

# THE EPOCH TIMES

# MIND &

# BODY

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MIRACULOUS BODY

THE MIRACULOUS IMMUNE SYSTEM SERIES Part II

## Tonsillectomy

### A 'Minor' Procedure With Major Long-Term Risks

YUHONG DONG &amp; MAKAI ALLBERT

Cumulative evidence of long-term associated risks of infection has proven the irrefutable role of tonsils in our immunity.



**In this series, "The Miraculous Immune System,"** we explore the layers upon layers of specialized molecules, cells, tissues, and organs that work tirelessly to protect us and provide practical ways to support these vital gifts.

#### SUMMARY OF KEY FACTS

- Tonsillectomy is often a treatment for severe tonsillitis with enlarged tonsils.
- A 2018 JAMA study of almost 1.2 million children reported that removing the adenoid or tonsils in childhood was associated with a significantly increased relative risk of later respiratory, allergic, and infectious diseases. Increases in long-term absolute disease risks were considerably larger than improvements in the disorders these surgeries aimed to treat.
- A Taiwan national cohort study showed that patients with a history of tonsillectomy had a risk of deep neck infection 1.71 times greater than others.
- A Canadian study suggests a strong association between a history of adenotonsillectomy and the development of retropharyngeal or parapharyngeal abscesses.
- Cumulative evidence of long-term associated risks of infection has proven the irrefutable role of tonsils in our immunity. The mechanism of increased infection relates to various functions of the tonsils in the immune system.

Continued on **Page 4**

- ◀ Removing the adenoid or tonsils in childhood is associated with a significantly higher risk of respiratory, allergic, and infectious diseases.

**Check inside:**  
Herbs to Support the Immune System After Tonsillectomy



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TOXINS AMERICA THE FLUORIDATED Part II



**In this series, "America, the Fluoridated,"** we explore the contentious findings surrounding fluoridation of the U.S. public water supply and answer the question of whether water fluoridation poses a risk and what we should do about it.

## Uncovering the Differences: Why Natural Fluoride and Synthetic Fluoride Are Not Created Equal

CHRISTY PRAIS

**Previously:** Fluoridation of the U.S. public water supply has been a polarizing topic both academically and politically since its start in the 1940s. Debate over its benefits and health risks has raged on as the science has continued to unfold. While some studies indicate water fluoridation can reduce cavities, others

link it to side effects, including cognitive issues in children.

Water fluoridation is controversial for more than its potential adverse events on people; there are also concerns about how the fluoride used in water is produced.

Not all fluoride is created equal. Naturally occurring fluoride, such as calcium fluoride (CaF<sub>2</sub>), is released into the soil as weathered

Water systems in the United States are inundated with one of three artificial chemical fluoride additives.

crustal rock and minerals dissolve. The fluoride is then picked up by any source of water and some plants, including those we eat.

Naturally occurring calcium fluoride has the potential to cause health problems with prolonged intake or overconsumption. There are regions in the world where high amounts of calcium fluoride cause major health issues.

Continued on **Page 2**



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MICROBIOME CULTIVATING OUR GUT MICROBIOME TO STIFLE DISEASE Part II

# How the Gut Cures and Creates Disease —a Medical Frontier

This rapidly developing microbiology medical frontier connects dots between microbes and pathways that affect disease

In this series, “Cultivating Our Gut Microbiome to Stifle Disease,” we’ll share how the latest developments on this medical frontier are transforming our approaches to illness and offering new strategies to heal and prevent disease.



A baby’s microbiome is partially inherited and develops quickly in the early years of life as beneficial bacteria colonize their gut microbiome.

AMY DENNEY

Previously: Many of the most important medical advances of previous decades were based on containing the threat of infectious disease. Unfortunately, more recent research has revealed this war against microbes also is killing beneficial microbes essential to human health.

The viruses, fungi, and bacteria that live inside and upon us are essential to critical functions in our bodies. Microbes in our mouths help us create nitric oxide, for example, helping keep heart disease at bay by ensuring our blood flows smoothly. This microbial community, our microbiome, is barely understood, but what we do know tells us that it is key to preventing and curing many diseases. Nowhere is this flora of microscopic life more crucial than in our gut.

Gut health is about much more than basic digestion. The beneficial bacteria that live within the gut help us digest foods in our large intestine and turn nutrients into metabolites that influence both our physical and mental health.

Metabolites are usually small molecules produced through metabolism. That metabolism may be done by our cells or by our microbes. Among other things, “microbial metabolites influence immune maturation, immune homeostasis, host energy metabolism and maintenance of mucosal integrity,”

notes a research review published in Nature Reviews: Gastroenterology & Hepatology. “Some bacteria produce bioactive neurotransmitters,” notes a study published in Nature. Bacteria in our gut contribute amino acids, lipids, and sugars linked to processes such as digestion and circulation. Metabolites are also involved in synthesizing hormones.

Our gut microbiome is a dynamic environment with trillions of microbes constantly interacting with us and one another. Bacteria have a short lifespan, yet they adapt quickly, and their numbers can proliferate rapidly to vastly improve our health—or damage it in ways that researchers can’t comprehend.

## A New Medicine

The human microbiome is a frontier of modern medicine in which many scientists and researchers expect to find explanations—and perhaps treatments—for the rising numbers of autoimmune diseases. As the human body increasingly turns on itself, the need for new treatments, cures, and answers grows more urgent.

The composition and changes among gut microbiota have already been associated with diseases that range from gastrointestinal, inflammatory, and metabolic conditions to neurological, cardiovascular, and respiratory illnesses.

Our microbes also have a significant impact on other pathogenic microbes. Each microbiome reacts uniquely when attacked by viral pathogens, for example. This can help explain how families can have some members who become sick from illnesses such as COVID-19 and influenza and others don’t.

For doctors and researchers, it’s a complex puzzle full of promise.

“We care about the biome, of course, because we believe hopefully that we can promote health by altering or intervening in a biome, and that’s sort of a core question,” Dr. Neil Stollman, chairman of gastroenterology at Alta Bates Summit Medical Center, said at the recent Malibu Microbiome Meeting, a conference on the microbiome.

For the most part, precision treatments based on our individually complex microbiomes are still years, or even decades, away. But the picture of the microbiome’s role in disease is much less murky than it was a decade ago.

## Microbes and Disease

A 2019 review in Microorganisms examined several studies that looked at the way the ecosystem of the human microbiome changes as we age. The study sought to document ways the microbiome shifts in response to habits, diet, exercise, and diseases. The simplistic conclusion is that a healthy balance of microorganisms allows the body to perform

metabolic and immune functions that prevent disease development.

If that healthy balance is lost, it can be much like an ecosystem that has lost too many crucial plants or animals and faces collapse, or can’t deal with an invasive species that then wreaks havoc. When this happens with the microbiome, it’s called “dysbiosis.”

Dysbiosis is connected to diseases ranging from gastrointestinal conditions to metabolic and neurological disorders. Research has also linked the gut microbiome with cardiovascular disease, asthma, allergies, eczema, non alcoholic fatty liver disease, according to a 2021 article in the European Journal of Clinical Nutrition.

Whether disease causes the imbalance or the imbalance causes the disease requires closer examination. The number of possible disturbances is a growing area of research, too.

## Microbes and Viruses

“Commensal bacteria calibrate the activation threshold of innate antiviral immunity,” declares the title of a study published in the journal *Immunity* in 2012. In other words, these bacteria prime the immune system to protect the body from viral replication, severe illness, and death. The study pointed out a loss of commensal bacteria is associated with severe illness and mortality in influenza, and that treatment with probiotics is beneficial in viral gastroenteritis and viral respiratory infections.

Even more recently, the relationship between microbes and COVID-19 illustrated the potential for bacteria to confer protective immunity against viral infections.

Dr. Sabine Hazan, a gastroenterologist and researcher, explained at the recent Malibu Microbiome Meeting her research findings that illustrated high levels of Bifidobacteria appear to create a protective factor against COVID-19.

The “Lost microbes of COVID-19” study that she led examined the varied responses to COVID-19 within families of close contact and concluded lower levels of Bifidobacterium were associated with infection. One unknown is whether the bacteria was lower because of infection or if the subjects had



## The beneficial bacteria that live within the gut help us digest foods in our large intestine and turn nutrients into metabolites that influence both our physical and mental health.



Trillions of helpful microbes live in our gut.

If the gut microbiome becomes imbalanced and pathogenic microbes proliferate, any number of diseases or conditions can quickly follow.

## A Controversial Practice

Research finds babies born by cesarean section delivery or who have early antibiotic exposure are more likely to suffer from inflammatory diseases and obesity, which is likely linked to dysbiosis. “Vaginal seeding” is one strategy to immediately recover a baby’s microbiome to a more normal ecology, although the procedure is still in question.

During this simple procedure, a sterile gauze is inserted into the mother’s vagina prior to C-section delivery and then wiped over the newborn’s entire face and body in an attempt to replicate microbe exposure in a vaginal birth.

There’s been some controversy associated with the procedure since the mother could

be harboring pathogenic microbes or even viruses such as COVID-19. The U.S. Food and Drug Administration considers vaginal secretions a “biologic,” subject to new drug regulations.

Studies are underway to determine if this would be an effective public health strategy to improve health outcomes. It might potentially open the door for “live biotherapeutics,” a standardized donor product for those babies whose moms might be suffering from infection or diseases. But the science is far from settled. A recent study from the University of British Columbia reports that vaginal microbiome does not influence babies’ gut microbiome, which would challenge the value of the procedure.



previously low levels of Bifidobacterium that made them susceptible to COVID-19.

Because viruses are known to penetrate an altered biome, Hazan postulated that the prevalence of dysbiotic (imbalanced) microbiomes in America could explain why COVID-19 hit so hard here.

“Maybe it’s about the lost microbes that made us susceptible to COVID. We’ve lost those bifidobacteria, and we need to replenish them,” she said. “The microbiome tells the story. It’s the forensics of medicine.”

Future studies could determine what commensal microbes could be used therapeutically to boost natural viral resistance, a 2020 study in *Cell* suggests. Researchers envision a future where the microbiome is leveraged not just as a diagnostic tool, but also to intervene for desired physiological effects.

## Microbes and Health

Of course, as researchers look toward an exciting future full of possibilities, they’ve also realized the importance of figuring out how microbiomes have become dysbiotic. Many researchers are asking what lessons can we apply to prevent disease in the first place.

We now know that the process of populating our microbiome starts during birth, when newborns receive bacteria from their mothers that help them prevent harmful, opportunistic bacteria from colonizing in the baby’s microbiome. And as we age, we acquire microbes in two ways: vertically (from parents), or horizontally (from the environment, including food).

The vertical formation of our microbiome likely begins in the womb, although the research is preliminary. In other words,

we get some microbes from our mothers before we are born. Some research suggests we also collect other microbes as we make our way through the vaginal canal during birth, though recent findings dispute this. Our close proximity to our parents, as well as breastfeeding, also confer microbes.

Bifidobacterium is one of the first bacteria to colonize the gastrointestinal tract, and is believed to have many health-promoting effects. Bacterial diversity rapidly expands in a baby’s first year of life, slowing by age 3 and becoming more similar to an adult’s by age 5.

Still, the gut microbiome of a child is less diverse and remarkably different from that of healthy adults. As we age, we begin acquiring microbes horizontally from environmental sources such as food, other people, and animals.

As much as our microbiome is exposed to bacteria and other microbes that help form it, it’s also shaped by environmental exposures that can kill off some flora and cause others to proliferate.

Because we understand so little about the microbiome, it’s hard to know what exactly a healthy balance of microbes looks like. Researchers are trying to figure out if there is a gold standard microbiome or even a normal one.

Next week:

Scientists now grapple with the seemingly impossible task of creating a standard for the ideal microbiome. Scott Jackson, from the National Institute of Standards and Technology explains how human bias can complicate research.

TOXINS AMERICA THE FLUORIDATED Part II

## Uncovering the Differences: Why Natural Fluoride and Synthetic Fluoride Are Not Created Equal

Continued from Page 1

A 2020 article in *The Lancet* reported that calcium fluoride not only contaminates the drinking water in India, but also leaches into food and spices.

As a result, in some parts of India, prolonged intake of calcium fluoride has resulted in an outbreak of skeletal fluorosis, a condition that leads to joint calcification, discomfort, and deformity that can lead to permanent disability. Dental fluorosis, which makes the teeth appear discolored and mottled, is also a side effect of prolonged or overconsumption of this natural chemical.

The article warns that more than 60 million people are possibly at risk of calcium fluoride contamination in India.

The fluoride additives in our public water system aren’t the naturally occurring calcium fluoride (CaF<sub>2</sub>), however.

According to the American Water Works Association Standards Committee on Fluorides, approximately 90 percent of fluoride additives used in the United States are produced during the process of extracting phosphate from phosphoric ore.

The CDC explains this process on its water fluoridation additives information page. Phosphate rock is heated with “sulfuric acid to produce a phosphoric acid-gypsum (calcium sulfate-CaSO<sub>4</sub>)” mixture, and the “phosphoric and fluoride gases that are released in the process are then separated.” The fluoride gas is captured and used to create fluorosilicic acid.

The three fluoride additives used for water fluoridation are derived primarily from phosphate fertilizer production, according to the CDC. Although some

“We should recognize that fluoride has beneficial effects on dental development and protection against cavities. But do we need to add it to drinking water so it gets into the bloodstream and potentially into the brain?”

Philippe Grandjean, adjunct professor, Harvard’s School of Public Health

counties such as Harford, Maryland, get their chemical fluoride additive from the toxic gaseous discharge from aluminum factories as well, as stated in their 2021 water quality report.

According to the peer-reviewed “Toxicological Profile on Fluorides, Hydrogen Fluoride, and Fluorine” from the Agency for Toxic Substances and Disease Registry, when materials are burned that contain fluoride, such as phosphate rock, the gas byproduct that is created is called hydrogen fluoride.

The profile states that “hydrogen fluoride is one of the 189 chemicals listed as a hazardous air pollutant (HAP) in Title III, Section 112 of the Clean Air Act Amendments of 1990.” Also, the chemical process of creating phosphate fertilizers, which in turn creates the toxic, gaseous byproduct that is added to our drinking water, has been highly scrutinized for significantly increasing the discharge of toxic and harmful compounds into the environment.

Because of the major environmental impacts of agricultural phosphorus use—and the hazardous chemical gas emitted from the manufacturing process—at least 11 states have banned phosphorus fertilizer use or sale, including Illinois, Maine, Maryland, Michigan, Minnesota, New Jersey, New York, Vermont, Virginia, Washington, and Wisconsin.

The Fluoride Action Network says that in recent years, an increasing number of water departments have begun purchasing their fluoride chemicals from China. The organization warns that “the quality control of the Chinese chemicals is even more lax, and variable, than the U.S.-produced chemicals.”

## Community Water Chemicals

Community water systems in the United States use one of three artificial chemical fluoride additives for community water fluoridation:

- **Fluorosilicic acid** (H<sub>2</sub>SiF<sub>6</sub>; also referred to as hydro fluorosilicic, FSA, or HFS), the form used by most water systems in the United States
- **Sodium fluorosilicate** (Na<sub>2</sub> SiF<sub>6</sub>)
- **Sodium fluoride** (NaF)

“Since the early 1950s, FSA has been the main additive used for water fluoridation in the United States. The favorable cost and high purity of FSA make it a popular additive,” the CDC states.

## Synthetic Chemicals Added to Water

What are these synthetic chemicals that are added to our public drinking water?

The National Oceanic and Atmospheric Administration (NOAA), a science-based federal agency within the Department of Commerce, lists the properties of each of the three artificially made fluoride chemical additives.

The chemical data sheets provided by the NOAA detail some notable attributes:

### Fluorosilicic Acid

General Description: “A colorless fuming liquid with a penetrating pungent odor. Corrosive to metals and tissue. Both the fumes and very short contact with the liquid can cause

severe and painful burns. Used in water fluoridation, in hardening cement and ceramics, as a wood preservative.”

This chemical requires the hazard label “corrosive,” and workers handling it are required to wear protective clothing, rubber gloves, and safety glasses.

Fluorosilicic acid solutions are used in electrolytic refining of lead, in electroplating, for crumbling lime or brickwork, for removal of lime from hides during the tanning process, for removals of molds, and as a preservative for timber.

### Sodium Fluorosilicate

General Description: “A fine, white, odorless, powdered solid. Toxic by ingestion, inhalation, and skin absorption. Used as a rodenticide.”

This chemical requires the hazard label “Poison,” and workers handling it are required to wear a dust respirator, protective gloves, and goggles or a face shield.

