

MIND & BODY

Doctor's Advice on Early Treatment for COVID-19

Treat COVID with the best practices learned from every other virus, advises doctor

CONAN MILNER

Over a year later, many people still live in fear of COVID-19. This pandemic has claimed millions of lives, has infected many more, and other dangerous variants are said to lurk just over the horizon.

Even though the odds of developing a serious case may be low, it can still leave us feeling vulnerable. Anyone who has heard of the painful and often life-threatening symptoms that can accompany this disease is urged to take caution.

But what kind of caution can we take? Other than wearing a mask and social distancing, what strategies for protection do we have? Experimental vaccines are now available through an Emergency Use Authorization, but not everyone is comfortable with this gene therapy solution. And for those who do take the shot, the treatment only promises to lessen symptom severity. Those who get vaccinated can still catch the disease and transmit it to others.

For those looking for other ways to guard against SARS-CoV-2, the virus that causes COVID-19, advice from real doctors on reliable options can be hard to find. Since the beginning of the pandemic, any information on remedies that may work for prevention and treatment has been routinely censored—even when they're recommended by board-certified physicians.

The only remedy ever approved by the U.S. Food and Drug Administration (FDA) to treat COVID-19 is an expensive new drug called remdesivir. Otherwise, health officials have had little to offer. People who test positive are merely told to quarantine themselves for several days and seek emergency care if symptoms become severe.

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We've long known that treating a viral illness within the first few days of symptoms can prevent it from establishing an infection.

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We are in an infectious disease war. I could not stand back and let my patients die.

Dr. Elizabeth Lee Vliet, co-editor and author, “The Guide to Home-Based COVID Treatment”

EMPOWERED PATIENT

Digital Detox for Physical, Mental, and Spiritual Rejuvenation

Our digital devices shatter our concentration and devour our time, which makes even one screen-free day a week life changing

BRANDON LAGRECA

Are you feeling burned out on social media or suffering from screen fatigue after a week of online meetings? Do your hands feel cold after hours of typing or get brain fog when working next to a Wi-Fi router? If so, it may be time to give your body a break from technology.

A digital detox gives the body's cells a rest from the onslaught of radiofrequency (RF) radiation. Although I advocate turning off all devices (including wireless routers) at night, most people are still swimming in a sea of non-native electromagnetic fields
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EVGENY ATAMANENKO/SHUTTERSTOCK

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Quick fatty foods are a popular respite for busy people carrying too much stress.

Lifestyle Intervention Helps Low-Income Moms Reduce Fatty Foods

A program offering video advice on healthy eating, stress reduction helps participants cut frequency of fast food meals

EMILY CALDWELL

Overweight low-income mothers of young kids ate fewer fast-food meals and high-fat snacks after participating in a study—not because researchers told them what to eat, but because the program being evaluated helped lower the moms' stress, research suggests. The 16-week program was a lifestyle intervention aimed to prevent weight gain by promoting stress management, healthy eating, and physical activity. The program offered simple steps tucked into lessons on time management and prioritizing. Many of these methods were demonstrated in a series of videos featuring mothers similar to those participating in the study.

“We used the women's testimonies in the videos and showed their interactions with their families to raise awareness about stressors. After watching the videos, a lot of intervention participants said, ‘This is the first time I've realized I am so stressed out’—because they've lived a stressful life,” said Mei-Wei Chang, lead author of the study and associate professor of nursing at Ohio State University.

“Many of these women are aware of feeling impatient, and having head and neck pain and trouble sleeping, but they don't know those are signs of stress.”

An analysis of the study data showed that the women's lowered perceived stress after participating in the intervention was the key factor influencing their eventual decrease in consumption of high-fat and fast foods.

“It's not that these women didn't want to eat healthier,” Chang said. “If you don't know how to manage stress, then when you are so stressed out, why would you care about what you eat?”

The research is published in a recent issue of the journal *Nutrients*.

The 338 participants, overweight or obese moms between the ages of 18 and 39, were recruited from the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), which serves low-income mothers and children up to age 5. Those eligible for the program must have an annual household income no higher than 185 percent of the federal poverty line.

Chang said these women are likely to face a number of challenges that could cause them stress: financial difficulties, living in run-down neighborhoods, frequent moves, unstable romantic relationships, and households bustling with little kids. It's also common for this population to retain 10 or more pounds of pregnancy weight after childbirth and face a higher risk of life-long obesity and potential problems for themselves and new babies if they become pregnant again.

During the trial, the 212 participants randomized into the intervention group watched a total of 10 videos in

which women like them gave unscripted testimonials about healthy eating and food preparation, managing their stress, and being physically active. Participants also dialed into 10 peer support group teleconferences over the course of the study.

Chang and colleagues previously reported that as a group, the women in the intervention arm of the study were more likely to have reduced their fat consumption than women in a comparison group who were given print materials about lifestyle change.

This newer analysis showed that the intervention's lessons alone didn't directly affect that change in diet. When the researchers assessed the potential role of stress as a mediator, the indirect effect of the intervention—reducing participants' perceived stress—was associated with eating less high-fat foods, including fast food. A 1-point reduction in the scale measuring stress was linked to a nearly 7 percent reduction in how frequently the women ate high-fat foods.

The intervention focused on showing the women examples of how they could achieve a healthier and less stressful lifestyle rather than telling them what they had to change.

“I learned a lot from those women,” Chang said. “Everything needs to be practical and applicable to daily life—anytime, anywhere.”

Some examples: Comparing a bag of chips to a bag of apples. The chips might be half the price, but they supply far fewer family snacks. Or using a household responsibility chart to assign tasks to young children, and encouraging moms to reward kids with a hug or individual attention when they follow the instructions. And taking deep breaths to counter the feeling of being overwhelmed.

When it came to stress management, the researchers focused on advising the women to shift their thinking rather than simply try to solve the problems that caused them stress. That shift in thinking was focused on the women not blaming themselves when things went wrong.

“We raised their awareness about stressors in their lives, and unfortunately, a lot of these problems are not within their control,” Chang said. “So we teach them ways to control their negative emotions: ‘Remember that this is temporary, and you can get through it.’ And give them confidence to look to the future.”

The videos from the intervention are now part of WIC's continuing education series for mothers. This work was supported by the National Institutes of Health. Co-authors included Duane Wegener from Ohio State and Roger Brown from the University of Wisconsin-Madison.

Emily Caldwell is a science writer for Ohio State News at Ohio State University.

COVID-19 and the Autoimmune Connection

Some people face a greater risk from COVID because of their immune system's inability to respond to the virus without hurting the body

ASHLEY TURNER

As the world faces the long-term impact of COVID-19, many people are grappling with autoimmune issues linked to the disease. So what is autoimmunity? To understand that, we first need a foundational understanding of the immune system.

The immune system is a complex network of cells, tissues, organs, and chemical messengers that work together to protect the body from foreign invaders. Some of these foreign invaders include viruses, bacteria, parasites, environmental toxins, mold, and mycotoxins. When the body comes in contact with any of these threats, the immune system responds with an attack to target and neutralize the threat.

This is the body's natural defense mechanism known as the inflammatory response.

In normal physiology, the body easily differentiates between your own cells and tissues and foreign invaders. Autoimmunity occurs when the body's immune system can no longer distinguish between itself and the threats of the outside world. When an individual has permeable barriers within the gut, lungs, or brain, certain proteins are able to pass through these damaged barriers. The immune system then starts producing antibodies against these foreign invaders. In situations of autoimmunity, the body starts attacking its own tissue. Sometimes this happens after the body responds to a viral invader.

The misfiring of the immune system can look different for each individual. In fact, there are multiple factors that contribute to autoimmune diseases including diet, pathogens or infections, hormone dysregulation, environmental toxin exposure, and stress. It is well-researched that viral infections can initiate or exacerbate autoimmunity.

Molecular Mimicry

In a process called molecular mimicry, the body initiates an autoimmune response because it sees similar amino acid sequences between foreign invaders and its own tissue. The autoimmune condition that manifests is determined by what tissue(s) are being attacked. For example, when the body has an immune response against the thyroid tissue, the result could be Hashimoto's thyroiditis or Graves' disease. If the gut remains leaky, substances from the digestive system can trigger an immune response and an individual can develop more autoimmunity as this process perpetuates itself over time.

