's Health Defense, Salvo Magazine, and many other publications.



## A Restorative Recluse

Tartary buckwheat thrives in the harsh climate of the Himalayan mountain range. It can be seen growing at an altitude of over 14,000 feet.

Many local fauna, including yaks and mountain goats, as well as nomadic tribes have subsisted off the Tartarian buckwheat as one of their main food sources.

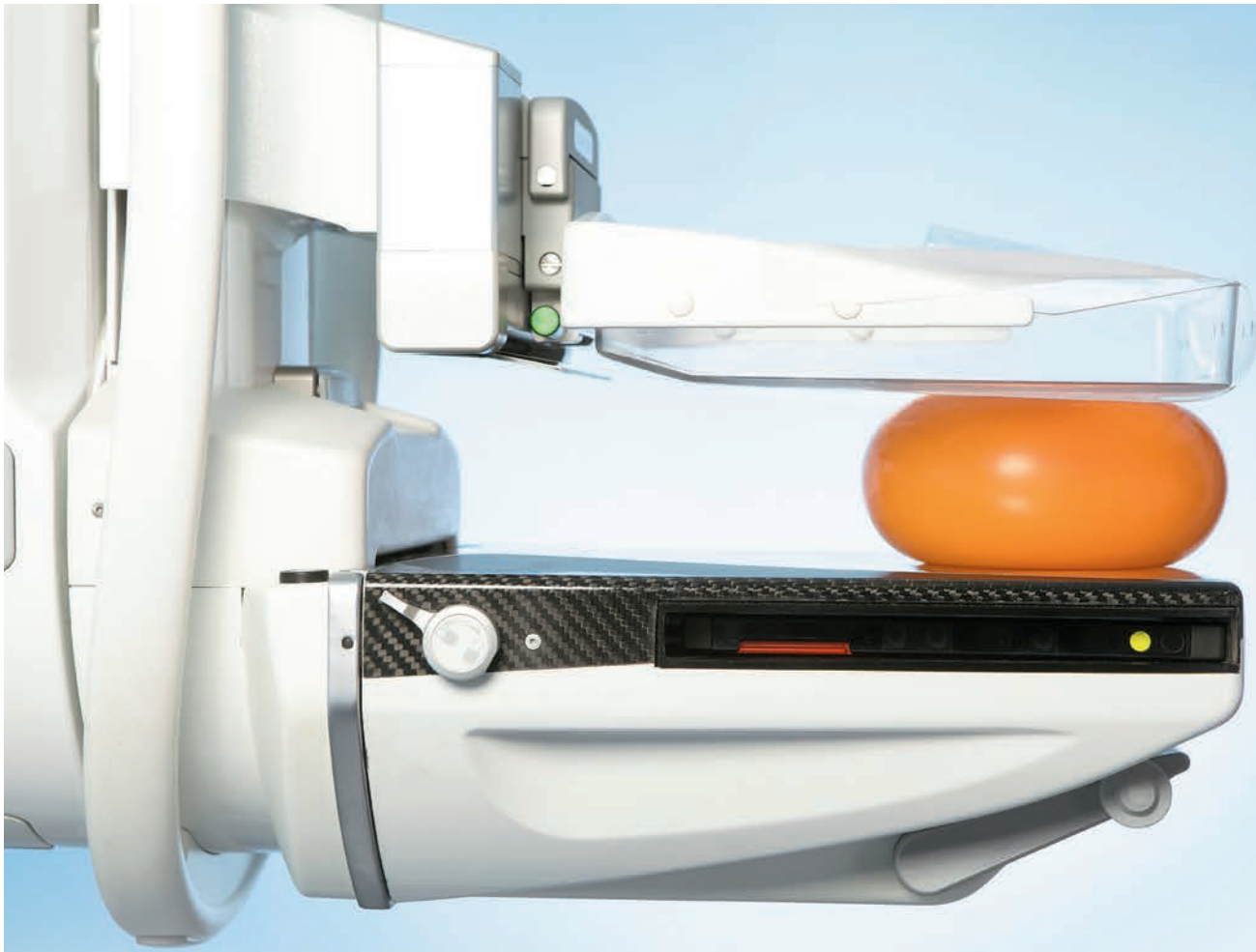
#### Paving the Way for Future Cures

Published in the National Library of Medicine, the scientists said that the discovery was a promising starting point for developing treatments, adding that "given nature's abundance, there could be a wealth of new antivirals waiting to be discovered."

The next step in the study is testing on animals, to be conducted in the next six months.

"Our research is also paving the way for large-scale testing of natural product medicines that can block infection associated with other respiratory viruses, such as influenza A and RSV," Jean said.