### Sodium Fluoride

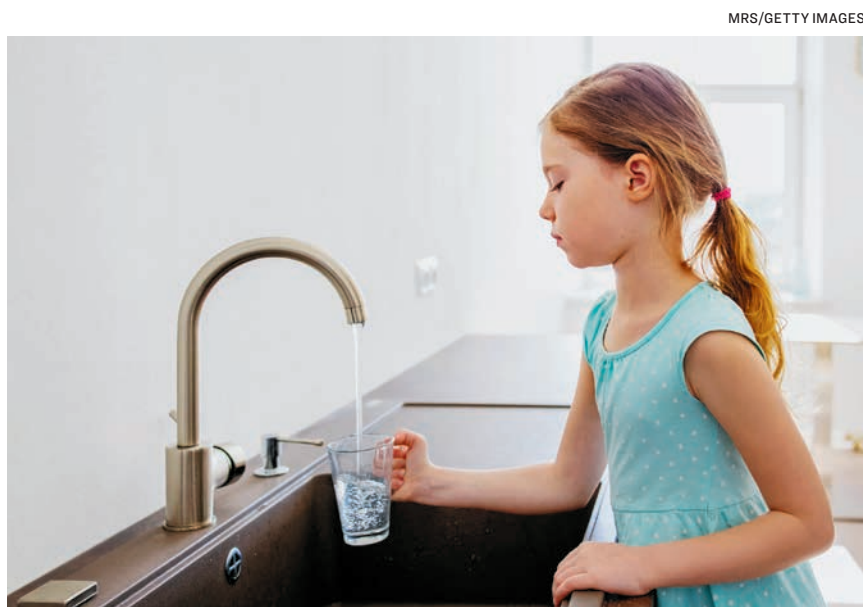
General Description: “A colorless crystalline solid or white powder, or the solid dissolved in a liquid. It is soluble in water. It is noncombustible. It is corrosive to aluminum. It is used as an insecticide. It is also used to fluorinate water supplies, as a wood preservative, in cleaning compounds, manufacture of glass, and for many other uses.”

This chemical requires the hazard label “Poison,” and workers handling it are required to wear personal protective clothing and eye protection.

## Changing Levels

In January 2011 the Department of Health and Human Services (HHS) update and replace the 1962 U.S. Public Health Service Drinking Water Standards recommendations for fluoride concentrations in drinking water to 0.7 mg/L.

Prior to this, the recommended range set in 1962 was 0.7 to 1.2 milligrams per liter. But



Concerns about water fluoridation go beyond its health implications. The process of creating fluoride additives releases toxic compounds into the environment.

large sections of the population were suffering from dental fluorosis. A 2018 study published in *Preventative Nutrition and Food Science* said that between 1999 and 2004, the prevalence of dental fluorosis was 41 percent in American adolescents aged 12 to 15 years.

After a review of new information regarding the high prevalence of dental fluorosis that began in September 2010 by a panel of scientists from across the U.S. government brought together by the Department of Health and Human Services, the recommendation was downgraded to the lowest end of the previous recommended range to minimize fluoride toxicity.

The CDC notes that this recommendation isn’t an enforceable federal regulation. Individual jurisdictions make their own decisions on whether to fluoridate their community’s water supplies, and some states mandate fluoridation for communities of a specific size.

## CDC Argues Artificial Is the Same as Natural

The CDC argues that because studies show that naturally occurring calcium fluoride and synthetic chemical additives have the “same

fluoride ion” present, there is no difference in the health effects of fluoride depending on its source or chemical compound.

They back up this claim with two studies. One was a single-blind, crossover study with 10 adults published in June 2008. The study measured three parameters that show how the chemicals are processed in the body: the level of the chemical in the bloodstream after it was ingested; the time it took for the chemical to reach its maximum concentration in the bloodstream after it was ingested; and the amount of the chemical that remained in the bloodstream over a period of time after it was ingested.

This study concluded that in 10 adults, fluoride type (natural versus artificial) didn’t impact how it was metabolized in the body.

## Are There Benefits?

According to the CDC, drinking fluoridated water “bathes” the teeth in fluoride-enhanced saliva, thus helping to protect and build surfaces by affecting the activity of cavity-causing bacteria. They say this is a cost-effective way of reaching poorer families who may not have a balanced diet, access to a

dentist, or the regular habit of brushing with fluoride toothpaste.

Critics question whether swallowing treated water allows fluoride into our bones and blood where it may be harmful to other parts of the body. They say that we must consider that if fluoride can kill enzymes in tooth bacteria, it could potentially have a damaging effect on other vital enzymes.

In a 2016 report by Harvard Public Health, Philippe Grandjean, adjunct professor of environmental health, states: “We should recognize that fluoride has beneficial effects on dental development and protection against cavities. But do we need to add it to drinking water so it gets into the bloodstream and potentially into the brain?”

He warns that we need basic research to make sure that fluoridation doesn’t cause adverse health risks.

Over the next several articles, we’ll examine the history and politics woven into the beginnings of the fluoridation program, scrutinize the validity of the studies used to start it, uncover suppressed research that challenges its credibility, and analyze contemporary research about the toxicity risk.

Next week:

In 2000, the University of York published the *York Review, the most extensive systematic review done to evaluate the effectiveness and safety of water fluoridation. It found that none of the 26 studies done on whether water fluoridation prevented cavities were characterized as being in the A category of evidence, and there were no randomized controlled trials in any of the 26 studies.*

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



MIRACULOUS BODY THE MIRACULOUS IMMUNE SYSTEM SERIES Part II

# Tonsillectomy

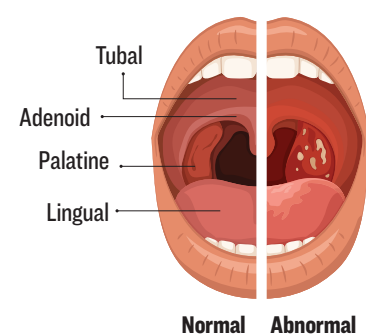
## A 'Minor' Procedure With Major Long-Term Risks

Researchers found that tonsillectomy was associated with a nearly tripled risk of upper respiratory tract diseases.

Research shows statistically significant decreases in cellular function after tonsillectomy, suggesting that the procedure also alters cellular immunity in children.

### TONSILS

The tonsils serve as the body's first line of defense against pathogens and bacteria.



Studies suggest tonsillectomies leave the immune system underdeveloped against future infections.

Continued from Page 1

*Previously: Tonsils guard the entrance to our body and work to prevent pathogens from entering through the air we breathe and food we eat, but sometimes they can't keep up. But that doesn't mean tonsillitis is a sign our immune system is weak.*

Tonsillectomy, or surgical removal of the tonsils, is a common surgical procedure performed more than 500,000 times annually in the United States on children younger than 15 years old. While tonsillectomy may reduce patients' short-term symptoms, many are unaware of the long-term consequences.

In fact, some diseases are associated with this so-called minor operation.

### When Is Tonsillectomy Considered?

Although the tonsils, particularly the adenoid at the upper part, serve as a front line of defense against infection, their role often isn't adequately recognized.

The tonsils and the adenoid normally shrink with age, being at their largest in children and absent in adults, suggesting that their absence might not affect adult health. However, their activity in early life is essential for normal immune system development and long-term immune function.

When the tonsils are in an intense battle with invading pathogens and don't get enough support, they may become inflamed and appear larger. As a consequence, these severely enlarged tonsils may cause difficulty swallowing and can obstruct breathing. Since recurrent throat infections and sleep-disordered breathing can significantly affect a child's health and quality of life, these two factors are common determinants for recommending a tonsillectomy.

In some instances, the adenoid may also be removed through a surgical procedure called adenoidectomy. Generally, physicians recommend the removal of both the tonsils and the adenoid.

According to guidelines from the American Academy of Otolaryngology-Head and Neck Surgery, a tonsillectomy is recommended when a child has had seven or more tonsil infections in a single year, five per year for the preceding two years, or three per year for the preceding three years, in addition to other factors, such as sleep-disordered breathing.

### Tonsillectomy: Beneficial or Not?

Will removing the tonsils or adenoid successfully treat illnesses such as recurrent throat infections or obstructive sleep apnea in the long term?

Not necessarily. The swelling is primarily caused by a buildup of lymph fluid containing viruses, germs, and increased immune cells. Swollen tonsils indicate that too many "soldier" immune cells are injured, suggesting a significant battle between viruses and the immune system. Accordingly, the root cause of tonsillitis is weakened immunity, making it difficult for our body to overcome viruses when more support is needed.

If the tonsils or the adenoid are removed without addressing the underlying cause of the infection—a weakened immunity—relief may be only temporary. The absence of tonsillitis doesn't mean the viruses or germs are gone, but rather that the guardians are.

In the long term, removing our tonsils leads to the absence of the body's major first line of defense against viruses and bacteria, leaving us vulnerable to a host of other problems.

For 78 percent of the 28 disease groups examined, there were slight but notable rises in relative risk for a variety of diseases. Those who underwent surgery may also have a higher risk of breathing difficulties, sinusitis, chronic sinusitis, and ear infections.

This highlights the importance of the adenoid and tonsils for normal immune system development and suggests that removal early in life may slightly but sig-

ificantly disrupt many processes important for health later in life. The authors concluded that it's important to consider long-term risks when considering tonsillectomy or adenoidectomy.

**Short-Term Benefits, Long-Term Risks**  
A 2017 meta-analysis in the journal *Pediatrics* analyzed illness rates and quality of life for children with recurrent throat infections who had a tonsillectomy versus those instead subjected to "watchful waiting."

The researchers at Vanderbilt University found that although the benefits of reduced throat infections were evident within a year of tonsillectomy, they didn't last any longer.

A study examined the effect of tonsillectomy on children with obstructive sleep-disordered breathing. A follow-up one year after the tonsillectomy revealed that these children did have better sleep outcomes than children who didn't undergo a tonsillectomy, but longer-term outcome measures were lacking.

Despite being viewed as a relatively insignificant surgery, tonsillectomy in children poses a significant risk of complications such as bleeding, respiratory difficulties, burns, nausea, vomiting, pain and, in severe cases, even death.

# 500,000

TONSILLECTOMY SURGERIES are performed annually on children in the United States.

A Cincinnati Children's Hospital Medical Center study reviewed 233 claims from the LexisNexis "Jury Verdicts and Settlements" database. The researchers examined claims filed from 1984 through 2010 for "deaths and complications during and following tonsillectomy."

Of the 233 claims, 96 were deaths, and nearly half (48 percent) were related to surgery. Nonfatal injuries included postoperative bleeding, impaired function, anoxic events, and postoperative opioid toxicity.

### Large JAMA Study Revealed Long-Term Risks

A research paper published in *JAMA Otolaryngology* in 2018 reported the long-term relative risk for 28 diseases after removing tonsils or the adenoid. The study had surprisingly shown that children with their tonsils, adenoid, or both removed before age 9 were at significantly increased risk for a broad range of diseases as they grew older.

The study followed a large cohort of more than 1.18 million Danish children for 10 to 30 years. Of the children analyzed, 17,460 received adenoidectomy, 11,830 underwent tonsillectomy, and 31,377 had both removed; a group of 1,157,684 children composed the control group.

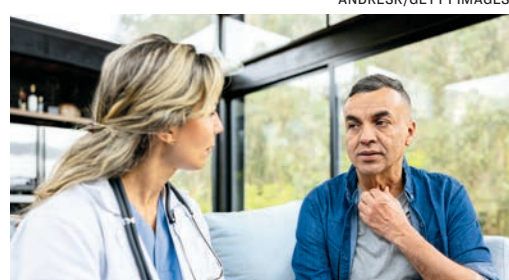
The researchers found that tonsillectomy was associated with a nearly tripled risk of upper respiratory tract diseases, most of which were infections, including rhinitis, pharyngitis, tonsillitis, and laryngitis, which are considered common conditions that everyone experiences during their lifetime.

Furthermore, adenoidectomy was associated with twice the risk of chronic obstructive pulmonary disorder and nearly double the relative risk of upper respiratory tract diseases and conjunctivitis. Additionally, adenotonsillectomy was associated with a 17 percent increased risk of infectious disease.

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nificantly disrupt many processes important for health later in life. The authors concluded that it's important to consider long-term risks when considering tonsillectomy or adenoidectomy.

The JAMA study also found that although surgery to remove tonsils and the adenoid can improve short-term sleep disorders and tonsillitis, long-term risks are similar to not having the surgery.

### Increased Risk of Deep Neck Infection

A retrospective, nationwide cohort study using data from the Taiwan National Health Insurance Claims database, which covered more than 98 percent of the population and medical institutions, identified that the risk of deep neck infection is significantly increased among patients who have undergone a tonsillectomy.

A total of 9,915 tonsillectomized patients and 99,150 comparison cohorts between 2001 and 2009 were enrolled in this study. Deep neck infections in the study included abscesses of the throat and neck and cellulitis.

After accounting for confounding factors, those with a history of tonsillectomy had a 1.71-fold higher risk of deep neck infection, according to both statistical models.

### Increased Risk of Throat and Neck Abscess: Canadian Study

A Canadian study found that children who had undergone an adenotonsillectomy were more likely to develop a retropharyngeal or parapharyngeal abscess—a buildup of pus in the throat or neck region.

The study examined 180 children with these abscesses and 180 age-matched children without abscesses. Results showed that 13.9 percent of children with an abscess had previously had an adenotonsillectomy, six times more than the 2.2 percent of children in the control group.

The study suggests a strong association between a history of adenotonsillectomy and the development of retropharyngeal or parapharyngeal abscesses.

### Mechanism of Increased Risk of Infection

Why is removing the tonsils and the adenoid linked with a greater risk of respiratory diseases and infections?

First, during childhood and early life, the tonsils play a pivotal role in the maturation of the immune system, acting as advanced scouts of bacteria and viruses in food and the air.

Second, an Iran case-control study published in 2020 found that antibody levels after tonsillectomy in 64 children aged 9 to 15 years were significantly lower after four to six years than in the control group.

Additional studies observed a decrease in the serum antibody immunoglobulin A (IgA) level of patients post-tonsillectomy at one to four months, four to six years, and up to 20 years later.

IgA is the major isotype of protective proteins in the surface layer of the respiratory tract and plays a key role in protecting against bacterial, viral, and other infections. Falling IgA levels could contribute to an increased proinflammatory status and an increased risk of infection.

Third, the tonsils—specifically palatine tonsils—express several antimicrobial peptides, including defensins and cathelicidins. They have direct antimicrobial activities protecting the host from microbial invasion and can indirectly modulate adaptive immunity.

Fourth, the tonsils act as a key link between innate and adaptive immunity. Research shows statistically significant decreases in cellular function after tonsillectomy, suggesting tonsillectomy also alters cellular immunity in children.

Removing the tonsils can impair the detection of the virus or germs, decrease mucosal antibody levels, decrease other protective peptides, alter the expression of host defense peptides, alter innate immunity, and increase susceptibility to viral and bacterial infections.



## NATURAL HERBS HELP HEAL AFTER TONSILLECTOMY

If you've had your tonsils removed or want to give your immune system some support, there are many herbs that can help. These herbs have antioxidant, anti-inflammatory, immuno-modulatory, analgesic, antiviral, antitussive, antimicrobial, bronchodilating, mast cell stabilization, anti-allergic, antihistaminic, and smooth muscle relaxant effects.

A systematic review published in *Physics and Chemistry of the Earth* identified medicinal plants that can be used to potentially manage respiratory infections. Out of 160 plants:

- **56 alleviated colds**, including mint, mango, Shakama plum, larger tinsel flower, lavender, ginger, spearmint, and wild tamarind.
- **53 alleviated pneumonia**, including pumpkin, gardenia and cape jasmine, star apple, Christmas berry, and small mahogany.
- **34 alleviated coughs**, including mango, parsley, aloe, mint, guava, ginger, and spearmint.
- **29 alleviated chest pain** and related conditions, including parsley, cowpea, and larger tinsel flower.
- **25 alleviated asthma**, including mango, garlic, parsley, aloe, gardenia, and cape jasmine.
- **22 alleviated tuberculosis** and spots in the lungs, including mango, parsley, aloe, and wild tamarind.
- **20 alleviated unspecified respiratory** conditions, including Shakama plum and small mahogany.
- **13 alleviated influenza**, including guava, ginger, golden everlasting, and wild tamarind.
- **12 alleviated bronchial problems**, including wild grape, Shakama plum, and ginger bush.
- **7 alleviated shortness of breath**, including Christmas berry and small mahogany.
- **5 alleviated sore throat and infections**, including star apple and small fig tree.
- **1 alleviated sinus congestion**, pepper bark tree.

Of the 160 plants studied, 129 exhibited pharmacological properties that aid in treating respiratory conditions. The most common properties were antioxidant, anti-inflammatory, antiviral, and antimicrobial activities, which explains why these medicinal plants have effectively alleviated respiratory illnesses and infections.