Epitope Spreading

To understand how this type of autoimmunity is triggered, we need to understand antigens and epitopes. Antigens are molecules or molecular structures that are usually found on the outside of a pathogen. These can be bound by specific immune cells. The presence of antigens in the body usually triggers an immune response to take care of the invader. Furthermore, specific protein sequences called epitopes are found on the invading pathogen's antigens. Immune cells including T cells and B cells are designed to look for, identify, and bind to the invading pathogen's epitopes. In epitope spreading, the normal immune response becomes greater as immune cells begin directing their responses to more proteins and epitopes. This includes epitopes on cells within various tissues and structures within the body. Hence, the initiation of autoimmunity.

Bystander Activation

The immune cells, specifically T cells and B



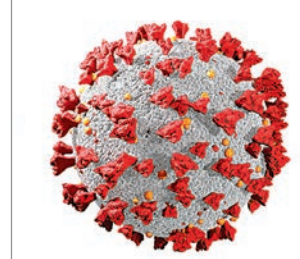
COVID-19 has made routine colds and flus a fearful prospect for those who face the world with an autoimmune condition.

cells, are designed to be very specific. These cells are programmed to attack only when exposed to a specific antigen. In bystander activation, the process of specificity breaks down and immune cells become “activated” without encountering their specific antigens.

What Is COVID-19?

COVID-19 is the disease caused by SARS-CoV-2. Once the body becomes aware of the viral invasion, it mounts the immune response that we discussed above creating a cascade of chemical messengers and an inflammatory response within the body.

Most often, people experience a mild case of COVID-19 wherein the immune system is able to neutralize the virus and easily come back to homeostasis. Some people develop severe cases of COVID-19 in which the body has an exaggerated response that overwhelms various tissues within the body. In these circumstances, too many pro-inflammatory cytokines and immune cells are released very aggressively. This causes significant inflammation, oxidative damage, and injury to tissues within the lungs and other parts of the body. Sometimes, these patients experience respiratory failure. We are finding that beyond these acute symptoms, some individuals experience longer-lasting effects from this viral infection.



Supporting the body can keep you from succumbing to a viral infection.

The SARS-CoV-2 and Autoimmune Connection

Recent research shows that various proteins within the body are cross-reactive with monoclonal anti-SARS-CoV-2 antibodies and polyclonal anti-SARS-CoV-2 antibodies. When cross-reactivity was studied between SARS-CoV-2 antibodies and various proteins within the body, it was discovered that SARS-CoV-2 antibodies had reactions to a diverse group of tissues including barrier proteins (gut, brain, and lungs), gastrointestinal proteins, thyroid proteins, neural tissues, and more. This research shows that the extensive immune cross-reactivity between SARS-CoV-2 antibodies and different tissues within the body likely influences the severity of illness, initiates an autoimmune disease in certain individuals, and exacerbates autoimmunity in those with pre-existing autoimmune conditions.

It may go without saying, but we clearly need more research to help us understand the long-term impacts of COVID-19 on autoimmunity and overall health. Thankfully, there are many strategies that can protect you from both COVID-19 and autoimmune diseases.

How Can I Protect Myself?

Supporting the body preventatively can go a long way in protecting yourself and your loved ones from succumbing to a viral infection or autoimmune disease.

COVID-19

It has been about a year since COVID-19 was beginning to spread. Since that time,

our clinic has always emphasized supporting the immune system and prevention. To reiterate what we have been saying, here are a few ways to protect yourself from COVID-19:

- Clean your hands: Use a nontoxic hand sanitizer or wash your hands with a non-toxic hand cleanser.
- Disinfect surfaces with an effective non-toxic cleaner.
- If you or a loved one are feeling unwell, stay home or practice social distancing.
- Support your immune system by eating a clean, non-inflammatory diet, getting adequate sleep and movement, taking probiotics and prebiotics, optimizing vitamin C, vitamin D, zinc, and glutathione status.

Autoimmunity

Similar to preventing a viral infection, there are many strategies to put in place to protect yourself from developing an autoimmune condition. We often think that autoimmunity, and chronic illnesses in general, are a result of our genetics or even bad luck. While genetics can contribute to autoimmunity, these diseases are more influenced by various lifestyle factors. Some initial strategies to protect yourself from autoimmunity:

Support the Gut: There are various factors to help support the gut including eating an anti-inflammatory diet, consuming collagen-rich foods, and supplementing with probiotics and prebiotics. Read more about the root causes of gut problems and reversing leaky gut to better understand how to support the gut.

Stress greatly hinders immune function, gut health, and overall wellness.

Avoid exposure to environmental toxins: Environmental toxins increase systemic inflammation, negatively impact the microbiome, damage the gut lining, contribute to hormone imbalances, and hinder phase one and phase two detoxification within the body.

Manage Stress: Stress greatly hinders immune function, gut health, and overall wellness. Read up strategies for managing stress.

Dr. Ashley Turner is a traditionally-trained naturopath and board-certified doctor of holistic health for Restorative Wellness Center. An expert in functional medicine, Dr. Turner is the author of the gut-healing guides “Restorative Kitchen” and “Restorative Traditions,” cookbooks comprised of non-inflammatory holiday recipes.

ALL IMAGES BY SHUTTERSTOCK

Doctor's Advice on Early Treatment for COVID-19

Treat COVID with the best practices learned from every other virus, advises doctor

Continued from Page 1

A free booklet from the Association of American Physicians and Surgeons (AAPS) aims to fill the gap. "The Guide to Home-Based COVID Treatment" offers clinically successful protocols from doctors who have personally treated many COVID-19 patients. The treatments haven't been subjected to randomized controlled trials to measure their efficacy against SARS-CoV-2, but they're proven safe and inexpensive strategies against other viruses and have worked for many with COVID-19.

The remedies recommended in this booklet resemble those used for other viral diseases. And since they can be implemented from home, it reduces the spread of illness, because infected individuals will inevitably spread their disease in a public clinic or hospital.

Co-editor and author of the booklet is Dr. Elizabeth Lee Vliet, a board-certified physician practicing in Arizona who specializes in preventive medicine.

The Epoch Times talked to Dr. Vliet about the need for home-based treatment and how the official response to COVID-19 is different from any disease response in history.

The Epoch Times: Health officials have already issued guidelines about how we should address COVID-19. Why is this booklet necessary?

The only remedy approved by FDA to treat COVID-19 is an expensive new drug called remdesivir.

Dr. Elizabeth Lee Vliet: We are in an infectious disease war. I could not stand back and let my patients die on my watch if there were things I could do to help them. And it became clear fairly quickly in February and March 2020 that this was similar to other viral diseases. And if you treat a viral illness within the first few days of symptoms, you prevent the virus from establishing the infection. You prevent it from multiplying and causing more damage. It's a very simple principle of preventative medicine. It's what we've always done. It's what doctors do. We treat disease early.

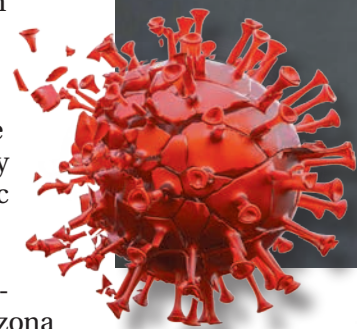
I was reading about what Dr. Peter McCullough, Dr. Zev Zelenko, and doctors in Italy were doing to treat COVID-19, and I learned that we could treat with antivirals quickly. We add corticosteroids if there are signs of inflammation and we add anti-coagulants if there are markers of blood-clotting risk. It's really pretty straightforward. Basic internal medicine with medicines that are FDA approved with a proven safety record. I've been doing it my whole career with these medicines. Why not apply them to a new viral disease? It just made common sense.

That's what got me started. But the more medical evidence there was supporting these approaches, the more I was seeing the censorship of them.

The Epoch Times: I remember last year that any mention of taking vitamins C and D for COVID-19 was being censored. Social media companies said it was to prevent misinformation. But why would they try to prevent doctors from providing basic nutritional information, especially at a time when so many people feared for their lives? **Dr. Vliet:** It was to drive control of the population through fear to get them to follow the vaccination campaign. That's clearly

Many people have been left feeling helpless because censorship has denied them knowledge of legitimate treatments that help the body fight viral infections.