OVERTREATMENT

# The Business of Breast Cancer: Mammogram Risks

Continued from Page 9

### Breast Cancer

Breast cancer deeply frightens many women (and yes, men can get it too). If you happen to be considered high-risk, screenings may start when you're in your early 20s. In the United States, mammograms are considered to be the gold standard of testing for breast cancer, and there are now 2D and 3D varieties for women to choose from.

Mammograms use X-rays (a form of ionizing radiation) to take pictures of the breast. A machine is used in which a woman places her breast between two plates or paddles. It's then compressed, and x-ray images are captured.

In a 2D mammogram, two images are taken, one from the top and one from the side, creating a 2D picture.

In 3D, or tomosynthesis, the process is largely the same, using slightly more radiation and capturing additional images, creating a three-dimensional picture of the breast.

Radiologists use the images to look for abnormalities, with breast cancer usually appearing as a white mass. If abnormalities are found, the patient is asked to come back for more tests, often an MRI, or to have a biopsy. Mammograms don't diagnose breast cancer. The only way to diagnose breast cancer after an abnormality is seen is to do a biopsy.

### Mammography: What You Should Know

Mammography does have risks, which all women should be aware of. The two main concerns of mammography are radiation exposure and overdiagnosis.

Because mammography uses a type of ionizing radiation, it comes with an inherent risk. We're all exposed to radiation every day. Some of that radiation, such as the ultraviolet and infrared rays of the sun, is essential to our health (in appropriate

## THE MAMMOGRAPHY INDUSTRY-PROJECTED EARNINGS

What might perhaps be interesting to know is that mammography is a multibillion-dollar industry.

In September 2022, Vantage Market Research released a report that projected that earnings for the mammography market would be up to:

**\$3.2** from **\$1.8**  
**BILLION** by 2028 **BILLION** in 2021

Growing markets in Asia are expected to provide most of that expansion. The report attributes the huge growth in the region to the existence of a significant number of mammography companies, the high adoption rate due to government measures that stimulate the industry, and increasing collaborations between the mammography industry and governments in the region.

doses). But we're well adapted to these natural, low levels of radiation. The same isn't true of man-made radiation.

The ionizing radiation used in mammograms is much stronger than that emitted by natural sources. At high levels, ionizing radiation can harm our tissues and organs and lead to cancer.

According to the American Cancer Society, the dose of radiation a person receives from a mammogram is about the same amount of radiation people get from their natural surroundings in a three-month period.

This is of concern because there are parts of the body that are particularly sensitive to radiation, and we should limit our exposure whenever possible. In fact, Cornell University's Program on Breast Cancer and Environmental Risk Factors states that "the female breast is known to be highly susceptible to the cancer-causing effects of radiation when exposure occurs before menopause." A mammogram is directing this radiation not only at the breast but also at the other organs inside the chest, such as the heart and lungs.

women are exposed to chemotherapy, radiation therapy, and surgery that may not have been needed.

An article published in Public Health Research and Practice titled "What Is Overdiagnosis and Why Should We Take It Seriously?" offers a very good explanation of what overdiagnosis is and why it's a problem, defining overdiagnosis this way:

"In cancer screening, overdiagnosed cancers are those that did not need to be found because they would not have produced symptoms or led to premature death.

"Overdiagnosis in cancer screening arises largely from the paradoxical problem that screening is most likely to find the slow-growing or dormant cancers that are least likely to harm us, and less likely to find the aggressive, fast-growing cancers that cause cancer mortality. This central paradox has become clearer over recent decades. The more overdiagnosis is produced by a screening program, the less likely the program is to serve its ultimate goal of reducing illness and premature death from cancer."

### Overdiagnosis

The other issue with mammography is overdiagnosis. Overdiagnosis is a concern because mammograms can detect abnormalities that may not be cancer or that are cancers that would have regressed on their own but are treated once they're discovered.

That means that

An article published in The Lancet in 2013 argued that two 30- to 35-year-old randomized studies underestimated when they concluded that there was a 19 percent rate of overdiagnosis when screening with mammography.

The article's author, Per-Henrik Zahl, a researcher with the Norwegian Institute of Public Health who has studied breast cancer overdiagnosis, argued that detection rates and the level of overdiagnosis have increased 100 percent or more as the sensitivity of mammograms has improved.

Zahl noted that when screening was introduced in Sweden and Norway, there was a 50 percent increase in invasive breast cancer. The total increase in diagnoses in Norway was 75 percent. He concluded that almost all of the increase in cancer detection through screening was due to lesions that normally go into spontaneous regression.

A comparative study published in the journal BMC Women's Health in 2009 set out to quantify overdiagnosis in the Danish mammography screening program. Denmark is unique because only 20 percent of the population has been offered mammography over an extended period. Inci-



The paradox of more screening is that it increases the likelihood of overdiagnosis and overtreatment.

