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# THE EPOCH TIMES

# MIND & BODY

## Vitamin D Can Mend a Broken Heart

New research  
reveals microscopic  
medicinal effect the  
sunshine vitamin can  
have on sick cells **2**

Many of us don't get  
enough sun or take  
enough vitamin D to  
compensate.

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# TRUTH CAN BE BLOCKED BUT NEVER STOPPED

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TRUTH and TRADITION


# A NEWSPAPER ABRAHAM LINCOLN WOULD READ

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# Vitamin D Can Mend a Broken Heart

New research reveals microscopic medicinal effect the sunshine vitamin can have on sick cells

In contrast to pharmaceuticals, vitamin D—which is generated by sunlight on the skin—has no harmful side effects.



**WILLIAM F. SUPPLE JR.**

First, the bad news. Cardiovascular disease (CVD) is the No. 1 cause of death worldwide. The World Health Organization estimates that 17.9 million deaths per year are due to CVD—31 percent of all deaths. In the United States, the Centers for Disease Control attributed 647,000 deaths to CVD in 2019, accounting for 1 in 4 deaths—one every 37 seconds. The major risk factors for CVD are high blood pressure, high LDL cholesterol, and smoking. Almost half of all Americans have at least one of these risk factors. Now the good news. Exciting new discoveries indicate that vitamin D can protect against CVD, and, quite amazingly, even reverse the damage to diseased cardiovascular tissue. Vitamin D is readily available, cheap, safe, and plentiful. In fact, all we have to do is go outside on a sunny summer's day to allow our skin to manufacture all we need. Fortunately, when there's no sun available, there are safe and inexpensive vitamin D supplements to fill the need. The problem is that many of us don't get enough sun or take enough vitamin D to compensate. Many cross-sectional studies of the population have shown that Americans are vitamin D deficient—some severely so. Furthermore, the National Health and Nutritional Examination Survey III (NHANES) found that vitamin D deficiencies are related to increased risk for hypertension, diabetes, hyperglyceridemia, and obesity. Other studies have found greater risk of stroke, heart attack, and all-cause cardiovascular mortality linked to lower vitamin D levels.

**Endothelial Dysfunction**

To understand CVD, we need to understand endothelial dysfunction. The endothelium is a single layer of cells that line the interior surface of blood vessels. These cells are in direct contact with circulating blood and have dramatic effects on cardiovascular function. This single layer of cells is really where the rubber meets the road with respect to CVD. Healthy endothelial cells provide a smooth surface over which blood flows freely. The loss of proper endothelial cell function, which can occur in a variety of situations—most notably under conditions of oxidative stress—can lead to those cells becoming inflamed, rough, and sticky. Blood-borne fats (LDL cholesterol) and/or calcium adhere to the inflamed endothelium causing the narrowing of the blood vessels (atherosclerosis). Endothelial dysfunction is a common denominator in diseases such as hypertension, diabetes, obesity, and heart failure. Interestingly, these are the diseases associated with insufficient levels of vitamin D. Because of a series of elegant experiments by Tadeusz Malinski and his colleagues at the Nanomedical Research Lab at Ohio University, we now know what constitutes healthy endothelial function at the level of the single endothelial cell. By using a nanosensor system, Malinski was able to record, in real-time, the molecular changes that occur in healthy and diseased endothelial cells. Malinski found that healthy endothelial cells are characterized by a relatively greater production of nitric oxide (NO), a cytoprotective vasorelaxant, or substance that relaxes blood vessels and stimulates mucus production and enhanced blood flow. These healthy cells also produce relatively less of the cytotoxic vasoconstrictor, peroxynitrite, better known by its chemical formula ONOO. ONOO reduces blood flow by constricting blood vessels. Cytotoxic substances cause cell damage or cell death. In healthy blood vessels, concentrations of NO greatly outweigh those of ONOO. Dysfunctional endothelial cells demonstrate higher concentrations of ONOO. This balance between the vasorelaxant nitric oxide (NO) and the vasoconstrictive peroxynitrite (ONOO) determines the health of the vascular endothelium. Not enough NO or too much ONOO spells trouble for cardiovascular health. What determines the balance? You guessed it—vitamin D! Using the same nanosensor experimental setup, Malinski found that administering the active form of vitamin D (calcitriol) increased the concentrations of NO almost fourfold in the endothelial cell while keeping the concentration of cytotoxic ONOO at bay. NO is also a vasoprotectant, which means it protects blood vessels. Remarkably, Malinski claims that his studies indicate that vitamin D treatment may be important in the “restoration of dysfunctional cardiac endothelium after heart ischemia, and capillary endothelium after brain ischemia.” In other words, vitamin D could be a powerful agent to not only prevent various cardiovascular diseases from developing, but also in repairing the vascular damage following heart attack and stroke, as well as vascular damage caused by diabetes, hypertension, and atherosclerosis.

**Experimental Model**

Researchers try to find ways to recreate diseases symptoms so they can test cures. Researchers can apply Angiotensin-II (A-II) to healthy endothelial cells, to create an experimental model of dysfunctional endothelium. This model is similar to that observed in hypertension. The model enables researchers to study treatments that affect the diseased endothelium. When researchers apply A-II, it creates the unhealthy balance of too much ONOO and too little NO. When Malinski applied vitamin D to this dysfunctional endothelial cell preparation, the NO-ONOO balance reverted back to that of healthy cells. In other words, treatment with vitamin D restored levels of vasoprotective NO and reduced levels of vasodestructive ONOO. The effect of the vitamin D on reversing this disease state was dose-dependent and occurred within a few seconds. The takeaway message from these studies is that vitamin D plays an important role in maintaining vascular health and preventing and treating vascular diseases. Even though Malinski's experiments were done in a Petri dish on isolated human endothelial cells, the results are immediately applicable for several reasons. First, there is a long history of observational reports showing a relationship between adequate levels of vitamin D and cardiovascular health. Previous studies have shown that vitamin D improves NO, modulates vascular tone, and lowers blood pressure in those with hyperten-

sion. Malinski's studies reveal a molecular mechanism that could explain these beneficial effects. Second, many of the antihypertensive drugs used today operate by adjusting the balance between vasoprotective and vasodestructive substances in endothelial cells, conceptually similar to what Malinski has shown vitamin D to do. However, in contrast to these pharmaceuticals, vitamin D—which is generated by sunlight on the skin—has no harmful side effects. “There are not many, if any, known systems which can be used to restore cardiovascular endothelial cells which are already damaged, and Vitamin D can do it,” Malinski said. “This is a very inexpensive solution to repair the cardiovascular system. We don't have to develop a new drug. We already have it.”

**What to Do**

You can take immediate steps to maintain your health in a safe and inexpensive manner by making sure you're getting enough life-saving vitamin D. Consult with your doctor. If your doctor is not recommending much higher levels of vitamin D, 5000 IU to 8000 IU per day, they are not up to date. This is not abnormal. Clinical practice usually lags years (or even decades) behind available research. It is a good idea to get your vitamin D levels tested. For most people, 50-100 ng/ml is a healthy level and should be achieved with sensible exposure to sunlight and supplements. If you are vitamin D deficient, and getting sunlight is a problem, supplement with vitamin D3 (cholecalciferol) the most bioavailable form of vitamin D.

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## CHINESE WISDOM FOR SEASONAL LIVING

# Hot Weather Could Treat Your Winter Illness

MOREEN LIAO

*A solar term is a period of about two weeks and is based on the sun's position in the zodiac. Solar terms form the traditional Chinese calendar system. The calendar follows the ancient Chinese belief that living in accordance with nature will enable one to live a harmonious life. This article series explores each of the year's 24 solar terms, offering guidance on how to best navigate the season.*

Summer is already well underway, and that means you should savor the remaining cooler evenings and mornings, because they won't last. After “Minor Heat” from July 6 to July 21 passes, even a breeze will feel hot. As the weather is often very hot and humid during this solar term, most people will take time off from work for vacation, to rest and recuperate. It's also a unique time, according to traditional Chinese medicine, to purge winter diseases from the body.

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ditional Chinese medicine, to purge winter diseases from the body. This year, the ideal period for this is between July 16 and August 15. This also is the time to start building health reserves for the cooler months ahead. There are five seasons and five elements recognized in Chinese traditional medicine, and each season has a corresponding element. Spring is associated with wood, summer with fire, late summer with earth, autumn with metal, and winter with water. Among the five elements, wood generates fire, fire generates earth, earth generates metal, metal generates water, and water generates wood. Thus, the transitions between most of the seasons, say from spring to wood, and from summer to fire, are smooth and natural. But the transition from summer's fire to autumn's metal is unnatural, since fire conquers metal by melting and forging it. This unnatural transition is an opportunity. Just as the proper application of fire can purify metal and make it stronger, if we care for our health and follow the correct habits through these hot days, our bodies can stay healthy well into winter. Sweat comes easily and the skin's pores are open at this time, so sweat stays on the surface of our skin, and some people may get cold very easily. The young and the elderly should be careful to stay hydrated and avoid the heat when possible.

**7 Ways to Live in Harmony With 'Minor Heat'**

1. Drink natural spring water regularly, but not too much at one time.
2. Don't eat very cold or chilled foods, as these reduce the yang energy the body needs to get through the coming autumn and winter.
3. Regulate the amount of food you consume; too much, or too little, can burden the body.
4. Coffee, a diuretic, can help to flush out heat and excess water retention.
5. A foot massage or meditation can help to adjust and rebalance the body.
6. For those who often have cold hands in the winter, add some organic ginger to your tea, or enjoy ginger with your food.
7. Don't avoid sweating, especially don't keep yourself inside air-conditioned rooms all the time. Sweating will cleanse your body and pores, and reduce heat from inside-out naturally. Too strong or too sudden of a temperature change closes your pores, and seals all the humidity and heat inside your organs and channels. That's one of the major reasons for disease, according to traditional Chinese medicine.

**Seasonal Foods**

At this time, beneficial foods include cucumber, zucchini, watermelon, rockmelon, honey melon, dew melon, bitter melon, winter melon, plum, cherry, green bean, Job's tear, green tea, peppermint, lotus seed, white fish, doufu, honeysuckle, and chamomile tea.

*Epoch Times contributor Moreen Liao is a descendant of four generations of traditional Chinese medicine doctors. She is also a certified aromatherapist and the founder of Ausganica, a manufacturer of salon-quality, certified organic cosmetics. Visit Ausganica.com*



Regulate the amount of food you consume; too much, or too little, can burden the body.

The young and the elderly should be careful to stay hydrated and avoid the heat when possible.







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FOOD AS MEDICINE

# 5 Best and Worst Anti-Aging Substances

Some foods help you stay young while others age you beyond your years

Many of you are aware that how you look and feel largely depends on what you put into your body. The health of your gut, brain, eyes, muscles, and even skin can be improved or worsened through your diet and lifestyle choices.