QUALTERO BOFFI / SHUTTERSTOCK



the motive. There is no other explanation for the orchestrated attacks on vitamins, hydroxychloroquine, and now ivermectin to prevent early treatment, and censoring any doctor that posts about this on Twitter.

I was on Twitter for six years. I had about 80 thousand followers. I was summarily suspended from Twitter on Jan. 11 for posting medically correct information about the vaccine risk and about early treatment options that were available. My account was suspended without warning and with no reason given. There wasn't anything medically incorrect that I had posted. I consider it my responsibility to read the medical literature and put it into layman's language in the hopes that people understand their options. I've always done that. I've written seven consumer books on health care topics.

Doctors have a duty to educate patients and put it into language that patients can understand and not talk over their heads. It's always been a part of being a doctor. Pythagoras in the 5th century BC said it's the physician's duty to teach men and women the physical and spiritual laws of life, and to live in accordance with God's purpose for them.

The Epoch Times: Why is early treatment important for COVID-19?

Dr. Vliet: Because every viral treatment known to man has an early phase where the virus invades the cells of the body and then uses the cells of our body to multiply itself. Those two steps are the point at which a viral illness needs to be interrupted if you're going to keep people from getting sick. I will tell you unequivocally that there is no doctor in practice in the United States that doesn't know that from medical school. All physicians will say, "You've got to start Tamiflu within 48 hours if you get the flu, or it doesn't work." If you're going to treat

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Keeping fit is an important part of overall health and effective immune function.

EVGENY HARBITONOV / SHUTTERSTOCK



Hydroxychloroquine has become a symbol of the battle against censorship and misinformation.

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Internet censorship targeted claims about vitamin D, a hormone important for immune function.

WANPATSORN / SHUTTERSTOCK



There are many remedies that help with viral infections generally.

HEKLA / SHUTTERSTOCK

I was summarily suspended from Twitter on Jan. 11 for posting medically correct information about the vaccine risk.

Dr. Elizabeth Lee Vliet, co-editor and author, "The Guide to Home-Based COVID Treatment"

It is difficult to justify wearing a mask when exercising outdoors while social distancing.

shingles, you have to talk to your doctor as soon as you feel the tingle, and see if you need antiviral medicine. If you're going to treat herpes, same principle. Why are they choosing to ignore that principle with COVID?

Every viral illness starts that way. The more it's allowed to progress, the more it takes over the cells and replicates itself. Then you have a viral load in the body that's spread to others with coughing and sneezing, through touch, or through the stool, for example. Then you have a viral load that triggers inflammation. And the chemicals released during the inflammatory phase start doing their own damage to the body.

In the case of COVID, it's even more critical to treat it early than it is with the influenza virus, because there are two unique aspects of the SARS-CoV-2 virus. If the virus infects the cells and replicates, it increases the viral load in the first five days after you're exposed. Then this virus triggers an exaggerated immune response of inflammation and damage. The second key difference is that it triggers a massive exaggerated blood clotting response, causing clots affecting critical organs.

It's these two differences with COVID that made it absolutely critical to treat in the first week of symptoms, and not let it get past day seven.

The National Institutes of Health guidelines instructs people to stay at home until they have symptoms, and then have them go to the ER. So people would wait through two and a half weeks of symptoms. And by that point, this virus would have triggered an exaggerated inflammatory response which can lead to the lethal form of cytokine storm. And it can trigger the exaggerated blood-clotting response, and people were developing micro-blood clots throughout the lungs.

That's a problem, and that's why this virus absolutely had to be treated early to prevent those damages. Primarily what has killed people with COVID is a delay to treatment, and allowing the exaggerating inflammatory response and blood clotting response to take hold in the body. But by then, there is little we can do.

By the time people got to the hospital and into the ICU, the average mortality was running across the U.S. around 25 percent. That's totally unacceptable. We've never had anything like that before during my career in medicine.

By preventing treatment for that long, you're essentially putting 25 percent of those patients to death. The 75 percent that recovered then suffered long-term complications. We've seen pulmonary fibrosis developing. We've seen neurological complications, fatigue, heart damage. You've got inflammation of the brain, inflammation of



CEDRIC FAUNTLEROY / PEXELS

the heart, kidney damage, and lung damage. All of these are consequences of waiting until the late stage to treat this virus.

It's a potential death sentence. There's no way around it. But they've consciously hidden that message. Our administrators and hospitals have financial incentives to keep people in the hospital. But physicians who work in hospitals are told they can't use these early treatment medicines.

Never in the history of medicine, and especially in the history of modern medicine in the United States of America have you had agencies directing doctors to stand down and do nothing until the patient was critically ill and needed oxygen and had to go to the hospital. Never.

If you really consider what's been done, it's criminal negligence. Failure to treat is a malpractice case in any other area of medicine.

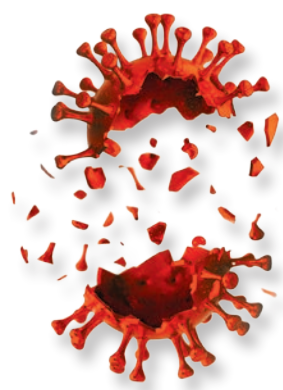
The Epoch Times: Your booklet focuses on the basics of good health: a healthy diet, drinking plenty of water, getting fresh air and sunshine. How do these things help protect us against COVID?

Dr. Vliet: Many ways. I have a nutritionist and exercise physiologist who has been with my practice for 25 years, and we're constantly working with our patients to reduce the dietary triggers of inflammation. Hippocrates said 2,500 years ago, "Let food be thy medicine." And it is. People can clean up their diet and reduce their risk of inflammation, which drives the COVID infection and damage. But also, healthy eating literally improves your immune

Doctors have a duty to inform their patients about how they can protect themselves.

I've had no hospitalizations, no deaths, and I've not had any patients develop the COVID long haulers syndrome.

Dr. Elizabeth Lee Vliet



ADAM VLJMEK / SHUTTERSTOCK



ALESSANDRO PINTUS / UNSPLASH

While the pandemic lockdown has stripped away many activities essential for our health, you can still find ways to enjoy the world with people you care about.

function by many mechanisms.

Vitamins play a role because they're co-factors in the enzyme pathways involved in the immune response. Vitamin D is not a vitamin, it's a hormone. It improves immune function, but it actually plays many roles in the body. There have been numerous studies that show that low vitamin D levels put people at higher risk for breast cancer, prostate, and other cancers. I've been working with my patients for years, checking their vitamin D levels, and making sure they're getting plenty of vitamin D.

We also get vitamin D from being out in the sunshine, not wearing sunblock, and letting your skin become a little factory that takes the sunlight and triggers the precursors to help your body. It's why people who live in sunny climates can have higher vitamin D levels than those who live in northern climates where there are long winters.

Sunshine and fresh air have been known since ancient times as helpful in disease prevention. It was known in the flu pandemic of 1918. We have pictures in the museum in Arizona and other places where they actually moved hospital beds outside to get people sunshine and fresh air. You're not recirculating the virus in a closed room if you've got the patient outside breathing fresh air.

All these people wearing the mask outdoors are inhibiting the normal mechanisms that get rid of the viruses. They're just recirculating bad viruses and bacteria that make themselves more susceptible.

I watch people out in the sunshine in Arizona—running, riding a bike, or power walking wearing a mask. No one is around them doing their exercise. They're decreasing their oxygen. They're increasing the build-up of CO₂—and some of them are a little older.

The Epoch Times: One of the medicines you recommend in your booklet is hydroxychloroquine. I've read that doctors in several non-Western countries are using this drug in early COVID treatment, but it remains very controversial here. Can patients trust this medicine?

Dr. Vliet: Hydroxychloroquine has been used for 65 years for all ages, from young children to people in their 90s and older, as well as pregnant and nursing mothers. The CDC and other agencies all over the world have always said this was safe.

Malaria prophylaxes [a treatment designed to reduce risk of getting an illness] with hydroxychloroquine is similar to the dosage we use for COVID-19. But I have patients on it for rheumatoid arthritis at larger doses for decades without complications.

The Epoch Times: Why is hydroxychloroquine considered such an important drug for early treatment of COVID-19? And why do they always combine it with zinc?

Dr. Vliet: Because a [2005 study from the Journal of Virology] showed that chloroquine and its derivative, hydroxychloroquine, in cell cultures blocked the virus from entering the cell at the ACE2 receptor, and blocked the SARS-CoV-1 virus from using our cells to multiply. So these drugs address the first two stages of viral illness.

