THE EPOCH TIMES

MINDS BODY

HEALTH AND HEALING

Natural Ways to Help Fight Colds and Flu This Fall

Here are **5** strategies you can use to support your immune system and fight off pathogens

EMMA SUTTIE

ife is full of natural cycles that give us a pretty good idea of what we can expect. It's like how when the weather cools, the leaves begin to change, and a gentle wave of viruses wash across the land bestowing colds and the flu.

Both colds and influenza are caused by viruses. Colds generally come on more slowly with milder symptoms, and the flu tends to come on quickly with more systemic symptoms that are more severe.

The flu is potentially more dangerous for people with compromised immune systems because it can lead to complications such as pneumonia. Knowing the difference between a cold and the flu can help you manage symptoms and understand when you may need to take things more seriously and seek medical attention

Fortunately, whether you are facing a cold or flu, you can take steps to support your immune system and get your body into fighting form for the pathogens ahead.

Tea Tree Oil

Tea tree oil, also known as melaleuca oil, is a natural antiseptic with powerful antibacterial, antiviral, and antifungal properties. Tea tree oil is extracted by steam distillation from the leaves of Melaleuca alternifolia, a plant native to Australia.

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SUPPLIENT WITH VITAMINS TO BOOST IMMUNE SYSTEM

Diffusing tea tree oil is a great way to maximize its antiviral benefits.

SUPPLEMENT WITH VITAMINS TO BOOST IMMUNE SYSTEMGetting vitamins from eating whole foods is always preferable to taking supplements.

3

) EAT CHICKEN SOU

Chicken soup has been a remedy for colds and the flu for hundreds of years.

KEEP WARM AND WEAR A SCARF

A simple scarf can keep cold from penetrating the body in unwelcome ways amid the changing season.

PRACTICE GOOD HYGIENE

 $\label{eq:Away} \textbf{A way to extend this practice further is by washing your hands immediately after returning home}$



Elderflower is a traditional tonic used to boost immunity. We now know it is rich in quercetin.

The Antitumor Effects of Quercetin

This remarkable compound is racking up an impressive list of research-backed therapeutic credentials

JOSEPH MERCOLA

Quercetin has a wide range of benefits, which has made it useful for a variety of different health conditions. In the past two years, the antiviral benefits of quercetin have been the focus of many studies. However, there are other, lesser-known benefits, including the effects as a senolytic agent against senescence-mediated cancer growth.

Cells become senescent as we age. They stop dividing and enter a kind of stasis. Instead of dying off as cells normally do, senescent cells persist but change shape and size and secrete inflammatory molecules that cause other nearby cells to become senescent. This process is one of the hall-

marks of human aging and senolytic agents used to induce the death of senescent cells.

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Quercetin is perhaps most well-known as a strong antioxidant and antiviral. For example, Elderflower extract, which is rich in quercetin, is a traditional tonic used to boost immunity. In supplement form, quercetin has been used to prevent and treat the common cold and influenza.

According to Mount Sinai, quercetin should be used with caution as it may interact with certain antibiotics by reducing the effectiveness of the drug. It may also enhance the effect of some blood thinners, which can increase your risk of bleeding.

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The anti-

effects of

inflammatory

quercetin are

crucial since

inflammation

is at the root of

many diseases,

autoimmune

heart disease.

Quercetin has been

gene expression and

and may be useful in

alleviating age-related

metabolic activity

ailments.

aging by slowing

shown to slow cellular

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The Antitumor Effects of)uercetin

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In addition to these, it may interact with corticosteroids, digoxin, cyclosporine, and fluoroquinolones.

Effects on Senescence-Mediated

A paper published in August 2022 in Nutrition Research analyzed the prooptotic effect that quercetin has on aging cells. Apoptosis is the normal, healthy way cells are supposed to die. The paper reviewed preclinical and early phase data using quercetin as a senolytic agent and found the data showed it was effective in "preventing or alleviating cancer formation."

The authors reviewed the importance of cellular aging in the development of cancer cells and the effect that quercetin may have on the suppression of cancer cell proliferation. Research has found that cellular aging can suppress tumor development, but paradoxically can also enhance cancer development.

Cellular senescence is a dynamic and multi-step process that is associated with alterations in metabolic activity and gene expression. This can compromise tissue regeneration and contribute to aging. On the other hand, by removing senescent cells, age-related dysfunction can be attenuated and potentially extend the lifespan.

One mini review published in Cancer Letters in 2008 looked at previous research and found that animal studies had demonstrated quercetin could prevent chemically induced cancer growth and epidemiological studies found it was associated with preventing lung cancer. One study focused on the effect that physiologically attainable doses of quercetin had on the inhibition of cancer cell proliferation. The researchers believed their study demonstrated quercetin had chemopreventive properties.

Lab studies have also demonstrated that quercetin is a strong antioxidant and has pro-apoptotic effects on tumor cells, with the ability to block growth at different phases of the cell cycle. Research has also demonstrated that quercetin can promote the loss of cell viability and autophagy through several pathways, including those involving mitochondrial function and glucose

Data indicate that guercetin could play a role in cancer treatment as it reportedly has synergistic effects in combination with chemotherapy agents or radiation therapy. Quercetin has also shown promising results with chemoprotective and radioprotective properties, by protecting normal cells against the effects of chemotherapy and radiation therapy.

One paper identified some of the antiinflammatory, antioxidant and antiproliferative properties quercetin has that enhances breast cancer treatment, while another evaluated its effect on the treatment of ovarian cancer, which is a serious cancer growth and threat to women's health.

Flavonoids May Attenuate Behavior

From Sleep Deprivation The strength of the antioxidant properties of quercetin is likely one factor in the ability to improve mood-related behaviors in animal studies where the subjects underwent sleep deprivation. A study published in 2022 used a sleep deprivation model using 30 male albino mice. The mice were split into five groups.

The intervention groups received either astaxanthin or one of two doses of quercetin. Their activities were monitored, and brain samples were later collected. Researchers found that during persistent wakefulness, the animals experienced anxiety and depression-like behavior. In the sleep-deprived group, brain samples showed increased pro-oxidant activity. Prooxidants induce oxidative stress.

In the group pretreated with quercetin, these behaviors were reversed. The researchers found that quercetin could reduce anxiety caused by sleep deprivation in the animals. The structure of this study was similar to another published in 2021 in which the researchers split the animals into five groups that received the same intervention and sleep deprivation just described.

The researchers hypothesized, and the data showed, that quercetin ameliorated the effects of sleep deprivation on memory performance, depression-like behavior, and against the loss of prefrontal cortex neurons. Researchers have been interested in how the powerful antioxidant effects of quercetin might mitigate the damage and impairment commonly found following sleep disruption.

In one study published in 2016, the researchers hypothesized that quercetin could reduce the manic-like behavior induced by 24 hours of paradoxical sleep deprivation in mice. Paradoxical sleep is another name given to rapid eye movement (REM) sleep, the deprivation of which has led to chronic conditions such as obesity and stress disorders in people.