This list highlights the best and worst substances for aging, and by adding or removing these items from your diet you can dramatically mediate the effects of time on your body and decrease your risk of age-related illnesses.

5 Best Anti-Aging Substances

**1. Melatonin**  
Melatonin's anti-stress properties, as well as its effects on the immune system, have been well researched for their anti-aging effects. Additional anti-aging benefits of melatonin include its ability to improve the microstructure of bones and protect the skin. Melatonin has also been studied for its beneficial effects on a variety of age-related diseases, including cancer.

**2. Curcumin**  
Curcumin's anti-aging effects come from its antioxidant and anti-inflammatory properties, which work to suppress NF-kappaB-dependent inflammation, a type of inflammation believed to be responsible for the development of many age-related disorders in which cellular senescence (the loss of a cells ability to divide and grow) is involved, including cancer and atherosclerosis.

Curcumin may also lower the risk for age-associated cognitive disorders like Alzheimer's disease. Researchers believe that curcumin could be used as a therapeutic cognitive treatment for elderly adults.

**3. Coffee**  
Research has demonstrated that caffeine, a bioactive natural compound present in coffee, protects against oxidative stress-related skin disease.

Caffeine may also protect against age-related cognitive diseases such as Alzheimer's and dementia, and a recent study found that drinking 3-5 cups of coffee each day decreased the risk of these disorders by 65 percent.

Although additional research is necessary to further study these effects, researchers are enthusiastic about coffee's therapeutic benefits. Further, research suggests many of the benefits may stem not



Grape seed extract can protect against oxidative stress and also lower cholesterol.



Research has demonstrated that caffeine protects against oxidative stress related skin disease.

only from caffeine but from other natural compounds in coffee as well.

**4. Grape Seed Extract**  
Grape seed extract is known for its high concentration of proanthocyanidins, a type of polyphenol known for its immunomodulating effects and ability to protect against oxidative stress and lower cholesterol. Proanthocyanidins also inhibit the progression of atherosclerosis and diabetes, two common diseases often associated with aging.

**5. Probiotics**  
A common concern with aging is the appearance of the skin. Probiotics work to restore the acidic pH balance of skin and improve photoaging, premature aging of the skin caused by excess exposure to UV radiation, through the up-regulation of antioxidant components.

Additionally, many degenerative diseases are related to imbalances of gut microbiota, microorganisms necessary for optimal nutrient metabolism. Changes in diet and microbial diversity throughout life may lead to a higher risk of infections and diseases, but researchers believe that a daily intake of probiotic supplements or foods may improve the aging process and reduce the risk of age-related disorders.

5 Worst Anti-Aging Substances

**1. Artificial Sweeteners**  
Researchers have found that intake of artificial sweeteners such as aspartame or sucralose is associated with a higher risk of weight gain and may contribute to the risk of developing diabetes.

The health of your gut, brain, eyes, muscles, and even skin can be improved or worsened through your diet and lifestyle choices.

Additional risks of artificial sweeteners include their adverse effects on the gut microbiome, increasing the risk of tissue inflammation and diseases associated with improper gut microbiota balance, including cancer, cardiovascular disease, diabetes, and obesity.

**2. Sugar**  
Research has demonstrated that glucose (sucrose, or table sugar, is made up of glucose and fructose) impairs skin repair. Diets high in sugar are also linked with a higher perceived age among diabetic and non-diabetic subjects.

By reducing glycation load (a damaging covalent attachment of a sugar to a protein or lipid) it's possible to effectively lower premature cellular senescence in skin fibroblasts and increase collagen repair while also lowering the risk of cardiovascular disease and diabetes, two age-related diseases linked with excess sugar consumption.

**3. Aluminum**  
While aluminum has long been considered an innocuous metal and therefore

safe to include in cookware and food preparation processes, researchers have now discovered that prolonged exposure to aluminum may increase and hasten the risk of neurodegeneration and brain-aging disorders, including diseases like Alzheimer's.

**4. Trans-Fatty Acids**  
There is some research to suggest that a diet low in trans-fatty acids may reduce the risk of Alzheimer's disease and other forms of dementia. Avoiding these types of synthetic fats may also lower the risk of obesity and Type 2 diabetes, which are also risk factors for age-related dementia. Although more research is needed, diets low in these fats (such as the Mediterranean diet) seem to lower dementia risk.

**5. Tobacco and Alcohol**  
The use of tobacco products and alcohol have both been linked to premature skin aging. Other dangerous effects of tobacco use include increased oxidative damage and decreased absorption of antioxidant vitamins, like vitamin C, increasing the risk of age-related diseases. Similarly, long-term use of alcohol disrupts cellular aging and damages telomere length. Telomeres are often compared to the bindings at the end of shoelaces. They effectively keep DNA from unraveling. Some researchers believe that even moderate consumption of alcohol may severely affect biological health as these shortened telomeres are a predictor of increased mortality.

Additionally, the effects of alcohol seem to worsen with age, since liver enzymes are less able to effectively metabolize alcohol over time. Finally, heavy alcohol consumption is linked with changes in brain plasticity and cognitive decline, although further research is needed to assess these correlations.

Properly nourishing your body with the right nutrients and lowering your exposure to the substances listed above are solid steps to decreasing your risk of age-related diseases like cardiovascular disease, diabetes, cancer, and obesity while also improving your quality of life, skin health, and gut microbiome.

To view a complete list of the substances that have been researched for their effects on aging, please visit the GreenMedInfo.com research database on aging.

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# Consequences of Recreational Cannabis Use According to Chinese Medicine

J.R. ZALK

Many people are drawn to cannabis for the feeling it imbues, but cannabis has side effects and problems with overuse. Most users choose to ignore these problems due to its psychedelic effects.

One of the best ways to understand how cannabis affects our health is through the principles of traditional Chinese medicine. While these concepts may seem unfamiliar, regular users of cannabis may find they offer a clear explanation of their experience.

The 3 Treasures

Chinese medicine focuses on what are known as the Three Treasures that constitute our life. These are known as Jing (essence), Qi (vitality), and Shen (spirit). The goal of Chinese medicine practitioners is to harmonize the Three Treasures.

Jing, or, essence, is a non-renewable substance that is the basis of growth, development, and reproduction. Concepts from western science that may be useful to understand Jing are DNA and neural crest cells. Neural crest cells are almost like the seed cells that our body grows from when we are just beginning to form as an embryo. DNA is also a useful idea, since DNA accumulates damage over time and can no longer perform its function properly, leading to aging, according to the DNA damage theory of aging. In a sense, DNA runs out, and can no longer help us reproduce healthy cells and stay young.

Qi is a concept many people are familiar with. It is the energy that drives the body, the difference between living tissue and dead. Qi is obtained by the energy we get from food and breathing and is what drives the various circulations and movements of our body.

Shen, or spirit, is responsible for consciousness. It drives cognition, our emotional life, and who we are as a being.

Understanding the three treasures will help you understand how marijuana affects the users according to Chinese medicine.

Burning Jing

Using cannabis takes Jing and rapidly turns it into Qi and Shen, thus, you lose a lot of essence over time, but gain a temporary boost in vitality and spirit. Since your body is releasing Jing faster than the body can assimilate it, it runs out more quickly. It's inefficient, like a car that has more power but less fuel economy. This would be similar to going to college with a large trust fund only to overspend it and find yourself penniless after a mere two years into your four-year degree. Overspending your allotted Jing makes one understand why people who consume a lot of drugs might look like they are aging faster than is normal.

Of course, like the student who blows through their trust fund, there are certain experiences that the user may pursue.

That rapid transfusion of Jing can fuel inspiration and activity. It may explain why cannabis users are often artists or creative. They want to be in deep alignment with their spirit and shine brightly into the world. There is an expanded creative process. But, longer-term, there is a weakened visionary process and inability to take action. This is why many marijuana users are full of grand ideas but are unable to complete what they've begun. They lose the ability to execute.

The continuous depletion of the Jing can create further issues such as depression, insomnia, lack of motivation, and a diminished sex drive.

Artificial Enlightenment

If you find yourself attracting a lot of friends who regularly use cannabis, you might have a gift for attracting people who are seeking enlightenment and transformation. Cannabis use, especially when used recreationally, can lead to new insights and open channels of creativity, though these discoveries can seem less powerful in the sober light of day.

Cannabis users may feel they have gained a deeper spiritual connection. True spiritual cultivation requires the practitioner to still the mind and open the heart to gain a truer sense of reality. Marijuana users may gain a semblance of this experience, though it can also be contaminated by their personal issues. Nevertheless, this feeling can be deeply stirring.

Many are addicted to this feeling, and therefore continue to use cannabis despite the fact that the enlightenment that they felt was only fleetingly attainable and not sustainable. In order to attain the enlightenment that we seek, we must integrate and assimilate the information more than once to be able to transform, not just access it once or twice quickly and artificially.

When at the peak of health, many have experienced "highs" practicing yoga, tai qi, and meditation, leading to longer-lasting positive insights and energy. Transcendental Meditation,

Buddhism and Daoist practices also aim for enlightenment. While the wording is different, this is the same goal of other religious practitioners. Christians describe a feeling of being closer to God. The difference between these natural ways to seek enlightenment and recreational drug use is that the latter is the lazy way to find enlightenment because no work was involved.

It's artificial. Cannabis can give the feeling of elevating, but without actually changing the person. There are also negative side effects from the body trying to re-balance due to the impact of the drug.

If someone has a long-standing relationship with drugs or alcohol, it is good to ask at what age they started using recreational drugs, as this is the time that their psychological growth was stunted.

Recreation Versus Addiction

There is a fine line between recreational use of any drug and addiction.

I was told by a patient, "If I don't smoke weed, then I can't shut off my brain. I do calculus problems as I'm trying to sleep, and I never get any rest!"

This reminded me of all the genius peers I saw from middle school to college who smoked cannabis in order to get some peace of mind. But in many cases, their grades started dropping after continuous cannabis use. The woman above is a chemical engineering student and mother of three. She was forced to stop smoking when she became pregnant with her third child, and came to me for help.

She was a patient even before getting pregnant. I would watch with interest as she would tell me a story, but as the ending got near, her temper would flare: she would raise her voice (volume, tempo, and pitch), and revealed that she couldn't control her emotions. This is a side effect of marijuana, leading to an imbalance of what Chinese medicine describes as liver fire.

Sometimes, she would end her story shaking and crying, only to move on to another subject almost immediately. I knew she was a regular cannabis user even before she told me.

This liver fire is related to the mood swings cannabis users can display.

Recovering From Cannabis

For all the creative vision cannabis can provide (though this typically diminishes over time), it uses a tremendous amount of resources. We must guard our Jing like the treasure that it is. If you use cannabis, it's critical to keep an awareness about usage in order to know how many resources it consumes. It seems innocuous at first, but it takes a toll, and it's a heavy price to pay. The loss of motivation and complacent attitude of many long-term cannabis users reflects this price.