The reason we focus on hydroxychloroquine as opposed to the older chloroquine is that chloroquine has a little more risk of prolonging the QT interval [causing fast, chaotic heartbeats]. Hydroxychloroquine has far less risk of that. So it's a safer derivative.

It's antiviral and it's anti-inflammatory, so hydroxychloroquine actually hits two of the COVID mechanisms: the virus establishing the infection and the inflammation that the virus causes. In addition, hydroxychloroquine is a zinc ionophore. It helps zinc get into the cells to block the virus from multiplying. Zinc is needed with hydroxychloroquine to stop the replication inside your cells. They work together.

Hydroxychloroquine has been used as

a drug to treat diabetes since the 1980s and even earlier. It's a second-line diabetes drug in India. So it actually lowers glucose and hemoglobin A1C. And we've known that diabetes is one of the greatest factors of dying from COVID.

I've found articles published in the United States from the 1980s about its use in diabetes. It just got overwhelmed by the new, expensive diabetes drugs in the U.S. But in countries that don't have the money to pay for the expensive diabetes drugs that we use, it's commonly used to treat diabetes.

There are over 16 different cancer trials with hydroxychloroquine as an anti-cancer drug as well. I found some studies just a couple of weeks ago where they're using it to stop the spread of prostate cancer. It's an amazing drug.

It's an amazing drug. It's widely available. It's inexpensive.

Dr. Elizabeth Lee Vliet

It's widely available. It's inexpensive. It's a generic medicine. A course of treatment for a week, which is all you need, probably runs around 20 bucks. You can pay cash for it, and you don't need insurance. You can get a good RX coupon card that may bring the cost down to \$10.

Pharmaceutical companies have ramped up production to make it available. It's been a political suppression. It is medically available. It is FDA approved. And doctors are using it for every condition day in and day out.

Once a medicine becomes FDA approved, doctors are legally, ethically, and morally able to use medicines off-label. This means that if a drug is approved for rheumatoid arthritis and we think in our medical judgment that it could help a patient with osteoarthritis, we're legally allowed to do that. In fact, about 20 percent of prescriptions written in the United States each day are for off-label uses of existing FDA-approved drugs for new uses.

I've been using FDA-approved medications legally off-label for a new use. FDA has already demonstrated their safety because they were approved years ago. And I've been using them successfully to treat COVID patients within the first three to five days of symptoms. I've had no hospitalizations, no deaths, and I've not had any patients develop the COVID long-haulers syndrome, because we treat it early.

China knew of the study on hydroxychloroquine and chloroquine in SARS-CoV-1 that stopped the virus from entering the cells and multiplying in cell culture. The Chinese applied that information to the new SARS-CoV-2 virus, which shares about 79 percent of the viral genome of SARS-CoV-1.

I later found from reports from overseas that China had shipped millions of doses of hydroxychloroquine to Iran and Turkey in the fall of 2019. I thought, "Well, son of a gun. They had some inside knowledge."

In January and February 2020, China was already using it in their hospitals, and Chinese doctors were sharing that information with South Korea and helped them get on top of it quickly. By March, India's Council of Medical Research had already published on their government website using hydroxychloroquine for prophylaxis in health care centers across the country for health care workers and high-risk patients, and for treatment, and they were publishing the guidelines and the doses.

I had that available in March 2020 and I was using a similar dose with my patients here in the U.S. and it has worked beautifully.

MINDSET MATTERS

How to Remain Calm When Others Are Out of Control

You can't control the world around you, but these 9 practices will help you control how you respond to it

ANGEL CHERNOFF & MARC CHERNOFF

We can all get frustrated when things don't play out the way we expect them to or when people don't behave like they're "supposed" to. We expect our spouses and children to act a certain way, our friends to be kind and agreeable, strangers to be less difficult, and so on and so forth. As human beings, we all have an idea in our heads about how things are supposed to be, and sadly this is what often messes our relationships up the most.

And when reality hits us, and everyone seems to be doing the opposite of what we want them to do, we overreact with anger, frustration, stress, arguments, and sometimes tears.

So what can we do about this?

Breathe
You can't control how other people behave. You can't control everything that happens

Deep breathing releases tension and calms our fight-or-flight reaction.

A healthy and calming morning ritual, like meditation or stretching, can set a great tone for the rest of your day.

EKATERINA BOLOVTOVA/PEXELS



to you. What you can control is how you respond to it all. In your response is your power.

When you feel like your lid is about to blow, take a long, deep breath. Deep breathing releases tension, calms down our fight-or-flight reactions, and allows us to quiet our anxious nerves so that we choose more considerate and constructive responses, no matter the situation.

So, for example, do your best to inhale and exhale the next time another driver cuts you off in traffic. In a recent poll we hosted with 1,200 people, overreacting while fighting traffic was the most commonly cited reason for overreacting on a daily basis. Just imagine if all the drivers on the road took deep breaths before making nasty hand gestures or screaming obscenities at others.

There's no doubt that it can drive us crazy when we don't get what we expect from people, especially when they are being rude and difficult. But trying to change the unchangeable, wanting others to be exactly the way we want them to be, just doesn't work. The alternative, though, is unthinkable to most of us: to breathe, to let go, to lead by example, and to accept people even when they irritate us.

That might not even sound possible, but there are concrete steps to do just that:

- Breathe deeply and often.
- Remind ourselves that we can't control other people.
- Remind ourselves that other people can handle their lives however they choose.
- Don't take their behavior personally.
- See the good in them.
- Let go of the ideals and expectations we have about others that cause unnecessary frustration, arguments, and bouts of anger.
- Remember that when others are being difficult, they are often going through a difficult time we know nothing about. And give them empathy, love, and space.

Being this way takes practice, but it's worth it. It makes us less frustrated, it helps us to be more mindful, it improves our relationships, it lowers our stress, and it allows us to make the world a slightly more peaceful place to be.



When someone is acting irrationally, don't join them by rushing to make a negative judgment call. Instead, pause. Take a deep breath.

Smart Ways to Remain Calm

If you're ready to feel more peace and less inner angst, here are some ways we've learned to remain calm and centered, even when those around us can't seem to contain themselves. These principles reinforce the bullet points above, and when you consistently practice these principles, the world within you and around you becomes a lot easier to cope with.

1. Get comfortable with pausing. Don't imagine the worst when you encounter a little drama. When someone is acting irrationally, don't join them by rushing to make a negative judgment call. Instead, pause. Take a deep breath ...

Sometimes good people behave poorly under stress. Don't you? When you pause, it gives you space to collect your thoughts and it also allows the other person the space to take a deep breath with you. In most cases, that extra time and space are all we need.

When we let the behavior of others dictate how we feel and respond, we surrender the power to control ourselves.

2. Respect people's differences. Learn to respect the opinions of others. Just because someone does it differently doesn't make it wrong. There are many roads to what's right in this world. Everyone is entitled to their own opinion. So choose your battles wisely and sometimes, just agree to disagree.

It is absolutely possible to connect with, and even appreciate the company of, someone you don't completely agree with. When you make a commitment to remain neutral on topics that don't matter that much, or speak respectfully about your disagreements, both parties can remain calm and move forward, pleasantly.

3. Be compassionate. In the busyness of today's world, people tend to be worried, fearful, hurting, and distracted about everything. The word "compassion" means "to suffer with." When you can put yourself in the other person's shoes, you give them the space to regroup, without putting any extra pressure on them.

Remember, we never know what's really going on in someone's life. When you interact with others in stressful environments, set an intention to be supportive by leaving the expectations, judgments, and demands at the door.

4. Extend generosity and grace. Everyone gets upset and loses their temper sometimes. Remind yourself that we are all more alike

than we are different. When you catch yourself passing judgment, add "just like me sometimes" to the end of a sentence. For example:

- That person is grouchy, just like me sometimes.
- He is so darn impatient, just like me sometimes.
- She is being rude, just like me sometimes.

Choose to let things go. Let others off the hook. Take the high road today.

5. Don't take people's behavior personally.

If you take everything personally, you will be offended for the rest of your life. And there's no reason for it. You may not be able to control all the things people say and do to you, but you can decide not to be reduced by them. Make that decision for yourself today.