In the animal study, the researchers found that quercetin blocked hyperactivity that was induced by sleep deprivation. In another

ated with sleep deprivation could be ameliorated with a preparation of grape seed polyphenol extract, concord grape juice, and resveratrol.

They found the preparation improved sleep deprivation-induced memory deficits and quercetin, found in grape seed extract and grape juice, was an important factor in attenuating cognitive impairment caused by acute sleep deprivation.

Quadruple Therapy Effective on SARS-CoV-2

Quercetin has been studied for its antiviral effect and has proven to inhibit the early stages of a flu infection. It is also a promising agent against the Epstein-Barr virus, Zika virus, Hepatitis B, and rhinovirus, the virus most often responsible for the common cold.

It was only logical then, as the COVID-19 pandemic emerged, that researchers would investigate the efficacy of quercetin against the SARS-CoV-2 virus. In the early months of the declared pandemic, a review was published that found the administration of bromelain, quercetin, vitamin C and zinc "showed promising results in improving clinical outcomes among COVID-19 patients."

In this paper, the researchers identified the antioxidant's ability to inhibit proinflammatory cytokines and to clinically block human mast cell cytokine release as an important property in the fight against severe COVID-19 disease, which is associated with increased levels of cytokine production. They also identified the independent actions that bromelain has in activating a healthy immune system. However, bromelain and vitamin C play

another role in the administration of quercetin. Because quercetin generally isn't soluble in water, it can be poorly absorbed. When administered with bromelain or vitamin C, it increases the absorption and bioavailability of the antioxidant. Bromelain is a proteolytic enzyme found

in the stem of the pineapple plant. Independently, it has been used as a supplement to help reduce swelling after surgery or injury, or in the nose and sinuses. It is also applied topically to help treat burns. The combination of quercetin with bro-

melain or vitamin C has also been a part of several successful protocols used to treat COVID-19. Quercetin is a zinc ionophore, which helps improve the cell's ability to absorb zinc where it is effective as an antiviral.

Dr. Vladimir Zelenko was among the first physicians to discover and implement a treatment that has been credited with saving millions of lives around the world. His early protocol used hydroxychloroquine, another zinc ionophore. However, as research data showed that quercetin was as effective as hydroxychloroquine, his early treatment options for low-risk patients included quercetin with vitamin C and zinc. Sadly, Zelenko died on June 30 at the

age of 48 after a long battle with cancer. While treating patients, he oversaw the treatment of roughly 7,500 people using his protocol, during which time only three patients died.

More Benefits of Ouercetin and

The antioxidant and anti-inflammatory health benefits of quercetin likely contribute to the other lesser-known benefits of this supplement. The anti-inflammatory effects of quercetin are crucial since inflammation is at the root of many diseases, including autoimmune disorders, heart disease, and cancer.

One review of the literature found that quercetin is "a strong anti-inflammatory weapon" that may be used in the fight against inflammatory diseases, such as obesity and type 2 diabetes. Another revealed that supplementation could

study, researchers hypothesized that the reduce systolic blood pressure, and a third animal study demonstrated that deficits in the hippocampal area associsupplementation with quercetin and exercise could reduce atherosclerotic plaque formation.

Quercetin has also shown promise in relieving the symptoms of allergies. It works by inhibiting histamine release and decreasing proinflammatory cytokine production and leukotrienes creation. The combination of quercetin and bromelain or vitamin C has also been promoted to help improve athletic performance based on the antioxidant po-

Additional Benefits of Quercetin

tential of both flavonoids.

Quercetin has also been studied for the positive health benefits it has on:

- High blood pressure
- Cardiovascular disease
- Metabolic syndrome Certain kinds of cancer
- Nonalcoholic fatty liver disease (NAFLD)
- Mood disorders
- Arthritis

Quercetin From Food and Supplements

Considering the wide-ranging benefits that quercetin has on human health, it could be a useful supplement for many, whether it is used to treat an acute or chronic condition or as a long-term preventative measure. It is one of the supplements I recommend keeping in your medicine chest for times when you may be feeling as if you're getting an upper respiratory infection. If you're prone to colds and flu, consider taking it for a couple of months before the cold and flu season hits to support your immune system.

If you feel as if you have a cold or flu, consider using quercetin with bromelain or vitamin C in addition to zinc. Over-thecounter zinc lozenges make it easy to consume zinc for the short time it's needed when you're feeling ill. Be sure to eat before taking zinc as it can make you nauseous.

On a long-term basis, quercetin has been useful for those with metabolic syndrome. However, it is much better to address fundamental issues to deal with metabolic syndrome, such as fixing a poor diet or getting enough exercise, and use a supplement only as an adjunctive therapy. If you have one or more conditions that make up metabolic syndrome, you would be wise to limit your total sugar intake to 15 grams per day.

For comparison, the American Heart Association reports that the average adult consumes 77 grams of sugar each day, which is more than three times the recommended amount for women. The number for children is even worse, with the average American child consuming 81 grams of sugar per day. Sugar-laden beverages are the leading source of added sugars in the diet.

Quercetin can function in several pathways to help reduce your risk of cancer. In addition to reducing the inflammatory response in your body and thus your risk of obesity and obesity-related cancer, it also promotes apoptosis at the cellular level to prevent cancer. When combined with exercise and reduced sugar consumption, you are making strong steps toward taking control of your health.

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

Dr. Joseph Mercola is the founder of Mercola.com. An osteopathic physician, bestselling author, and recipient of multiple awards in the field of natural health, his primary vision is to change the modern health paradigm by providing people with a valuable resource to help them take control of their health

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A Research-Backed Guide to Weight Training

Weight training is essential to maintaining muscle mass, function in old age

MAT LECOMPTE

Old-fashioned resistance training, such as lifting heavy weights repeatedly until you can't, is the best way for older adults to slow, or even reverse, age-related muscle loss.

Sarcopenia, the medical term for

muscle loss, can boost the risk for falls and frailty. Resistance training (also called weight training) can be a huge help. It consists of doing upperand lower-body exercises using free weights, machines, resistance bands, or even body weight.

Ultimately, the goal is to stress your

muscles enough to feel a difference but not overdo it to where you risk injury. You also want to train with the goal of continuous improvement, and not

The main challenge is to find the sweet spot between doing too little or So, how do you get to that sweet spot?

The Journal of Strength and Conditioning Research has published some evidence-based guidelines to follow.

Type: One or two multi-joint exercises per major muscle group were identified as being the most beneficial. There are six main muscle groups:

chest, back, shoulders, arms, legs, and calves.

Multi-joint exercises are movements that engage more than one joint, such as the elbow and shoulder, knee and ankle, etc. They differ from singlejoint movements, such as a bicep curl. Multi-joint movements allow you to move heavier weights, to increase muscle faster.

Weight: It's recommended that older adults aim to exercise within 70 to 85 percent of their one-rep maximum weight. Because learning your one-rep max can be difficult and dangerous, pickweights with which you can do 10 a few days, and then add another as

repetitions with good form. You want to be struggling for the final rep or two, and leave no more than a rep or two

Reps (repetitions): Guidelines have found that anywhere from six to 12 reps per exercise are beneficial. Start with doing 10 reps because it's easy to remember, and as you progress, aim for heavier weights at six to eight reps.