Research finds that children that have their tonsils, adenoid, or both removed before age 9 are at a significantly higher risk for a broad range of diseases.

## Intermittent Fasting—Is It Right for You?

This simple method of limiting your daily eating window can help cleanse the body and burn off excess fat

### TENG CHENG LIANG

Intermittent fasting has become a popular way to lose weight and improve overall health. The practice is based on eating only during specific times and fasting for longer periods between meals.

Understanding fasting and evaluating your current state of health can help you determine whether intermittent fasting is right for you.

### Benefits of Intermittent Fasting

1. Reduces inflammatory reactions in the body
2. Reduces blood sugar levels in Type 2 diabetes
3. Lowers blood pressure, cholesterol, and triglycerides
4. Assists weight loss
5. Fights aging
6. Improves recovery from acute disseminated encephalomyelitis
7. Improves immune rheumatic diseases, such as asthma, multiple sclerosis, and polyarthritis
8. Improves side effects of chemotherapy,

prevents cancer, and improves survival rates for certain cancers

9. Enhances the quality of sleep, skin condition, temper, and digestive function
10. Regulates satiety and hunger
11. Reduces the risk of tumors and inhibits tumor growth

During fasting, the body's function changes from "production mode" to "survival mode," burning sugar and fat stores. Fasting detoxifies the body, promotes clarity of mind, and boosts energy levels.

In ancient times, human beings hunted and gathered wild fruits and vegetables. Without steady food supplies, they were often in a state of fasting. The development of agriculture and animal husbandry created a stable food supply and the evolution of the three-meals-a-day concept.

### Who Should Avoid Fasting?

People with hyperlipidemia, kidney disease, or gout shouldn't do long-term fasting, and intermittent fasting isn't recommended for:

- Children
- Underweight or weak people
- Pregnant or lactating women
- People with conditions such as anorexia and bulimia
- People with stomach problems, hyperacidity, and cholecystitis
- People with diabetes or low blood sugar

### Introduce Fasting Gradually

After 12 hours of fasting, blood ketone levels will gradually rise, and the body will start burning fat. Modern people are well-fed and seldom suffer from hunger, so a good option is intermittent fasting, also known as "light fasting." Light fasting means choosing a fixed period of the day to not eat and only drink water or non-caloric beverages such as plain coffee or tea.

The practice of fasting should be introduced gradually and factor in your current state of health, workload, how much time you have to rest, social commitments, etc. Adopt fasting as a lifestyle gradually. If hunger causes adverse effects, reduce the number of hours you're not eating and increase them as the body adjusts.

Light fasting shouldn't cause muscle loss. If it does, you may not be eating enough protein. Eating quality protein and exercising moderately can ensure you don't lose muscle from fasting.

### The Discomforts of Fasting

Fasting usually doesn't cause major discomfort. However, you may experience some of the following:

- Feeling cold or chilled as fat is burned in the body. This happens as thyroid function drops temporarily, causing cold hands and feet.
- Mood swings may occur as a symptom

For human beings who lived in primitive societies, fasting was a natural occurrence due to uncertain food supplies.

of low blood sugar and are usually temporary.

- Headache can arise as you transition from burning sugar to burning fat.
- A burning sensation in the stomach may occur. If the accumulation of stomach acid causes too much discomfort, you can eat something to slow down the fasting pace.
- Nausea may arise but will ease naturally.
- Dizziness can occur. Be sure to sit down. Consider eating a bit if it persists.
- Hair loss or fatigue may indicate you aren't eating well during nonfasting periods. Be sure your diet is balanced, healthy, and meets all your nutritional needs.

In short, if the symptoms aren't serious, they will usually improve within a few days. You should stop fasting if the symptoms aren't relieved.

*Dr. Teng Cheng-Liang, is a Chinese and Western medicine practitioner with more than 20 years of professional medical experience. He is the superintendent of Chi Teh Medical Clinic and Cheng-Liang Medical Clinic in Taipei, Taiwan. He graduated from the College of Medicine at Taipei Medical University and completed his doctoral degree in Traditional Chinese medicine at the Nanjing University of Chinese Medicine.*



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**Next week:** Although removing our tonsils may lower the risks of tonsil cancer and alleviate specific symptoms, scientists have unexpected findings...



COVID-19 UNEXPLORED ADVERSE EVENTS OF COVID-19 VACCINES Part II

# Vision Impairments in Patients After COVID-19 Vaccination, Doctors Caution Possible Risks

MARINA ZHANG

While potentially fatal blood clots and heart inflammation have been acknowledged as rare side effects of the COVID-19 vaccines, there might be a more expansive field of potential adverse events across multiple body systems, suggest safety signals from the Vaccine Adverse Event Reporting System (VAERS), research reports, doctors' observations, and the experiences of the vaccinated.

New Hampshire state Rep. Mike Belcher, a Republican, has been suffering from ocular migraines for almost two years.

He took his first Pfizer COVID-19 mRNA immunization in April 2021, and things haven't been the same since.

About 12 hours after the shot, Belcher recalled developing symptoms of severe flu. Neurological symptoms manifested in a matter of days.

One unusual symptom stood out: His vision became strange. He started to notice that the red and green color balance in his eyes would shift, and dark spots would appear in his field of vision.

Belcher would soon be tormented with painful headaches preceded by a blinding light that would cause searing pain at the back of his eyes.

He also experienced more serious symptoms, including impaired balance (he was unable to walk in a straight line) and memory problems. After being transferred from specialist to specialist, Belcher was finally hospitalized in May 2021.

"I was hospitalized for maybe four days, and I was discharged with the diagnosis of protracted ocular migraines with some other names stacked on," Belcher told The Epoch Times. "I had never had a migraine before, and at that point, I had a migraine for [about] 20-something days straight."

## Reports of Unusual Visual and Neurological Symptoms in the Vaccinated

Alabama-based neurologist and neuro-radiologist Dr. Diane Counce told The Epoch Times that since the vaccine roll-outs, she has also seen many patients who, after vaccination, would develop migraines or experience a worsening or increased frequency of symptoms. These migraines would often manifest with temporary blindness.

Counce's clinic has treated roughly 300 long-haul and post-vaccine patients, and she has noticed that her long-COVID patients tend to have symptom presentations that are more understood, "more textbook presentation," while the patients who developed symptoms after vaccination may develop more severe and unexplainable symptoms.

A rather puzzling symptom she saw in her vaccinated patients was vision fluctuation, which would be accompanied by other neurological problems. The patients' visual acuity would decline, but the decline would fluctuate from day to day, with no obvious physical abnormality observed in the eye.

The constant changes in symptom severity make it hard for patients to change their eyeglass prescription, "because they'll be different the next day," Counce said.

Ophthalmologist Dr. Lynnell Lowry from Alamo Eye Institute in Texas has also observed a rise in unusual eye problems.

She told The Epoch Times about a patient who, for several weeks, had her field of vision interrupted by snow-like disturbances, but Lowry couldn't find anything remarkable upon examination.

Most of Lowry's vaccinated patients seemed to have developed vision problems related to a shingles flare-up or thyroid-related deficiencies.

She has also seen an increase in rarer ocular problems. She would typically see central serous retinopathies about once every five years but has seen three cases in vaccinated people in 2022. She normally sees about one case of cranial nerve palsies every two years but has seen three cases in vaccinated people in 2022.

Belcher said many of the doctors he saw during and leading up to his hospitalization were quite certain that the vaccine was a contributor to his condition.

70

PERCENT

of eye-related problems in the vaccine adverse events reporting system (VAERS) were attributed to the COVID-19 vaccines.

Some ophthalmologists are reluctant to consider that increases in some eye conditions may be linked to the vaccine.

## More Evidence Needed to Prove Causality

Mark from California suddenly started to see floaters in cobweb-like formations in his left eye within the first two weeks after receiving his first Pfizer vaccine dose. This came after suffering from chest pain within hours of vaccination.

A referral to an eye specialist showed that his retina was bleeding. The gel in his left eye, which gives eyes their spherical shape, was pulling on the retina, causing the tissue to bleed. If the gel tears or causes the retina to detach, it may lead to permanent vision loss.

Since COVID-19, doctors have become more cautious when discussing vaccine adverse events.

Mark said his ophthalmologist told him that the spike protein produced by his first dose of the COVID-19 vaccine may have aggregated in his eye, leading to inflammation and damage, but other eye specialists have told him the opposite.

Mark had laser-assisted in situ keratomileusis (LASIK) to correct his vision more than 20 years ago, so other ophthalmologists told him that he was at risk of retinal detachment to begin with, although studies have generally reported retinal detachment within the first few years after a LASIK surgery.

While ophthalmologists are now becoming more aware of vaccine adverse events, some argue that the current evidence that supports ocular complications from the vaccine isn't strong enough.

Since ocular complications after vaccinations tend to be quite rare to begin with, some experts think it's unknown whether reported cases of suspected ocular problems after vaccinations are side effects or only a matter of coincidence.

Ophthalmologist Dr. Abdelrahman Elhusseiny, who has co-authored several studies documenting ocular adverse events after COVID-19 vaccinations, said although the literature on this topic has increased since 2021, he has seen very few cases of possible vaccine adverse events in his clinic.

He also said many of his vaccinated patients who then developed ocular problems had underlying health problems, such as autoimmune disease, diabetes, or high blood pressure, which would already put them at risk of ocular symptoms and may increase the risk of vaccine adverse events.

While extensive literature has shown that the COVID-19 vaccines can cause myocarditis, pericarditis, and thrombocytopenia, links between COVID-19 vaccines and ocular adverse events have been quite weak.

"There is evidence, but the evidence is not as strong as with other conditions such as, say, cardiovascular issues. This is mainly due to [the] small number of events and lack of well-



In "Unexplored Adverse Events: A COVID-19 Vaccine Series," we'll evaluate some of the lesser-known yet common adverse events that are appearing in the research literature as well as in doctors' clinics, and, more importantly, how to deal with them and reduce the risks.

controlled studies specifically on ocular adverse events," ophthalmic epidemiologist and professor Mahyar Etminan from the University of British Columbia told The Epoch Times over email.

The most compelling evidence so far is from a Japanese epidemiology study that compared vaccinated people to unvaccinated people. After comparing about 80,000 double-dosed individuals against the same number of unvaccinated people, the authors found that risks of ocular complications increased after the second dose. However, analyzing the same sample using a different technique resulted in an insignificant link between vaccination and ocular symptoms.

There are also several case studies reporting possible links, although this type of study is less convincing as evidence to prove causality.

Nevertheless, Etminan believed that it's possible to investigate the possible link between ocular complications and vaccinations, noting that the study should be well-designed with a large sample size.

"Since these vaccines are under the microscope, we have to be careful not to link everything and the kitchen sink associated with these drugs. This data should only come from well-designed studies," he said.

## Ophthalmologists Now Discussing Vaccine Risks With Patients

To err on the side of caution, some ophthalmologists are now actively bringing up possible risks of the vaccines to their patients.

Lowry said that now she considers a person's vaccine status and evaluates its potential temporal association with the symptoms of which her patients complain.

Elhusseiny similarly said he lets his patients know about the risks of vaccinating so they can make their own decisions.

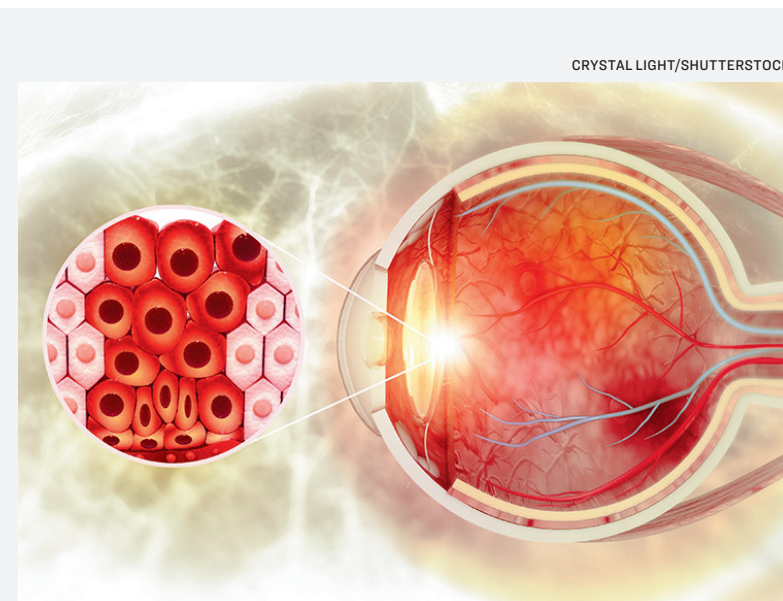
One of Elhusseiny's patients lost his spouse to COVID-19 and continued getting vaccinated without further adverse reactions, while another patient had a relative who experienced a vaccine-adverse event, and therefore, decided to stop getting vaccinated.

Lowry highlighted the importance of physicians bringing up vaccine risks with their patients.

Coming out of the COVID-19 pandemic, she noticed that while some patients suspect that the vaccines may have been involved in some of their symptoms, they seem afraid to mention it voluntarily.

"There's a huge stigma," Lowry said. Patients who got vaccinated and had adverse events are "almost afraid to blame it on the vaccine."

Especially since most people now have experienced both vaccination and infection, there's an added level of complexity for doctors to come to a diagnosis, with Lowry comparing doctors now to detectives.



Inflammation linked to the COVID-19 vaccine may be behind some eye conditions but the research is still unclear.

## Eye Complications Recorded in Database and Literature

According to data from the U.S. Centers for Disease Control and Prevention's (CDC) Vaccine Adverse Event Reporting System (VAERS), about 70 percent of eye pain, blurry vision, and visual impairment reports were filed for COVID-19 vaccines, as well as more than 50 percent of all eye swelling reports.

While VAERS can't determine whether an adverse event was caused by a vaccination, patterns in reporting may suggest a need for further evaluation to assess potential safety concerns.

The UK, which rolled out vaccines at about the same time as the United States, reported more than 9,000 cases of neurological symptoms, including muscle spasms, myalgia, paresthesia, headaches, and dizziness, to its VAERS database by late April 2021.

A New Zealand study that tracked about 3,000 vaccinated patients who developed uveitis before the vaccine rollouts found that patients had an increased risk of uveitis flare-ups after vaccination.

The baseline rate of uveitis flare was 12.3 per thousand patient months. This number increased to 20.7 after the first dose, 15 after the second dose, 12.8 after the third dose, and 23.9 after the fourth dose.

In November 2022, the American Academy of Ophthalmology posted a review of ocular manifestations post-vaccine that were reported in the literature. Eye complications fell into four broad categories:

- Ocular inflammatory diseases occur when tissues in the eye become red, swollen, and pained. Post-vaccination inflammation has been documented in the conjunctiva, the outermost layer of the eye, and the sclera, the white layer covering the eye, as well as inflammation in the inner layers including the episclera and uvea.
- Optic neuropathies occur when the optic nerves that transfer visual information from the eye to the brain become damaged. This may occur when blood clots stop or limit blood flow to the nerves and also when the body starts attacking its own optic nerves, which may lead to flickering lights in the eyes, vision loss, and pain.
- Anterior segment conditions are related to eye complications in the front part of the eye such as the cornea, irises, and lens, as well as the muscles that control these areas. Since the vaccines rolled out, there have been several reports of keratitis, which is inflammation in the cornea. Reports of corneal transplant rejections have also been documented, although reporting rates aren't higher than rates of other vaccines. Eye infections from shingles have also been reported and may occur with or without rashes.
- Retinal conditions include tearing and detachment of the retina. Since the retina is responsible for detecting light and color, its damage can lead to impairment and loss of vision.

## Unresolved but Improving

When looking to the horizon, the bright light triggers a pulsating effect on his eyes, Belcher said.

"The vision kind of fades in and out just a little bit," he said. "That's a constant feature."

Belcher said many of the doctors he saw during and leading up to his hospitalization were quite certain that the vaccine was a contributor to his condition.

Thankfully for Belcher, most of his neurological symptoms are now under control.

Although his ocular migraines need daily medication to prevent breakthrough cases, in recent weeks, he's seeing a decrease in frequency.

Belcher hopes that future examinations will inform him of the pathological reasons behind his ocular symptoms.



**"I had never had a migraine before, and at that point, I had a migraine for 20 something days straight."**

Mike Belcher, state representative, New Hampshire

The UK reported more than

**9,000**

CASES

of neurological symptoms, including muscle spasms, myalgia, paresthesia, headaches, and dizziness, to its VAERS database by late April 2021.