Let it go! Seriously, there is a huge amount of freedom that comes when you detach from other people's beliefs and behaviors. The way people treat you is their problem; how you react is yours.

Everyone behaves the way they behave based on how they feel inside. Some people never learn how to effectively cope with their stressful emotions. When someone is acting obnoxious, it's vital that you remain calm, no matter what. Don't allow other people to knock you off your center.

Do what it takes to remain calm and address the situation from the inside out. That's where your greatest power lies.

6. Talk less and learn to appreciate silence.

Don't fall into an unnecessary argument just because you feel uncomfortable in silence. Don't say things you'll regret five minutes later just to fill your eardrums with noise. Anger and frustration begin internally. You have the capacity to choose your response to momentary discomfort. Inhale. Exhale. A moment of silence in a moment of anger can save you from a hundred moments of regret.

7. Create a morning ritual that starts your day off right.

Don't rush into your day by checking your phone or email. Don't put yourself in a stressful state of mind that makes you incapable of dealing positively with other people's negativity. Create time and space for a morning ritual that's focused and peaceful. Here's part of my morning ritual: I take 10 deep breaths before getting out of bed. Then, I stand up and stretch, followed by 10 minutes of meditation.

I challenge you to try this—it has been life-changing for me—but start small, with just three deep breaths and three minutes of meditation a day. Do this for 30 days. After 30 days, if this daily ritual becomes easy,

add another two breaths and another two minutes to your ritual. When you begin a day mindfully, you lay the foundation for your day to be calm and centered, regardless of what's going on around you.

8. Cope using healthy choices and alternatives.

When we face stressful situations, we often calm or soothe ourselves with unhealthy choices—drinking alcohol, eating sugary snacks, smoking, etc. It's easy to respond to anger with anger and unhealthy distractions.

Notice how you cope with stress. Replace bad coping habits with healthy coping habits. Take a walk in a green space. Make a cup of tea and sit quietly with your thoughts. Listen to some pleasant music. Write in your journal. Talk it out with a close friend. Healthy coping habits make happy people.

9. Remind yourself of what's right, and create more of it in the world.

Keeping the positive in mind helps you move beyond the negativity around you.

At the end of the day, reflect on your small daily wins and all the little things that are going well. Count three small events on your fingers that happened during the day that you're undoubtedly grateful for. For example:

- My family and I made it home safely from work and school today.
- My spouse and I shared a laugh.
- We have everything we need to feel safe and cared for.

And pay it forward when you get a chance. Let your positivity empower you to think kindly of others, speak kindly to others, and do kind things for others. Kindness always makes a difference. Create the outcomes others might be grateful for at the end of their day. Be a bigger part of what's right in this world.

The most fundamental aggression to ourselves and others—the most fundamental harm we can do to human nature as a whole—is to remain ignorant by not having the awareness and the courage to look at ourselves and others honestly and gently.

Angel (and Marc) Chernoff are New York Times bestselling authors and the creators of Marc & Angel Hack Life, which was recognized by Forbes as "one of the most popular personal development blogs" and the authors of the brand-new book, "1,000 Little Habits of Happy, Successful Relationships." Through their writing, coaching, course, and annual live events (where I've spoken twice), they've spent the past decade sharing proven strategies for getting unstuck in order to find lasting happiness and success. This article was originally published by BecomingMinimalist.com



We can move beyond the negativity around us by thinking about the positive.

MINDSET MATTERS

How to Communicate (Calmly) With a Defensive Partner

You don't have to be triggered by your partner's reactions, and you'll be better equipped to help them if you're not

NANCY COLIER

Sarah, Jon's girlfriend of three years, experiences Jon as "bafflingly defensive." Jon responds that he has been called "defensive" by every woman he's ever dated. Not surprisingly, he denies his own defensiveness, and blames his ex-girlfriends for being demanding, impossible to please, aggressive, and his favorite criticism: controlling.

According to Sarah, just trying to tell Jon about something he said that was hurtful is a monumental challenge. Jon's first defense is to deny it; he simply didn't say what she heard him say. According to Jon, she has distorted his words or made it up. If Sarah holds her ground, Jon then insists that she look at her own behavior—what she did to make him say what he said.

At other times, he launches into a diatribe about what she's doing to him at that moment, how her current complaint is an aggression on him. If Sarah continues, Jon then goes on full attack; he shakes his head in disgust and says things such as "You should look at your face, listen to

your tone; you're the angry one."

He then accuses her of trying to control him, claiming that if he does anything that isn't what she wants or thinks is right, she has to put him down and be in control.

Sarah never gets to feel heard, known, empathized with, or loved.

At this point, Sarah is the one who feels controlled, and also silenced, and enraged. She loses her cool and begins shouting. The conversation (that was never a conversation) then becomes a fight, which usually ends with Sarah walking out of the room, often trailed by Jon's voice accusing her of controlling the interaction even further with her departure.

Sadly, this kind of event happens all the time in couples. Sadly, Sarah, and all the women and men who live this relational scenario, never get to share what sim-

ply hurts. As a result, Sarah never gets to feel heard, known, empathized with, or loved. Her hurt (and her whole experience) is rejected, which means that she is rejected.

Sarah starts out feeling hurt by something specific, often a small comment or event; she starts out just needing a bit of

validation and kindness, a basic acknowledgment of her experience. But, what she gets instead is an attack on her, and a fight. She ends up with the same hurt she started out with, and now, on top of that, a whole pile of criticisms to manage. Now, she not only feels hurt, but also angry, lonely, frustrated, and unloved.

Trying to express her upset is a lose-lose event for Sarah.

At the same time, Sarah feels stymied by these interactions; things in the relationship can never change or improve if what hurts her can never be taken to heart or processed. This stuckness then adds to the sadness of the situation.

Those of you reading this might say it's obvious Sarah needs to leave Jon, and that what she is living is clear-cut emotional abuse. But here's the problem: Sarah doesn't want to leave Jon. She still loves him and believes that there are enough positive aspects to the relationship for her to stay. Besides being defensive, Jon is also witty and smart, funny and loving; he showers her with affection and takes her on exciting travel adventures. He has a loving extended family whom she adores, and the list goes on.

The problem in the midst of all these good things, however, is that when Jon does something that upsets her, there's no effective way to share it with him. Sarah has to swallow her hurt and anger, or if it's too much to swallow, she has to put herself in the firing line of his anger.

What Sarah wants from me are coping strategies; how to communicate effectively and feel less triggered by Jon's defensiveness. She wants to be happier within this relationship, to not take his defensiveness so personally, not bite the hook when he attacks, and just generally, be able to stay off his roller coaster of anger.

With this as my charge, I offered Sarah the following suggestions.

When communicating your feelings:

1. Stick to the facts. Be very specific about what happened that upset you. Use the specific words that were spoken and the precise chain of events that occurred when expressing your feelings. "I said this, then you said that." Don't go wide and don't generalize; don't make interpretations as they encourage defensiveness.

2. Use "I" statements. "I felt hurt," "I felt misunderstood." Keep the conversation on what is non-negotiable and inarguable—your own experience.

3. Do not mirror the defensive person's anger. Keep your voice even and steady. Stay calm! This may be the most

important advice I can offer. As difficult as it is to stay calm when we feel unfairly attacked, it's absolutely critical not to meet the defensive person's anger with more anger. Anger added to anger creates a fireball that only strengthens the defensive person's case against you. Your anger furthers their claim that you are to blame for what's happening (and they are innocent).