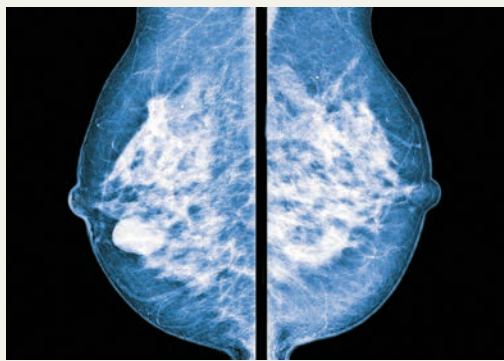
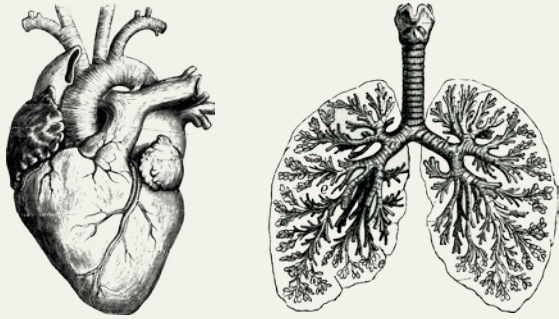
ALL ILLUSTRATIONS BY SHUTTERSTOCK

## Risk of Heart Disease and Lung Cancer

A cohort study published in the British Journal of Cancer in 2012 followed more than 500,000 women from 1973 until 2009. The study found that women who had received radiation treatment for breast cancer (high energy x-rays) had a significant increase in heart disease and lung cancer in the decades after their treatment.

The study clearly demonstrates a progressive increase in both risk and mortality from radiation-related heart disease and lung cancer with time (into the third decade) after exposure to radiation.

The study is one of many to raise questions about routine mammograms for women at low risk of breast cancer.



Mammograms often find precancerous growths that present zero risk but can prompt unnecessary tests, treatments, and stress.

dence rates of carcinoma in situ (stage 0 breast cancer) and invasive breast cancer were collected in areas with and without screening over 13 years, and 20 years before its introduction. The study found that in the screened women, the overdiagnosis rate was 33 percent.

A systematic review published in the British Medical Journal in 2009 tracked the incidence of breast cancer before and after the introduction of mammography screening in specific areas—the UK; Manitoba, Canada; New South Wales, Australia; Sweden; and parts of Norway—both seven years before and seven years after public breast cancer screening programs were implemented. The review found that overdiagnosis was estimated at 52 percent and concluded that one in three breast cancers detected in a population that was offered screenings were overdiagnosed.

As evidence of overdiagnosis has accumulated, it's now recognized as the most serious downside of population-wide breast screening.

### What Women Think

One of the main concerns with mammograms is that women may not be warned about the potential risks of and all the factors involved in breast cancer screenings. A cross-sectional survey of 479 women in the United States aged 18 to 97 published in the British Journal of Medicine set out to understand women's attitudes to and knowledge of false-positive mammography results, as well as the detection of ductal carcinoma in situ (a type of stage 0 breast cancer) after screening mammography.

Ductal carcinoma in situ (DCIS) is defined as the presence of abnormal cells inside the milk duct in the breast. DCIS, which is considered an early form of breast cancer, is noninvasive, meaning that it's still isolated, hasn't spread out of the milk duct, and has a low risk of becoming invasive.

The survey concluded that women were aware of false positives, seeming to view them as an acceptable consequence of screening mammography. In contrast, most women were unaware that screening can detect cancers that may never progress (ductal carcinoma in situ) and felt that that information was relevant.

The study also found that only 8 percent of women thought mammography could harm a woman without breast cancer and 94 percent didn't realize (doubted) that mammograms could detect cancers that might not progress. Few of the women in the study knew about DCIS, but 60 percent of the women wanted to take into account the possibility that any cancer detected may not progress.

Another study published in the Journal of the American Medical Association in 2013 looked at overdiagnosis and overtreatment of breast cancer and what physicians were telling patients about the risks of screening, specifically the possibility of overdiagnosis and overtreatment.

Less than 10 percent said they were told about the risks of mammograms by their physicians. Little more than half (51 percent) said they wouldn't agree to a screening if it resulted in one overtreated person per one life saved. These numbers imply that millions of Americans might not choose to be screened if they knew the whole story, but unfortunately, 90 percent aren't getting that information.

### The Cancer Industry Recommendations

In the United States, mammograms are the standard screening used to detect breast cancer, and doctors usually begin speaking to their women patients about mammograms at about age 40.