Frequency: Doing two or three workouts per week produces the most muscle size and strength. Start with two workouts per week, spread out by

It can take some time to start noticing the changes. If you're not seeing more muscle or feeling stronger after eight weeks, you aren't exercising hard enough and need to mix up your routine by adding weight or increasing the number of exercises.

Mat Lecompte is a health and wellness reporter for Bel Marra Health which first pul

While it may reps with a is often the



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Several studies have shown that tea tree oil is effective against influenza. One study in the International Journal of Pharmacy and Pharmaceutical Research demonstrated that melaleuca alternifolia showed significant anti-influenza properties. The researchers concluded that tea tree oil (in addition to olive leaf extract) could be used preventatively in birds to prevent further outbreaks of avian flu.

Another study in the American Journal of Essential Oils and Natural Products showed that tea tree oil showed 100 percent inhibition in influenza type A. In addition, 30-minute exposure of type A virus to tea tree oil vapor also caused 100 percent inhibition, meaning the vapor's medicinal actions had a lasting effect.

A study from the journal Molecules published in 2022 studied the antiviral activity of several essential oils using vapor instead of liquid oil. It found that tea tree oil strongly reduced the viral cytopathic effect of host cells. The cytopathic effect refers to structural changes in host cells caused by a viral

invasion. The study also concluded that the most abundant components of the essential oils' vapor might directly interfere with the influenza virus envelope or mask viral structures necessary for the early stages of

How to Use It

benefits is to diffuse it. Essential oil diffusers use various methods to emit essential oils into the air.

Influenza particles can spread through the air, through close contact with an infected person, or through surfaces or objects contaminated by the virus. Influenza particles can remain active on objects for up to 48 hours according to the Centers for Disease Control and Prevention, so sterilizing surfaces is a good idea to reduce its spread. Diffusing tea tree oil is a good way to give your living space a "deep cleaning" without having to resort to harsh chemical cleaners. Diffusing also allows the oils to be inhaled, so your body is able to reap their antibacterial, antiviral, and antifungal benefits.

Essential oil diffusers come in four types nebulizing, ultrasonic, heat, and evaporative—and can be found at most health food stores or on Amazon. Always make sure to use high-quality, organic essential oils.

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You can also make a natural household cleaner by adding 5 to 10 drops of tea tree oil to a spray bottle of water and using it on Pregnant women need 85 mg, and for lactatsurfaces to disinfect your home, reducing ingwomen, the RDA is 120 mg daily. Smoking the spread of viruses and other microbes.

Supplement With Vitamins to Boost Immune System

Because of our hectic lifestyles, it can be difficult to regularly sit down and have a healthy home-cooked meal. So intentionally adding vitamin-rich foods to our diet or taking a good, high-quality supplement will ensure that we get the vitamins we need so that our

bodies function optimally and can fight off invaders. Getting vita-

mins from eating whole foods is always preferable to taking supplements because of the synergistic effects found within the complex biochemistry of plants, animals, and mushrooms. These foods contain various compounds, minerals, and vitamins in intricate structures and perfect ratios that offer a benefit to the body that's greater than the sum of their molecular parts. These foods are also perfect for our body and we're able to absorb them readily. A high-quality supplement is a good option if you feel as though you aren't getting enough of these critical vitamins in the foods you eat, but it isn't a replacement for real food. That said, sometimes you need a boost, and supplements can offer you an edge over colds and the flu.

Vitamin C

Vitamin C, or L-ascorbic acid, is one of the best vitamins you can take to boost your immune system. The human body can't create its own vitamin C, but our bodies need it to function properly, which is why we need to get it through the foods we eat or by taking supplements. Vitamin C is a water-soluble vitamin that the body can't store—another reason we need to make sure we're getting enough of it every day, especially if we feel a cold or flu coming on.

Vitamin C is necessary to help our bodies fight infections, heal wounds, and stimulate the production of white blood cells—a vital component of our immune systems. It's also a powerful antioxidant, reducing inflammation and fighting free radicals that can impair health and accelerate aging.

Here are some of the best foods to eat for vitamin C:

- rose hips
- chili pepper guava
- canteloupe
- oranges
- grapefruits kiwis
- strawberries
- papaya tangerines
- black currants
- spinach
- snow peas kale
- broccoli
- bell peppers
- Camu camu
- acerola cherry
- Chinese red dates

Recommended Daily Intake

The recommended dietary allowance (RDA) for adults older than 19 years of age is 90 milligrams (mg) for men and 75 mg for women. depletes vitamin Clevels in the body, so keep this in mind if you're a smoker and adjust

During cold and flu season, some people recommend taking up to 1,000 mg (1 gram) of vitamin C daily. Because it's a water-soluble vitamin, it's not stored by the body and any extra that the body can't use is passed through the urine. If you want to take these larger amounts of vitamin C that exceed the RDA guidelines, increase gradually and track

Vitamin D

Our best source of vitamin D is the sun, which we should try to get a little of every day to stay healthy and maintain a strong

immune system. Vitamin D is a fat-soluble and helps maintain the body's calcium and phosphate levels, which are needed to build new bones. Vitamin D helps to reduce inflammation and modulates cell growth, glucose metabolism, and immune function. Below are some excellent food sources of

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vitamin D:

- cod liver oil
- salmon
- swordfish
- orange juice fortified with vitamin D
- dairy and plant milk fortified with vitamin D
- sardines
- beef liver
- cheddar cheese
- sardines crimini mushrooms (and some other
- mushrooms)
- pork chops
- eggs

Recommended Daily Intake

Adults (19 yearsor older): Men-15 micrograms (mcg) (600 international units [IU]) Women-15 mcg (600 IU)

Pregnant Women: 15 mcg (600 IU)/Lactation-15 mcg (600 IU)

Adults (70 years or older): 20 mcg (800 IU) Note: Most people are vitamin D deficient because of the generational shift toward indoor, sedentary lifestyles. Many experts suggest that a higher intake of vitamin D is necessary, especially for those who are already deficient.

Vitamin E

Vitamin E, a fat-soluble vitamin, is a powerful antioxidant that helps fight the free radicals that cause damage to DNA and accelerate aging. Vitamin Ehelps to reduce inflammation and supports and strengthens immune function. This essential vitamin also dilates blood vessels and makes blood less "sticky," preventing dangerous clots.

Below are some excellent foods for vitamin E:

- wheat germ oil
- almonds peanuts and peanut butter
- hazelnuts beet and collard greens
- spinach
- sunflower, safflower, and soybean oil
- sunflower seeds pumpkin
- red bell pepper
- kiwi mango

Recommended Daily Intake

en-15 mg Pregnant Women: 15 mg/Lactation-19 mg

Vitamin A

Vitamin A is a fat-soluble vitamin and plays a vital role in making white blood cells that fight infections in the body. Vitamin A regulates the immune system, increasing protection from bacterial and viral infections. It's essential for cellular communication, growth and development, and male and female reproduction. Vitamin A is also vital for eye health and can help to prevent eye disorders such as age-related macular degeneration, a leading cause of vision loss.