Depending on frequency of consumption, reducing or eliminating cannabis will yield similar results to any type of detox, such as cravings and irritability. Therefore, it is best to find a ritual during the transition process. For patients who refuse to quit smoking, herbal remedies such as Sha Shen Mai Men Dong will help to protect their yin and kidney organs.

Cannabis as an Escape

Understanding why the cannabis user is trying to self-medicate and what they are trying to escape might be difficult in the midst of drug-use.

If someone has a long-standing relationship with drugs or alcohol, it is good to ask at what age they started using recreational drugs, as this is the time that their psychological growth was stunted.

For instance, if someone started using at age 15, then there may have been something at that age that they couldn't handle and drugs were an easy escape. If the same person decides to get sober at age 25, there is a whole new set of rules and responsibilities that the world will impose on them and that they may struggle with.

Being sober may be hard without help from therapists or mentors.

The new "sober world" might prove to be too much for them and they may relapse. Alcoholics Anonymous (AA) is a free program and is translatable to any drug. The program is free, meets worldwide, and has weekly lessons along with mentors to help people "grow up" and stay clean.

*J.R. Zalk holds a master's degree in Chinese medicine from Middlesex University in London and is a licensed acupuncturist living in Boulder, Colo.*



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MADE TO MOVE

# Why Strength Matters

MOHAN GARIKIPARITHI

You might not need to lift boulders, tires, or other heavy objects every day. But regardless of that, strength matters.

Being strong enough to take on daily tasks makes life easier. But strength goes further than physical ability. Research has indicated muscle strength can also provide insight into your risk for chronic illness.

One way that muscle helps is through glucose metabolism. When you have strong muscle, your body has more area to store glycogen (sugar). This can improve insulin sensitivity and reduce the risk of metabolic syndrome, fat storage, and Type 2 diabetes.

A new study published in the American Journal of Preventative Medicine shows that grip strength is associated with future risk for Type 2 diabetes.

The study found that apparently healthy adults who had weak grip strength were more likely to develop Type 2 diabetes than those with a stronger grip. Grip strength is a good indicator of overall strength.

So, how do you get stronger?

Resistance exercise and proper nutrition are key. For muscle to become and remain strong, it has to be continuously built and challenged. It's built and maintained with adequate protein consumption and challenged with weight-bearing exercise.

A great place to start is resistance bands. These elastics don't restrict natural movement patterns and provide versatility along the strength curve (which means you can adjust resistance where you want it). They can also be used virtually anywhere at any time.

Some things to keep in mind when picking bands are resistance level, manufac-

turer, and components. It's recommended to get a set of a few bands so you can reach appropriate levels of resistance. Your legs and back require more weight than your arms.

Purchasing a set that includes a door anchor is also worthwhile. This allows greater versatility for movements.

Building strength is about more than just lifting. Muscle helps improve metabolism and fight against chronic illness like Type 2 diabetes. Resistance training can play a major role in your overall health and risk for disease.

*Mohan Garikiparithi holds a degree in medicine from Osmania University (University of Health Sciences). He practiced clinical medicine for over a decade. During a three-year communications program in Germany, he developed an interest in German medicine (homeopathy) and other alternative systems of medicine. This article was originally published on Bel Marra Health.*



# COVID-19 Survivor Says Reciting These Words Helped Her Recover

Alone, and fearing she would die without being able to raise a call for help, Osnat Gad was ready to try anything

CATHERINE YANG

Osnat Gad felt profoundly alone. Isolated at home with nothing for company but the rattling of her own breath, Gad realized that if she stopped breathing entirely, she wouldn't even be able to call for help. There was no one who would know to call for her. If she was to survive, she was going to have to do it alone. As weeks of illness dragged on, her frustration gave way to fury. She felt like she was never going to get better. "I'm also a cancer survivor, I've had a heart condition, and I've had many flus, sicknesses. I have had operations," said Gad, who lives on Long Island and suffered the symptoms of COVID-19 for more than a month. "This was not like that at all."

Gad tested negative for seasonal flus and was told to go home and self-quarantine. She was advised to stay home because even if she came to the hospital, it was unlikely they could do more to help.

**2nd Attack**  
In early March, everyone was talking about the CCP (Chinese Communist Party) virus, the novel coronavirus from the city of Wuhan in central China that causes the disease COVID-19. There was no talk of social distancing yet, but there was an uncertain buzz in the air surrounding the virus and what should be done.



People practice the Falun Dafa meditation at a park in Sydney, Australia, on June 26, 2017.

Family members from Manhattan came to visit Gad, and they went on a hike. One week after the visit, Gad began to feel incredibly sick. The first odd symptom she noticed was losing her sense of taste and smell. At the time, it wasn't widely known that the CCP virus causes some to lose those senses while sick. Two days later, she couldn't even get out of bed. Gad had a feeling she'd contracted the virus. The next day, feeling even worse, Gad called urgent care to explain her situation and asked whether it was safe for her to come in. Not knowing enough about the virus, she wasn't sure if she would put others in danger by doing so. She was told to come in.

There, Gad tested negative for seasonal flus and was told to go home and self-quarantine for two weeks and take Tylenol every four hours. This was before her local hospital even had tests for COVID-19, though her doctor and nurses said her symptoms showed it was likely she had it. She was advised to stay home because even if she came to the hospital, it was unlikely they could do more to help. Gad kept track of her oxygen levels and temperature, which stayed at normal levels. After a week, she thought she'd gotten better. Then one day, she got up to do laundry and was hit with a "second attack." "I couldn't move," Gad said.

After a while, she pulled herself together and had a video conference with her doctor, who told Gad there were other COVID-19 patients who also had a second attack after a week of receding symptoms. The doctor again advised her to stay home and keep taking Tylenol.

**Learning to Breathe**  
But this bout was much worse than the first. "I couldn't even breathe," she said.

The days and weeks blurred together as mid-March became late-April. There were times she couldn't move at all.

"The pain was excruciating," Gad said. "The fear of not being able to breathe is tremendous, it's a dreadful fear."

She called friends for advice. Some advised breathing in steam. Nothing worked. Then one of her friends, Anna, said something in Chinese, and Gad's head was so fuzzy she couldn't hear or remember the explanation: "Falun Dafa Hao. Zhen Shan Ren Hao." Anna told her to repeat the words.

What did Gad have to lose? She said the words, and felt oxygen reenter her system.

"I was very helplessly sick. I trusted that my friend Anna had my best interest in her heart. I know she cares for me and she wanted me to heal. Her passion and strength was the reason I started chanting [those words]," Gad said.

Gad said she was raised Ortho-



Osnat Gad from Long Island spent nearly six weeks suffering from COVID-19 symptoms.



Osnat Gad from Long Island spent nearly six weeks suffering from COVID-19 symptoms.

dox Jewish and had said a lot of prayer in her life. There was this pressure to make sure she said the words very accurately as she had been taught to do so with Hebrew prayer. But when she said the words, it didn't feel like worship but almost like self-help, she said. She wasn't asking some higher power to rescue her, but rather trying to heal herself from the inside out.

"Well, what I learned is that the mantra is actually allowing you to breathe correctly. After each word, you must stop and catch your breath," Gad said, demonstrating the words and how natural it was to breathe after each one. Gad said it was like these words taught her body how to breathe all over again, and the more she said them, the better she felt. She would start her mornings with the words, and say them be-

fore she fell asleep. The effect had been immediate, but she wanted to keep saying the words.

The words are made up of nine characters in Chinese that translate to "Falun Dafa is good. Truthfulness, compassion, and tolerance are good."

"I have to be very thankful to Falun Dafa," Gad said. "I can say it saved me. It taught me how to breathe."

After what felt like a miracle, Gad had to know what exactly Falun Dafa was. She called Anna and has plans to research this spiritual practice more thoroughly. Traditional Chinese culture has a long history of "self-cultivation," or practices of mind and body, and that's why, Gad realized, she felt that saying those words like a mantra was a form of "self-help" and meditation. Adherents of Falun Dafa, a spiritual practice that was introduced to the public in China in the 1990s, believe in living by the principles of truthfulness, compassion, and tolerance to better themselves.

"[Saying this] completely changed my energy levels. I don't know if it's associated or not, I'm not a doctor, but I just know that this saved me, because I learned how to breathe by saying the mantra, do you know what I'm saying? It was amazing," Gad said.

"[COVID-19] stayed with me more than a month, maybe six weeks. If I didn't do the breathing, maybe I could not get well."

If she was to survive, she was going to have to do it alone. As weeks of illness dragged on, her frustration gave way to fury.

Gad, early in her research into Falun Dafa, had called a local number to learn more, and she hopes to learn the practice's slow-moving exercises and meditation. "I'm reading about the inner strength we have within us, and it's only up to us to use it by being good humans," Gad said. "I hope I can study it deeply."

Sarah Lu and Shiwen Rong contributed to this report.

# Volunteering Could Extend Life

New study links volunteering to significantly lower mortality

DEVON ANDRE

A new study is showing that volunteering could have life-extending benefits. For those looking to get involved in their community, the benefits extend beyond enriching the area they live in. Volunteering has the potential to improve the lives of others as well as yourself. On a personal level, it can lead to a greater sense of purpose, connection, and well-being. The new study was conducted by researchers at the Center for Health and Happiness at Harvard's T.H. Chan School of Public Health. The results were published in the American Journal of Preventative Medicine. Researches tracked 13,000 people aged 50-plus who were participating in the U.S. Health and Retirement Study. They were observed for a four-year period sometime between 2010 and 2016. They found that adults who volunteered 100 hours or more a year had a 44 percent reduced

They found that adults who volunteered 100 hours or more a year had a 44 percent reduced risk for mortality and a 17 percent reduced risk of impaired physical function compared with those who didn't volunteer.

risk for mortality and a 17 percent reduced risk of impaired physical function compared with those who didn't volunteer.

The models used in the study adjusted for socio-demographics, physical health, health behaviors, psychosocial factors, and personality.

"Humans are social creatures by nature," said Eric Kim, the study's lead investigator. "Perhaps this is why our minds and bodies are rewarded when we give to others."

The study found volunteers were less likely to develop physical limitations than those who didn't volunteer. They also reported higher levels of activity and greater well-being.

What's interesting is that although the benefits of life extension, mobility, and better mental health were observed, volunteering didn't show any direct impact on chronic health conditions such as high blood pressure, diabetes, pain, and more.

The activity and fulfillment a



Volunteering has the potential to improve the lives of others as well as yourself.

person may acquire from volunteer work and all that it offers may be a way to manage these conditions so they take less of a toll. It is really hard to say.

There are several ways you could volunteer and get involved in a cause that serves your community or a goal that you believe in. Using your skills can create a positive impact with many secondary benefits.

Because social distancing measures are still recommended, volunteering may take on a slightly different look these days, though you can still find organizations

you believe in needing help.