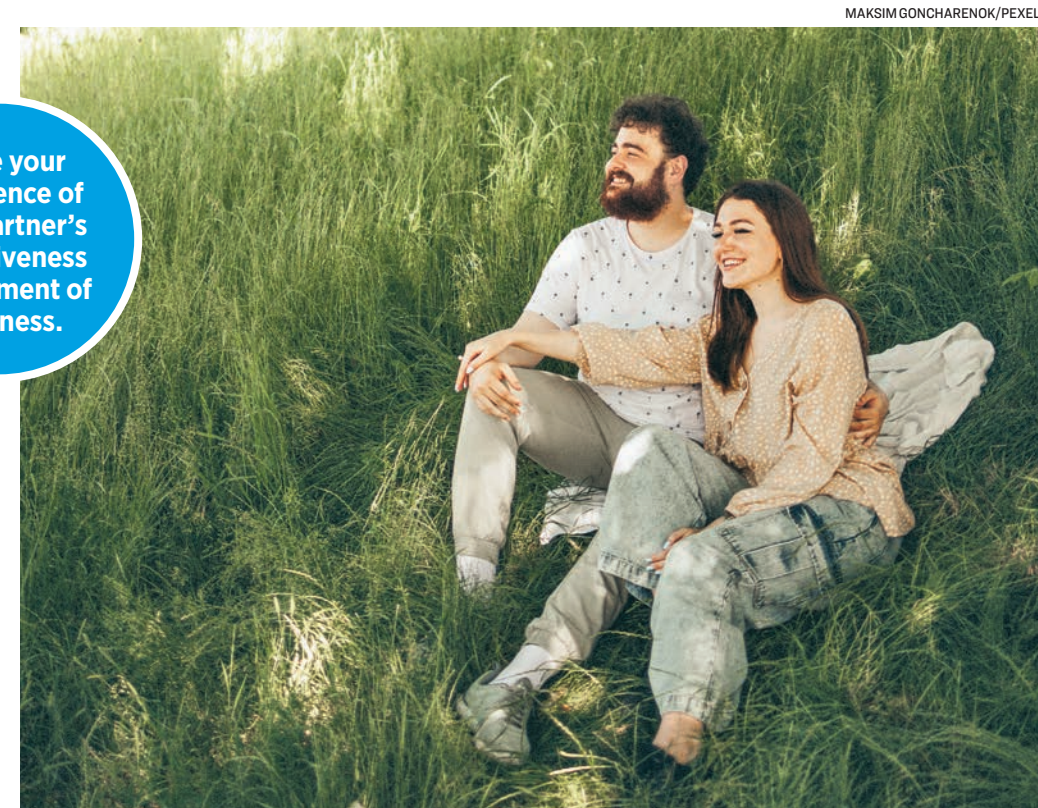
4. Raise your hand toward the other person with an open palm, to signal 'stop.' This gesture creates separation and a message that cannot be fought with in the same way that words can. If it feels right, accompany this stop gesture with the calm words, "Please don't use that tone with me," or "Please don't talk to me this way."

5. Repeat yourself. When the defensive person takes the conversation to other topics, and most often to the topic of you, repeat the same words you started with, calmly and in a low and slow voice. "I felt upset when you said this ..." And then again, after he/she has shifted topics, "I felt upset when you said this ..." Do not defend yourself against their accusations; do not take the bait. No matter how difficult or counter-intuitive it might feel, ignore what's coming at you and return to the experience you're trying to express.

6. Physically remove yourself. Leave the room, no explanation needed.

7. In a moment when things are going well with your partner, a moment of closeness, share your experience of

Share your experience of your partner's defensiveness in a moment of closeness.



Let your partner know that even when you are upset about something he or she said, you still love and respect them.

your partner's defensiveness. But don't make it about their being defensive (no surprise), make it about wanting to be closer and more intimate with your partner. Express your wish to be able to share honestly: what works in the relationship—and also—what doesn't work. Most importantly, let your partner know that even when you are upset about something he or she said, you still love and respect them.

For those of you who are outraged that I would try and help someone find peace within such a relationship and that the only thing I should be doing is helping Sarah leave Jon, I would say this: Sar-

ah didn't want to leave the relationship, on that point she was clear. She wanted me to help her find peace within what was a flawed relationship, like every relationship. Many women and men choose to stay in relationships that, judging from the outside, we might say should end. Many women and men are even happy in relationships that, judging from the outside, are unthinkable. And so it is; welcome to the world of human relationships. "Judging from the outside" are four words that ultimately are useless.

If you are in a relationship with someone defensive, who uses anger to shut you down and control you, perhaps some of my advice may help. I hope so. Intimate relationships are difficult; relationships in which it's impossible to share what hurts are even more difficult and lonely.

As is always the case in a relationship, however, the more you can untether yourself from your partner's behavior and reactions; the better you are at not biting your partner's hook and not boarding your partner's emotional roller coaster, the happier and more content you will be. And, the more you will be in control of your own internal state. The path to peace in a relationship is often chock-full of conditions we don't like, and conditions we've been taught we shouldn't have to travel. We can choose to wait for a perfect relationship or we can choose to be well, now.

Nancy Colier is a psychotherapist, interfaith minister, public speaker, and author of the upcoming "Can't Stop Thinking" (2021) and "The Power of Off: The Mindful Way to Stay Sane in a Virtual World." For more information, visit NancyColier.com



Putting away our devices and spending time outdoors with people we care about can rejuvenate us.

EMPOWERED PATIENT

Digital Detox for Physical, Mental, and Spiritual Rejuvenation

Our digital devices shatter our concentration and devour our time, which makes even one screen-free day a week life changing

Continued from Page 1

while awake. Another benefit is a reset of attention span. With endless distractions born of a mobile information age, it has become a superpower to maintain extended, singular focus while others are multitasking themselves to stressed-out exhaustion.

These two benefits frame a period of time during which where amazing things can happen. You'd be surprised at the ease and insight that flows from a more relaxed, distraction-free environment. Sounds just like what doctor Google wouldn't order?

Here's how to successfully stage a digital detox intervention:

When and How to Do a Digital Detox

Choose your time frame. For some people, one day a week free of computers, cell-phones, and tablets is the only option if they need to interface with technology for work. With rare exception, I take Sunday as my weekly digital detox since work responsibilities are absent (by my choice and design), and the day is reserved for undistracted family time. A longer digital detox of a weekend or longer might coincide with a holiday break or family vacation.

Once you've decided on the day, turn off all devices at bedtime the night before and stash them out of sight if temptation looms. You'll be keeping them turned off until the morning of the day after your digital detox. Now, comes the hard part, the tough seed that will eventually blossom into a joyous flower of creativity and productivity. If you can survive the day without interfacing with a screen, you will be rewarded with an astonishing amount of free time.

With practice, you'll be amazed at what

With endless distractions born of a mobile information age, it has become a superpower to maintain extended, singular focus.

transpires on digital detox days. I have read entire books, played extended board games with my family, taken long walks in nature, and cooked epic meals—sometimes all in the same day. But what I value most are the moments of introspection that punctuate an extended period without distraction.

Every late December, I compose a working document of goals for the year ahead. Every digital detox Sunday, I review these goals and establish action steps for the coming week. This recalibrates focus on my greater vision for the year as represented by those goals, while drilling down a weekly to-do list that's a prerequisite for their actualization.

Goal-writing may not be your thing, but keep a pen and notebook handy because creative ideas flow on digital detox days. It could come as a solution to a problem or an idea for the future. Keep in mind, I'm not talking about intuitions that magically appear while in a state of deep meditation. These are insights that arise while washing dishes or scrubbing the toilet. On digital detox days, the Zen of ordinary life—unplugged—opens a swirling vortex of consciousness where thoughts seemingly sort themselves out.

Exceptions and How to Curb Temptation

Sometimes, a complete digital detox may not be possible or even desirable. I will temporarily break a digital detox and turn on my desktop computer if an extended family FaceTime or Zoom session is scheduled. If this is a routine in your family, turn off your device afterward to eliminate temptation.

You can also choose whether TV counts as quality personal or family time, or if a strict

screen-free policy is best. For some, a family movie is an exception, but I would implore you to think twice (maybe thrice) about binge-watching a series. This is particularly important if watching on a wireless-enabled smart TV or streaming device. Board games can offer a more meaningful way to spend face-to-face time with family members.

Travel days are an ideal time for a digital detox, although I don't hesitate to have my cellphone on for driving directions or to manage digital airline tickets. Here, too, you will have to decide what level of technology is acceptable. Listening to music or an audiobook via a cellphone is perfectly reasonable provided you don't get sucked into other applications. If you need your cellphone for assistance on your trip, even though that timeframe is intended for a digital detox, you can turn off all notifications and keep it in airplane mode whenever possible.

For an increasing number of families, all their music, media, and phone services are tied to devices. Call me a dinosaur, but our family still has a landline phone, music on CDs, and films on DVDs. For those on the digital cutting-edge, your options are a day completely uninhibited by technology or having an iron will using certain aspects of technology while not being tempted by others. Even on digital detox days when I choose to have a device operational, the deal-breakers are no email, games, web surfing, or social media. I still may text during travel or if trying to coordinate a gathering, but nothing extraneous or capricious.