Vitamin A is also essential for healthy

surface linings of the eyes, mucus memvitamin that promotes calcium absorption branes, respiratory, urinary, and intestinal tracts, which are important barriers that help protect the body against infection. Acquiring vitamin A from food sources has also been shown to lower the risk of many types of cancer.

Foods high in vitamin A include:

- kale
- spinach
- broccoli carrots
- · sweet potato pumpkin
- winter and summer squash
- eggs
- beef liver fish oils
- tomato
- red bell peppers
- cantaloupe
- butternut squash lettuce
- pink grapefruit

Recommended Daily Intake Adults (19 years and older): Men-900 mcg/

Women-700 mcg Pregnant Women: 770 mcg/Lacta-

tion-1,300 mcg

Zinc is an essential mineral with functions in the body that include wound healing, immune system function, building proteins and DNA, fertility in adults, and growth in children. Zinc is also needed to maintain our sense of smell and taste.

Zinc is available in lozenges, syrups, and over-the-counter cold remedies. Animal products are the most bioavailable forms of zinc, with oysters containing more zinc per serving than any other food.

Below are some of the best food sources of zinc:

- oysters
- beef chicken leg
- firm tofu
- lean pork chops squash
- pumpkin seeds
- lentils
- low-fat yo-
- gurt
- oatmeal shiitake

mushrooms **Recommended Daily Intake**

Adults (19 years and older): Men-11 mg/ Pregnant Women: 11 mg/Lactation-12 mg

Eat Chicken Soup

Chicken soup has been a remedy for colds and the flu for hundreds of years—and for good reason. Soups are full of healthy ingredients and are well-cooked so that everything is broken down, making it less work for the body to digest. The body needs all of its resources to fight the illness when you're sick. Soups and stews are a great way to get good nutrition while not taxing the body's energy, which it needs to fight invading pathogens.

Moses Maimonides (1135–1204), a Jewish philosopher and physician, apparently knew the benefits of chicken soup nearly 800 patients for a wide variety of ailments and wrote about it in his book "On the Causes

years ago when he recommended it to his

A study in the journal The American College of Chest Physicians corroborates this ancient wisdom. The study found that chicken soup increases mucus flow and helps eliminate the cold virus.

Chicken is high in the amino acid cysteine, which helps to loosen mucus and other secretions. Cooking chicken into a soup releases the cysteine into the broth. Adding spices such as pepper and garlic increases cysteine's mucus loosening effect. Using chicken and a variety of vegetables that are high in nutrients, such as parsnips which are high in potassium, and carrots, and onions, which are rich in antioxidants, add to the soup's therapeutic effects and help to replenish electrolytes, which are often lost in body fluids when we get sick.

Both colds and influenza are caused by viruses. Colds generally come on more slowly with milder symptoms, and the flu tends to come on quickly with more systemic symptoms that are more severe.

In Eastern medicine, the spleen and stomach are the organs that are most vital to digestion, as well as the role they play in creating qi, the vital energy needed to fuel the body's processes, including maintaining a strong immune system. The spleen and stomach require a lot of energy to digest and process the food we eat, and we can reduce this burden if we eat soups that are already well-cooked, allowing more energy to go to a lot of "high-touch" areas or you have a fortifying the immune system or fighting that nasty cold or flu that you just caught.

Keep Warm and Wear a Scarf

Not being warm enough puts unnecessary stress on our immune systems, which is why keeping warm is especially important in cold and flu season, when our bodies are under constant assault by external invaders.

We tend to get more viral infections in close contact between people.

In Eastern medicine, fall is the season associated with wind, considered the master of 100 diseases. The place where wind (and cold) most easily enter the body is through the neck. Wearing a scarf, especially in the fall, when the seasons are changing and there's often a chill in the air, is an excellent



odds of avoiding a cold or flu.

sonal style in the process.

Dressing warmly enough for the time of year isn't always easy, especially in the transitional seasons of fall and spring. Because the weather is so changeable, having a scarf, an extra sweater, or a pair of socks with you is an excellent way to ensure that you can be warm enough no matter what the weather may do and increases your

way to ensure that you stay warm and that

your vulnerable neck is protected. Another

great thing about a scarf is that it's highly

portable and available in almost any color

and pattern imaginable, so you can take

care of your health and express your per-

Practice Good Hygiene

As an acupuncturist, washing my hands has become an almost Pavlovian activity, something I do a thousand times each day without even thinking about it. But to most people, it isn't something we usually think about unless in an obvious situation, such as using the bathroom.

Because microbes thrive everywhere in our environments and on every surface, washing our hands often and being mindful of the things we're touching just takes a little practice. The other part of this is developing an awareness of our compulsion to touch our faces, which allows all those microbes some pret-

ty direct avenues into the body (the mouth, nose, and eyes), which is how they us sick. A way to

extend this practice further is by washing your hands immediately after returning home from being anywhere in public. Depending on how vigilant you want to get, you can also change your clothing to ensure that you aren't bringing unwanted microbes into your home. If you happen to be in a densely populated place with compromised immune system, this might be a good preventative practice.

If you have small children, after returning from somewhere such as a playground, where many other children play and touch surfaces, changing your children's clothes when they get home and showering them can help keep infectious agents to a minimum.

Final Thoughts

colder months because we spend more The arrival of fall doesn't need to induce time inside and get less vitamin D from anxiety because of the potential barrage the sun, which is an essential component of viruses that seem to accompany the of our immune systems. We also tend to changing of the seasons. There are nugather indoors to avoid the weather, makmerous ways we can all keep ourselves built up, such as eating our vitamins and minerals, getting enough sleep, managing stress, and staying warm to name a few. Rather than relying on medications, it's far better for the body and spirit to live preventatively to keep ourselves healthy year round so viruses and other microbes never come to visit.

> Emma Suttie is an acupuncture physician and founder of Chinese Medicine Living, a website dedicated to sharing how to use traditional wisdom to live a healthy lifestyle in the modern world. She has lived and practiced in four countries and now works through her practice, Thrive Consulting. She is a lover of the natural world, martial arts, and a good cup of tea.

> health, there is now evidence that CFS is ac-

companied by leaky gut, a pathology char-

acterized by compromised intestinal walls.

By healing your gut lining with a focus on

Natural Options for Chronic Fatigue Syndrome

This mysterious, debilitating condition affects millions of Americans, but natural remedies may help alleviate symptoms

in your head. You may have chronic fatigue syndrome, and there is a lot that you can do to feel better and reclaim your energy.