Volunteer work can help you live longer and feel better by relieving stress, decreasing the risk of depression, giving you physical and mental exercise, offering a sense of purpose, and introducing you to new friends.

Devon Andre holds a bachelor's degree in forensic science from the University of Windsor in Canada and a Juris Doctor degree from the University of Pittsburgh. Andre is a journalist for Bel Marra Health, which first published this article.



MINDSET MATTERS

# Unhitching Your Well-Being From Your Partner's Wagon

Letting go of our partner's inability to change frees us to develop ourselves with autonomy

We can't change the person we are with, but we can free ourselves from that burden and elevate ourselves.

NANCY COLIER

I recently wrote an article about a client who enjoys her marriage and who also struggles with her partner's angry outbursts. The article garnered some criticism. To recap: After many years of explaining to her partner how and why his anger (and denial of that anger) was hurtful and not okay, his behavior continued, barely impacted by her rigorous and persistent efforts to change it. My client, as I reported, eventually lost the willingness and interest to keep trying to change her partner. At the same time, she realized that her partner's behavior was not in her control to change.

It was at this point that my client decided to turn her attention away from her partner and toward herself, to get curious about her own response, her own relationship with her husband's bad behavior. Since changing her partner was clearly not possible and she still wanted to stay married, she began investigating her own narrative, the story she was telling herself about his behavior, and what kind of partner she "should" have, how she "should" be treated, and what her relationship "should" include.

I received a strong response to this article. A number of people were angered by it and believed that my client's choice to shift her attention away from her husband and his problematic behavior and toward herself and her own process was to demonize herself, make herself to blame. And furthermore, that I was encouraging her to accept what she positively "should not" accept, to find fault in herself. But in fact, it was nothing of the sort.

Turning her attention to her own process was not about trying to figure out how and where she was to blame, nor about denying or condoning her husband's behavior. Rather, it was about finding a way to free herself from the anger, helplessness, and frustration that her current reaction to her husband's anger was triggering in her.

What she wanted was to hand her husband's bad behavior back to her husband, to not have to carry it around as her problem, and to not have to wait for it to change until she could be okay. In short, she wanted to be in charge of her own well-being.

It's abjectly false and dangerous, in fact, to suggest that focusing our attention on our own response to difficulty, prioritizing self-awareness above fixing anyone else, is negative or self-defeating in any way. For my client, the decision to stop trying to change a behavior she couldn't change felt immediately empowering and liberating, as if she were taking the reins back in her life. With the shift in focus, she was no longer waiting for her

husband to change so that she could be happy. With a better understanding of her own narratives, her husband's outbursts could be just that: her husband's outbursts, his problem that he would or wouldn't address in his own time.

But most importantly, his outbursts could be not about or against her, not something she had to be in charge of correcting. Turning the lens on her own response, and doing what she needed to do to maintain her own peace, was about taking care of herself in the reality she was in, as opposed to fighting with reality and continuing to demand that it be different. One thing we know for sure, when we fight with reality, reality wins, every time.

We hold firmly entrenched beliefs and internal narratives on the topic of relationship. They range from the micro to the macro, the subtle to the obvious. The most troublesome "should" of all, however, may be this idea that we "should" be able to change our partner, fix what we don't like. And consequently, we can't be happy or content until we do.

To stay in a relationship with a partner we can't change, to accept what we don't like, is seen as a surrender to failure, giving up on our partner and to some degree, ourselves. When we stop trying to change the parts of our partner we don't like, we are judged (and judge ourselves) as weak, dysfunctional, and lacking self-respect.

The idea of focusing on ourselves when the problem is our partners sends us into the fiercest of "should" minefields. We get tangled up in the narrative that we "should not" have to live with this problem, "should not" let the problem continue (as if we have a choice), "should not" have to change who we are to accommodate our partner's problem, "should not" let our partner get away with the bad behavior, and countless other "shoulds."

But these "shoulds," while sensible and maybe even true in some perfect universe, do nothing to change the problem, the partner, or the relationship. And most importantly, they don't bring us peace. These "shoulds" keep us fighting with reality, convinced of our rightness but suffering nonetheless. But worst of all, they keep our well-being hitched to someone else's capacity or willingness for change, which is never where we want to be.

Contributing to these "shoulds" is the belief that relationship is either good or bad. If the relationship contains difficulties we can't fix, then the relationship must be all bad and we "should" leave. If we don't, we're agreeing to stay in a bad relationship.

The truth is, we abhor contradiction in this culture; we're not trained to hold co-existing and contradictory truths. Contradiction, which paradoxically is the essence of a relationship, terrifies us.

Since changing her partner was clearly not possible and she still wanted to stay married, she began investigating her own narrative.

We can't wrap up contradictory truths and put them neatly on a shelf. Nor can we categorize a relationship as either bad or good, worth staying in or not.

And yet, every relationship is both bad and good (except perhaps the newest ones). Accepting that good must coexist with bad, and being loving amid the contradiction, is the ground of a healthy relationship. Please note that those bad aspects of a relationship are not abuse. Your partner can have shortcomings that are difficult to bear without them being intentionally hurtful toward you.

A relationship requires an attitude of "and," not "but." "But" is an eraser word; it wipes out everything that came before it. Opposing truths can indeed be happy bedfellows.

It's a healthy drive to want to fix what we don't like in a relationship, to change what's not working. And the period of figuring out and fighting with the problem and our partner, in other words, the period of suffering, can go on for a really long time, sometimes the duration of the relationship. For some people, the lucky ones, a moment arrives when we realize that we've done everything we know how to do to try to change our partner, and still the problem persists and the partner remains unchanged. We then have the option to take a new tack and examine whether there's a way to find peace even with the problem. Our partner may keep doing what they've always done, but we can do things differently.

At any moment in a relationship, we can choose to get curious about ourselves, our history, our triggers, our stories, and our response to a problem we experience with our partner.

We can unpack our narratives and consider whether there's anything we can let go of that will ease our suffering and bring us peace.

We do this not to blame or castigate ourselves, but to liberate ourselves from the fight. We do this so as not to be tangled up and victimized by the problem any longer, but to use it as an opportunity for self-awareness and expansion.

The act of turning the lens on ourselves is a victory, a setting ourselves free and handing the problem off to the one whose problem it is.

We unhitch our own well-being from the other person's wagon.

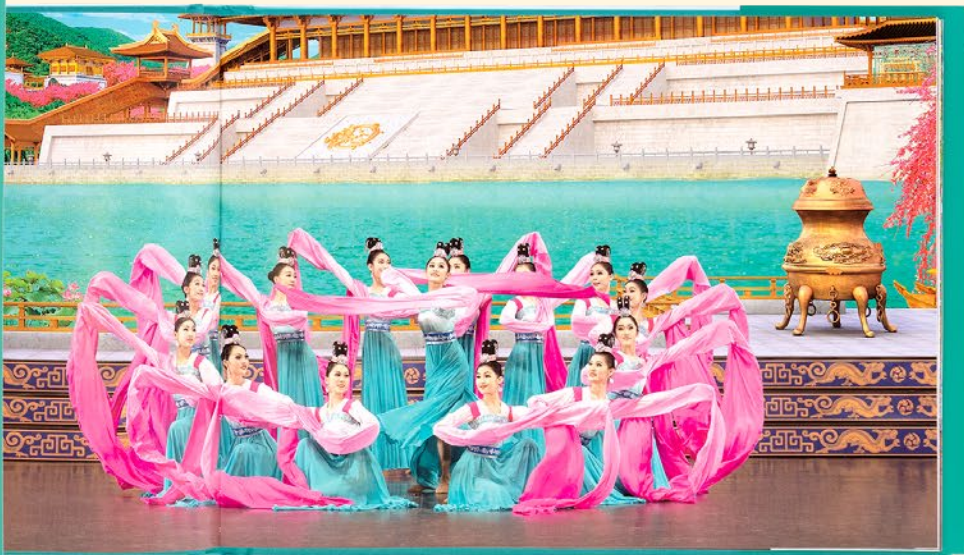
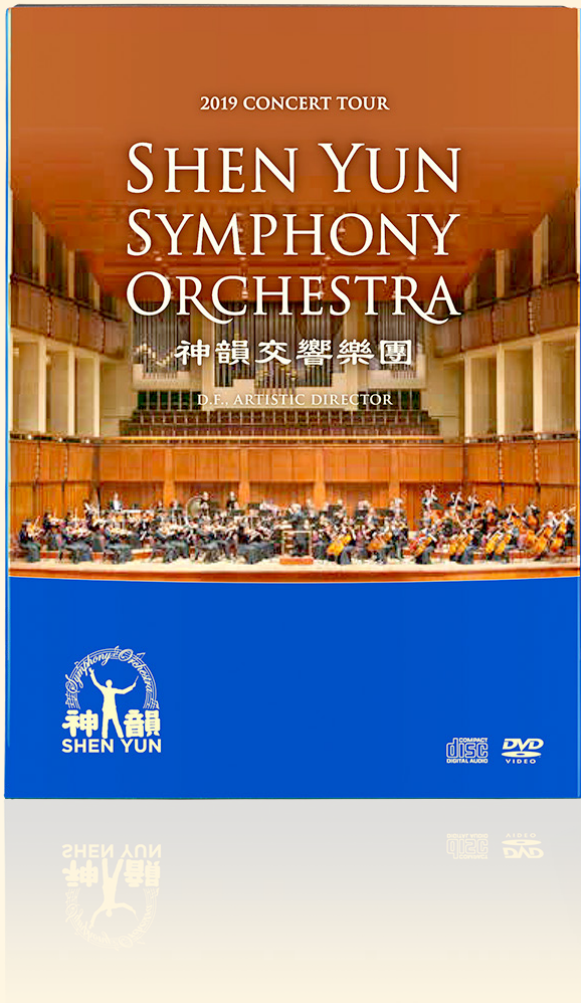
Once unhitched, we discover that we can live with that same problem, but not experience it as problematic, our problem, or even a problem. This is freedom. This is autonomy.

Nancy Colier is a psychotherapist, interfaith minister, public speaker, workshop leader, and author of "The Power of Off: The Mindful Way to Stay Sane in a Virtual World." For more information, visit NancyColier.com





# Bring Home the Magic of Shen Yun!



# Improve Your Life Through Deep Reflection

Why pausing to reflect could amp up your productivity, creative thinking

CONAN MILNER

Reflection is a word with two meanings: It's the image that you see when you look in a mirror, but it's also the act of serious thought. Particularly powerful is a combination of the two, in the form of self-reflection.

When you've regretted something you have said or done and taken the opportunity to use it to see some aspect of yourself more clearly, you've used this power of reflection to elevate your self-awareness. This insight can save you from future personal disaster and reveal hidden beliefs limiting your breadth of mind.

Such realizations often sting as we see something about ourselves more clearly in hindsight. Yet once the pain passes, we can easily forget the value of looking inward.