Both the American College of Radiology and The American Congress of Obstetricians and Gynecologists recommend women begin annual mammograms at age 40. The American Cancer Society recommends that annual screenings begin at 45 (then once every other year after 55), and the U.S. Preventative Services Task Force recommends women begin mammograms every other year at age 50.

Mammograms are approved by the Food and Drug Administration (FDA), which regulates the standards for mammography machines and the people who provide them. The FDA has also released several warnings about using thermography instead of mammograms, reminding the public that mammography is still the most effective primary breast cancer screening test.

### Do Regular Mammograms Lead to Better Outcomes?

The question becomes, do regular mammograms lead to better outcomes? Well,



If you are at low risk of getting breast cancer, it may not be worth having many years of mammograms as the screening itself may cause the cancer.



In the United States, mammograms are the standard screening used to detect breast cancer starting at age 40.

If you happen to be considered high-risk, screenings may start when you're in your early 20s.

1 in 3 BREAST CANCERS

detected in a population that was offered screenings were overdiagnosed.

Most women are unaware that screening can detect cancers that may never progress.

in the journal Radiology in 2011.

In 2013, the Swiss Medical Board—an independent health technology assessment initiative—was asked to prepare a review of mammography screening. After a panel reviewed the available evidence—and contemplated its implications in detail—they were extremely concerned. The Swiss Medical Board's report was released on Feb. 2, 2014, and acknowledged that systematic mammography screening might prevent about one death from breast cancer for every one thousand women screened, even though there was no evidence that overall mortality was affected.

It also emphasized the harm caused by mammography, specifically false-positive test results and the risk of overdiagnosis. The report cites the following statistics from a study published in the Journal of the American Medical Association:

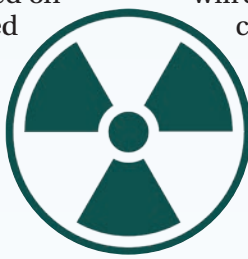
"For every breast-cancer death prevented in U.S. women over a 10-year course of annual screening beginning at 50 years of age, 490 to 670 women are likely to have a false positive mammogram with repeat examination; 70 to 100, an unnecessary biopsy; and 3 to 14, an overdiagnosed breast cancer that would never have become clinically apparent."

Based on their findings, the board recommended that no new systematic mammography screening programs be introduced in Switzerland and that a time limit be placed on existing programs in the country, phasing them out entirely.

(On The New England Journal of Medicine's website, you can listen to an interview the journal conducted with Dr. Mette Kalager on the Swiss Board's recommendation and learn more about why they recommended phasing out routine mammography screening.)

The Nordic Cochrane Centre, which is thought to be one of the world's best and least-biased research institutions, conducted a systematic review to assess the effect of screening for breast cancer with mammography on mortality and morbidity. The trials they looked at included 600,000 women aged 39 to 74. The conclusions, published in 2013, are as follows:

"If we assume that screening reduces breast cancer mortality by 15 percent and that overdiagnosis and overtreatment is at 30 percent, it means that for every 2,000 women invited for screening throughout 10 years, one will avoid dying of breast cancer and 10 healthy women, who would not have been diagnosed if there had not been screening, will be treated unnecessarily. Furthermore, more than 200 women will experience important psychological distress including anxiety and uncertainty for years because of false positive findings."



The radiation used in mammograms presents its own cancer risk.

The study's authors, Gotzsche and Karsten Juhl Jorgensen, said women should be fully informed of both the benefits and harms. They went so far as to write an evidence-based leaflet in several languages to help women understand the risks.

### Final Thoughts

Success when it comes to breast cancer really depends on the outcome we're trying to achieve. If it's early detection, then we seem to be doing a stellar job. But if our goal is lowering mortality rates, we seem to be in a gray zone and possibly moving backward. With the present technology—and its increasing sensitivity—we seem to have created many more cancer patients, perhaps unnecessarily, and are keeping women in the dark about the dangers.

Michael Baum, a professor emeritus of surgery and a visiting professor of medical humanities at University College London, is a British surgical oncologist specializing in breast cancer treatment and one of the architects of the UK's national breast screening program.

Baum went from being one of the most determined supporters of breast cancer screening to one of its most vocal opponents.

In his book "The History and Mystery of Breast Cancer," he explained why:

"The largest threat posed by American medicine is that more and more of us are being drawn into the system not because of an epidemic of disease, but because of an epidemic of diagnoses. The real problem with the epidemic of diagnoses is that it leads to an epidemic of treatments. Not all treatments have important benefits, but almost all can have harms."





# Expert Tips for Healthy Growth

Lionel Messi defeated growth deficiency and created a legacy despite a growth hormone deficiency

EMMA YU & ANGELA BRIGHT

Few would dispute that one of the most memorable sporting events in 2022 was the victory of Argentina's soccer team at the Qatar World Cup, led by the Argentine soccer star Lionel Messi.