FOOD AS MEDICINE

## 4 Major Benefits of Sweet Potatoes

These delicious tubers can help prevent cancer, cardiovascular disease, and more

DAVID CHU

Sweet potatoes are a healthy and nutritious staple food with a sweet and delicious taste. Research has shown that eating sweet potatoes regularly can help prevent chronic diseases such as diabetes, cardiovascular disease, and cancer. Additionally, sweet potato leaves also offer various health benefits and have anti-cancer and antioxidant properties.

Sweet potatoes are a highly nutritious food. They contain dietary fiber, vitamins A (beta-carotene), B, and C, as well as trace elements such as iron, magnesium, and potassium. Sweet potatoes also contain a variety of essential amino acids for the human body, hence they are often considered a superfood. There is growing evidence that sweet potatoes offer at least four major health benefits, as follows:

### 1 Prevent and Fight Cancer

In a research report published in the Journal of Epidemiology in August 2005, Japanese researchers conducted a follow-up survey of 47,997 men and 66,520 women aged 40 and over for more than seven years. The results showed that regular consumption of sweet potatoes, potatoes, and taro was associated with a decreased risk of death from kidney cancer.

A study published in the Journal of the National Cancer Institute in March 1996 found that premenopausal women who consumed vegetables (like sweet potato) rich in beta-carotene, folic acid, vitamin C, and dietary fiber had a reduced risk of developing breast cancer by approximately 50 percent. In addition to the aforementioned health benefits, researchers also discovered a unique protein with anticancer activity in sweet potatoes as early as 1931.

A study published in the World Journal of Gastroenterology in June 2013 found that protein purified from sweet potatoes demonstrated significant anti-proliferative and anti-metastatic effects on human colorectal cancer cells both in vitro and in vivo. The proteins not only slowed the growth of colorectal cancer cells but also reduced their migration and invasion.

Additionally, sweet potato leaves have also been shown to have anti-cancer properties. A study published in the Asia Pacific Journal of Clinical Nutrition (APJCN) in 2007 found that consuming vegetables rich in vitamin A, particularly galand chrysanthemum and sweet potato leaves, may provide protection from lung cancer.

### 2 Prevent Cardiovascular Disease

Sweet potato leaves also contain phenolic compounds that can scavenge free radicals, thus reducing vascular inflammation. Therefore, regular consumption of sweet potato leaves by hypertensive patients can effectively prevent the occurrence of cerebral arteriosclerosis.

A study published in Life (Basel) in August 2021 found that consuming sweet potato leaves can lower plasma total cholesterol, lower low-density lipoprotein, and reduce oxidative stress. The researchers believe that eating more sweet potato leaves is an effective nutritional strategy for hyperlipidemia and cardiovascular disease prevention. However, the study was conducted with an animal model, so further research is still needed to confirm its effects on the human body.

Dr. Yu Hsiang Fu, former chief physician of the Department of Geriatrics and Gerontology at National Taiwan University Hospital, pointed out in a Facebook post that sweet

potatoes are high in dietary fiber, which can lower cholesterol levels. Moreover, sweet potatoes contain mucopolysaccharides that can prevent arteriosclerosis and reduce the risk of heart disease.

Purple sweet potatoes are rich in anthocyanins. A study published in the Journal of Agricultural and Food Chemistry in February 2019 found that dietary intake of anthocyanins may help prevent cardiovascular disease. Although the mechanism by which anthocyanins improve cardiovascular health is still unclear, epidemiological data show that people who consume more anthocyanins have a lower risk of dying from myocardial infarction and cardiovascular diseases.

### 3 Control Blood Sugar Levels

In a 12-week clinical trial published in Diabetes Care in 2004, researchers at the University of Vienna in Austria measured the efficacy of caiaop, an extract from white sweet potatoes, on metabolic control in 61 patients with Type 2 diabetes. They found that patients taking caiaop had a significant decrease in their glycated hemoglobin levels from 7.21 to 6.68 percent. The results showed that caiaop can help reduce plasma glucose and cholesterol levels in patients with Type 2 diabetes.

Another study published in Biological and Pharmaceutical Bulletin in January 2000 found that sweet potatoes have remarkable antidiabetic activity and can improve abnormal glucose and lipid metabolism by reducing insulin resistance.

The researchers fed white-skinned sweet potatoes to mice with diabetes and found that their hyperinsulinemia was significantly improved, with a 60 percent improvement observed after only six weeks of oral administration.

Consuming sweet potatoes in moderation can help control calorie and fat intake, which may benefit individuals with diabetes. However, it is important to note that after eating sweet potatoes, the intake of other staple foods should be reduced to control total calorie intake.

According to Fu, sweet potatoes have a moderate glycemic index with a value of around 69. They are also rich in dietary fiber and can create a feeling of fullness, so are less likely to cause fluctuations in blood sugar and insulin, which helps to control blood sugar levels. Fu also advised that to achieve the best effect of controlling blood sugar, sweet potatoes should be consumed without any processing or seasoning.

### 4 Prevent Constipation

Because sweet potatoes are rich in dietary fiber and antioxidants, they can help maintain gut health. They contain both soluble and insoluble dietary fiber, which cannot be digested and absorbed by the body but provide multiple benefits for the gut.

Soluble fiber, also known as viscous fiber, can absorb water and soften stool, while non-viscous and insoluble fiber does not absorb water but increases stool volume. Both soluble and insoluble fiber can be fermented by bacteria in the colon, producing short-chain fatty acid compounds that serve as nutrients for intestinal wall cells and help maintain gut health.

According to a study published in Cancer Nursing in June 2016, 57 leukemia patients experienced relief from chemotherapy-induced constipation after eating 200 grams of sweet potatoes per day.

Fu mentioned that sweet potatoes can improve the gut environment. The dietary fiber in sweet potatoes can promote the growth of probiotics while inhibiting harmful bacteria. This, in turn, increases the number of beneficial bacteria in the gut, leading to a healthier gut and reduced risk of gut problems.



Eating sweet potatoes can help diabetics improve abnormal glucose and lipid metabolism by reducing insulin resistance.

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# The Life-Saving Essentials of Nitric Oxide

This molecule is the single most critical factor in cardiovascular health and it can be lost in unexpected ways



Exercise is one of the most effective ways to boost nitric oxide production.

THOMAS BARWICK/GETTY IMAGES

## CHRISTY PRAIS

Nitric oxide (NO) is one of the most important signaling molecules in our body involved in virtually every organ system. Some researchers say that there is a very clear progression of cardiovascular disease that begins with decreased NO production.

Every age-related disease and every chronic disease—whether it manifests in the kidney, the brain, the heart, or the liver—has a vascular component, according to Nathan S. Bryan, Ph.D., an international leader in molecular medicine and NO biochemistry. Bryan says that the common trait among them is a lack of oxygen-rich blood reaching a part of the body, and this is dependent on NO. The lack of NO production can lead to high blood pressure, sexual dysfunction, and chronic inflammatory vascular disease leading to heart attack, stroke, or heart failure.

The body naturally begins to produce less NO as we age, but this gradual loss of NO can be sped up or slowed down based on lifestyle and diet.

Remarkably, all of the conditions mentioned above have been shown to be improved by dietary nitrite and nitrate interventions. It's important to know, however, that although some natural foods high in these compounds are generally good for your health, others, such as processed meats, can create problems, especially when cooked at high heat, which can turn nitrite and nitrate into problematic nitrosamines.

Knowing what can damage our body's ability to create NO and adopting healthy habits such as a good diet and exercise can prolong the inevitable drop in NO production with age and prevent age-related disease and chronic illness, particularly cardiovascular disease.

## Essential for Health

Dr. Caldwell Esselstyn, the Cleveland Clinic's renowned director of the Heart Disease Reversal Program, describes NO as the single most important factor affecting cardiovascular health, stressing that NO's most important function is vasodilation.

This means it relaxes and widens the blood vessels, enabling your blood to move freely and delivering oxygen and nutrients to your whole body more efficiently.

Esselstyn also said that NO prevents inflammation and arterial thickening that can restrict blood flow, cause hypertension, and increase the workload on your heart.

NO reduces the stickiness of LDL and other elements in our blood that leads to plaque buildup in arteries, according to Esselstyn.

**Nitric oxide prevents inflammation and arterial thickening that can restrict blood flow, cause hypertension, and increase the workload on your heart.**

NO also has a profound predictive value for Alzheimer's disease progression. The common denominator in any neurological disorder is a loss of regulation of blood flow, and that is all dependent on NO. Alzheimer's and vascular dementia have reduced blood flow to the prefrontal cortex.

When the body can't make NO, every organ in the body is affected.

## Things That Affect NO Production

It has been well established that the oral and gut bacteria microbiome play a role in NO production. Because of this, any-

thing that destroys your beneficial bacteria can cause your blood pressure to go up and put you at increased risk of heart attack, stroke, and dementia.

"The salivary glands and oral bacteria play an essential role in the conversion process from nitrate (NO<sub>3</sub>-) and nitrite (NO<sub>2</sub>-) to [NO] in the human body," according to a review study published in the Journal of Dental Research.

That means antiseptic mouthwashes can reduce NO production by wiping out the nitrate-producing bacteria among your oral microbiome.

A study published in Frontiers in Cellular and Infection Microbiology in 2019, warns that research has found that "oral antiseptics resulted in increases in systolic blood pressure."

The study looked specifically at chlorhexidine, an antiseptic used in mouthwash.

"Twice-daily chlorhexidine usage was associated with a significant increase in systolic blood pressure after 1 week of use and recovery from use resulted in an enrichment in nitrate-reducing bacteria on the tongue," it reads.

Oral antibiotics can also unsettle these bacteria since they kill not only the bad bacteria but also the good in your gut microbiome. The same goes for antibacterial soaps and hand sanitizers.

Research has found that proton-pump inhibitors also decrease NO and are linked to a significantly increased risk of heart attack and stroke.

## Signs of Decreased NO

Usually, normal NO production falls long before a diagnosis is possible, so it's important to look for symptoms and take action to address any deficiency.

A decrease in NO production will lead to a decrease in blood flow, and, clinically, this manifests in several ways:

- Increased blood pressure
- Chronic inflammatory vascular disease with plaque deposition in the lining of blood vessels
- Dysfunctional arteries

- Erectile dysfunction
- Vasculogenic female sexual dysfunction

Because of NO's critical role in keeping blood flowing through the veins, a reduction can lead to heart attack or stroke, the leading killers of men and women worldwide.

## NO-Releasing Workout Strategy

Research finds that exercise is one of the most important ways to increase your available NO.

"Regular exercise helps arteries by boosting the endothelial cells' [NO] production," an article in Harvard Health reads.

"There is concrete evidence that physical activity enhances NO production," according to a study published in The Journal of Sports Medicine and Physical Fitness in 2021.

Dr. Zach Bush is a physician specializing in internal medicine, endocrinology, and hospice care. You can find his The Four Minute Workout online. It's designed to maximize the body's ability to regenerate NO by exercising the 16 largest muscle groups in your body in just four minutes.

Because blood vessels only store about 90 seconds worth of NO before they need to manufacture more, working each major muscle group out for 90 seconds gives you the most efficient workout to tone and build muscles.

The body can also regenerate NO every couple of hours, so Bush says that "the most effective way to increase your muscle function is to work out very briefly every few hours."

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



## Nitric Oxide-Supporting Foods

Lack of nitrite in the diet increases risk for every single age-related and chronic degenerative disease.

Adopting healthy habits such as a good diet and exercise can prolong the precipitous drop in NO production with age. Here are some foods that help support and boost your body's production of NO.

### Beets

Beetroot has one of the highest concentrations of dietary nitrate in the plant kingdom, ranking just after leafy greens. In one study, participants who were given 70 milliliters (4 tablespoons) of beetroot juice were shown to have NO levels elevated by 21.3 percent after 45 minutes and 20.3 percent after 90 minutes.

### Leafy Greens

Green leafy vegetables contain large amounts of nitrates. One study showed that eating a high-nitrate meal containing spinach increased salivary nitrate levels eightfold. The study group also had significant arterial elasticity and decreased systolic blood pressure. The study concluded that "a nitrate-rich meal can lower systolic blood pressure and pulse pressure and increase large artery compliance acutely in healthy men and women."

### Garlic

One study found that aged garlic extract temporarily increased NO production by 30 to 40 percent from 15 to 60 min after administration.

### Meat

Meat is an excellent source of CoQ10, which is shown to increase NO levels. Studies show that getting enough CoQ10 can help athletes perform better, recover faster, and prevent injury.

### Dark Chocolate

Research shows that the flavanols found in cocoa can help maintain optimal levels of NO in your body, which is shown to lower blood pressure and promote cardiovascular health.

### Citrus Fruits

Citrus fruits are a great source of vitamin C, which can increase the amount of NO in the body.

### Nuts and Seeds

Nuts and seeds are sources of L-arginine, an amino acid that plays a role in the production of NO. One study showed that eating L-arginine-rich foods was associated with higher levels of NO.



# How to Boost Your Lymphatic System, Improve Bone Healing

Research suggests you can nurture stronger bones by ensuring your lymphatic system is operating at its best

## GEORGE CITRONER

The lymphatic system consists of thin tubes and lymph nodes that run throughout the body. It's part of the immune system and keeps body fluid levels in balance. It also plays important roles detoxifying the body of cellular debris. Bones were believed to lack lymph tissue because the hard tissue of bone made studying what happened inside the bones so difficult.

Now, researchers from the University of Oxford have used an animal model to confirm that bone contains lymphatic tissue and this tissue plays a significant role in bone healing.

## Lymphatic Vessels Are Impaired in Aged Bones

The researchers identified and drew the lymphatic vessels of bone in high-resolution 3D, using light-sheet imaging. They also identified certain key signals occurring among lymph vessels, blood stem cells, and bone stem cells.

The discovery of these signals could lead to new ways of encouraging the healing of injured bones in older patients.

Lymph vessels were shown not only to be present in bone, but also to play a role in bone and blood cell regeneration. Furthermore, researchers found that aging bones showed reduced growth of lymphatic vessels in response to injury.

"The lymphatic system not only serves as an immuno-surveillant and fluid transporter, but also "plays a critical role in shortening bone-healing times," and maintaining bone strength, according to Dr. Akash Kamwal Attreya, a family medicine doctor in Albuquerque, New Mexico, affiliated with Piedmont Macon North Hospital and Holy Rosary Healthcare—Miles City.

He said he believes that this knowledge can be used to improve outcomes in bone care and improve quality of life for patients. From a global health view, it can also reduce morbidity and mortality.

"The administration of young lymphatic endothelial [stem] cells restores healing of aged bones, thus providing a future direction to promote bone healing in elderly," Dr. Junyu Chen, a co-author of the study, said in a statement.

Scientists intend to expand on these findings to look at what role lymphatic

vessels play in bone-based diseases, such as rheumatoid arthritis, and to discover new approaches to treat bone and blood diseases.

## When Do Bones Start to Heal More Slowly?

There's no particular age when our bone-healing ability diminishes, according to Dr. Kate Nixon, an osteopathic physician in neuromuscular medicine.

However, there is "a progressive loss of bone density and size as we age," she told The Epoch Times. "We see an increase in brittleness and a change in stress and strain properties, making us more susceptible to material failure."

This becomes more pronounced after menopause for women—around age 50, as it tends to correspond with a decreasing level of estrogen. For men, it's more obvious after the age of 70 because it correlates with decreasing testosterone levels.

## Stimulating Your Lymphatic System

There are two methods to stimulate your lymphatic system, and they may help increase your bone healing ability by helping lymphatic fluid to better circulate through your body.

**Lymph vessels were shown not only to be present in bone, but also to play a role in bone and blood cell regeneration.**



Lymphatic massage can be used to improve the flow of lymph fluid and reduce swelling.



Supplementing with vitamin D can support bone healing.



As we age, our bones are slower to grow lymphatic vessels when injured and this can slow healing.

## Lymphatic Massage

Also called manual lymphatic drainage, this is a special kind of medical massage that can help treat lymphedema, which is swelling due to a collection of lymphatic fluid.

Lymphatic massage is used to improve the flow of lymph fluid, which reduces swelling. It's performed by people specially trained in it, and research shows that it can help relieve the symptoms of rheumatoid arthritis.

## Osteopathic Manipulative Medicine

Osteopathic manipulative medicine is a method used by osteopaths to manipulate the body to treat muscle, tendon, or bone pain. Physicians apply gentle pressure to the body to encourage the body to heal itself.

Kathleen Becker, who holds a doctorate in molecular biology and biochemistry and is an assistant professor at the University of New England College of Osteopathic Medicine, said that this method can affect the lymphatic system.

## Other Ways to Maintain Your Bone-Healing Ability

Older adults can better maintain bone health by doing weight-bearing exercises such as strength training with weights and walking, according to Dr. Kathryn Brandt, the chair of primary care at the University of New England College of Osteopathic Medicine.