Chronic fatigue syndrome (CFS) is a com-

plex long-term disorder affecting more than

2 million Americans that's characterized by extreme fatigue and malaise that doesn't improve with rest. difficult to carry on with normal activities such as work, school, and household chores.

periods of time due to the disorder. The reasons behind the exceedingly low rates of accurate diagnosis for CFS include limited access to qualified health care, no definitive diagnostic method, and a lack of awareness of CFS among health care provid-

tients is house-bound or bed-bound for long

health practitioners may dismiss symptoms as novel or consider them to be side effects of other, potentially undiagnosed, health issues. While some studies demonstrate a correla-

tion between CFS and autoimmune system

dysregulation, the cause of CFS, also referred

to as myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS), is still unknown. There is no known cure for CFS, with treatment generally focusing on symptom relief. We've identified four of the best natural options for chronic fatigue syndrome to provide safe, effective support to revitalize

Nicotinamide Adenine Dinucleotide (NADH)

An essential element in the production of energy, nicotinamide adenine dinucleotide (NADH) is a coenzyme found in every cell in the human body. NADH is a critical factor in hundreds of metabolic processes, including healthy cell turnover (antiaging), converters. Due to limited training on the condition, ing food into energy, and maintaining the

integrity of DNA, an important factor

NADH has been studied extensively as a therapeutic study comparing oral tritional supplements and psychological therapy for a period of 24 months. To rule out specific comorbidities, imevaluated at baseline and each trimester of therapy. Patients who received NADH had a dra-

matic and statistically signifi-

cant reduction in symptoms during the

natural remedies.

fatigue, it's worth exploring

Another trial on the stabilized oral form of NADH examined 26 qualified patients over a 12-week double-blind, placebo-controlled

either 10 milligrams (mg) of NADH or a placebo for a four-week period, followed by a four-week "washout" period, after which subjects were switched to the alternate treatment for a final four-week period.

tients, or 31 percent, responded favorably to NADH compared to just 8 percent (two patients) of the placebo group,

herbal remedy known for its adaptogenic qualities, meaning it can help protect the body from dam-

ratory tract infections, and to regulate healthy blood pressure, among other uses. Astragalus can even be applied topically for wound care thanks to antiviral properties. A 2009 study focused on the herbal formula

myelophil, a combination of two traditional

medicinal plants, Astragalus membranaceus

and Salvia miltiorrhiza, a member of the sage family. The myelophil extract was given to the treatment cohort in either low- or high-dose groups of 3 or 6 grams of myelophil daily. A control group was provided with a placebo and all groups were monitored for four weeks. Patients were surveyed for symptom severity and blood antibody arrays were taken to

measure inflammatory cytokines, an important marker of disease symptoms. Results showed that even at low dosage (3 grams), myelophil significantly decreased fatigue severity compared with placebo, though no changes in cytokine expression were noted

Probiotics have garnered a health spotlight in recent years, owing to their ability to support and protect the digestive tract, boost the brain, and improve mood.

Probiotics

Brain fog is a key side effect of CFS and a potentially devastating one when it comes to its effect on daily functioning. The same can be said for depression, another common hallmark of CFS. Studies reflecting the mood-boosting, clarity-producing effects of probiotics are cause for optimism for sufferers of chronic fatigue.

systematic review of studies was performed in this meta-analysis, encompassing randomized controlled trials and pilot studies of CFS or FMS conducted between 2006 and 2016. The administration of Lactobacillus casei for eight weeks was found to reduce anxiety scores, while treatment with Bifidobacterium infantis for the same period reduced inflammatory biomarkers.

(FMS), which shares many features of CFS. A

There is no known cure for chronic fatigue syndrome, with treatment generally focusing on symptom relief.

a role in CFS, as it plays a part in the health of the immune system. A 2009 study on probiotics' effects on energy level and symptomology for CFS patients found that after four weeks of probiotic supplementation with strains of lactobacillus, acidophilus, and Bifidobacterium, patients reported improved neurocognitive functions, though fatigue and physical activity scores weren't

significantly affected.

Antioxidant Formulas

Supplementing with antioxidants is another way to boost your body's defenses against the damaging effects of free radicals. By increasing the amount of antioxidant enzymes available to your cells, you may be able to prevent or even reverse the effects of oxidative stress that can cause systemic inflammation and

Oxidative stress as a factor in CFS was studied by researchers using a mouse model that stressed mice via chronic swimming. Mice treated with melatonin (a hormone with antioxidant effects) and carvedilol (a medication To find the studies mentioned in this that is 10 times more potent than vitamin E) were observed to have significantly reduced immobility periods each day.

Similar results were observed when mice were administered an oral herbal compound of Withania somnifera (100 mg/kg), quercetin (50 mg/kg), and St. John's wort (10 mg/kg). These treatments further caused a significant reduction in lipid peroxidation, a sign of oxidative stress, and restored the GSH (glutathione) levels decreased by

Heal Chronic Fatigue From the Inside Because of the increased attention on gut

nutrition and targeted supplementation, you may be able to eradicate chronic fatigue at the root. Adding safe, natural options for treating chronic fatigue syndrome to your diet can support your body and help restore your energy to healthy levels. To learn more about natural options for CFS, consult GreenMedInfo.com, the world's most widely referenced, evidence-based natural medical resource.

The GMI Research Group is dedicated to investigating the most important health and environmental issues of the day. Special emphasis will be placed on environmental health. Our focused and deep research will explore the many ways in which the present condition of the human body directly reflects the true state of the ambient environment. This work is reproduced and distrib-

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especially your neck area, so that you can avoid putting added stress on your

Do you suffer from malaise, low energy, brain fog, and a depressed mood? It's not all

A whopping 90 percent of chronic fatigue sufferers are undiagnosed and many find it your body and spirit. According to the Centers for Disease Control and Prevention (CDC), at least 1 in 4 CFS pa-

in disease prevention. for CFS, including a 2004 NADH with conventional therapy consisting of numunological parameters and viral antibody titers (levels) were also you suffer from chronic

study. Subjects were randomized to receive

Within this cohort of 26 subjects, eight pawith no severe adverse reactions related to treatment.

> Astragalus is a traditional age due to oxidative stress. A powerful antioxidant, astragalus is used to protect and support immunity, as a preventative against colds and upper respi-

> > A 2018 study in the journal Beneficial Microbes points to the role gut microbiota may play in CFS and fibromyalgia syndrome

Unhealthful intestinal ecology may play

MINDSET MATTERS

What's Happened to Emotional Resilience?

Our children are growing up increasingly less able to handle the routine hardships of life



NANCY COLIER

UWE KREJCI/GETTY IMAGES

10-year-old daughter would be coming home from camp early.

Jane had finally given in; she couldn't take any more sobbing phone calls from her daughter about how awful camp was and how the girls in the cabin were bothering and mistreating her.

My friend was confused and frustrated that her daughter's experience of camp, with all its remarkable activities, gorgeous setting, and kind people, could indeed be so negative. But, alas, individualized universe. such was the report coming from Vermont.

I started hearing similar reports from other parents. Their kids also wanted to come home from camp and were struggling with anxiety, relational difficulties, and other emotional issues. I checked in with a friend who's the director of a popular summer camp, and she confirmed that at her camp, and many other camps, more kids this summer were leaving or talking about leaving than she'd seen in her decades as a camp director.