Dr. Froswa Booker-Drew is an author and consultant who has lectured on leadership at the University of North Texas at Dallas. She is also the founder and CEO of Soulstice Consultancy.

She warns that reflection has become a rare trait in our world, particularly online.

"You can see it all over social media where people are just saying things and not really reflecting on the implications of their decisions," Booker-Drew said. "And the consequences can be debilitating."

One glaring example comes from YouTube celebrity Paul Logan, who posted a video on Dec. 21, 2017, of a man who hanged himself in Japan's notorious Aokigahara "suicide forest." Logan's channel is popular with kids and teens, so his footage of a recent suicide spawned immediate outrage. In response to complaints, YouTube removed Logan from a web series, shelved his upcoming film project, and terminated his top-tier ad revenue.

In a video apology, Logan expressed regret for posting the offending video and admitted he should've known better. It's an extreme case, but in a world where success is mea-

sured in likes and views, the impulse is all too common.

"We're always ready to hit the send button, but the backlash can be even worse than the comments to your posting," Booker-Drew said. "People are losing jobs and opportunities just because they're not taking the time to think about it."

## Slowing Down in Fast-Paced World

Reflection helps us avoid bad decisions and can reveal creative solutions. Albert Einstein is a remarkable example. He claimed to have conjured his innovative ideas through thought experiments, such as imagining what it would be like to ride alongside a beam of light.

Einstein was 16 years old when he first began to use these sophisticated daydreams to realize a new understanding of the universe. Meanwhile, his teachers considered him a failure because he fell short in their most valued form of education: memorizing facts.

There are many cultural pressures that can squelch our reflective nature. One of the biggest culprits is busyness—we always feel starved for time. Who can afford a moment of quiet contemplation when we're so rushed, overworked, and overlooked?

In our race to beat the clock, we try to work more and multitask. But this high-speed strategy may actually set us back.

In the past few years, researchers have discovered that slowing down, focusing on one activity at a time, and taking breaks can ultimately make you more productive and creative.

*Continued on Page 11*

Reflection helps us avoid bad decisions and can reveal creative solutions.





TRUTH *and* TRADITION: *In Our Own Words*

# WE ARE HOLDING THE LINE

In America, publishing news is easy.  
But publishing the truth ... that's very difficult.



You might've seen some of the videos we've produced over the last year. But you likely

don't know the difficulty of creating this type of honest news content to be published on the big tech platforms.

Because The Epoch Times has the courage and fortitude to both investigate and report stories that most media don't as well as to call into question the "established" narratives when the facts don't seem to line up, we have been attacked, demonetized, and de-platformed by the giant tech conglomerates, the legacy media

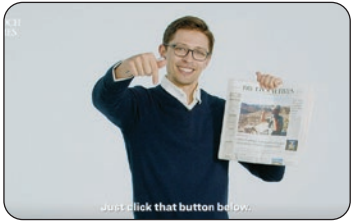
outlets, and even certain service providers.

That's not to even mention how over the last 20 years, there were dozens (maybe even hundreds, but we never thought to count) of times when the Chinese Communist Party's consulates around the world have used threats to force businesses and ad agencies to

pull their advertising from our publication. I believe that open public discourse is vitally essential to our nation. It is paramount to a free republic.

Working here over the last eight years, at a truly independent news organization, has opened my eyes to the many forces attempting to restrict your access to truthful information. And contrary to what it seems like on the surface, **these forces are not censoring our mouths. They are actually censoring your ears and your eyes.**

They are engaged in an act of theft: robbing you of the truth.



For instance, when we examined claims about the CCP virus's origins that didn't line up with the established narrative or when we looked beneath the surface of FISA abuse that took place during the 2016 election and reported inconsistencies with the mainstream narrative, we were further attacked, censored, and de-platformed—directly limiting your access to a treasure trove of our investigative findings. **So what we are doing here at The Epoch Times is not simply reporting stories or conducting investigations.**

We are holding the line.

We are taking the attacks so that you may be informed of the truth, and so our future generations may know what truth is.

We seek to be a stalwart bastion of objective reality which can stop the descent of our society into a place where our grandkids and great grandkids have internalized ever-encroaching politically correct thought confines to the point where even forming an independent idea is a crime.



To me, that might've seemed like hyperbole 10 years ago, but having seen this encroachment first-hand, I believe it is a grim possibility that we might just "naturally" slide into it if we don't take a strong stand against it right now.

I hope you are enjoying this paper. I hope you share it with your friends, your family, and your entire community so that we can restore decency in this country's public discourse.

**And I hope when that happens, you'll be there with us to see it.**

*In Truth and Tradition,*

Roman Balmakov  
The Epoch Times



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Roman Balmakov  
Video Producer

THE EPOCH TIMES

TRUTH *and* TRADITION

# Improve Your Life Through Deep Reflection

Continued from [Page 9](#)

As a result, many companies—such as Google, Apple, Procter & Gamble, and General Mills—have initiated mindfulness programs and other unorthodox methods to help boost creative thinking. Author Carl Honoré has been promoting the benefits of slowing down for over a decade. He's written several books devoted to the subject and has consulted with companies around the world on how to take a more reflective

“**I can create peace, and have resolution around that situation, instead of carrying this baggage and anger with me.**”

*Dr. Froswa Booker-Drew, author and consultant*

approach. “As human beings we are prone to skimming the surface and being distracted. We actually need that reflection time as an anchor,” Honoré said. “It's in those moments of quiet stillness that we find ourselves. In some ways, I think that's what human life is all about.” Religions have taught the importance of reflection for centuries, but it's a concept humans have always been at odds with. It can be uncomfortable, te-

dious, and even frightening to be alone with your thoughts. And today, the opportunities for distraction are greater than ever. “We live in an intrinsically superficial society and the temptations are all around us—the next update from Instagram, or the next incoming message from your inbox,” Honoré said. “It's much easier to go for the distractions and avoid the metaphysical heavy lifting involved in deep reflection.”

carrying this baggage and anger with me.” It's much easier to reflect when we're alone. But this act of deep thought takes time and mental space, which can be difficult in some environments, like our work. When someone asks us to make a decision on the spot, we may feel compelled to answer right away. While everyone favors a fast response, Honoré says we may actually gain more respect when we ask for time to ponder our answer.

He urges us to break through the taboo that slow means stupid. And if we ask for extra time, it might influence the people around us to do so as well.

“Very often we're locked into a standoff in the workplace where everybody is wondering who is going to say ‘I want to slow down’ first,” he said. “It's terrifying to be the first person. But once somebody says it, you realize that others were thinking that and often there is a big relief.”

In order to access our sense of reflection, we have to make space for it. This means learning to say no to the unnecessary activities that eat up our precious time. For many of us, this involves having clear boundaries with the technology we consume.

Despite the numerous avenues for entertainment and time-saving tools that technology offers, staring at a screen ultimately prevents us from looking inward. Honoré believes it's critical that we learn to use our gadgets wisely, because we can't tune in until we unplug.

**Researchers have discovered that slowing down, focusing on one activity at a time, and taking breaks can ultimately make you more productive and creative.**

**Making Space for Reflection** Quick thinking has its place. In emergencies, for example, we need to act fast, not dwell in chin-stroking wonder at the possibilities. The trick, said Honoré, is to find balance and match your speed with the situation. When we get caught up in the frenetic pace of modern life, we lose that flexibility and get stuck in fast forward.

When you have an opportunity to put yourself in a reflective mood, Honoré suggests starting with something that shifts your mind to a lower gear, such as yoga, gardening, reading a book, taking a walk without your phone, or soaking in a hot bath. Booker-Drew recommends journaling; putting words to paper can help identify our fears as well as our blessings. Her most devoted reflective ritual is processing her day before bed. Nearly every night, she takes at least 5 to 10 minutes to think about what irked her and analyze her response to it. “I may be really angry with someone in that moment, but hours later, when I sit and reflect on what bothered me, I sometimes discover that it had nothing to do with that person,” she said. “This way, I can create peace, and have resolution around that situation, instead of

**While everyone favors a fast response, Honoré says we may actually gain more respect when we ask for time to ponder our answer.**

“I'm not a Luddite, I think gadgets are great, we just need to find a better way to use them,” he said. “Putting them in the right place gives people the space to find themselves ... and not to live in this unhealthy, unsatisfying state of constant distraction.”



JACK FROG/SHUTTERSTOCK

## The Promise of a *Perfect Home*

A mirage of advertisements send us scurrying for the ultimate oasis

JOSHUA BECKER

We live in a culture of unreasonable expectations. Nearly every day, television, magazines, websites, and billboards offer us countless images of the “perfect” home. Beaming faces, sparkling eyes, pristine decor, and bountiful tables of food are shown on media platforms of every sort. Many of these images stand side-by-side with corporate logos and retail stores. It would seem, from the image on the screen, these items are essential for a perfect home. Because, obviously, the smiles are bigger, the family is happier, and the lights shine brighter—if we buy the consumer product to make it so. This is not a new strategy from marketers.

Our entire lives, they have communicated subtle (and not-so-subtle) messages that our lives will be better, happier, and more fulfilled if we buy whatever they're selling. It seems our entire economy is built on making people feel dissatisfied with what they have. And nobody is immune to the meticulously crafted persuasion. I assume one reason for the effectiveness of these ad campaigns is because we all desire a joyful home filled with love, warmth, and comfort. We cherish our time with family and want it to be picture perfect. We love our kids and want them to be happy. And we all enjoy times of celebration and desire them to be memorable. But let's remember one important truth today: You don't need any of those things in the ads for a perfect home. You don't need new furniture or updated countertops. You don't need the stainless steel appliances (or whatever is most trendy this decade). You don't need the largest-screen television. You don't need all the perfect decoration. You don't need expensive food or drink. And you certainly don't need a new sedan in the driveway with a red ribbon wrapped around it.

Home is about family, thankfulness, acceptance, love, and strength. It's about reflecting on the life that was and looking forward to the life that can be in the future. It's about counting blessings. And it's about slowing down from life long enough to appreciate and enjoy the people who matter most. Too often, the consumeristic promises and fake photos keep us from all that. Instead of slowing down, we speed up. We rush from store to job to website filling our homes with all the things we think will make it just perfect. We fill our schedules with commitments and responsibilities. We max out our credit cards. We get weary chasing the perfect home and forget to take the time to enjoy what is front of us. But once we slow down enough to notice our blessings, we begin to see that we already have everything we need for a perfect home. We just need to appreciate it 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](https://www.becomingminimalist.com)*



MONKEY BUSINESS IMAGES/SHUTTERSTOCK

**It's about slowing down from life long enough to appreciate and enjoy the people who matter most.**





# My Kids Have Nothing to Do This Summer. Now What?

We need to hold our kids to the expectation that they will contribute to our household in meaningful ways.