They should also eat a diet high in vegetables and low in processed foods.

Becker added that it might also be helpful to eat sufficient protein (because bone is also made of protein), and get adequate vitamin D—"particularly during the winter months," Becker said.

Brandt considers the University of Oxford's research to be very interesting and believes it challenges some old assumptions about the resilience of bone.

"The more we learn about what controls bone rebuilding and healing, the better we can figure out new ways to help with healing," she said.

# Why (Some People) Should Drink Celery Juice

**Celery juice can relieve constipation, improve heart health, and more—but some people shouldn't drink it**

## JESSICA LEE

Celery juice has recently become a popular health beverage. Dr. Jingduan Yang, founder and medical director of the Yang Institute of Integrative Medicine, shared on the Dimensional Health YouTube channel that celery juice could help relieve constipation and maintain cardiovascular health. However, four groups of people should drink with caution.

Celery juice is high in fiber, which can increase satiety, promote nutrient absorption, protect the intestines, and aid in bowel movements. Drink unflavored celery juice to obtain its full nutritional value.

The juice is low in sugar and calories. A can of soda contains approximately 150 calories, and the same amount of celery juice contains only about 50.

Yang further stated that celery contains antioxidants that can alleviate inflammation, preventing and treating diseases. Many diseases, such as thyroiditis, cardiovascular disease, diabetes, and cancer, can be caused by inflammation. Consuming foods rich in antioxidants, including celery, can significantly benefit overall health.

According to a research review published in Phytotherapy Research in December

2019, celery is rich in phytochemicals such as phenolic acids, flavonoids, and flavonols, which can prevent inflammation. Flavonoids help inhibit cardiovascular inflammation.

Celery is also an essential source of antioxidants such as vitamin C, beta-carotene, and manganese, which protect body cells and tissues from oxidative damage.

To make celery juice, Yang suggests cutting 3–4 celery stalks into small pieces, removing the leaves to reduce bitterness, and blanching them in boiling water to clean and reduce irritation before juicing. Blanching too long can damage the nutrients.

He also recommends adding nuts, dried fruits, and blueberries to improve the taste of celery juice.

## Who Should Avoid Celery Juice?

### People Taking Anticoagulant Medication

Celery contains vitamin K, which helps maintain normal blood clotting function. However, it isn't beneficial for people who are taking anticoagulant medication.

### People With Kidney Disease

Celery contains essential trace elements such as potassium and sodium. Patients undergoing dialysis or with kidney disease shouldn't drink celery juice because their

**Celery contains antioxidants that can alleviate inflammation, preventing and treating diseases.**

kidneys can't metabolize potassium ions effectively.

### People With Sensitive Stomachs

Celery juice contains resistant starch, which is fermented by microorganisms in the intestines. Drinking celery juice can cause bloating and diarrhea in people with sensitive stomachs or those who suffer from irritable bowel syndrome.

### People With a Cold Constitution

Traditional Chinese medicine categorizes food as "hot" or "cold." Foods that are cold in nature have a cooling effect on the body, and foods that are hot in nature can help warm it up. Celery is considered cold, so people with a cold body constitution shouldn't drink too much raw celery juice to avoid exacerbating their condition.

### Timing for Drinking Celery Juice

Many people are used to drinking celery juice before breakfast. Taiwanese nutritionist Xia Ziwen wrote on Facebook that it's more appropriate to drink it before dinner on an empty stomach to increase satiety.

## A Healthy Habit

### 1 GLASS

of celery juice per day can offer a plethora of benefits. One of them is aiding weight loss.

### 3-4

### STALKS

of celery per day feeds the gut microbiome healthy fiber which benefits the whole body.



# Natural Remedies for Headaches

From herbal remedies to better breathing, there are many natural ways to safely relieve headaches

JORDAN MILLER & KYLA MILLER

Headaches are an extremely common complaint in our society and are often treated with “quick fix” pain medication. In fact, more than half a billion dollars is spent annually on this type of remedy. What is in these drugs, and are they doing us more harm than good? Are there more effective natural remedies we can use to alleviate headaches?

## Ingredients in Conventional Headache Remedies

There are two main ingredients in the leading headache medications. These are acetylsalicylic acid (aspirin) and acetaminophen (Tylenol). Today, an estimated 80,000 tons of these two ingredients are consumed each year.

The main side effects of acetylsalicylic acid are gastrointestinal ulcers, stomach bleeding, severe abdominal or stomach cramps/pain/discomfort, heartburn or indigestion, bruising, confusion, dizziness, fainting, nausea or vomiting, buzzing or ringing in ears, tiredness or weakness, loss of hearing, allergic reaction, and bleeding.

The main side effects of acetaminophen are nausea and vomiting, appetite loss, sweating, diarrhea, irritability, abdominal pain, yellow eyes or skin, liver failure, kidney failure, heart problems, ulcers, bleeding in the digestive tract, coma, seizures, and death.

Also note that these symptoms don't necessarily manifest instantly. Continual use of these products can slowly wreak havoc on your body.

## Causes of Headaches

In some cases, a headache is a symptom of a more serious underlying disorder, but often headaches are caused by stress, dehydration, tiredness, poor posture, caffeine, alcohol, drugs, food allergy, eyestrain, sinusitis, poor nutrition, or low blood sugar.

## Trusting in Our Natural Ability to Heal

Our bodies have an amazing design. If we allow ourselves to trust the body's ability to heal itself, the results will be astounding. Let's treat our bodies with the respect and loving care they deserve. If we do, symptoms such as headaches will occur much less frequently.

*Jordan and Kyla are passionate about health. Kyla is currently studying to become a Registered Holistic Nutritionist, and Jordan is currently learning about traditional North American medicinal herbs. GreenMedInfo is dedicated to investigating the most important health and environmental issues of the day. Special emphasis will be placed on environmental health. Our focused and deep research will explore the many ways in which the present condition of the human body directly reflects the true state of the ambient environment. This work is reproduced and distributed with the permission of GreenMedInfo LLC. Sign up for their newsletter at <https://greenmedinfo.com/newsletter>*

Many people enjoy a relaxing cup of herbal tea to ease their worries and relieve headaches. Popular choices include peppermint, ginger, chamomile, or valerian root.



# Alternative Remedies

## GINGER

Traditional Chinese herbal medicine recommends ginger for headaches. Eat a small piece of fresh ginger root or make ginger tea from the fresh root or tea bags.



## HERBAL TEA

Sitting down with a relaxing cup of mild herbal tea is often good for a tension headache. Good choices are peppermint, spearmint, chamomile, rose hip, lemon balm, or valerian root (which may induce sleep). Additionally, adding cayenne pepper to your tea can help.



## CELERY

Celery contains phtalide, which helps you relax and be less anxious, which helps with pain. It is also rich in potassium, in which many headache sufferers are deficient. Celery seeds can be used in smoothies, juices, or soups. Taking 2 ounces of celery juice and then lying down for 30 minutes has proven to be a very effective remedy for headaches.



## AROMATHERAPY

The relaxing qualities of lavender oil make it a good treatment for a tension headache. This essential oil is very gentle and can be massaged into your temples, the base of your neck, or the base of your nostrils. Taking a bath with relaxing oils such as chamomile and ylang-ylang will also help to soothe and relieve pain.



## BREATHING

To learn how to relax and cope with headaches, you need to become familiar with your own breathing patterns and change them in ways that will help you relax. We tend to hold our breath when we are anxious, stressed, or in pain. Below are a few relaxation exercises:

**Rhythmic breathing.** If your breathing is short and hurried, slow it down by taking long, slow breaths. Inhale slowly then exhale slowly. Count slowly to five as you inhale,

and then count slowly to five as you exhale. As you exhale slowly, pay attention to how your body naturally relaxes. Recognizing this change will help you to relax even more.

**Deep breathing.** Imagine a spot just below your navel. Breathe into that spot, filling your abdomen with air. Let the air fill you from the abdomen up, then let it out, like deflating a balloon. With every long, slow exhalation, you should feel more relaxed.

**Visualized breathing.** Find a comfortable, quiet place where you can close your eyes, and combine slowed breathing with your

imagination. Picture relaxation entering your body and tension leaving your body. Breathe deeply, but in a natural rhythm. Visualize your breath coming in through your nostrils, down into your lungs, and expanding your chest and abdomen. Then, visualize your breath going out the same way. Continue breathing, but each time you inhale, imagine that you are breathing in more relaxation. Each time you exhale, imagine that you are getting rid of a little more tension.

These are just a few natural remedies. There are many more. But before taking any of these

## VITAMINS AND MINERALS

Frequent headaches could be a sign that you are low in some important vitamins and minerals. Low levels of niacin and vitamin B6 can cause headaches. For example, all the B vitamins are needed to help combat stress and avoid tension headaches. The minerals calcium and magnesium work together to help prevent headaches, especially those related to women's menstrual cycles. Good sources of calcium are beans, peas, and dark green leafy vegetables, such as kale and broccoli. Magnesium is found in dark green leafy vegetables, cacao, nuts, bananas, wheat germ, full spectrum salts, beans, and peas.



## CORIANDER SEEDS

An Ayurvedic treatment for sinus-related headaches is the steam inhalation of coriander seeds. Put the coriander seeds into a small bowl. Pour on some boiling water, drape a towel over your head and the bowl, and inhale the steam.



# Rookie Senior Golfers Reap Mental, Physical Benefits

Researchers discover ‘vitamin G’ is an effective supplement for body, mind, and spirit

HUEY FREEMAN

George Salem was about 55 years old when he ventured out on a golf course with one of his buddies.

“I enjoyed it and went back again. I started playing once a week,” Salem, an associate professor at the University of Southern California, told The Epoch Times. “It was from that experience that I began to realize what a unique and comprehensive exercise experience golf was.”

Salem, now 62, who spent much of his career developing exercise programs, realized that there was something exceptional about golf once he began walking the courses in Southern California.

“It's a recreational activity that's very different from weightlifting or cardio-respiratory activities like walking, cycling, or rowing,” he said. “Part of that is you're in a group environment. There's a lot of social support. It's very addictive.”

Golf is also a sport that requires mental calculation, agility, fine motor control, and bursts of concentrated force.

Salem, director of an exercise and aging research program in the university's biokinesiology and physical therapy division, decided to study the positive effects of golf



After playing golf, people walked faster. Walking speed is an indicator of overall health.

after observing fellow golfers whose health exceeded that of other seniors.

“I was playing with guys who were 80 years old, who were way better golfers than I was, able to walk up and down hills, in and out of bunkers, around trees and roots,” he said.

Salem said he walked a course with one golfer who had Parkinson's disease and another man who played with one arm.

He developed a study for military veterans aged 60 to 80 and enlisted 12 men for a 12-week golf training course. Eight of the 12 participants hadn't played golf in the past 20 years, and the other four had limited experience. Some were combat veterans who reported mental challenges associated with their service.

This 2019 program produced positive results, including improvements in strength, balance, and agility. Brain function also improved.

“We found golf improved cognition with medium and large effect sizes,” Salem said,

“We saw that people walked faster after golfing. Walking speed is a really important measure of overall health.”

*George Salem, associate professor, University of Southern California*

noting that the veterans' memory and attention skills were tested before and after the program.

“Several veterans said it changed their life. “One wife of a participant said it saved her husband's life. He wasn't getting off the couch. Now he couldn't wait to get out twice a week and play golf.”

This training program included walking over hilly, uneven terrain, repeatedly bending to pick up or tee up golf balls, and “ballistic golf swings,” according to the study Salem co-authored, which was published in the International Journal of Golf Science.

After completing the first study at a Veterans Administration golf course, Salem was encouraged to undertake another investigation of golf benefits for seniors at a public course. This was a 10-week program for male and female nongolfers, focusing on physical and cognitive brain functions.

This time, half of the 14 participants were women, including two who were 80 years old and who had never played the game.

“And they loved it, and they loved coming every week,” Salem said. “They had aging problems, but were relatively healthy.”

All participants in the studies were tested for immediate recall, short delay recall, and long relay recall by being asked to repeat a list after various time increments. Participants were given a score for each test and a comprehensive score based on all three.

“They improved in immediate recall and comprehensive scores,” Salem said.

Another battery of cognition tests they were given measured attention, working

memory, card-sorting, processing speed, and sequential memory. Salem said there were moderate improvements in attention, card-sorting, and working memory, as well as an improvement in the composite score.

Physical tests also produced positive results, including improvement in balance while static or moving, leg power, grip strength, and awareness of body positioning. “We saw that people walked faster after golfing. Walking speed is a really important measure of overall health,” Salem said. “The individuals walked faster at the end of the programs.”

He said his research shows that golf is an ideal comprehensive exercise activity for seniors, encouraging socialization and improving concentration and quality of life.

“It's an activity that older adults can continue to play until the day they die,” Salem said.

“Our studies are showing that even if you've never played golf, as an older golfer, you can learn to play golf and enjoy it.”

“There are golfers that are over 100 years old who are still playing. Unlike basketball or tennis, which are good for middle-aged and younger people, you are going to get to the age you can't play those sports anymore. But you can continue to golf into your 80s and 90s. There's even a 105-year-old golfer out there.”

Safety was an important concern for the program's administrators, especially considering the lack of participants' golf experience.

“We found with our program that you can safely learn to play golf as an older adult,” Salem said. “With both those programs, we had no adverse events. We had no injuries related to golf. We had no dropouts. Nobody reported that they didn't like it, or it was hurt-

ing their back, nothing like that. So it is a safe sport for seniors.”

One of the most prominent indications of the enjoyment of the sport by older nongolfers was the high rate of attendance by participants during the 10- and 12-week programs.

“In the two studies, they attended 92 and 94 percent of all scheduled training sessions,” Salem said. “In most studies, if you have a 70 percent attendance rate, you are doing well. This is an unbelievably high rate. Our studies showed how people enjoyed it and continued to come back.”

Exit interviews were sent out to participants in the second study. All 10 of the respondents said they planned to continue to play golf.

Salem said the comments included these statements on their mental or emotional states:

“It improved my concentration.”  
“I feel more relaxed.”  
“I'm more relaxed and happier.”  
“I've learned to handle my stress better.”  
The novice golfers made these comments on the social aspect:  
“I met great people on my team.”  
“I seem to be more tolerant.”



Many golfers report that the challenging elements of the sport help their brains remain sharp.

“Everyone in my group were like cheerleaders.”

“It opened up another way of enjoying friendships.”

## Long-Term Golfer Reports Long-Term Benefits

Dr. Chuck Stone, a 63-year-old retired dentist, has been playing golf since he was 7 years old. Unlike most senior golfers, who ride in motorized carts or push 3-wheeled carts, Stone carries his clubs on most of his rounds.

“It's really good exercise,” said Stone, who plays four or five times per week during the summer. “Golf is great for overall health.”

He said the benefits he enjoys include staying in shape physically and the joy of friendship and a focused state of mind.

“It is a six-mile hike; my bag weighs 25 pounds,” Stone said. “It's like backpacking six miles. It keeps my weight down, you're not sitting in front of a TV and eating.”

Carrying his clubs for up to 30 miles per week could translate to about half a pound per week of weight loss.

Stone, a cheerful man with many golf partners, gains much more than he loses on the course.

“Certainly just being with your friends and having fun has to be good for your mental health. I really look forward to golfing with my friends,” he told The Epoch Times.

“A lot of the time, I feel a sense of euphoria, just being with my friends. You're walking, it's a beautiful day. I never carry my cell phone with me when I'm out playing golf. It stays in the car.”

Stone credits golf with helping him to stay mentally sharp.

“It's a chess game you are playing in your mind,” he said. “Mental gymnastics are con-

stant, as you try to figure out how to secure a good score on each hole and think your way out of situations that will wreck your score.

“When you play an 18-hole round of golf you are keeping your mind busy for four or five hours. You're learning how to do things under different circumstances. It's an addictive game because you always want to have that perfect round.”

There are so many variables to contend with, including which club to choose and what kind of shot to hit.

“You are always getting yourself out of trouble,” Stone said, admitting that he often repeats the same mistake. “You have to adjust to conditions on the course, which can be different from one green to another. Some are fast, while others are slow.”

Other forms of exercise, such as riding a stationary bike, aren't mentally challenging, he said.

“Golf is a thinking man's game,” Stone said. While focusing on all the challenges of the game, the cares and stresses outside the course tend to fade away.

“If you had a bad day, you tend to forget about that,” he said.

“When you're golfing, you're not thinking of your problems,” Stone said. “You're just playing golf. You are tuning out outside distractions.”

“There are times you get angry at yourself, because of the way you are playing, but your friend will laugh at you. Then you have to laugh at yourself.”