Exodus of the Uncomfortable

From my unscientific research, it seemed that children wanted to leave because they felt too anxious, annoyed, excluded, emotionally bullied, and sad (formerly called homesick). Children described an overall difficulty getting along with cabinmates, navigating social situations, adjusting to other people's wants and needs, and figuring things out without their parents' help.

One 11-year-old girl, in explaining why she wanted to come home, described her bunkmate who twice told her that she shouldn't wear "that" shirt with "those" shorts. One girl felt bullied after being told that her shampoo wasn't a good one. Another described the overwhelming rejection she felt when her cabinmate didn't want to lend her a dress for the dance, and how she was once

deliberately excluded

from swinging on a hammock with the other girls.

For one tween, it was the overwhelming annoyance of a cabinmate continually sitting on her bed, and another who

continually asked her what time it was. The shared sentiment was that the whole experience of summer camp was just too difficult to The experiences

these children described can most certainly be

challenging and painful, and other electronic devices it's hard to live (often for the first time) in close quarters with other kids who aren't family, and who are also navigating the turbulent social landscape of building identity and inde-

While cellphones and

offer us contact to the

outside world, they

also isolate us, leaving

each of us in our own

pendence. Learning how to speak up for yourself, draw boundaries, and ask for what you want and need are no small tasks (at any age).

Still, it behooves us to think more deeply about why these situations that used to be considered just regular life—the basic aggravations of living in a world that includes other people—have become so impossible and overwhelming for our children. Why do our kids seem less and less able to handle—for lack of a better

COVID and Modern Problems

Is there something about our parenting that contributes to our children's lack of resilience and difficulty with accepting, compromising, and, most importantly, finding solutions in challenging and uncomfortable situations?

And why does it sometimes seem that our children, who often are given so much more than we were given, appreciate and enjoy so much less? According to some researchers, childhood anxiety and depression are at historic highs.

The reasons our children lack resilience and feel so overwhelmed by life are, of course, multiple and complex. So, too, the aspects of modern parenting that contribute to this troubling quandary are layered, intricate, and difficult to discern.

The reality, however, is that our kids are growing up in a world filled with profound and scary problems—frightening realities that children of previous generations didn't have to consider. Will there be a planet at all for them to live on? Will they get shot when they go to school? Will an

unseeable virus from a monkey or pangolin, or created in a lab, somehow kill their family, or them?

THE EPOCH TIMES Week 36, 2022

When it comes to things to worry about, our world is overwhelming, and not just for kids, but for all of us. So, when we think about why the small situations of everyday life might feel overwhelming and unmanageable, we have to remember that our children are already filled to the brim (and overflowing) with scary stuff.

In addition, for more than two years, we've all been isolated because of COV-ID-19, living in our own private bubbles, separated from everyone but those closest to us, which means separated from other people's differing ideas, preferences, and needs.

During this time, when we've lost control over so much, we've also, in some ways, ended up with more control over our immediate environments.

Our kids haven't had to work things out with their peers, to compromise, be resourceful, or navigate challenging situations. As a result, they've missed out on two important years of emotional and social development, and the opportunity to build critical skills for living in their community.

Screened In

In addition to the pandemic, there's the profound and inescapable issue of what screens and social media are doing to our children's emotional resilience and ability to cope with real life (or, what they now call "RL").

While our screens have the capacity to connect us, they also isolate us, leaving each of us in our own individualized

Our screen is a place where we can hide, surround ourselves with our personal preferences and opinions, and minimize contact with any kind of other. Our screen is a universe in which we are the master, and we rarely, if ever, have to put up with anything we don't approve of or want.

Other people—their behavior and choices don't need to bother us inside our selfdesigned universe. If they do, we can usually just delete them (which we can't do as easily in RL).

Our screens present an image of reality that isn't real, a shiny, airbrushed

We no longer view difficulty and discomfort as normal parts of life that offer **opportunities** for growth. If life is uncomfortable, somethingor someonemust be changed to correct the situation-

Many parents feel like

they are supposed to

problems.

solve all of their children's

image that's absent two of the most reliable aspects of reality: difficulty and discomfort. Sadly, we've come to expect the real world to be like our screen world, and yet it isn't. **Problems in Parenting?** This seeming diminishment in emotional resilience may also be tied to the increasing phenomenon of helicopter parenting—namely, overly involved and immediately. controlling parents who swoop in to take care of every problem their children might

have, but without allowing their children to solve issues for themselves. In what's usually an effort to be helpful

> and to protect their children from pain, such parents do their kids a disservice, depriving them of the opportunity to be resourceful and to learn how to manage life for themselves. Such kids can end up helpless, without the emotional and mental skills to work with other people and to manage the challenges of regular life.

Yet another contributing factor in camp exodus is our culture's prevailing attitude that everything should be easy and comfortable for us—always. Our culture conditions us to believe that life should be how we want it to

be, that we shouldn't have to struggle, and that our children shouldn't have to, either; we can't bear our children's discomfort and we're teaching them that they can't and shouldn't bear it, either.

Comfortable

Expectations We no longer view difficulty and discomfort as normal parts

of life that offer opportunities for growth. If life is uncomfortable, something—or someone—must be changed to correct the situation—immediately.

(For more than two years, we've

all been isolated because of

COVID-19, living in our own

private bubbles, separated from

everyone but those closest to

us, which means separated from

other people's differing ideas,

preferences, and needs.)

I've written a lot about the importance of empathy and compassion in parenting, for both our children and ourselves. The essence of well-being is the ability to care about and be kind to our own experience—there's nothing I believe more firmly.

And yet, for the first time ever, I'm questioning whether our generation may have swung too far from previous generations, when "suck it up" was the only advice for kids who found themselves in a hard situation.

While a dismissive admonishment to "suck it up" doesn't help children to develop an emotionally healthy internal life, treating every irritation and struggle as something that shouldn't exist and must immediately be fixed might not be the right solution either.

Perhaps the work, for now, is in parents learning to tolerate our children's discomfort—and our own as well.

Difficulty and discomfort build resilience and character; we don't do our kids (or ourselves) any favors when we treat these normal parts of life as the enemy and something that must be immediately

In fact, when we do, we create people who are dissatisfied and unhappy, and ultimately, are unable to deal with real life.

Nancy Colier is a psychotherapist, interfaith minister, thought leader, public speaker, and the author of "Can't Stop Thinking: How to Let Go of Anxiety and Free Yourself from Obsessive Rumination," "The Power of Off," and the upcoming "The Emotionally Exhausted Woman: Why You're Depleted and How to Get What You Need" (November, 2022.)

INTENTIONAL LIVING

Common Problems in Life That Minimalism Can Solve

Often the best way to upgrade your life is to prune, whether that be habits or household items

MOLLIE DONGHIA

"Reduce the complexity of life by eliminating the needless wants of life, and the labors of life reduce themselves."—Edwin Way Teale

Sometimes, the answer to common problems is to begin a different routine, start a new process, or purchase something to make life easier. While this might be true in some common problems that many of us face and situations, I've found even more success with the exact opposite approaches.