At 35 years of age, Messi has won seven Golden Ball awards, six European Golden Shoe awards, and six Best FIFA Men's Player awards. He was the highest-paid athlete in 2022, according to Forbes. What many people may not know about Messi is that, as a child, he suffered from a growth hormone deficiency (GHD).

## Child With a Gift and a Disease

Messi was born in Rosario, Argentina, in June 1987, the year after the late Argentine star Diego Maradona led Argentina to its second World Cup title. Messi began to play soccer at a very young age. He was small and flexible and exhibited extraordinary talent.

However, doctors diagnosed Messi with GHD after his family noticed that he seemed too small for his age. GHD can lead to stunted growth and hypoplasia of bones in children. It also affects the pituitary gland, skin, teeth, eyesight, and immunity. Without treatment, Messi, who was roughly 4-foot-3 at the time, would have grown to a maximum height of 4-foot-7, dashing his dream of a brilliant soccer career before it had even begun.

Fortunately, GHD can be treated with injections of human growth hormone, but daily subcutaneous injections can take years and are expensive, and Messi's family and his local team couldn't afford the treatment for long. Eventually, Messi won the favor of the Barcelona football club (FC Barcelona) of Spain's First division (La Liga) and signed up with the club to cover his medical expenses.

## Helping Children Defeat Disease

Messi injected growth hormone into his legs every night for three years from age 12. He fought the disease with a positive attitude. By the age of 15, Messi had grown to his current height of 169 centimeters (5-foot-6.54), and FC Barcelona confirmed that Messi was completely cured of the disease.

Messi went on to become the youngest player to score in FC Barcelona and La Liga. He played for FC Barcelona for 17 seasons before leaving the club in 2021 to join Paris Saint-Germain Football Club.

Messi supports numerous charitable endeavors, including the Special Olympics. He has established a foundation that funds medical research, hospitals, education, and sports programs for needy children.

## Growth Hormone Deficiency (GHD)

Symptoms of GHD include slow or no growth, short stature, insufficient or delayed puberty, and headaches, according to guidelines by the Johns Hopkins University School of Medicine.

On its website, Cleveland Clinic has posted that GHD can be divided into congenital GHD and acquired GHD. The chance of congenital GHD is about 1 in

**GHD can lead to stunted growth and hypoplasia of bones in children.**



Messi injected growth hormone into his legs every night for three years from age 12.

REUTERS/LEE SMITH



Eating calcium rich foods helps ensure healthy growth.



For children who don't have growth hormone deficiency, exercise and sleep can best guarantee of growth.

4,000 to 1 in 10,000. If a child is born with a pituitary gland that secretes too little growth hormone, there may be a risk of the disease. The causes of acquired GHD in adults are associated with brain injury, a medical injury caused by chemotherapy or radiotherapy, pituitary infarction, or central nervous system infection. The chance of experiencing acquired GHD is about 1 in 10,000.

A blood test to measure growth hormone levels and other hormones is often used to diagnose GHD. MRIs and X-rays may help diagnose pituitary or hypothalamic abnormalities; treatments such as growth hormone therapy can improve these abnormalities.

## Expert Tips for Healthy Growth

Some parents who worry that their children won't grow tall may look to growth hormone injections for help. Jonathan Liu, a professor of Chinese medicine at Georgian College in Canada, said parents should consult with a doctor to confirm that their child has a GHD before starting treatment.

Liu stressed that one shouldn't use growth hormone treatments unless a child can't secrete growth hormone properly because exogenous growth hormone will interfere with the body's endocrine system. In particular, children's organs, including endocrine glands, are still in an immature state. Injecting growth hormone will inhibit the pituitary gland's secretion of natural growth hormone.

For children who don't have GHD, Liu suggested three alternative ways to grow taller: exercise, sleep, and calcium supplements. A person's height mainly depends on the long bones of the thighs. A proper amount of running, jumping, and other exercises can stimulate the epiphysis, (located at both ends of the femurs), promoting growth. Since growth hormone is mainly secreted at night, sufficient sleeping time and quality of sleep can stimulate growth hormone secretion.

Liu suggested that children sleep more and avoid playing video games before sleep. In addition, since calcium is the primary material of bones and minerals such as magnesium are also needed for growth, children's diets should be rich in calcium and nutritionally balanced. He suggested that children minimize the consumption of fried and other high-calorie foods.

**5 Major Foods Conducive to Healthy Growth**

Dr. Kawabata Aiyoshi, professor emeritus at Kyoto University in Japan, has conducted in-depth research on height issues. His theory has been put into practice by more than 500,000 people for more than 30 years and has gained widespread support.