*A newspaper reporter, editor and author, Huey Freeman recently wrote “Who Shot Nick Irie?” a true crime book on the murder of a Border Patrol agent. He and his wife, Kate, live in Central Illinois.*



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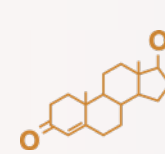
AGE WELL

# How to Maintain Your Testosterone Levels

## in a World That Wants to Bring Them Down

Age isn't the predominant cause of low testosterone and there are things you can do to maintain your levels

JANO TANTONGCO



**On an individual level, symptoms of testosterone deficiency can include low sex drive, loss of energy, brain fog, osteoporosis, inability to gain muscle mass, and depression.**



Many men accept as fact the idea that testosterone will inevitably decrease as they get older. However, new science is showing that diseases of lifestyle, rather than just age, are often the real culprits behind the decline.

Testosterone levels have shown a stunning downward trend in the past several decades. The standard American diet is a nutritional wasteland. Environmental pollution and microplastics are wreaking havoc on our hormone levels with their endocrine-disrupting chemicals. Obesity, many drugs, and our sedentary lifestyle also undermine testosterone production. When so many aspects of our way of life can potentially sabotage testosterone levels—and by extension, good health—it becomes fundamental to a man's well-being to understand how to preserve and boost levels of this vital hormone.

In a study published in March 2023 in *The Journal of Sexual Medicine*, researchers examined 625 men with an average age of 65 years, aiming to determine how aging affects testosterone. They discovered that when they controlled for comorbidities, age alone wasn't "significantly associated with testosterone decline." Comorbidities, including anemia, diabetes, heart failure, obesity, peripheral artery disease, and stroke, were found to be far more important in predicting whether testosterone would drop over time.

Continued on Page 16

Healthy stress like exercise is an effective way to help keep testosterone levels high.



## How Jewish Communities Reveal a Key Cause of Autism



The use of acetaminophen has become a defining factor in rising rates of autism, researchers say

JENNIFER MARGULIS

According to a 2015 article published in the peer-reviewed *Journal of Autism and Developmental Disorders*, children of modern Jews are more frequently diagnosed with autism spec-

trum disorder than those of ultra-Orthodox Jews and Arabs.

The study, which was led by Dr. Raanan Raz, who was at the Harvard School of Public Health at the time, analyzed data collected on more than 2,400,000 children from the Israeli National Insurance Institute.

Raz and an international team of scientists suggested that a lack of awareness in the ultra-Orthodox Jewish community could account for the discrepancy.

Since ultra-Orthodox Jews in Israel "refrain from modern life," as they put it, they

would be less likely to seek out a modern doctor to make an autism diagnosis.

Raz and his colleagues also proposed that ultra-Orthodox Jews (UOJ) simply don't want people to know they have children with autism.

"Traditionally, mental disorders in these populations may be stigmatized and, especially in the UOJ population, might also negatively affect other family members' arranged marriage processes," the scientists wrote.

Continued on Page 16

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Walnuts, berries, and pomegranates all contain urolithin A, a compound that may help protect the mitochondria and provide cancer-fighting properties.

ALL PHOTO BY SHUTTERSTOCK

## Immunity-Boosting Compound May Help Slow Aging, Prevent Cancer

Urolithin A may improve mitochondrial function, leading to lower inflammation levels and boosted immune function

SUSAN C. OLMSTEAD

Aging is inevitable, but some of the maladies we face may one day be mitigated, thanks to advancing knowledge about exactly what causes our bodies to decline with time.

The landmark 2013 Hallmarks of Aging study identified nine factors that contribute to health decline in advanced age: genomic instability, telomere attrition, epigenetic alterations, loss of proteostasis, deregulated nutrient-sensing, mitochondrial dysfunction, cellular senescence, stem cell exhaustion, and altered intercellular communication.

The study was updated in 2022 to include five additional factors. One of these is inflammation.

Chronic, low-grade inflammation has been called “inflammaging” because it’s a significant risk factor for disease and death in the elderly. In fact, human aging is characterized by chronic, low-grade inflammation, and most—if not all—age-related diseases arise from an inflammatory process, according to gerontologists.

At the body’s cellular level, damaged mitochondria are thought to contribute to inflammation and aging.

“As we age, our mitochondrial health declines, and as a consequence, energy levels decline,” immunologist Dr. Anurag Singh told *The Epoch Times*.

“This is mainly because rates of cellular processes such as mitophagy slow down and we accumulate more faulty mitochondria in our cells.”

### What Is Mitophagy?

Mitophagy is “a cellular renewal process that recycles poorly functioning mitochondria into building blocks of newer healthier mitochondria,” Singh said.

Can we induce and harness mitophagy to ameliorate disease? This is a newer field of research that holds promise.

The 2020 review article “Mitophagy: An Emerging Role in Aging and Age-Associated Diseases,” by a group of French, Chinese, and Swedish researchers, found that “impaired mitophagy and dysfunctional mitophagic mechanisms were associated with numerous physiological and pathological processes.”

These included “development, differentiation, aging, neurodegenerative disorders, cardiovascular pathologies, and cancer.”

### Renewing Mitochondria

We now know that many foods long considered to be “healthy” are beneficial thanks to their anti-inflammatory properties. The metabolite urolithin A, a compound found in berries, walnuts, and pomegranates, seems to have anti-inflammatory and cancer-fighting properties due to its effects on mitochondria.

“The most studied health benefits of urolithin A are on improving mitochondrial health,” Singh said.

Singh and co-authors of the study “Impact of the Natural Compound Urolithin A on Health, Disease, and Aging” noted that urolithin A protects against aging and age-related conditions affecting muscle, joints, the brain, and other organs by inducing mitophagy.

Singh is also chief medical officer of Amazentis, a company that makes a urolithin A supplement.

Although urolithin A was discovered

more than 40 years ago, research into the benefits of supplementing the human diet with urolithin A is relatively new.

Recent advances in urolithin A research suggest that it “attenuates inflammation in various tissues, including the brain, adipose, heart, and liver tissues,” according to researchers at the University of Nebraska-Lincoln.

This attenuation leads to the “potential delay or prevention of the onset of Alzheimer’s disease, Type 2 diabetes mellitus, and non-alcoholic fatty liver disease,” they wrote.

“Urolithin A is the only clinically studied natural molecule shown to activate mitophagy that has shown to be safe across multiple randomized clinical trials and that when orally administered improves mitochondrial health,” Singh said, citing a study by Swiss researchers that showed improved mitochondrial and cellular health following regular oral administration in a group of sedentary elderly subjects.

The only other interventions known to activate mitophagy are regular exercise and calorie restriction, he said.

### A Treatment for Cancer?

Mitophagy induced by urolithin A changes T cells’ genetic program, making them better able to fight tumors, according to Dr. Joseph Mercola.

A German study published in 2022 showed that urolithin A improved the function of immune cells and called the molecule a promising treatment for colorectal cancer.

“After treatment with urolithin A, tumour-fighting immune cells become T memory stem cells, which, due to their ability to divide, constantly supply the immune system with rejuvenated, non-exhausted T cells,” the researchers reported.

### The Gut Connection

Not everyone naturally produces urolithin A. The ability to do so requires a specific type of microbiome composition in the gut and depends on age, health, and diet.

Only approximately 40 percent of the human population has this specific gut microbiome composition, researchers found in a research review published in *Trends in Molecular Medicine* in 2021.

“Direct supplementation with urolithin A overcomes limitations of dietary exposure and gut microbiome variability in healthy adults to achieve consistent levels across the population,” Singh and his colleagues wrote in a study published in the *European Journal of Clinical Nutrition*.

“One way people can focus on the key pillars of good health is eating a balanced diet rich in fiber, fruits, and nuts rich in the dietary precursors that lead to urolithin A production,” Singh told *The Epoch Times*.

Although research into the benefits of urolithin A is relatively new, it looks as though the compound holds great promise as an anti-inflammatory agent and a possible cancer treatment. Berries, nuts, pomegranates, and other inflammation-fighting foods may boost the body’s functioning from the cellular level.

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.

NATURAL MEDICINE

# Dragon’s Blood: One of the Most Potent Sources of Antioxidants on the Planet

This ancient remedy has been used for centuries and scientists are discovering the mechanisms behind its long-recognized effects



Dragon’s blood is obtained from different plants, including dragon trees (*Dracaena cinnabari*) like this one on Socotra island in Yemen.

CHRISTY PRAIS

Of 3,100 foods, beverages, spices, herbs, and supplements used worldwide, dragon’s blood is the highest-known antioxidant tested according to a study published in *Nutrition Journal*. This dark-red tree resin has been used as a medicine for more than 1,000 years by many ancient civilizations including the Greeks and Romans and has been used in many traditional medicine systems worldwide, including traditional Chinese medicine, Arabic medicine, Thai medicine, and African medicine.

Some of its uses and applications include healing wounds, hemostasis (stopping bleeding), killing pain, and curing various conditions such as diarrhea, dysentery, and ulcers. In addition to medicinal applications, dragon’s blood has also been used as a coloring material, varnish, incense, and for ceremonial purposes.

Contemporary research not only supports the traditional uses of the substance but has also found additional health benefits dragon’s blood possesses, including an antioxidant effect that is associated with slowing the processes of aging in both body and brain.

### What Is Dragon’s Blood?

Dragon’s blood gets its name from the dark-red resin produced by various tropical tree species, collectively known as dragon trees. These trees belong to several plant families, including *Dracaena*, *Croton*, *Pterocarpus*, and *Daemonorops*, which are found in many parts of the world.

The various sources mean the various resins will have different properties. The study mentioned above didn’t detail the exact plant the resin was derived from but noted the resin came from Peru. Throughout history, different cultures used different sources of plant resin.

A review published in 2008 in the *Journal of Ethnopharmacology* notes that the dragon’s blood derived from *Dracaena cinnabari* was used as a dye and medicine in the Mediterranean basin.

Also, several species of the genus *Croton* are used by indigenous cultures of the Amazon River for the treatment of infected wounds and to accelerate wound healing.

According to traditional Chinese medicine, the dragon’s blood resin from *Daemonorops draco* and *Dracaena cochinchinensis* are equally prescribed for improving blood circulation.

### Health Benefits

**Antibacterial and Antifungal**  
The dragon’s blood resin demonstrates antibacterial, antiviral, and antifungal activity, which is why dragon’s blood is widely used for infectious skin conditions.

In traditional medicine, many plants were used against fungal pathogens. Over the past few years, there has been a search for new antifungal agents in response to the inefficacy, adverse effects, and resistance related to the current medications, especially when it comes to skin issues.

Because plants possess their own defense

**Dragon’s blood comes in powder or capsule supplements as well as alcoholic extracts, tinctures, and topical ointments.**



There are several species of dragon trees, each producing dragon’s blood resin with slightly different properties depending on where it was sourced from.

Dragon’s blood may boost wound healing due to its strong anti-inflammatory benefits.



mechanism against fungal pathogens, researchers have been looking at plant-based fungicides as possible alternatives.

A study published in 2005 in the *Journal of Ethnopharmacology* tested the antifungal activity of dragon’s blood from *Croton urucurana*. The in vitro study affirmed resin’s traditional use as a wound treatment. The study found that the dragon’s blood resin has antifungal properties that can be used to treat skin infections caused by fungi.

“*Croton urucurana* has a potential antifungal effect that can be explored for therapeutic advantage as an alternative treatment for dermatophytosis or in conjunction with other antimicrobials to allow the use of lower doses avoiding problems such as side effects and/or resistance,” the study concluded.

Another 2005 study published in the same journal tested five different types of fungi and found that dragon’s blood was able to inhibit their growth at concentrations ranging from 0.175 to 3.0 mg/ml.

A 2011 study on dragon’s blood from *Dracaena cambodiana* found that five of the tested compounds within the species were effective against *S. aureus* bacteria.

*S. aureus* is a common type of bacteria that is often found on the skin and in the nasal passages of healthy individuals, but it can cause infections when it enters the body through a cut or other opening. It causes a range of illnesses, from minor skin infections to more serious conditions such as pneumonia, meningitis, and sepsis.

Some strains of *S. aureus* are resistant to common antibiotics, which can make infections more difficult to treat.

The study also found that seven of the compounds were effective against MRSA bacteria. MRSA infections can be difficult to treat, as these bacteria have developed resistance to many of the antibiotics that are commonly used to treat bacterial infections.

Symptoms of MRSA infections can range from mild to severe and can include skin infections, pneumonia, and bloodstream infections.

### Wound Healing

Several studies have confirmed that dragon’s blood may actually speed up wound healing because of its strong anti-inflammatory properties.

In the *Journal of Traditional and Complementary Medicine*, a randomized, double-blind, placebo-controlled clinical trial measured wound healing in 60 patients between the ages of 14 and 65. It used a cream based on *Croton lechleri* resin.

At the end of the trial period, there was a significant difference in wound healing in the group that received the dragon’s blood cream compared to the placebo group.

Researchers noted that they saw significant improvement in wound healing in the dragon’s blood group by just the third day compared to the placebo.

They theorize that because the dragon’s blood resin contains phenolic compounds such as proanthocyanidins and catechin,

the inflammation process is shortened.

### H. Pylori and Ulcer Treatment

*Helicobacter pylori* (*H. pylori*) is a bacteria that causes infection in the stomach and is the main cause of peptic ulcers. Researchers found that two flavonoid compounds in the dragon’s blood from *Dracaena cochinchinensis* were effective at killing *H. Pylori*.

### Anti-Aging

A study published in *Nutrition Journal* in 2010 found that dragon’s blood from Peru, also known as *Sangre de Grado*, had the highest antioxidant content of all the products in the tested database with an oxygen radical absorption capacity (ORAC) score of 2,897,110.

An ORAC analysis tests how well compounds stop the oxidation caused by harmful substances called peroxy radicals. It measures the total antioxidant capacity of foods, or how well certain foods prevent damage caused by harmful substances.

Foods that have a high ORAC score may protect cells and their components from oxidative damage and help slow the processes associated with aging in both body and brain.

### Side Effects and Contraindications

The book “*A Materia Medica for Chinese Medicine*” outlines several possible side effects and contraindications for dragon’s blood.

It’s recommended that during menstruation, dragon’s blood should only be used externally, and it should never be used during pregnancy.

As for its toxicity, the authors say that overdoses should be avoided and there can be potential allergic reactions that include itching, rashes, and swelling of the skin.

A 2011 study on rats noted that certain types of dragon’s blood may have blood-thinning effects. If you’re on blood thinners, this may be a supplement to avoid.

As with everything, check with your health care professional for contraindications with other medications or health issues.

### Tips for Buying

Dragon’s blood comes in powder or capsule supplements as well as alcoholic extracts, tinctures, and topical ointments.

You can also make your own topical ointment by mixing dragon’s blood powder with carrier oils such as coconut oil or shea butter.

Always make sure to source your products from reputable and trustworthy companies, as the supplement industry isn’t tightly regulated.

In a recent interview, Matt Roeske, founder of Cultivate Elevate, said that when it comes to purchasing dragon’s blood products, “you want to make sure it is not altered with any synthetic fillers, gums, or preservatives. Always make sure your dragon’s blood is sustainably sourced and heavy metal tested.”

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



AGE WELL

How to Maintain Your

# Testosterone Levels

in a World That Wants to Bring Them Down

Continued from Page 1

## How Testosterone Works

Testosterone is the primary sex hormone that governs men's health. It has direct effects on muscle growth, the production of red blood cells in the bone marrow, reproductive function, and behavior.

Dr. Tro Kalayjian, medical director of his own nationwide practice focusing on weight loss, explained that testosterone is made in our mitochondria, specifically in what's known as Leydig cells in the testes. He further elaborated that cholesterol—much maligned by mainstream nutrition-

al science—is actually the fundamental building block of sex hormones.

What exactly constitutes a healthy testosterone level is up for debate. According to guidelines issued in 2018 by the American Urological Association, 300 nanograms per deciliter is a “reasonable cut-off” to diagnose low testosterone. The 300 level is a commonly used standard, as we see in health publications intended for a general audience.

“Testosterone is a huge quality-of-life metric for men. If you really wanted to see if a man is suffering, check [his] testosterone level.”

Dr. Tro Kalayjian, medical director, Dr. Tro's Medical Weight Loss & Direct Primary Care

▶ Maintaining a healthy weight with diet and exercise is fundamental for testosterone production.

However, Kalayjian explained that he considers a healthy range to be between 500 and 700.

“A 30-something-year-old male could have a 300 testosterone level, and that would be considered normal by our [modern] lab values. That's definitely not normal,” he told The Epoch Times. “The range is based on a statistical plot of our population, but we've had a sick population for 70 years.”