This ‘Dear Christine’ column offers tips for structuring your family’s summer during the pandemic

## CHRISTINE CARTER

In *Dear Christine*, sociologist and coach Christine Carter responds to questions about marriage, parenting, happiness, work, family, and, well, life. Want to submit a question? Email [advice@christinecarter.com](mailto:advice@christinecarter.com).

Dear Christine,

Since school ended, my whole family is floundering. We have no summer plans. I’m feeling some pressure to make up for “COVID slump,” but I haven’t a clue how to do so. Neither of my teenagers have summer jobs or internships, and neither is interested in taking an online class. We need to find a purpose this summer—all of us. What, even, is the goal?

Warmly,  
A Floundering Family

**Dear Floundering,**  
You aren’t alone! Day-to-day life without structure and routine is hard. We human beings are creatures of habit, and when our routines are disrupted, we tend to feel anxious and agitated.

So, here’s the goal: Do something productive every day. Also, get into some semblance of a routine.

Even though your kids probably feel like there is “nothing to do,” they are going to feel better if they make themselves useful or do something creative every day. People feel good about the things that they do well. This doesn’t mean that we don’t have other sources of good feelings, but, truly, there are few better sources of self-esteem than doing something—anything—well.

Also, there’s so much to be done. I’m guessing you noticed: It’s a mess out there. My kids are tired of people telling them that 2020 is going to go down in the history books. They know that this is an important historical moment on a lot of fronts. A lot of old institutions and social structures, including our kids’ educational structures, have been profoundly shaken. If your kids are like mine, they may feel angry about all that is wrong in the world, and they may blame “you boomers.” (For the record, kids, I’m not a boomer.)

But, seriously, this is no time for finger-pointing. Neither is it time to wallow in self-pity or to allow ourselves to be sidelined by despair or resignation. It’s time to create the world we want to live in. We all need to get involved in fixing all the things that are broken. We need to step up and engage. What do you as a family care most about? What do your kids care about most? What role do you each want to play in making the world a better place?

This summer offers a chance to get

involved in a meaningful cause. It could be through activism, learning, growth, and self-reflection, which are also productive foundations for healthy change.

And the goals we set for the summer should rest on that foundation. What do we want to learn or accomplish? How do we want to make a difference?

We can ask our kids questions about what they want. We can encourage them to set goals and be guided by their personal motivations. What do they want to accomplish? What helps them feel like they are productive members of society and the family? What can they do every day to improve a skill that they value?

I don’t think we need to push our kids to achieve something big this summer, and I don’t think we need to be particularly high-performing ourselves during this crazy time. Let “doing something productive every day” be a low mountain to climb. No need to construct some amazing program for your kids to counter the “COVID slump.”

Again, this is about stepping up and engaging. Whatever they, and we, are interested in is fine. And as parents, a say, consistently helping with dinner or emptying the dishwasher without being asked. This may not feel as meaningful to them as the other things they could do but it will make a big difference in our households, and our sanity as parents.

**Creating Routines to Accomplish Goals**  
Should you exercise in the morning or afternoon? Check email before or after breakfast? Work on college applications during the week or on the weekends? Shower every day? Go to bed before midnight or play video games all night?

And for parents, this is even more important if we are managing (or just worrying about) our kids’ schedules.

This might seem crazy, but I ask my kids (and many of my clients) to construct their ideal day in increments of 30 minutes for themselves on a spreadsheet. I also do this for myself at the start of every new season, or when there is a big change afoot.

Developing a daily routine is about deciding how you will spend your time. More specifically, it’s about deciding what you will do and when you will do it. The key is to decide on these things one time instead of trying to figure out how to structure your day/week/summer every morning. Once constructed, we can lean on that structure to guide our daily life.

I like to think about our daily activities in terms of five big buckets:



As parents, often the best we can do is to teach through our own example.

**Physical.** How will we get some exercise? Is there something athletic we’d like to train for? How can we move our bodies throughout the day? What are other components of physical health that are important to me?

**Emotional.** How can we care for our psychological health by bringing some joy into our daily life? How can we foster positive emotions like gratitude or awe? How can we connect with nature or pets or something that brings us peace or happiness?

**Social.** How can we connect with the people around us? This one is tricky during a pandemic, and it is also extraordinarily important. Teenagers need to connect with their peers. Similarly, most people need to connect with sources of emotional support outside of their immediate family. With creativity and determination this can be done outdoors in ways that lower the risk of spreading COVID-19.

**Cognitive.** Many of us get the intellectual stimulation we need through our work; kids can get it in myriad ways over the summer. What are they interested in reading? Learning more about? Can they get a jumpstart on their AP reading or SAT prep so they have less to worry about in the fall?

**Spiritual or humanitarian.** This is where our daily routine can connect back to engaging in something that brings us meaning or connects us to something larger than ourselves. Teens who provide tangible, emotional, or informational support to people in crises tend to feel more strongly connected to their community. Over and over, research shows that we feel good when we stop thinking about ourselves and support others.

Creating an ideal day that includes each of these aspects of well-being gives us something concrete to shoot for in a world of uncertainty. Once created, we don’t have to stick to it rigidly. Often, it’s not the plan that makes the difference, but the planning process. Having decided once, we don’t have to decide every day.

Floundering Family, your teens may or may not engage in deciding on their ideal day. They may or may not decide to be productive this summer. Either way, make sure they see you do these things and that you are clear with them what the larger goal is for the summer. As parents, often the best we can do is to teach through our own example. Fortunately, with teenagers, that is almost always the best place for us to start—and it is enough to make a difference in the long run.

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# Why We’re Drawn to Dystopian Fiction

How ‘defensive pessimism’ in our stories can help us in real life

## JEN MAFFESSANTI

Police violence, civil unrest, riots, fires, looting, destruction, a “no-go zone” in a major American city, and media suppression, all set against the backdrop of a global pandemic and economic upheaval. It’s our current reality, although it sounds an awful lot like the setting of the next dystopian bestseller/blockbuster.

The dystopia genre has been around for centuries, but the case can be made that dystopian stories are currently experiencing something of a golden age. I’m inclined to believe it, given the smashing success of franchises such as “The Handmaid’s Tale” and “The Hunger Games,” that terms like “Orwellian” and “Big Brother” are now common parlance, and that declarations that real-life situations indicate “the simulation is glitching.”

But why—even before COVID-19, when life for the everyday person had been empirically better than ever—would a genre that is, by its very definition, pessimistic and dark be so popular?

To answer that, we first have to understand why fiction itself is important.

By definition, fiction isn’t real. Fiction is just, well, lies we tell each other. Many people assume the function of fiction is entertainment, telling each other stories to pass the time, whether that’s through books, movies, TV shows, or ghost stories around a campfire. And yes, fiction can be very entertaining. But it isn’t the fiction aspect that entertains us. It’s the story the fiction is telling.

The value of storytelling is in its power to explain things. The value of storytelling is in its ability to convey lessons in an emotionally impactful way. And in fiction, it’s in using falsehoods to convey truth.

Look at stories that are clearly not factual, like fairy tales. Obviously, “Little Red Riding Hood” never actually happened. Wolves certainly cannot talk, much less do credible impressions of kindly grandmothers. But the fundamental truth of “Little Red Riding Hood”—the lesson it teaches us—is that danger lurks in the woods, that not everyone means you well, so be careful. An important lesson for children in the ancient world.

All genres have their own special niche in the world of storytelling. Dystopian fiction falls under the much broader heading of “speculative fiction.” Speculative fiction, which also includes fantasy, science fiction, and others, isn’t bound by the limits of reality and often includes blatantly unrealistic aspects. “Pride and Prejudice” is literary fiction. “Pride and Prejudice and Zombies” is speculative fiction.

While it’s not for everyone, fans of speculative fiction enjoy its wide-ranging possibilities, even when they cross over into the realm of absurdity

(“Gulliver’s Travels,” anyone?). And nestled there in the cosmos of speculative fiction, we find the dystopian fiction section.

Dystopian fiction, in all of its forms, shows a world in decline or collapse. Regardless of the root cause, the common person is laboring under some form of oppressive control or pervasive threat, the most common culprits being government, disease, aliens, technology, and social conditioning.

**The dystopia genre has been around for centuries, but the case can be made that dystopian stories are currently experiencing something of a golden age.**

In George Orwell’s “1984,” Winston Smith struggles against a pervasive surveillance state that is constantly at war with other states and attempts to control people’s thoughts through controlling language. Neighbors report on each other. People engage in regularly scheduled, ritualized vitriolic statements. Members of society are disappeared when they step out of line. And Big Brother is always watching.

In “The Handmaid’s Tale” by Margaret Atwood, what was the United States is now Gilead, a brutal theocracy where women are banned from reading, owning property, or holding any positions of power. The wealthy and politically connected men may have wives (one of the few allowable roles for women). These men also enjoy the services of Handmaids, women set aside because they are the few remaining who can still get pregnant.

“The Maze Runner” by James Dashner is set in a world after an environmental collapse, with people just struggling to survive. “Red Rising” by Pierce Brown shows us a color-coded caste-based society on Mars. “The Giver” by Lois Lowry displays a literal color-blind society embodied by conformity and assigned life roles and partners.

“Brave New World.” “The Time Machine.” “Do Androids Dream of Electric Sheep?” These are all notable examples of dystopian fiction, and they are all quite different from each other. What makes them resonate, what makes them true, isn’t that these fictional situations are likely to happen or are at all desirable. It’s that they are, however unlikely, still possible. At least, in part.

Dystopian fiction teaches us to be wary. Even when things are going



Dystopian fiction teaches us to be wary.

well, when life is easy, we must always be wary. Disaster can strike without much—or any—warning. An environmental collapse, a world war, a robotic uprising.

A pandemic.

And when that disaster strikes—or just sits looming on the horizon—there will be those who will seek to take advantage. As Bran Stark, a character from “Game of Thrones,” stated, “Chaos is a ladder.” Where there is fear, disarray, and people searching for answers, opportunity exists for those with more ambition than scruples.

**In modern psychology, this considering and visualizing worst-case scenarios is called ‘negative visualization’ or ‘defensive pessimism.’**

Probably, a person looking to take advantage of bad situations isn’t going to lead to the end of the world as we know it. But while the odds might be low, they’re still not zero. If we have already considered the potentially disastrous effects of decisions made to “mitigate” a crisis in a safe and socially acceptable intellectual space, it not

only becomes much easier to mentally come to grips with the original crisis, but also to identify and counter the potential problems in the actions proposed to stop it.

In modern psychology, this considering and visualizing worst-case scenarios is called “negative visualization” or “defensive pessimism,” though such practices can trace their roots back thousands of years to the philosophy of stoicism. It can help alleviate anxiety, overcome internal obstacles, and put real life in perspective. In a way, experiencing a dystopian story is a kind of defensive pessimism.