Mathematician Carl Jacobi made a huge contribution toward solving hard problems Too Much Stress when he suggested the idea of "invert, always invert."

When we have a problem, we typically approach it in a forward-thinking way. "How do I have a better marriage?" But when we focus only on moving forward, to the neglect of the root issues, we will likely not get the lasting results we want. If we invert the question, however, we may find a more direct and durable route to success.

For example, "How do I avoid having an unhealthy marriage?"

Inverting our approach to problems can guide us to remove what ails us. For instance, if we want to be healthier, we could add a new exercise routine or vitamin, but maybe we should start by ceasing an unhealthy habit of smoking or eating too many unhealthy foods. This applies in many areas. For example, instead of adding more obligations to my schedule or "things" to my home, I've found that having less actually contributes more.

Through our family's journey toward minimalism, we've found the labors of life feel less significant as we take away the obstacles that lead to problems. This works better than adding more systems or items.

Minimalism isn't merely a means to an end, but a way of living that allows for greater enjoyment of the journey, not just the destination. In this article, I'll share six how practicing minimalism can be the key to moving forward.

We live in a fast-paced society that prioritizes efficiency and productivity. According to The American Institute of Stress, more than 70 percent of people experience Resist the urge to impulse buy

by following the

to delay making nonessential purchases in the heat of the moment.



Bring more emotional satisfaction into your life by finding new ways to solve problems without the need to spend money.

stress that contributes to poor physical and mental health, and 48 percent have trouble sleeping.

The solution: Take on fewer hours in the office, if possible. Follow fewer social media accounts, blogs, or news sites. Say yes to fewer but more meaningful commitments. Avoid impulse purchases. Focus on a handful of deep relationships, and commit to investing your time in quality interactions together.

Too Much Clutter

Clutter affects each of us differently, and how we feel about our homes can shape our mood and stress levels. When we walk inside the door and notice piles of clutter and unfinished projects, it's no surprise that our cortisol levels rise.

Instead of living in a home filled with items that take away from the enjoyment of life, establish a few decluttering strategies to help push past this problem.

If you haven't worn an article of clothing in a year, let it go. Find a realistic home for every item you own. Determine if you really need duplicates of the same item, or if one will serve the purpose. Ask yourself, "Does what I have bring me pleasure or just take up space?"

Not Enough Time

There have been many days where I wish I had just a few more hours to be productive. I try to fill my day full of events and work while still keeping up with the regular demands of motherhood. But when my mindset is geared this way, I often feel run-down and weary by the end of the day.

Instead of trying to take on a list of a dozen items, make a three-item to-do list of realistic, attainable tasks. Life isn't just about checking everything off a list or seeing how fast we can get something done. Use your hours wisely, and set limits on activities that waste too much valuable time such as social media, your phone, or Netflix.

Let go of your desire to accomplish it all. Slow down. Learn how to push back against this fast-paced society so you can be part of a more meaningful life.

Financial Debt

With the ease of online shopping, many people overspend and are faced with financial debt that adds stress to their lives. Our society teaches us that when our clothes and things no longer bring us pleasure, we should buy something new to fulfill that desire.

Resist the urge to impulse buy by following the "48-hour rule" to delay making nonessential purchases in the heat of the moment. Make a meal plan before heading out to the grocery store, and purchase only items on your list. Have a budget for major spending categories so you can visually observe gain more emotional satisfaction than if we

amount. Find some free activities or hobbies to do, and focus on investing in the relationships around you. When you learn to live with less stuff, you'll find

when you cross your allotted

greater financial freedom and realize that your things won't ever become a lasting allows for greater source of happiness.

Unclear Goals

When our goals in life are the destination. unclear or scattered without any real destination, we're likely to become overwhelmed and love by giving quality time. Read to form a feel stretched thin between the things we'd like to do, should do, or could do.

Instead of juggling too many goals with no path forward, consider these ways to make them clearer.

Create a list of priorities, narrow it down to the most important, and take on a realistic task list each day. With common daily decisions such as what to eat, what cleaning products to use, or what to wear, decide once and stick with it. Decision fatigue is real, so don't mull the small stuff.

Likewise, when you start a task, commit to focusing solely on that alone, rather than getting distracted by everything else that vies twice-weekly newsletter.

for your attention, such as checking email, scrolling social media, or starting another task. Just do the one thing.

Limited Creativity

Our modern world thrives on a stable economic system. In order to live well, we earn income and purchase goods and services to have our needs and desires met.

But if we solve life's problems only by spending money, we rob ourselves of a valuable gift.

The ability to create allows us to bring beauty and innovation into our lives. When we create things or find new ways to solve problems without spending money, we often your spending habits and draw a hard line simply head to the store or call the repair guy.

> Make a home-cooked meal for your family. Take photos of the people you share life Minimalism isn't with. Write in a journal to merely a means convey your thoughts. Plant a small garden and watch it to an end, but a yield fruit. Go on an adventure without spending a way of living that dime. Sew a patch. Search YouTube for how to fix that squeak your dryer makes. enjoyment of the Begin healthy habits that reduce stress. Make a home journey, not just

that's warm and inviting to those who enter. Create deep relationships with those you well-rounded view of the world.

The time you spend doing meaningful things that enrich your life is true wealth. Just as it's impossible to out-exercise a bad diet, you can't out-accomplish a bunch of wasted time. Often the key to a better life is simply getting rid of the items, habits, and ideas that weigh you down.

Mollie (and her husband, Mike) blog at This Evergreen Home where they share their experience with living simply, intentionally, and relationally in this modern world. You can follow along by subscribing to their

Easy Activities That Could Slash Dementia Risk

MAT LECOMPTE

Dementia affects millions, and future predictions expect those numbers to jump as the population continues to age. A new study, however, suggests this

condition may not be inevitable. New research published in Neurology links several daily activities that may lower the risk for dementia, which likely

comes as great news to many. Several previous studies have linked leisure activities with better heart health and individual perceptions of well-being. However, evidence linking activities with dementia risk has been a little murkier, with findings often conflicting.

But researchers in this new study found that leisure activities such as making crafts, playing sports, or volunteering, among other things, were associated with a lower risk for dementia.

The study reviewed 38 existing studies that included more than 2 million people who didn't have dementia. Of them, 74,700 went on to develop the condition during a three-year follow-up period.

After controlling for factors such as age, gender, and education, they found that people who engaged in leisure activities had a 17 percent lower chance of dementia than people who didn't.

They found that mental activities such as reading, writing for pleasure, watching TV, listening to the radio or music, playing

A healthy body that gets plenty of exercise is the best defense against dementia.

games or instruments, using a computer, or making crafts were linked with a 23 percent lower risk for dementia.

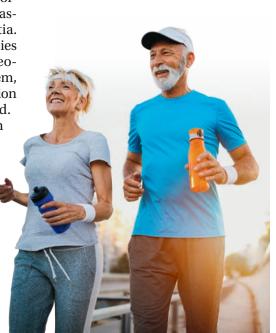
> Physical activities such as walking, running, swimming, cycling, weight lifting, yoga, sports, and dancing were associated with a 17 percent lower risk.