Kawabata pointed out that essential nutrients for growth include calcium, vitamins, and protein. Therefore, he recommends including five nutritious foods in the diet: milk, sardines (80g), spinach (100g), carrots (100g), and oranges (200g) per day.

Alternatives for the above specific foods include:

Milk: Full-fat unsweetened cheese (yogurt) (400g), cheese (160g), and traditional tofu (250g).  
Sardines: Sauries (95g), mackerels (90g), and pomfrets (150g).  
Spinach: Japanese mustard greens (160g), crown daisy chrysanthemum (120g), and kelp sprouts (150g).  
Carrots: Pumpkin (80g), Chinese leeks (140g), and chives (130g).  
Oranges: Strawberries (160g), kiwi (140g), and grapefruit (200g).

Kawabata said the most important thing is to avoid eating too much sugar because the sugar will acidify the blood and cause calcium to dissolve out of the bones and teeth, impeding growth.

While getting enough calcium, one should also pay attention to reducing calcium loss. A 2009 study published in Physiology & Behavior found that children with a high preference for high-sugar foods have significantly higher levels of bone resorption during growth compared to children with a lower preference. The process of bone resorption releases calcium from the bones into the bloodstream, which can lead to problems such as osteoporosis.

## Grow Taller With Exercise

Wu Kuo-Pin, superintendent of the Xinyitang Clinic of Traditional Chinese Medicine in Taiwan, said that sports good for children to grow taller should give an "average load" to the whole body, such as swimming, volleyball, basketball, tennis, and soccer.

He emphasized that sports or activities mustn't impose a forced burden on any part of the body and that sports unsuitable for optimum growth include weightlifting, mechanical gymnastics, judo, marathon running, and American football.

Considering that it may not be possible to play sports every day, Wu suggested that children do calisthenics at home to stretch their muscles and bones and promote healthy physical growth. For example:

1. Turn the upper body to the left and swing the arms to the left. Switch to the opposite direction. Swing back and forth repeatedly.
2. Lift both arms upward, then extend them to both sides for chest expansion.
3. Step forward with your right foot while lifting your arms forward, then spread your arms to both sides to do chest expansion exercises. Return to the original position and step forward with your left foot. Repeat the above movements, alternating the foot position often.
4. Bend the upper body to the left and right sides, symmetrically stretching the muscles and bones on both sides of the spine.
5. Skipping can stimulate bone and enhance muscle and visceral functions.

Wu suggested that children practice these simple exercises for 10 minutes every morning and evening with a reminder that the key to growth is consistency.

# Can a Health Coach Help You Achieve Your Health Goals?

Personalized support can help people make difficult lifestyle changes that are the key to health

ZRINKA PETERS

With the start of the new year comes a rash of determined resolutions to face personal health challenges head-on. It's a time when we set goals that we hope will improve our lives. But we all know how hard it is to bridge the gap between the idea of a goal and actually seeing it through to fruition.

UAB Medicine News reported that less than 8 percent of the population achieve the lofty goals of their New Year's resolutions. Changing deeply engrained "bad habits" can seem daunting and may require more than willpower alone to achieve. Maybe we needn't do it alone; enlisting the assistance of a health coach could make all the difference between staying in a habitual rut and getting unstuck.

Health coaches are trained professionals who help individuals work within the specific parameters of their own lives to improve their health and well-being. Coaches offer a personalized service that can help you identify unhealthy habits. Together, you design achievable goals and a plan of action based on your unique lifestyle, desires, and abilities. Think of it as having your own personal wellness counselor and cheerleader who's there to guide and encourage you on your journey toward your intentions. A coach acts as an accountability partner, helping you stay the course and get back on track when you falter.

"A health coach is an attractive option when an individual needs consistent and wise guidance using a holistic approach to help heal a chronic health condition," said Derek Henry, founder of Healing the Body and Thrive Academy.

"This service is virtually nonexistent in conventional and alternative practices. When specific direction is needed for day-to-day nutrition, supplementation, and lifestyle habits, a health coach typically provides the best programs and services to guide the client along that continuum of change at a much faster rate than quarterly visits to a doctor."

The field of health coaching can touch on many different areas of life. Cleveland Clinic outlines the top six areas that health coaches address: smoking, stress, nutrition, sleep, exercise, and time management. These core areas can branch into a multitude of other, more specific concerns, from managing diabetes to coping with a stressful move.

Health coaches can be found in a grow-

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Derek A. Henry, founder, Healing the Body and Thrive Academy



ing number of places, including hospitals, fitness centers, and the workplace. Through a process of interview and discussion, health coaches get to know their clients' particular health challenges and goals and help them grow in the knowledge, skills, and confidence to make positive changes and take responsibility for their own health and well-being.