In stories, it’s easy—or, at least, less difficult—to pick out the villains from the heroes. In real life, people do not wake up in the morning and decide to be evil. In real life, villains generally begin with good intentions.

But that is exactly why dystopian fiction and its defensive pessimism is so important, and why it has such broad appeal. Like “Little Red Riding Hood,” it warns us of the dangers lurking in the metaphorical woods we’re trying to navigate. It teaches us to be on our guard, to be skeptical, and, should the need arise, to be steadfast and bold in the face of those who would lead us toward real disaster.

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# TRUTH CAN BE BLOCKED BUT NEVER STOPPED

Pass it on, one friend at a time



I have mentioned to my family and friends how much my husband and I value The Epoch Times. One of the fronts in our nation’s battle to preserve our Constitutionally established political, cultural, and religious freedom is in our school rooms where the covert strategic assault against them began a hundred years ago. Truth is our sword. Would that this “sword” could be in the hands of educators and school boards throughout our nation. —CYNTHIA PETERSON

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The truth is, we don't yet know how far is far enough when it comes to COVID-19.

Major variables and infinite scenarios make social distancing a best guess rather than a hard science

LENA CIRIC

What constitutes a safe distance when it comes to the spread of COVID-19? The answer depends on where you live. China, Denmark, and France recommend social distancing of one meter; Australia, Germany, and Italy recommend 1.5 meters (around five feet), and the United States recommends six feet or 1.8 meters. In the United Kingdom, a study has attracted criticism from top scientists for suggesting one meter would be marginally less safe than two.

The truth is, we don't yet know how far is far enough when it comes to coronavirus. A recent study found the virus in the air as far as four meters away from infected patients in a COVID-19 ward. But another study, touted by the World Health Organization (WHO), concluded that the risk of transmission becomes significantly lower with a distance of one meter or more from an infected person, reducing further with increased distance.

Why such a range of "safe" distances? That's because social distancing is a complex problem with many variable influencing factors. Here are four of the most important ones.

Respiratory Droplets

When we breathe, talk, cough, and sneeze, thousands of droplets are expelled from our mouth and nose. The size of these drop-

lets varies—some may be millimeters in size and some might be many thousands of times smaller. The larger droplets, which carry more virus particles, settle more quickly due to gravity. The smaller droplets, carrying fewer particles, can remain suspended in the air for hours.

The number and size of droplets vary depending on the activity. A cough produces more droplets overall and a greater proportion of them are larger. Breathing produces fewer droplets overall and they are generally smaller. The speed with which the droplets leave your mouth and nose also influences how far they travel—sneeze droplets will travel furthest.

Viral Load

Viral load refers to the number of copies of the virus in a sample, like the droplets that leave our mouth and nose. We know the number of virus copies in the respiratory samples of COVID-19 patients can vary from a few thousand to hundreds of billions per milliliter.

The infectious dose is the number of copies of the virus that your body needs to be exposed to in order to develop an infection. When it comes to calculating a safe distance, the closer you are to an infected person, the more likely you are to be exposed to the infectious dose by breathing in virus-laden droplets.

The viral load varies from one person to another but also depends on what stage of the illness the patient is at. We also know that people without symptoms can shed the virus.

Knowing the viral load in respiratory droplets allows us to calculate how many virus particles people may be exposed to and whether this might be enough for them

to become infected.

Infectious Dose

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The infectious dose for influenza strains varies from thousands to millions of copies. We do not yet know this number for SARS-CoV-2.

In time, further research on how the virus behaves in humans and other animals, and comparisons to other viruses will help to hone this number. In any case, we can be certain that the infectious dose will vary between different people.

The Environment

Whether we are indoors or outdoors, in school, at work, on public transport or in the supermarket, the flow of air, ventilation, temperature, and humidity will influence what happens to respiratory droplets.

Air currents will blow droplets around in various directions. Good ventilation will dilute the number of droplets in the air.

Temperature and humidity will affect the rate at which water evaporates from droplets. All this will affect our understanding of how much distance to keep in different types of space.

Complex Scenarios

With these four elements, we can begin to put together what makes a safe distance.

Let's start with this scenario: Three people are in a room that is not ventilated. One of them is infected and two are not. One of the healthy people is standing closer to the infected person—for example, 80 centimeters away—and one is further away, say two meters.

The infected person coughs, producing a cloud of droplets. The larger droplets carrying more virus particles settle more

quickly due to gravity. The smaller droplets carrying less virus travel further. So the person standing closest to the infected patient is at higher risk of being exposed to infectious droplets than the one standing further away.

Temperature and humidity will affect the rate at which water evaporates from droplets.

Of course, the above scenario is overly simple. People move around. An open window may blow air in a particular direction. The infected person may cough repeatedly during a period of time. An air conditioner might recirculate air around a room. Room temperature and humidity may result in drying leading to smaller particles carrying higher concentrations of virus. Exposure to many smaller droplets over a longer period of time may be equivalent to exposure to a few larger ones in a short period.

There is an infinite number of scenarios and having one rule that applies to them all is impossible.

This means that different countries' rules are, ultimately, best guesses made on the basis of some of the factors described above. They cannot apply in all contexts.

It is very unlikely that you would be exposed to infectious droplets outdoors because of rapid air flow and dilution, but enclosed crowded indoor spaces are much more of a risk. We all need to do our bit to stop the spread of coronavirus, so keep your distance, preferably as far as you can.

Lena Ciric is an associate professor in environmental engineering at the University College London in the U.K. This article was first published on The Conversation.

# Forest Bathing for Immune Support

Natural experiences can calm us even as they help reinvigorate our immune system

Forest bathing, also known as shinrin-yoku, is the ancient practice of visiting a forest and breathing in its air. A Japanese nature therapy practice used as a natural remedy for stress relief and mental fatigue, forest bathing has received much scientific attention in recent years, with many studies exploring the physiological and psychological benefits of spending time in nature.

Urbanization is a growing global trend, and 68 percent of the world's population is projected to live in urban areas by the year 2050. Urban living environments are associated with increased anxiety and mental health concerns, and urbanicity also has numerous negative impacts on physical health, including increased weight gain, poor food quality, and increased risk of cardiovascular problems when compared to those living in rural areas.

For these reasons and others, researchers have begun tracking and comparing the effects of nature excursions such as forest bathing on human health. In addition to psychological benefits, there is now evidence that forest bathing may improve immunological function.

Participants also experienced decreased scores for anger, depression, fatigue, and confusion, while urban walkers experienced higher scores in these areas. These findings suggest that even brief walks in nature can significantly reduce anxiety and enhance psychological health, and could present a potential treatment for anxiety disorders and depression.

Immunological Benefits of Forest Bathing

A study conducted in Japan explored the effects of forest bathing on immune function. Healthy male participants between the ages of 35 and 55 years were selected to participate in a three-day nature trip that involved hiking in the woods.

Natural killer (NK) cell levels were measured in the men before and after the trip, and nearly all participants experienced an increase in natural killer cell activity after the trip. Natural killer cells are key to the innate immune system and help our bodies reject cancer cells and viral infections. Researchers also measured perforin, granzymes, and granulysin-expression in peripheral blood lymphocytes and found that the trip dramatically increased the production of these anti-cancer proteins, signifying that forest bathing may indeed increase immunological function.

This wasn't the first study to find shinrin-yoku beneficial for stimulating immune function, however. A study of healthy young females found similar results in natural killer cell production and anti-cancer proteins after a three-day nature excursion, and found that the results lasted at least seven days after the trip had ended.

Researchers believe that phytoncides, a type of aromatic compound released from trees and plants, may be responsible for the decrease in hormone stress levels and increase in NK production. Other studies have backed these results and found that NK production levels were still increased even 30 days after such trips, suggesting

forest bathing once a month may drastically improve immunological function.

Researched Benefits of Forest Bathing

In addition to its benefits on the immune system, forest bathing has been studied for its positive effects on a variety of ailments including:

**Stress.** Forest bathing has been shown to effectively alter cortisol levels, a biomarker of stress. Additionally, the placebo effect of forest bathing is quite strong and reduced the salivary cortisol levels of participants before they had even experienced the forest bathing intervention.

**Depression and anxiety.** Anxiety disorders are the most common form of psychiatric disorder and affect approximately one-third of the population. Further, about 10 percent of those who experience mild forms of depression are at risk for later developing clinical depression.

Researchers have demonstrated that forest bathing effectively lowered heart rate and systolic blood pressure, indicating an increase in parasympathetic nervous activity and a decrease in sympathetic nervous activity, even when the subject's exposure to natural settings was as short as 15 minutes.

Participants also experienced decreased scores for anger, depression, fatigue, and confusion, while urban walkers experienced higher scores in these areas. These findings suggest that even brief walks in nature can significantly reduce anxiety and enhance psychological health, and could present a potential treatment for anxiety disorders and depression.

Cardiovascular disease.

Researchers studied the effects of forest walks on healthy individuals in a study involving 48 young adult males. The researchers measured heart rate variability, systolic blood pressure, and diastolic blood pressure and compared results in participants who walked in the forest as opposed to those who walked in an urban setting. In addition to these physiological measurements, participants also reported their feelings in questionnaires. Forest walkers reported feeling "refreshed" after their walk, while urban walkers scored significantly



68 percent of the world's population is projected to live in urban areas by the year 2050.

PHOTO CRED MICHAEL BEONAREK/SHUTTERSTOCK



Immersing ourselves in natural environments, what the Japanese call "forest bathing" is being studied for its mental and physical health benefits.

Urban living environments are associated with increased anxiety and mental health concerns, and urbanicity also has numerous negative impacts on physical health.

Forest bathing has been shown to effectively alter cortisol levels, a biomarker of stress.

lower in this category. Overall, researchers suggested that the positive effects on cardiovascular response after forest bathing may reduce the risk of cardiovascular disease and improve heart and mental health.

**Poor mood, anger, and fatigue.** In a study involving 128 middle-aged or elderly participants, researchers demonstrated that forest walks may improve mood, and found that feelings of anger, fatigue, and bewilderment were significantly lowered after nature walks. These results were consistent even when the walks were kept to a one- or two-hour period and a short 2.5 km (1.5 miles) distance.