## Decline of Testosterone

In a study published in *The Journal of Clinical Endocrinology & Metabolism* in 2007, researchers followed a group of 1,532 American men aged 45 to 79 over nearly two decades to determine if there was an age-independent decline in testosterone in the male population. In other words, they wanted to compare if a 65-year-old man in 1987 had the same level of testosterone as similar men of the same age in 2004. They collected baseline data from 1987 to 1989 and conducted two follow-up periods in 1995–97 and 2002–04.

They found an average decline of about 1 percent per year. For a hypothetical 65-year-old man in 1987

contrasted with a similar 65-year-old in 2014, that amounts to an approximately 17 percent decline.

A later study published in 2020 in *European Urology Focus* performed a similar analysis on survey data of 4,045 males aged 15 to 40 from 1999 to 2016 in the United States. They found an approximately 25 percent drop in average testosterone levels from 1999–00 to 2015–16.

Both studies attempted to control for factors such as comorbidities, diet, and lifestyle. Overall, the science is still unclear as to what accounts for this stark decrease over time, but there's some speculation. The 2007 study explored the idea of environmental toxicity potentially contributing to the decline. The 2020 study showed an association between higher body mass index (BMI) and lower testosterone levels, noting that BMI increased in the men over time as well.

And environmental factors are emerging as a potential source of population-level testosterone decline. In a study published in the *Journal of Ecotoxicology and Environmental Safety* in 2023, plastic nanoparticles were found to induce oxidative stress in mouse cells and decreased testosterone

secretion. And a study in the *Saudi Medical Journal* from 2010 shows that long-term exposure to cell phone radiation of 60 minutes per day decreased testosterone levels in rats.

These findings stand in stark contrast to findings from a unique population of men. In examining the role of circadian rhythm and seasonal changes in rural Bolivian men, researchers discovered an “absence of an age-related [testosterone] decline,” in a study published in 2009 in the *American Journal of Human Biology*. They theorize that the male reproductive system may adapt differently in such a rural setting, which includes harsh winters and strenuous physical labor.

On an individual level, symptoms of testosterone deficiency can include low sex drive, loss of energy, brain fog, osteoporosis, the inability to gain muscle mass, and depression. To ultimately diagnose low testosterone, Kalayjian advocates for considering both measured testosterone levels and clinical symptoms.

“Testosterone is a huge quality-of-life metric for men. If you really wanted to see if a man is suffering, check [his] testosterone level,” he said.

**Dr. Kalayjian advocated for minimizing carbohydrates in one's diet, especially of the processed variety, while increasing fat and protein consumption.**

## Turning Back the Clock

Despite the population-wide trend, men can opt out of being a statistical point in the modern downward trajectory.

In his medical practice, which is staffed by three health coaches, two personal trainers, and one mental health counselor, Kalayjian said he's seen testosterone levels—and overall well-being—jump up in men who make key lifestyle changes in diet, exercise levels, and sleep.

“They're going back to normal, and they feel like a fountain of youth. Their sex life is back. They're able to put on muscle. It's a big deal,” he said.

Kalayjian highlighted that he's even seen patients aged 60-plus sometimes double, if not triple, their testosterone levels.

In diagnosing the problem, Kalayjian takes a two-pronged approach. First, he takes aim at conditions such as metabolic syndrome, diabetes, and obesity, which all wreak havoc on testosterone. For instance, a study in *The Journal of Sexual Medicine* from 2010 shows that those with metabolic syndrome had significantly lower levels of testosterone.

Next, he determines if there's a deficiency of cholesterol—the building block of testosterone—or saturated fats, which support optimal hormone production.

“Cholesterol [intake] has also come down decade-over-decade, which is the precursor to testosterone production,” he said.

And, despite earlier mainstream recommendations against saturated fat, recent science is painting a different picture.

One study published in 2009 in the *Journal of Steroid Biochemistry and Molecular Biology* found that low-fat diets “appear to decrease” testosterone levels in men. In a 2010 meta-analysis published in *The American Journal of Clinical Nutrition* examining 21 studies, researchers found “no significant evidence” for concluding that saturated fat was associated with an increased risk of cardiovascular disease or coronary heart disease.

With this in mind, Kalayjian advocated for minimizing carbohydrates in one's diet, especially of the processed variety, while increasing fat and protein consumption. He specifically recommended whole foods such as red meat, fish, chicken, eggs, Greek yogurt, green leafy vegetables, and avocados.

“Those foods are so filling, they typically lead people to start losing weight,” he said. “Just reversing metabolic syndrome, pre-diabetes, [or] diabetes in my clinic will typically... double testosterone from the 200 to 300 range to the 400 to 600 range.”

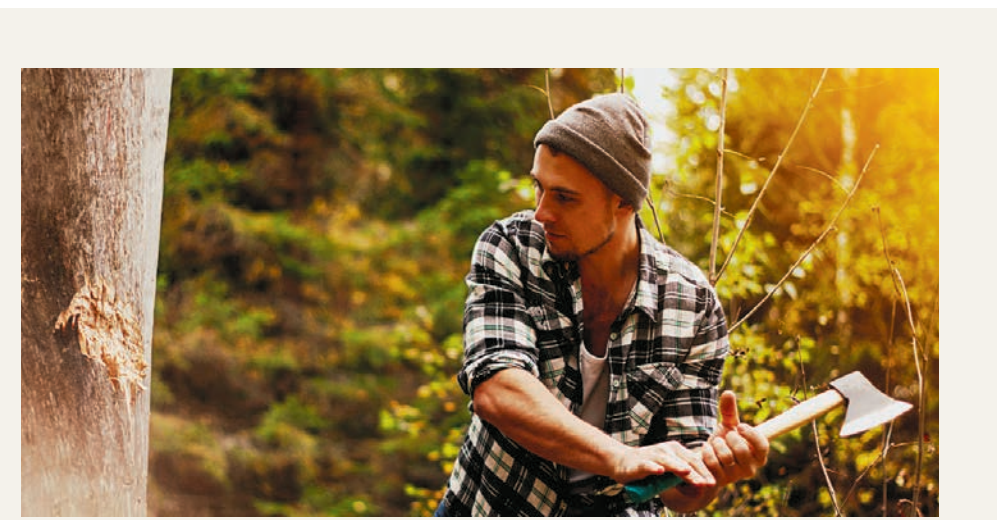
He said it typically takes three to six months to start seeing testosterone levels increase. At that point, he said, one can make use of his newly elevated testosterone by channeling it into exercise. However, he noted that overtraining can also impair testosterone, so he advocated for slow and steady progress.

In addition to diet and exercise, healthy sleep is also fundamental for testosterone production. A 2011 study published in the *Journal of the American Medical Association* found that sleeping less than five hours a night can lower testosterone levels by as much as 15 percent.

“As research progresses, low sleep duration and poor sleep quality are increasingly recognized as endocrine disruptors,” lead researcher Eve Van Cauter told the University of Chicago Medicine.

And, of course, managing stress is also paramount to maintaining hormonal health. While some low-level stress can actually have a positive effect on testosterone, chronic stress is another story. A 2022 study in the *Journal of Cellular and Molecular Medicine* shows that chronic stress damages mitochondria in rats, leading to lowered testosterone levels and reduced body weight.

*Jano Tantongo is a writer and digital creative based in New York. He covers health, culture, and politics.*



## RAISING TESTOSTERONE

The key to improving testosterone is likely addressing the factors behind the decline. These include the unhealthy American diet, pollution, microplastics, obesity, drugs, our inactive lifestyles, and lack of sleep.



Medications such as metformin, statins, and SSRIs can undermine testosterone production.



## WHEN LIFESTYLE CHANGES FALL SHORT

Dr. Tro Kalayjian says there are a few cases where even profound lifestyle changes won't move the needle for proper testosterone function.

He outlined that it could simply be that for certain men, mitochondria function naturally diminishes over time. Some older men who contract viral infections such as measles or mumps can also have permanently diminished testosterone production, he noted. And there are a plethora of widely prescribed medications such as statins, metformin, finasteride, and selective serotonin reuptake inhibitors that can undermine testosterone production.

For these men, Kalayjian suggests that testosterone supplementation may help, “if you've done diet and you've done sleep and you've done exercise, and you want that extra 10 percent, and you want to feel vigor that you didn't have.” This approach does come with side effects, including an increased risk of prostate cancer. Overall, Kalayjian said one should always consult with their physician to see what will work best for them. His takeaway mantra on optimizing testosterone is this: “Diet, lifestyle, check your levels.”

# How Jewish Communities Reveal a Key Cause of Autism

Continued from Page 1

**Underreporting Doesn't Explain It** Dr. Mitchel Shertz is a pediatric neurologist and director of Child Development & Pediatric Neurology at Meuhedet in North Israel. He has looked closely at the autism rates in Israel.

According to his research, the average rate of autism among the ultra-Orthodox is 1.5 cases per 1,000 children; among Arab children, it's 3 cases per 1,000; among secular and modern Jews in Israel, it's 5.5 to 9 cases per 1,000. This means that modern Jews may have nearly six times the number of children with autism as very religious Jews.

But, according to Shertz and other experts, the gap isn't due entirely to either underreporting or underdiagnosis.

“Now we understand that the rarity of autism among the ultra-Orthodox and Arabs is a key factor in lowering autism frequency in Israel,” Shertz told a reporter at the Israeli newspaper Haaretz in 2014.

How can something be causing autism in the modern Jewish community without affecting ultra-Orthodox Jewish and Arab communities?

**Environmental Exposure as the Cause** Raz's team pointed out that an environmental factor that could be causing autism among modern Jews “would have to relate to exposures experienced separately, and with distinct temporal patterns, by the different groups.”

For articles on acetaminophen, visit TheEpochTimes.com



Acetaminophen is often used as a pain reliever during infant circumcision in modern Jewish communities.

William Parker, a scientist who spent almost 30 years doing research at Duke University, has combed the scientific literature to try to understand why secular Jews have higher rates of autism.

Parker said that he believes that it's related to differences in circumcisions in each community.

It isn't the circumcision itself, Parker said, but the way it's done that may be causing brain damage among modern, more secular Jews. Why? Because modern Jews almost always give their newborns acetaminophen, which is the main ingredient in Tylenol.

In Israel, Tylenol is called Acamol or Dex-emol. The active ingredient is paracetamol, which is the word used for acetaminophen throughout Europe as well.

Acetaminophen is likely a causative factor in the rise in autism among children, especially boys. During traditional circumcisions, ultra-Orthodox Jews usually don't use Tylenol.

Instead, they often use wine or other alcohol. For example, in some cases, the baby is given a rag soaked in vodka to suck on during the circumcision. “You only need to know two facts to understand the observations,” Parker said. “First, our published research has shown that exposure to acetaminophen very early in life can cause autism in susceptible children. Second, modern Jews but not ultra-Orthodox, tend to use acetaminophen during circumcision.”

“Many Jews, both modern and ultra-Orthodox, usually use a bit of alcohol to help babies get past the pain of circumcision during traditional circumcision ceremonies. Unfortunately, alcohol is also one of the factors known to make people more sensitive to adverse reactions to acetaminophen.”

What about Arabs living in Israel and

elsewhere? The age of circumcision among Muslim families varies, depending on the culture, region, and family. For many, the ceremony involves an elaborate rite of passage into manhood, for which pain medication isn't appropriate. And many, if not most, Arabic families living in Israel don't circumcise newborns. Instead, they wait until the boy is about 13 years old. At this age, a child's brain is much more developed and much less vulnerable to environmental assaults.

Finally, alcohol, which amplifies the negative effects of acetaminophen, is also forbidden in Islamic cultures and not given to children as medicine.

## Circumcision Raises Autism Rates

In 2015, Danish scientists found that circumcision was associated with a two-fold increase in the prevalence of an infantile autism diagnosis.

2013 research published in the *Journal of Environmental Health* also found an association between autism and circumcision.

But Parker said that the reasons for the connection aren't widely appreciated. “We have been looking at this issue since 2016, and evidence is overwhelming that use of acetaminophen for anything early in life, whether it be vaccination or circumcision, is going to lead to autism in a subset of babies and small children,” Parker insisted.

## How Could Baby Tylenol Cause Autism?

Parker explains that the baby's liver is part of the problem.

The liver is the organ that normally detoxifies drugs.

“The best available evidence tells us that the most vulnerable time for acetaminophen-induced brain injury is immediately after birth, when the baby's liver suddenly becomes independent from the mother's

liver,” he said. “The baby's liver is only meant to process breastmilk, not drugs such as acetaminophen.”

Parker's team has concluded that the risk of acetaminophen-induced autism is much greater after birth than during pregnancy.

Parker pointed to a 2008 case-controlled study that showed that adverse reactions to vaccines were associated with autism, but only if acetaminophen was used, not ibuprofen.

**Other Jews, like the ultra-Orthodox, forgo all conventional pain medication and use comfort measures such as breastfeeding instead of analgesics.**

“There is such a large volume of circumstantial evidence that we can be certain, without any reasonable doubt, about acetaminophen causing many if not most cases of autism,” Parker said. “Each bit of evidence by itself is concerning but not conclusive. However, up to 20 different lines of evidence have tipped the scales for us.”

## Acetaminophen Plus Oxidative Stress Causes Autism

But if acetaminophen really causes autism, given the popularity of the drug for babies and children, why don't more people have autism?

“Most babies, even newborns, can handle some level of drug exposure,” Parker said. “The problem comes when too much oxidative stress builds up, which occurs in

some, but not all, babies. Oxidative stress plus acetaminophen are key ingredients in the development of many, if not most, cases of autism. They must both be present, or autism will not result.”

Oxidative stress is a metabolic condition that hinders drug metabolism. It can be caused by a wide range of factors, including genetics (babies who are homozygous for MTHFR mutations, for example, are at higher risk), exposure to a variety of environmental toxins (such as alcohol used during circumcision), and other medical conditions.

It's difficult to predict which babies and children are going to have enough oxidative stress to put them at real risk from acetaminophen, Parker said.

For Parker, who has published three peer-reviewed papers showing the connection between autism and early exposure to acetaminophen, and his research team, the observation that modern Jews have more children with autism than Orthodox Jews isn't surprising. It's expected.

“Dr. Raanan Raz at Harvard got it exactly correct,” Parker said. “It is an environmental factor that is individually experienced but depends on religion. He nailed it, although he didn't mention acetaminophen by name.”

## Newer Give a Baby Tylenol

According to a 1994 study published in the *Journal of Pediatrics*, acetaminophen doesn't work well for pain associated with circumcision. So the solution for modern Jews, according to Parker, is simple: Don't use it.

Some Jewish parents are choosing to forgo the procedure. “While I'm not qualified to offer an opinion with regard to analgesia in neonates following circumcision, I can say that some Jewish people are rethinking the necessity of circumcision altogether,” said Rebecca Wald, executive director of

Brechim, a nonprofit that advocates for the open inclusion of Jews who choose not to practice infant circumcision.

“It just makes sense to avoid injuring and traumatizing a newborn,” Wald continued. “We don't fully understand how this impacts the developing brain, but it can't be good. Efforts to ameliorate the pain are well-intended but also have potential downsides.”

Other Jews, like the ultra-Orthodox, forgo all conventional pain medication and use comfort measures such as breastfeeding instead of analgesics. And still others choose to use a different pain medication, such as baby aspirin, instead.

But the bigger picture is perhaps a little more complex.

“The people of this planet have almost universally embraced acetaminophen as a safe drug,” Parker said. “They're wrong. But changing that perception appears to

be an uphill battle. We're hoping to reach a tipping point soon. But when? Our research has shown that the drug was never shown to be safe for brain development, and we have nearly 20 lines of evidence which have absolutely convinced us that the drug causes many—if not most—cases of autism. But the practice hasn't changed yet.”

*Jennifer Margulis, Ph.D., is an award-winning journalist and author of “Your Baby, Your Way: Taking Charge of Your Pregnancy, Childbirth, and Parenting Decisions for a Happier, Healthier Family.” A Fulbright awardee and mother of four, she has worked on a child survival campaign in West Africa, advocated for an end to child slavery in Pakistan on prime-time TV in France, and taught post-colonial literature to nontraditional students in inner-city Atlanta. Learn more about her at JenniferMargulis.net*



Acetaminophen may be particularly dangerous to newborns, research suggests.

ALL IMAGES BY SHUTTERSTOCK

SEAN GALLUP/GETTY IMAGES



## HYDRATION

# 6 Major Health Benefits of Water

How much water do you need to drink to get these important life-improving benefits?

Being hydrated improves your vitality, memory, and ability to focus on the things that matter.



CHERYL NG & EMMA YU

Water constitutes a high proportion of the human body's weight and is ubiquitous in the body. It plays a crucial role in maintaining bodily functions and maintaining health. Studies have found that drinking water (in the correct ways and amount) can impact brain cognition, weight loss, and prevention of kidney stones, to name just a few.