The modern health coaching movement began in earnest in the early 1990s and has taken off in recent years. Marketresearch.com reported that the U.S. health coaching market rose to \$7.1 billion in 2020 and is projected to climb to \$8.87 billion by 2025.

Health coaches are emerging to fill a void that has long been neglected in health care. Currently, 6 out of 10 American adults live with some type of chronic disease, such as diabetes, cancer, heart disease, or obesity. Chronic diseases represent the leading causes of premature death and disability, as well as nearly 75 percent of the trillions of dollars spent on annual health care costs in the United States.

A key factor linking chronic diseases is that the majority of them are preventable with modifiable lifestyle factors. Doctors, whose time with patients is usually limited to somewhere between 13 and 24 minutes per appointment, may advise a patient to quit smoking, exercise more, or eat a healthier diet, but their ability to help the patient achieve these goals is limited. A health coach can bridge that gap by providing time, attention, practical guidance, and encouragement in creating a realistic plan of action and support in carrying it out.

Dr. Sanobar Pezad, a Dallas-based integrative and holistic dermatologist and health coach, shared her view of health coaching with The Epoch Times.

"I was part of the conventional medical practice before and realized certain drawbacks in the system; the major one is being unable to give the sufficient time needed to address various factors affecting an individual's health, apart from the ones he/she came to me for," she said.

"Health coaches support clients in figuring out where to start the change process and how to make sustainable shifts to achieve their wellness goals. They raise awareness and offer support as clients move on their own terms toward the greater health they want for themselves. I personally feel the role of a health coach is indispensable and invaluable."

Having a knowledgeable, supportive partner to journey with through the difficult process of change is making a difference in the lives of many. According to a 2016 study published in the American Journal of Lifestyle Medicine titled "Clinical Effectiveness of Lifestyle Health Coaching: Case Study of an Evidence-Based Program," health coaching resulted in impressive patient gains, including "clinically relevant improvements in multiple biomarker risk factors (including systolic and diastolic blood pressure, total cholesterol, LDL cholesterol, HDL cholesterol, triglycerides, fasting glucose, body weight, body mass index, waist circumference, and cardiorespiratory fitness) in diverse populations."

Patients who have used health coaches also reported high levels of satisfaction with their experience.

The holistic and personalized education, guidance, and encouragement health coaches provide help clients improve their lives in meaningful and long-term ways.

"Those that benefit most from a good health coach are those who want to learn not only what to do to improve their immediate health situation but also what to do to maintain it," Henry said.

"The foundational approach a good health coach should provide is beneficial for nearly any situation to help the healing process along more effectively."

A health coach is like having your own personal cheerleader and guide to help you achieve optimal health.

Zrinka Peters is a freelance writer focusing on health, wellness, and education topics. She has a BA in English Literature from Simon Fraser University in Canada and has been published in a wide variety of print and online publications including Health Digest, Parent.com, Today's Catholic Teacher, and Education.com

# Tea Linked to Improved Cognition, Reduced Dementia Risk

Large cohort study in the United Kingdom finds tea drinkers maintain better cognitive function

ELLEN WAN

Characterized by symptoms including memory loss and hindered judgment, dementia is a common condition that can affect daily functioning for years or the remainder of a lifetime.

Once considered primarily an ailment of the elderly, many people diagnosed with dementia now are under 65. Fortunately, there are ways to improve cognitive function.

A 2022 study published in Translational Psychiatry, a sister publication of the scientific journal Nature, shows that drinking tea can inhibit or slow down the aging of the brain and improve cognitive dysfunction.

From 2006 to 2010, a team made up of neurology researchers from Fudan University-affiliated Huashan Hospital and the Department of Neurology of Qingdao University-affiliated Qingdao Municipal Hospital conducted followed a large cohort of people in the United Kingdom. The study found that, compared with non-tea drinkers, people who favored tea drinks achieved a 16 percent lower overall risk of dementia.

During the four years, the team selected 377,592 volunteers from 22 regions in the UK with an average age of 58.49, of which

There's a **17.7** PERCENT reduction in dementia risk for those who are drinking one to two cups of tea daily.



The more green or black tea study participants drank daily, the lower their risk of dementia. But after six cups, there was no additional reduction.

54.3 percent were women.

Researchers divided study participants into six groups: no tea drinking at all; one to two cups per day; three to four cups; five to six cups; seven to eight cups; and nine or more cups per day respectively.

Proportional hazard regression models show a significant association between tea consumption and reduced risk of dementia. Specifically, those drinking one to two cups daily had their risk of dementia reduced by 17.7 percent; three to four cups by 20.8 percent; and five to six cups by 19.7 percent. However, when consumption exceeded six cups per day, the risk of dementia was no different than that of non-tea drinkers.