One final pro tip: If you keep to-do lists on a device, place a sticky note in an accessible area or carry a scratch pad in your pocket to jot down thoughts that can be transferred to the digital medium after your detox day.

The World Is Waiting

The two-year anniversary of my book, *Cancer and EMF Radiation*, has passed and the proliferation of electromagnetic fields (now including 5G) has continued unabated. Not that I thought my humble book would stop or slow the billion-dollar telecommunications industry—nor do I believe that is even possible. Our only hope is a cross-pollination between the fields of bioelectronics and radiation physics. Until that fateful day occurs when wireless routers are "tuned" to harmonize with biology, it's advisable to take breaks from technology.

As it stands now, non-native RF fields add a low level of biological stress to a growing chemical and electromagnetic soup of environmental carcinogens. I dream of a world where information is transmitted wirelessly on frequency bands conducive to biology. What if data could travel on harmonic frequencies of the Schumann resonance?

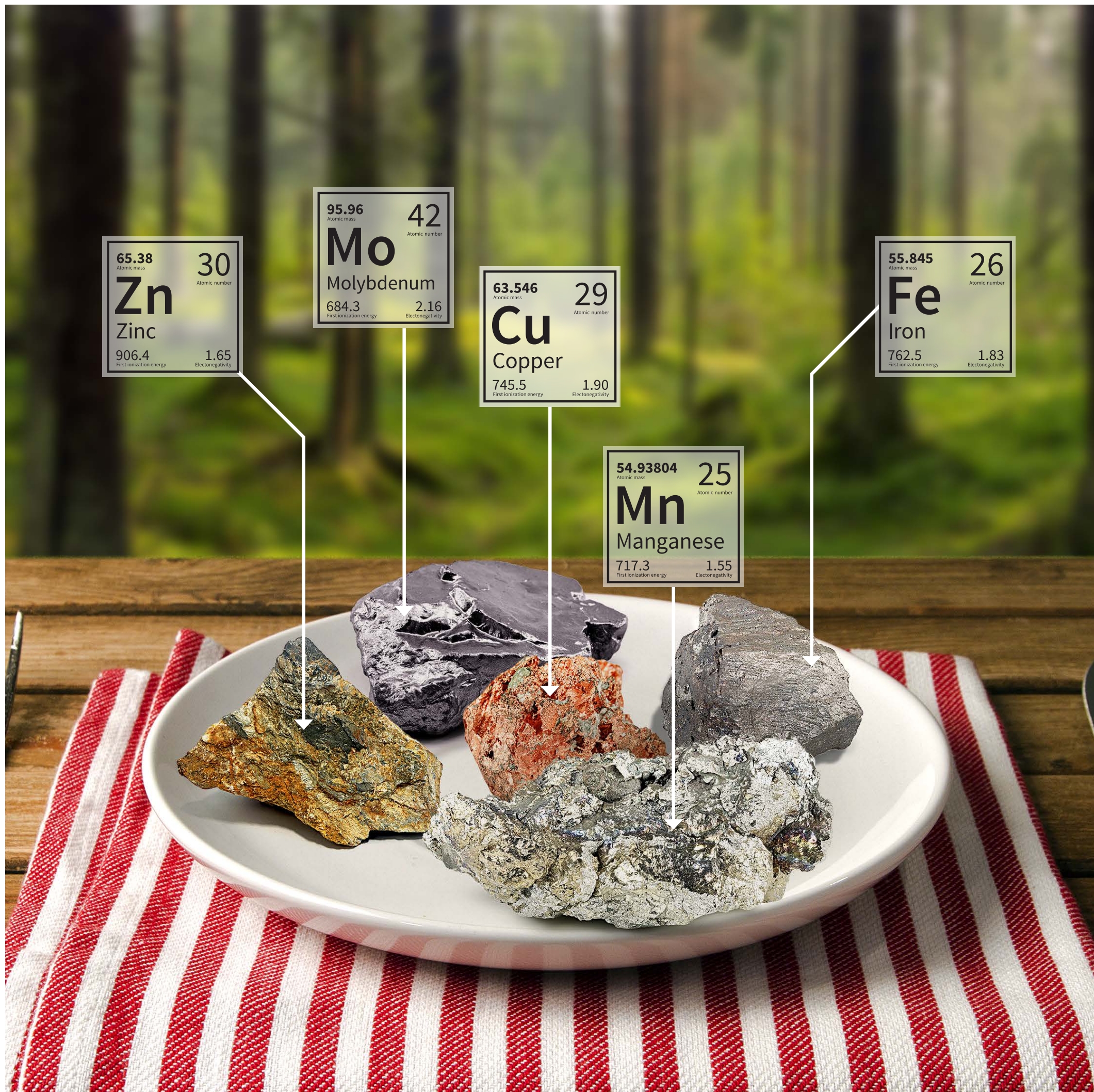
Even then, do we still want to be plugged in 24/7 to a world of human doing? What do we lose for all that the modern technological world affords us, and what can we gain by being a human being instead of a human doing?

You don't need to wait to find out; the insights that have eluded you, the time to be present with loved ones, the headspace to be happy—they all might be found by a vision that turns away from the ubiquitous screen and inward to the heart. The screen is bright, but the human spirit is brighter.

Brandon LaGreca, LAc, MACOM, is a licensed acupuncturist in the state of Wisconsin. He is the author of "Cancer and EMF Radiation: How to Protect Yourself From the Silent Carcinogen of Electropollution" and "Cancer, Stress & Mindset: Focusing the Mind to Empower Healing and Resilience." He shares his thoughts at Empowered Patient Blog.



A day away from the devices can be a day to renew an old hobby or cook an epic meal.



Why Most People Are Deficient in Minerals

Deficient food, chronic disease are leaving us malnourished

JOSEPH MERCOLA

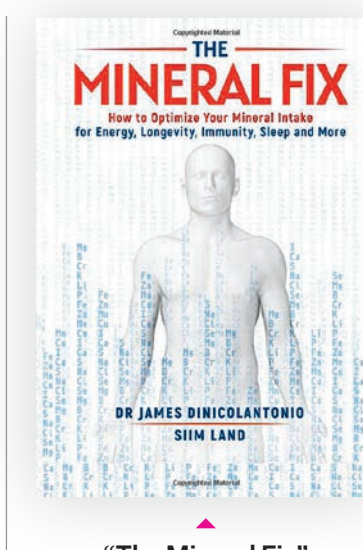
It's estimated that 1 in 3 Americans is deficient in at least 10 minerals, including potassium, manganese, magnesium, and zinc, putting them at risk of chronic diseases such as heart disease and diabetes.

"The Mineral Fix," written by James DiNicolantonio and Siim Land, author of "Metabolic Autophagy," provides a comprehensive guide about the role of essential minerals and why you need them to optimize physiological function and survival.

There are 17 essential minerals, broken down into seven macrominerals and 10 trace minerals. There are another five minerals that are possibly essential.

The primary role of minerals is to act as cofactors for enzymes, but that's just the bare minimum.

"They literally are the shields for oxidative stress," DiNicolantonio said, "because they make up our antioxidant enzymes. They help us produce and activate adenosine triphosphate (ATP), help us produce DNA, protein, so literally every function in the body is dependent, in some way, on minerals."



"The Mineral Fix" provides guidance to the role of essential minerals.

Minerals' role in the creation of ATP alone is a clue to their importance. As the energy currency in your body, ATP is essential for cellular functions throughout your body, including in your heart, which is dependent on sufficient amounts of ATP to function properly. DiNicolantonio believes that not getting enough minerals in your diet can be just as damaging as eating an unhealthy diet focused on sugar and seed oils.

3 Reasons Why You Might Be Deficient in Minerals

About a third of the U.S. population is likely deficient in the 10 minerals below (estimated percent not hitting RDA/AI or estimated percent deficient):

1. Boron (> 75 percent)
2. Manganese (~ 75 percent)
3. Magnesium (52.2-68 percent)
4. Chromium (56 percent)
5. Calcium (44.1-73 percent)
6. Zinc (42-47 percent)
7. Iron (25-34 percent)
8. Copper (25-31 percent)
9. Selenium (15-40 percent)
10. Molybdenum (15 percent)

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How Pandemic Fatigue Made Us Antisocial

COVID-19 took a toll on our relationships. Understanding why might help us come back together.