Water makes up about 60 percent of an adult's body weight. According to a study published in the *Journal of Biological Chemistry* in 1945, the water content in major body parts of an average adult is as follows:

- Brain and heart: more than 73 percent
- Lungs: more than 83 percent
- Muscles and kidneys: more than 79 percent
- Bones: more than 31 percent

It's a well-known fact that drinking water helps restore fluid lost through metabolism, breathing, sweating, and passing waste. However, there are plenty of other lesser-known benefits to drinking water.

**1 Improves Athletic Performance**  
A study published in the *International Journal of Sport Nutrition and Exercise Metabolism* in 2017 pointed out that dehydration resulting in body weight loss of greater than or equal to 2 percent can significantly reduce performance in endurance.  
In that study, researchers measured and analyzed the urine specific gravity before

and after exercise of 430 collegiate or club-level athletes and assessed their weight changes during the course. The study found that in an 18-hole golf game, players with noticeable dehydration took significantly more shots to complete a round than did well-hydrated players. Athletes who started exercising while well-hydrated scored higher overall than those who were dehydrated.

**2 Affects Brain Function**  
The amount of water in one's body also has a big impact on the brain. A 2012 study published in *The Journal of Nutrition* found that after mild dehydration (an average weight loss of 1.36 percent) in healthy young women, their vitality, fatigue level, and general mood were adversely affected, with an increase in headaches and poor concentration.  
A 1988 study on young men also found that participants who were dehydrated by 2 percent or more of their body weight suffered a significant drop in mental functions such as short-term memory, numerical efficiency, and performance in visual-motor tracking involving attention and focus.

In addition, studies have mentioned that dehydration may negatively impact memory and brain function in children and the elderly.

**3 Potentially Improves Headaches**  
A randomized, controlled trial published in the *Journal of Family Practice* in 2012 followed the status of 102 patients with chronic headaches for three months. The researchers randomly split the patients into a control group and a water-drinking group. The patients in the latter group had

**Studies found that drinking water can impact brain cognition, weight loss, and prevention of kidney stones.**

**60 PERCENT**  
of an adult's body weight is made up of water.



## So How Much Water Should You Drink?

While "eight glasses a day" may be the most talked about, it may not be true for everyone, since various factors can affect our hydration needs.

The National Academy of Medicine recommends 13 and 9 cups of fluid per day for healthy men and women, respectively, where 1 cup equals 8 ounces. For people who are physically active or exposed to very warm climates, the required intake can be higher, and slimmer individuals may require less. Fluid needs vary from one person to another, and even from day to day.

1 1/2 liters (about 3 pints) added to their daily water intake.

The results showed that there was no apparent change in the number of headache days reported by patients in the water group with moderate headaches, but that drinking more water resulted in a significant improvement in migraine-specific quality of life. More research is needed to confirm whether increasing water intake helps improve headaches. However, the researchers suggested that headache sufferers try this noninvasive intervention for a short while to see if it helps.

**4 Helps Prevent Constipation**  
Lack of water can be one of the causes of constipation. Studies have shown that staying hydrated is an important way to prevent it.

**5 Prevents Kidney Stones**  
A review of studies published in the journal *Nutrients* in 2019 showed that increasing fluid intake can reduce the risk of kidney stones, and high fluid intake can also reduce the risk of kidney stone recurrence.

**6 Aids in Weight Loss**  
Drinking water can help with weight loss, and laboratory studies show that drinking water while eating meals reduces hunger and increases satiety. Middle-aged and elderly people who drink water half an hour before meals can reduce their calorie intake during meals.

In a study published in the journal *Obesity (Silver Spring)* in 2010, middle-aged and elderly participants who drank a half liter (1 pint) of water before meals lost 44 percent more weight after 12 weeks than the participants in the control group, who didn't drink water before meals.

## THE WATER CONTENT

in major body parts of an average adult is as follows:



**73%**  
Brain and heart



**83%**  
Lungs



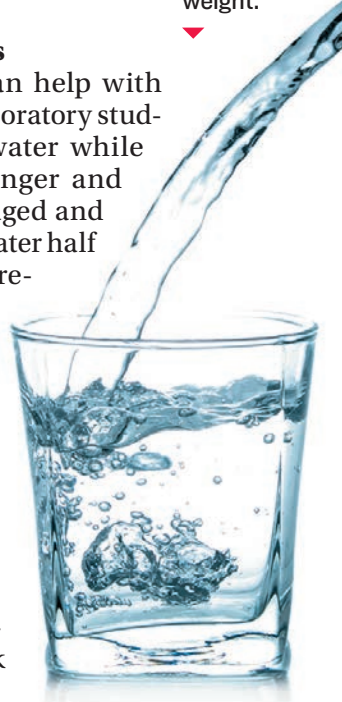
**79%**  
Muscles and kidneys



**31%**  
Bones

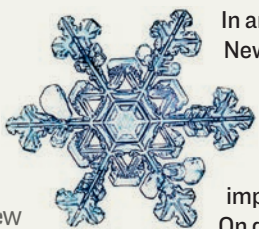
SOURCE: ASTUDY PUBLISHED IN THE JOURNAL OF BIOLOGICAL CHEMISTRY IN 1945

Drinking water before meals can make you feel fuller and help you lose weight.



## Real Stories, Experiments Related to Water

More than 20 years ago, New Zealander Veda Austin was involved in a car accident that left her with a broken collarbone, broken ribs, whiplash, and internal bleeding. Half of the windshield was embedded in multiple parts of her body, and the internal bleeding left scar tissue in her small intestine, which grew during the next few months, slowly severing her digestive system. Only a saline intravenous drip helped relieve her severe dehydration, nausea, and pain. After undergoing bowel surgery, Austin began adding a teaspoon of sea salt to her glass of water before breakfast daily.



In 2011, Austin established the Lemurian Wellness Clinic and began further research into the benefits of natural salt, water, and water alkalinity. She discovered that naturally alkaline water could be greatly beneficial, which prompted her to seek out the purest water source possible. Eventually, she found some pure water sources in New Zealand but cannot make them public due to certain confidentiality agreements.

In an interview, Austin shared with *New Zealand's Good* magazine that drinking water had some amazing effects on her, giving her glowing skin in just three days and dramatically improving her digestive system. On days six and seven, she noticed some small bumps on one of her arms and her jaw, which were painful to touch. So she started adding a specific percentage of dissolved Himalayan salt for every liter of water. By the 10th day, she discovered that 27 small shards of glass that had been in her body for 20 years had been expelled from her skin.

Austin also mentioned that her water research was deeply influenced by Japanese scientist Masaru Emoto.

Emoto has been taking photos of water crystals since 1994. He compiled some of these photos into a publication called "The Hidden Messages in Water," which has been translated into more than a dozen languages.

In one of his research experiments, Emoto taped words or phrases to bottles of water and observed the changes in water crystallization. The research results show that when the water "sees" graceful words such as "kindness," "gratitude," and "praise," the water crystals will produce beautiful patterns. On the contrary, with negative words such as "hate," "complaint," and "pain," the water crystals will take duller, less attractive shapes.

Emoto did many other experiments to show that water is a kind of message carrier and that it can respond to the messages conveyed by language, music, and text, presenting different crystallization states as a result.

## SOCIAL MEDIA

# How Social Media Affect Your Memory

Heavy social media use undermines our ability to learn, what we remember, and how we remember it

ZRINKA PETERS

The explosive proliferation of social media platforms, and their use by billions of people each day, shows us that this novel form of interaction between human beings and technology is having a profound impact.

This technology has allowed practically everyone, all over the world, to connect with neighbors near and far, and instantly share everything from cute pet photos to heated political opinions. Social scientists are scrambling to figure out what impact this sea change in human interaction is actually having on us—and on our brains—at each stage of life. Recent research shows that when it comes to memory, heavy social media use seems to weaken us.

## The Dominating Influence of Social Media

Whether it's Facebook, YouTube, Instagram, WhatsApp, or TikTok—each of which holds the regular attention of well over a billion users (or in the case of Facebook, almost 3 billion)—scrolling through social media feeds is a dominant pastime for many. Americans spend, on average, a little over two hours each day on social media, but this time varies widely between different age groups.

Generation Z, for example—those born from the mid-90s to around 2010, and the first generation to be raised with an internet connection always within reach—spends an average of 4 1/2 hours per day on social media. And these are "averages." According to Pew Research, 46 percent of teens and 44 percent of 18–49 year-olds report being online "almost constantly," and it's likely this same cohort spends an above-average amount of that time on social networking sites.

Social media is clearly a dominating influence, and questions are being raised about how this medium may be impacting our relationships, mental health, and cognitive function.

## Social Media's Harmful Impact on Memory

Despite the positive potential of social media to provide meaningful human connection, research shows concerning, harmful effects of heavy social media use on mental and emotional health, especially for adolescents.

Three related studies, published in the May 2018 *Journal of Experimental Social Psychology*, examined how memory is affected when participants record their experiences using digital media, when they share them, and when they simply don't use media. In each case where participants recorded or shared their experiences, their ability to remember details from their experience was reduced.

"Across all three studies, we found evidence that media use impairs memory, irrespective of whether memory was tested soon after the experience or over a week later," the study authors concluded.

Another study, published in February 2020 on behalf of The Gerontological Society of America, examined the correlation between memory and time spent on social media in adults and found that, on days when social media usage was "high," participants consistently reported more memory failures.

## 'Dopamine Hit' Addiction

Social media could be undermining our ability to remember for a couple of reasons: It's distracting and addictive. That's by design.

"The thought process that went into building these applications, Facebook being the first of them ... was all about: 'How do we consume as much of your time and conscious attention as possible?' And that means that we need to sort of give you a little dopamine hit every once in a while because someone liked or commented on a photo or a post or whatever," Sean Parker, the first president of Facebook, said in a 2017 interview with Axios.

That mechanism will trigger users to contribute more content, likes, and comments, Parker said.

"It's a social-validation feedback loop ... exactly the kind of thing that a hacker like myself would come up with because you're exploiting a vulnerability in human psychology. The inventors ... understood this consciously. And we did it anyway."

Matt Johnson, a neuroscientist with a doctorate in cognitive psychology from Princeton University, consumer psychology expert, and author of "Branding That Means Business," told *The Epoch Times* that experiences like that can preempt memory formation.

"There's an important process that needs to happen for new memories to be formed.

The better we're focused on the experience, the better we'll recall it later," he said. "When we're having an experience and our phone is there, we're always going to be checking it. There are a host of digital experiences that can lure us away from the experience we could be having."

Precisely because it's hard to stop ourselves from reaching for a device every time it lights up with a notification, we are distracted and multitasking more than ever—but we're not very good at it. In one randomized controlled trial, college students who scrolled through Instagram while listening to a speaker recalled significantly less of the material presented than their peers who listened without digital distraction.

We just don't remember things as well when our attention is divided. And the impact on education is concerning.

"As a professor, I see it myself," Johnson said, noting the effects of digital distraction on the classroom experience.

"Also, the longer you spend on these platforms, you acquiesce to immediate gratification. You get a real uncomfortable impatience with experiences that are not immediately gratifying. Education is a long-term proposal. The students lose patience for longer-term enterprises, like learning a subject or getting through a course."

## The 'Google Effect'

Another way heavy social media use may impact memory is by way of a phenomenon researchers are calling the "Google effect." Not so long ago, finding information about an unfamiliar subject meant substantial personal effort—trips to the library, paging through reference books, or phone calls to others who might be in the know.

Now that virtually any bit of information, from the most trivial to the arcane, can be found in seconds via Google or other search engines, not only does it take less effort to find information, but most of us also put less effort into remembering it. We in effect "out-source" our memory to the internet and use social media as one of our personal online memory banks.

In fact, one study published in the Aug. 5, 2011, issue of *Science* found that "when people expect to have future access to information, they have lower rates of recall of the information itself and enhanced recall instead for where to access it." In other words, we're more likely to remember which website to search than the actual information we're looking for.

Johnson said when it comes to learning, effort matters.

"There's a really strong relationship between the effort you tend to put into a task and how likely you are to remember it. The more you strain your cognitive faculties, the better you'll be able to remember it. If you really have to work for it, combining a lot of different cognitive processes, that's going



Life can become a social media driven performance for others.

“Online, you'll get the answer, but you'll basically have no memory of that experience and have to look it up again. We export our long-term memory to these devices.”

Matt Johnson, neuroscientist

neuroscientist



Watch your step—social media is designed to distract you.

to be a very strong memory. Online, you'll get the answer, but you'll basically have no memory of that experience and have to look it up again. We export our long-term memory to these devices."

## Breaking the Habit

To what extent social media can create enjoyable experiences and meaningful connections between people may be up for debate, but one thing is not—the amount of time most of us spend on social media is changing what we remember, how we remember it, and possibly even our memory capacity. And a growing body of research suggests that, in large amounts, the effect on memory is mostly detrimental.

It's impossible to say precisely how much time spent on social media is too much, but there are some simple guidelines that can help manage use, especially for adolescents. Research suggests that negative mental health effects increase when more than two hours are spent on social networking sites daily, so that may be a good upper limit to be aware of.

Johnson suggests also regularly reflecting on your recent social media experiences and being aware of any regrets or negative experiences associated with that time.

Putting clear limits on time spent on social media is also prudent. Johnson suggests using a timer to have an audible reminder of when the time is up.

"When the timer goes off, turn [the app] off even if it's mid-video. Set up a strict structure for how long you allow yourself to stay on these apps. Essentially we need to export our approach to them to external rules. If we leave it to our own self-discipline, the apps will beat us every time because that's what they're designed for."

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*

ALL IMAGES BY SHUTTERSTOCK



Social media has been designed to be highly addictive. Research finds 46 percent of modern teenagers report being online on a near-constant basis.



# Your Life Is Too Valuable to Waste Chasing Possessions

Chasing more will leave you always wanting more—and that’s no way to live a good life

When we shift our focus from possessions to investing in the relationships that matter most, we can build strong ties and a solid foundation for ourselves and others.



**JOSHUA BECKER**

*“You only live once, but if you do it right, once is enough.” — Mae West*

There is more joy to be found in pursuing less than we can ever find in pursuing more. Deep down, this is a message that we already know to be true.

It’s just that, since the day we were born, we’ve been told that possessions equal joy.

Every advertisement that has ever been created sets out to convince us that our lives will improve if we buy whatever they’re selling.

And because we hear that message so many times and from so many places, we believe it. As a result, we spend the best years of our lives working long hours to make good money so that we can go buy nice stuff: houses, cars, clothes, devices, and toys.

But when we hear the simple message that there is more joy and fulfillment to be found in owning less and focusing on what satisfies us, it rings true in our hearts and souls.

We know that possessions don’t equal joy. And we know that our life is too valuable to waste chasing them. It just helps to be

reminded from time to time.

So today, remember:

**Our Lives Are Short**

And we only get one shot at living them well. The time goes quick. And once we use it up, we can’t get it back. So make the most of it.

Possessions can easily steal our time and energy. They require unending attention to be cleaned, maintained, fixed, replaced, and removed. They steal our precious attention, time, and energy, and too often, we don’t even notice it—until it’s too late.

**Our Lives Are Unique**

Our looks, our personalities, our talents, and the people who have influenced our lives have made us special. As a result, our lives are exactly like no one else.

And just because everyone around us may be chasing material possessions, it doesn’t mean we have to as well. We get to choose our symbols of success.

Far more than material success, our hearts desire significance because significance lasts. On the other hand, possessions are temporal. They perish, spoil, and fade. And most of them, by design.

**Our Lives Hold Opportunity to Inspire**

Let’s make footprints worth following because nobody ever changed the world by following someone else.

People who change the world live differently and inspire others to do the same. Possessions may briefly impress, but they never truly inspire.

**Possessions can easily steal our time and energy.**

**Our Lives Are Important**

Our hearts and souls make us valuable. Never sacrifice your important role in this world by settling for possessions that can be purchased with borrowed money.

**Our Lives Are Defined by Our Relationships**

From our closest family members to the strangers we encounter every day, the relationships we cultivate have a profound impact on our lives.

By shifting our focus (and resources) away

from physical possessions and investing them into positive relationships, we can build a strong foundation for both ourselves and others.

**Our Lives Deserve Better**

Joy, happiness, and fulfillment are found in the invisible things of life: love, hope, peace, and relationships. And they aren’t on sale at your local department store. Stop looking for them there.

People who live their lives in pursuit of possessions are never content. They always desire newer, faster, or bigger because material possessions can never satisfy our deepest heartfelt desires. Those who always want more will never find it.

Be reminded today that your life is too valuable to waste chasing material possessions.

And find more joy by choosing to pursue better, rather than more.

*Joshua Becker is an author, public speaker, and the founder and editor of [Becoming Minimalist](#), where he inspires others to live more by owning less. Visit [BecomingMinimalist.com](#)*

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