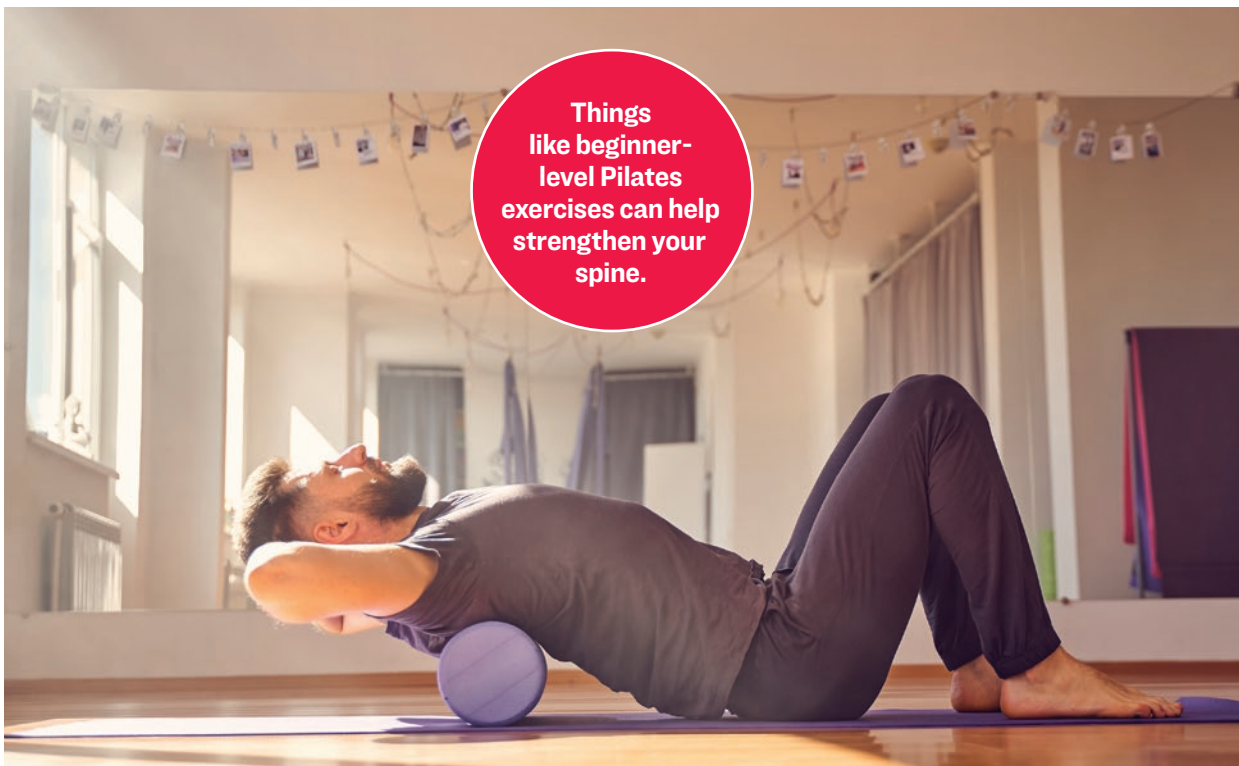
The benefits of spending time in nature are not new to anyone who has recently visited the forest. It's clear that the physical and psychological benefits of these nature excursions are vast, and researchers are only just beginning to understand the myriad of health conditions that could be improved by forest bathing.

If you'd like more information on the immune system or other ways to naturally stimulate your immune response, please visit the GreenMedInfo.com research database on immunostimulatory agents. You can also find more studies on the practice of forest bathing and its research-backed benefits.

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# How to Fix Bad Lockdown Posture—by Copying Astronauts

Being in space can take a toll on your back not unlike being stuck in a chair for hours on end



Things like beginner-level Pilates exercises can help strengthen your spine.

YAKOBCHUK VIACHESLAV/SHUTTERSTOCK

ANDREW WINNARD & NICK CAPLAN

Lockdown could be bad for your back. Thanks to measures to tackle the coronavirus pandemic, many of us are now working from home. This means you might not be moving around as much, and your home desk setup (and the posture you adopt while working) might not be as good as it should be. These are all things that can lead to back pain.

Common poor desk posture is actually very similar to the posture astronauts adopt during spaceflight in zero-gravity. Usually, this is a forward-leaning posture with a forward head position and the loss of normal spinal curves. Being in space

also has similar effects to staying in bed all day.

At the Aerospace Medicine and Rehabilitation Laboratory at Northumbria University, our team of researchers looks into ways of keeping the spine healthy in astronauts during space missions. But this research can also be used to help those of us on Earth keep our spines healthy when working from home.

At a very basic level, the spine is a stack of 33 bones called vertebrae. In between the vertebrae are thick jelly-like discs that provide space for the bones to move across the whole spine when we rotate or bend.

Alongside the vertebrae are many small and large muscles that either help stabilize the spine or help it generate move-

ment. All these muscles are in a complex conversation with the brain in order to work together and maintain your upright posture and stability when sitting and moving. When even one of these vertebrae, discs, or muscles becomes irritated, it can lead to back pain.

When you lean forward a lot, you stop using the small postural muscles that control the spine's normal curve. Over time, they become smaller, weaker, and don't activate properly when needed. So if you're working at home, you might find our advice to astronauts helpful.

Tips to Keep Your Spine Healthy

1. Move. Try to take a few mo-

ments to move around every 1 to 2 hours during the workday. For your spine, this means gently rotating, leaning forward, backward, and sideways. Avoid extreme ranges, and don't use weights or resistance to do this. Think of it like oiling the joints and moving that oil around by gently moving them.

2. Sort out your setup. While on the International Space Station, astronauts float rather than sit. So they're encouraged to keep a normal, upright position as much as possible, as well as exercise to maintain back strength. To keep good posture on Earth, make sure you set up your desk, chair, and home office equipment correctly.

Ensure your screen is directly in front of you, with the middle of your screen at eye level. Be sure to sit back in a good chair that is upright and not reclined. Have your keyboard level, right in front of you, with your elbows by your side and at 90

degrees, ideally with wrists supported, too. Make sure your feet are also flat on the floor in front of you.

To keep good posture on Earth, make sure you set up your desk, chair, and home office equipment correctly.

3. Aim for a 'neutral' upright posture. Try to avoid leaning forward. Maybe even get someone to check your posture from the side. If you look hunched over, are leaning forward, or craning your neck back to see your screen, then you have a high chance of developing spi-

nal pain. You can reset to good posture by:

- Aim to have your ear in line with your shoulder, and that this is in line over your hip.
- Try to make sure your head is over your torso not sticking forward, and that your head isn't tilted up or down.
- Ideally have a slightly inwards arch in your lower back—but only a small one, as overdoing it can hurt, too.
- If you're experiencing back pain, a small pillow placed behind your lower back may help, or lying on your back on the floor once or twice a day may help move your spine into a better position.

4. Exercise. If, like our astronauts, you have some weak spinal stability muscles from poor posture—or not enough exercise from lockdown (or space flight)—some spinal exercises might help. Things like beginner-level Pilates exercises

can help strengthen your spine. Suck in your belly button toward your spine (to about 30–40 percent of your max power but not 100 percent) during your exercise as this can help engage the right muscles. Remember to move around every hour or two. At the end of the day, a walk may also help minimize back pain and build strength.

Of course, being in gravity is ultimately different from floating in space. If you find your spinal problems aren't improving, see a physiotherapist to get specific exercises tailored to you.

Andrew Winnard is the lead for the aerospace medicine systematic review group and lecturer at Northumbria University—Newcastle in England. Nick Caplan is the professor of aerospace medicine and rehabilitation at Northumbria University—Newcastle. This article was first published on The Conversation.



FOOD AS MEDICINE

# Coconut Water’s Complex Chemistry Is a Natural Wonder

Drinking coconut water has been shown to have numerous benefits including reducing body weight and blood sugar

Coconut water is a gift of nature, a complex and nutritious beverage with a host of benefits. This liquid is found in the center of a young, green coconut and helps nourish the fruit. Its wide range of applications is possible thanks to its unique chemical composition of sugars, vitamins, minerals, and amino acids, as well as phytohormones.

The average green coconut offers about one-half to 1 cup of coconut water. One cup contains 46 calories along with 9 grams of carbohydrates, 3 grams of fiber, 2 grams of protein, 11 percent of the recommended daily intake (RDI) of sodium, and 17 percent of the RDI of potassium.

Coconut is known to be an excellent alternative to sports drinks, a natural refreshing beverage that could be used for whole-body rehydration post-exercise. Nature also filters coconut water through an intensive purification process, eliminating safety issues commonly tied with municipal water systems and even sports beverages’ comprising synthetic ingredients.

Let’s recap some of the whole-body benefits of consuming fresh coconut water, starting with a 2018 study looking into its effects on body weight and glucose levels.

### Slashing Blood Glucose and Excess Pounds Naturally

A group of researchers sought

to compare the effects of higher saturated fatty acid and fiber intake, as provided by fresh coconut with monounsaturated fatty acid (MUFA), and fiber intake via a combination of groundnut oil and groundnuts. They then measured indicators such as blood insulin and glucose levels, along with blood pressure, in healthy adults.

The researchers divided the 80 healthy subjects they recruited into two randomized groups consuming a standardized diet along with either 100 grams (3.5 ounces) of fresh coconut or an equal amount of groundnuts and groundnut oil for 90 days.

The results showed that fasting blood sugar in both groups was significantly reduced. Yet they also observed a significant reduction in body weight in the coconut group, along with a notable increase in diastolic pressure in the groundnut group.

The researchers noted, “Fresh coconut-added diet helps reduce blood glucose levels and body weight in normal healthy individuals.” This supports previous studies that vouch for the blood-sugar-lowering action of the natural drink, offering potential anti-diabetes benefits despite its naturally sweet taste.

Interestingly, while groundnut intake reflected an increase in diastolic pressure, coconut was shown in previous research to push down systolic and diastolic pressures in hypertensive subjects. Additional animal research



shows coconut water prevents and reverses fructose feeding-induced high blood pressure, along with reducing oxidative stress and insulin resistance.

Coconut water vinegar, too, has been promoted as a food ingredient with potential anti-obesity and anti-inflammatory effects, thanks to alterations in the gut microbiota due to increased populations of bacteroides and akkermansia genera bacteria.

### Other Benefits of Coconut

**Anti-ulcer properties:** Both coconut water and coconut milk demonstrate strong anti-ulcer activity against chemicals such as indomethacin, a non-steroidal anti-inflammatory drug (NSAID).

**Lipid-lowering action:** Coconut water has a lipid-modulating effect similar to the drug lovastatin in rats fed a fat- and cholesterol-

enriched diet.

**Alzheimer’s disease protection:** In a novel study, young coconut juice showed positive future implications in the prevention and treatment of Alzheimer’s disease in menopausal women.

**Sperm preservation:** A coconut water-based extender, ACP-116c, along with 20 percent egg yolk and 3 percent glycerol, was effective for the cryopreservation of semen.

**Antibacterial benefits:** Three peptides were purified and identified from green coconut water, exhibiting remarkable antimicrobial action against pathogenic bacteria.

**Kidney stone fighter:** In a study on rats with kidney stones, coconut water barred crystals from sticking to the kidneys and other parts of the urinary tract. In ad-

dition, it slashed the number of crystals formed in the urine.

While pure, clear water remains the beverage of choice to stay cool and hydrated, natural coconut water can be a sound option, replacing electrolytes lost from sweating without the added sugar. Its close kin, coconut oil, is equally celebrated for its own set of healing and nourishing benefits.

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