Further analysis into dementia types showed that compared with participants who didn't drink tea at all, those who drank one to four cups per day had a 16.3 to 19.1 percent lower risk of developing Alzheimer's disease, but there was no significant difference after more than five cups per day. In vascular dementia, taking one to six cups per day can reduce the incidence rate by 25 to 29.2 percent.

The research team then followed the study participants for more than nine years and recorded a total of 5,122 cases of dementia.

According to the research team, tea con-



To make your tea even healthier, drink it with a friend and enjoy the brain boosting effects of social connection.

sumption has been linked to protection against several diseases. Tea leaves contain various biomacromolecules, the most notable among them being polyphenols in green tea, which can evoke a wide range of cellular antioxidant and nerve rescue activities with the effect of preventing memory deficits. Biomacromolecules also have anti-inflammatory effects, which can prevent cognitive decline.



# Weeding Out Chronic and Mental Illness

Gardeners have lower risk of cancer, stress, anxiety, and more, study finds

JESSIE ZHANG

A first-ever randomized, controlled trial of community gardening has found that beyond eating more fiber and getting more physical activity—two known ways to reduce the risk of cancer and chronic diseases—those who pottered around in gardens also had significantly reduced levels of stress, anxiety, and risk for mental illness.

The new study of low-income households found that the gardeners who came into the study the most stressed and anxious saw the greatest reduction in mental health issues.

“These findings provide concrete evidence that community gardening could play an important role in preventing cancer, chronic diseases, and mental health disorders,” said Jill Litt, senior author and environment professor at the Department of Environmental Studies at the University of Colorado Boulder.

“No matter where you go, people say there’s just something about gardening that makes them feel better.”

The study recruited nearly 300 gardening beginners, whose average age was 41.

Half were assigned to the community gardening group and received a free community garden plot, some seeds, an introductory gardening course, and a study partner. The other half were assigned to a control group.

Both groups took regular questionnaires about their diet, mental health, and body measurements.

Two seasons later, the gardening group was eating 7 percent more fiber daily than the control group.

“An increase of one gram of fiber can have large, positive effects on health,” said James Herbert, co-author and director of the University of South Carolina’s cancer prevention and control program.

Fibre exerts a profound effect on inflammatory and immune responses, influencing everything from how we metabolize food to how healthy our gut microbiome is to how susceptible we are to diabetes and certain cancers, the researchers noted.

Litt said community gardening is transformational and even life-saving, particularly for low-income immigrants living in apartments.



Gardening can have transformative healing effects. If you don’t have room for a plot, look for a local community garden.

The gardeners who came into the study the most stressed and anxious saw the greatest reduction in mental health issues.

Gardening offers meaningful exercise for older adults.

“Even if you come to the garden looking to grow your food on your own in a quiet place, you start to look at your neighbor’s plot and share techniques and recipes, and over time relationships bloom,” she said.



**Gardening Tips**  
National Seniors Australia recently outlined some guidelines for avoiding getting sick while gardening, in light of increased cases of Legionnaires’ disease—a severe form of pneumonia—from potting mix and soil.

People are advised to wear gloves and masks when working with garden soil or potting mix, particularly if one is older, a smoker, or has a weakened immune system.

Harriet Whiley, associate professor in environmental health at Flinders University, said to open potting mix bags away from the face and avoid shaking the bag before emptying it.

“Legionnaires’ disease is not transmitted from person to person, but through inhalation or aspiration of the Legionella bacteria,” Whiley said.

“This is why it is important to wear a mask, wet down the soil, and wear gloves or wash hands when handling potting mix.”

Wetting the potting mix first helps prevent any contaminated potting mix dust from blowing up into the air and being inhaled.

The gardening study was published on Jan. 4 in the journal *Lancet Planetary Health*.

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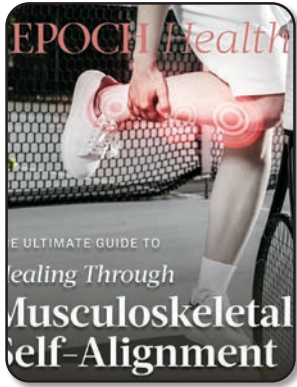
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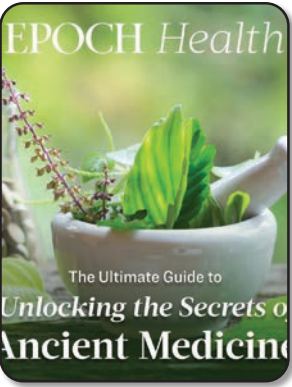
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