Lastly, they found that engaging in social activities such as staying in touch with friends, taking classes, joining clubs, volunteering, spending time with relatives or friends, or attending church may lower the risk by 7 percent.

Of course, it's important to note that the study doesn't prove these leisure activities reduce the risk of, or prevent, dementia, only that there may be an association.

Some, or many, of these activities can easily fit into most people's lifestyles. So, if you want to potentially reduce your risk for dementia, try picking some up. Also, take care of your heart and do your best to eat a healthful diet.

Mat Lecompte is a health and wellness reporter for Bel Marra Health, which first published this article.



NDAB CREATIVITY/SHUTTERSTOCK

8 | MIND & BODY

Poor sleep

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more likely

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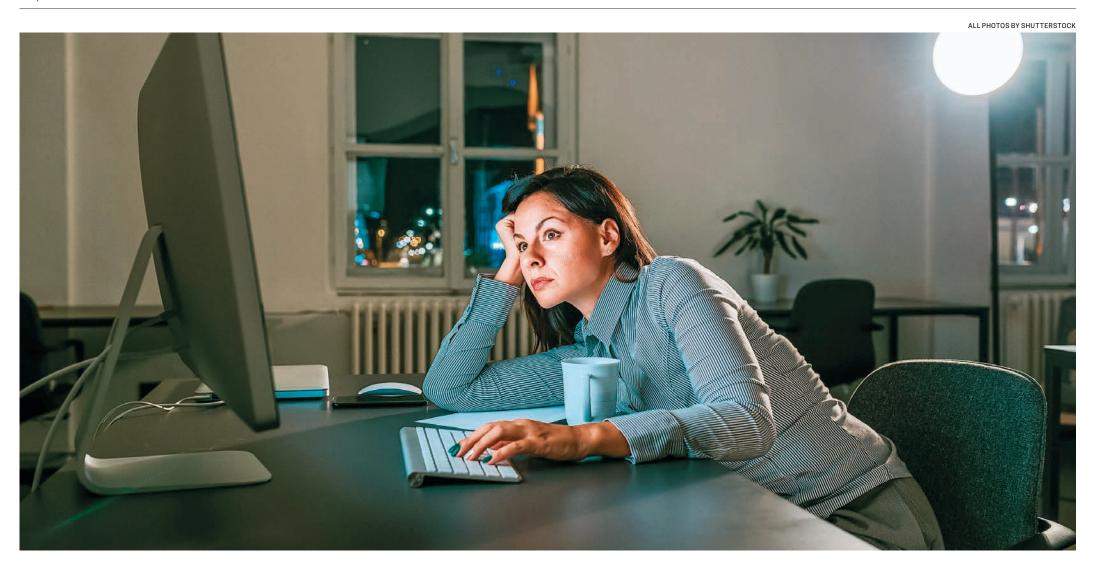
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Tiredness Can Change How Generous You Are: Study

Research finds sleep deprivation could be undermining your willingness to help others

LAURA BOUBERT

What determines how generous you are as a person? Could it be how much money you have? How inherently kind you are? Or maybe it comes down to the values you hold.

A study in 2015 found a significant increase in the number of fatal traffic accidents in the United States the day after the clocks changed during daylight savings time, when clocks go forward and we lose one hour of sleep.

These are all reasonable assumptions. And, of course, how generous you are can change day-to-day. One factor affecting that daily inclination to generosity, according to a new study from the University of California–Berkeley, is how well you've slept.

Sleep deprivation, the researchers found, leads to a reduction in generosity.

The researchers tested, in three different ways, how kind people were when they were tired. In the first study, they deprived 21 volunteers of sleep for 24 hours, then asked them how willing they would be to help in a range of scenarios such as helping a stranger carry their shopping bags.

They asked the participants to repeat the al-



Researchers also analyzed more than 3.8 million charity donations made in the United States before and after the clocks were changed for summer, which causes everyone to lose an hour of sleep. Donations decreased by 10 percent in the days after the clocks changed, compared to the weeks before and after the transition.



A good night's rest can leave you healthier, happier, and more inclined to be generous to others, researchers have found. truism questionnaire after a normal night's sleep. The researchers also studied the 21 participants' brain activity levels using functional magnetic resonance imaging (fMRI).

Next, 171 volunteers recruited online kept a diary of their sleep before doing the same questionnaire. For both experiments, the researchers found that tired participants scored lower on the altruism questionnaire. This was the case regardless of participants' empathy traits and whether the person they were supposed to help was a stranger or someone familiar to them.

Finally, the researchers analyzed more than 3.8 million charity donations made in the United States before and after the clocks were changed for summer, which causes everyone to lose an hour of sleep. Donations decreased by 10 percent in the days after the clocks changed, compared to the weeks before and after the transition.

The fMRI analysis found that sleep deprivation seems to be connected to reduced activity in the area of the brain linked to social cognition, which regulates our social interactions with others. The change in brain activity wasn't related to sleep quality, only to quantity. The good news is, this effect is short lived and disappears once we return to our normal sleep pattern.

What the Research Says

It's long been established that sleep is critical to many aspects of our health and wellbeing. This was famously demonstrated in 1959, when the American DJ Peter Tripp stayed awake to broadcast live from New York's Times Square for 201 hours continuously. Tripp's record was beaten in 1964 by Randy Gardner, a teenager who stayed awake for 260 hours (nearly 11 days) for a school science fair project.

Tripp and Gardner appeared well at the

beginning of their experiences. But as the challenge progressed, they began to slur their speech, were confused at times, and struggled to complete simple tasks such as reciting the alphabet.

Both also had vivid hallucinations. Tripp saw cobwebs in his shoes and believed a desk drawer had burst into flames.

We now know that sleep deprivation is linked to mental health problems including hallucinations and psychosis. Tripp and Gardner seemed to recover from their ordeals, but research shows that severe long-term sleep deprivation can lead to lasting neurological problems.

Since Tripp and Gardner's stunts, research has found that sleep deprivation affects most aspects of our behavior, not least our basic thinking skills, such as memory and decision making. In 1988, the Association of Professional Sleep Societies published a report in the journal Sleep, warning that poor sleep leads to an increased risk of having an accident, such as a road collision or a DIY mishap at home.

A study in 2015 found a significant increase in the number of fatal traffic accidents in the United States the day after the clocks changed during daylight savings time, when clocks go forward and we lose one hour of sleep.

It All Makes Sense

Psychologists believe kindness and generosity are part of our social cognition, a complex set of processes that control how we interact with others and how we make decisions about our behavior toward them.

These decisions are based on many factors. Each of these factors is affected by how well we sleep: our memory, all aspects of memory of previous situations, the quality of our decisions, how impulsive we are, and especially our emotions and how well we can regulate them. It's only to be expected that the amount of money we're willing to donate would also be sensitive to sleep.

So next time a friend asks you to donate to their marathon fundraiser, sleep on it.

Laura Boubert is the principal lecturer in psychology at the University of Westminster in the UK. This article was originally published on The Conversation.