KIRA M. NEWMAN

On a Thursday morning in mid-February, writer Donna Ashworth woke up in lockdown in Scotland, and something felt different. "You could feel the collective quiet," she said.

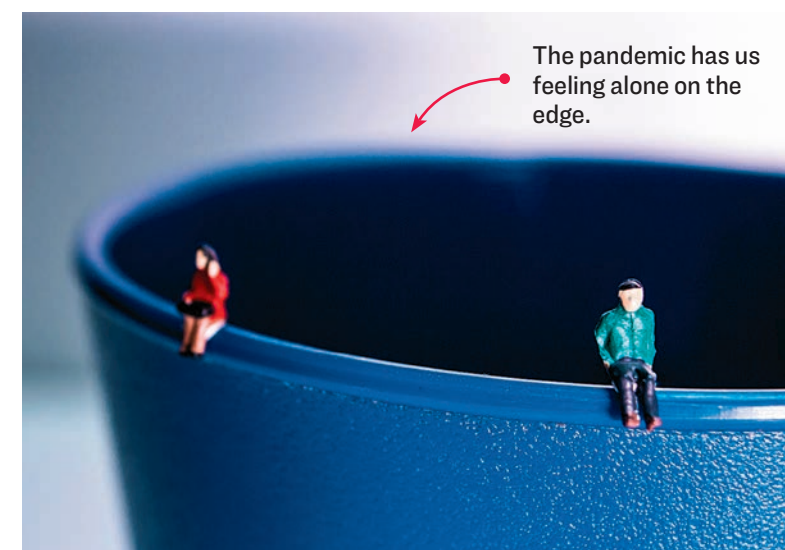
At night, her neighborhood no longer came to life with raucous

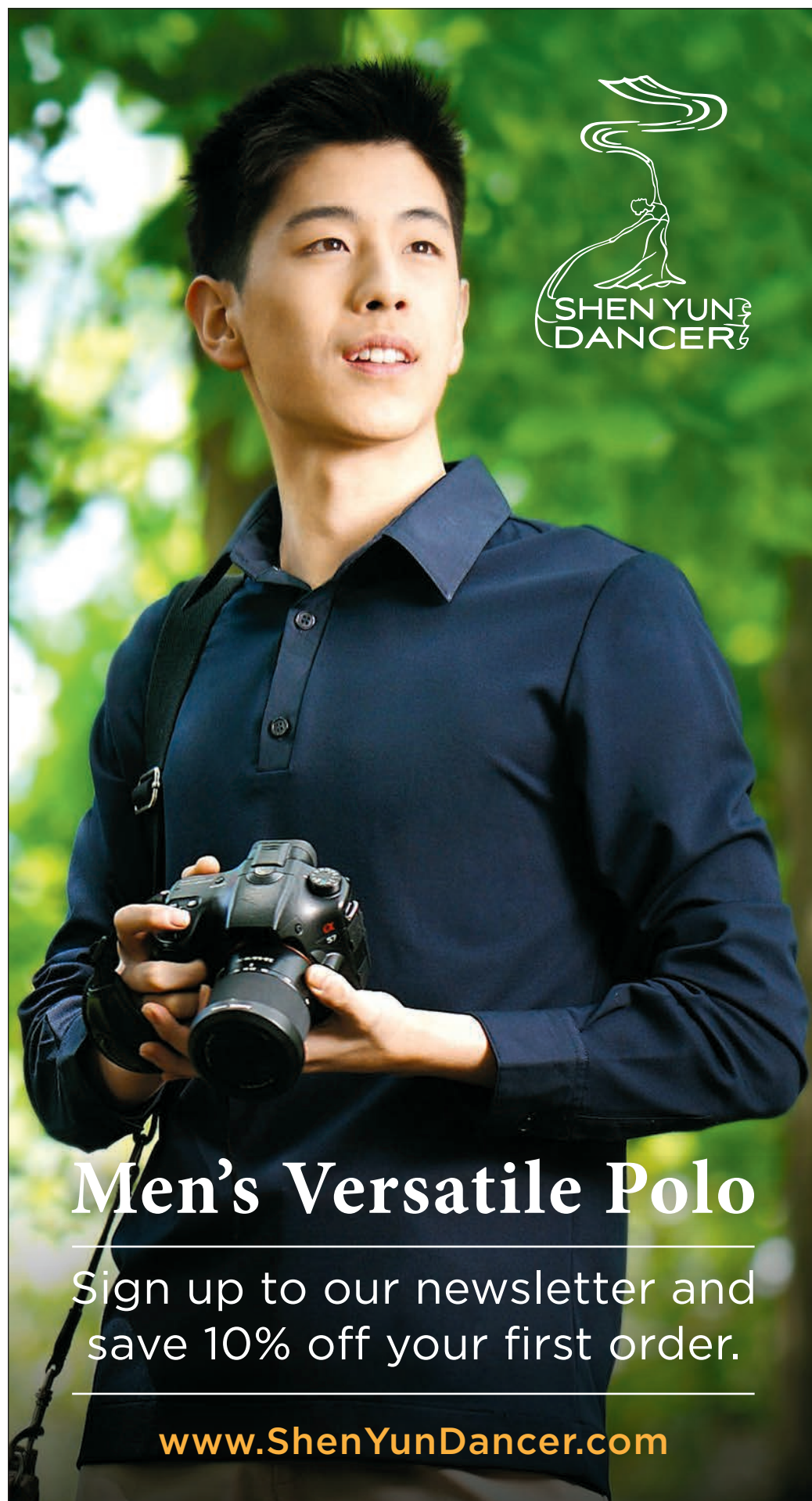
cheers and clapping for health care workers. Her phone was no longer buzzing with messages from group chats, friends checking in, or invitations to virtual game nights. When someone did reach out, Ashworth felt guilty about how long it took her to reply.

She sat down to write a short

poem about her feeling and then posted it to her Facebook page, Ladies Pass It On. The poem went viral, garnering more than 7,500 comments as of this writing. People across the world reached out to thank her for putting into words what they were feeling:

Continued on Page 14





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High-impact exercises, such as tennis, basketball, running, jumping, and some cardio exercise classes, help to maintain strong bones, but they can also prematurely age your knees.

10 Ways to Age-Proof Your Knees

Your knees are a critical joint that can last a lifetime with proper care

LYNN JAFFEE

Your knees are the workhorse joint of your body. They're considered to be your body's shock absorbers. With each step, they absorb one and a half times the weight of your body, and when you run or jump, they absorb much more.

It makes sense that your knees may be the first of your joints to act up as you age. However, knee pain doesn't have to be a foregone conclusion in your later years. Here are some ways to protect your knees and slow down the effects of aging on them:

1) Keep moving. Exercise helps to strengthen the muscles that support your knees and keeps them loose and flexible.

2) Maintain a healthy weight. An extra 20 pounds or more puts a great deal of stress on your knees. If you're overweight, know that even small reductions in your weight can make a difference in the health and function of your knees.

3) What you wear on your feet is important. Stable, well-fitting shoes with good support are what your knees want. Flip flops offer no support and can be a direct cause of knee pain. High heels dramatically change your body's biomechanics, especially that of your knees and legs—and not in a good way.

An extra 20 pounds or more puts a great deal of stress on your knees.

4) Strengthen the muscles that support your knees. Your quadriceps muscles on the front of your thigh and your hamstrings on the back are involved in the bending and straightening of your knee. These muscles run from your pelvis to below your knee. Strengthening those muscles plays an important role in preventing knee pain. Research has documented that increasing the muscles that support your knees can be as effective as surgery in treating some cases of knee pain. You can get help in finding the right strengthening program through a physical therapist or athletic trainer.

5) Mix high- and low-impact exercises. While exercise is good in keeping your knees healthy, high-impact activities can wear down cartilage, the fibrous

connective tissue that acts as a cushion between your bones. High-impact exercises, such as tennis, basketball, running, jumping, and some cardio exercise classes help to maintain strong bones, but they can also prematurely age your knees. What to do? A good strategy is to combine some higher impact activities with less bone-jarring exercise, such as cycling, walking, or swimming to keep your knees moving and muscles strong without adding unnecessary wear and tear on your cartilage.

6) Maintain the range of motion in your knees. This means the ability to both straighten and bend your knees to their full capacity. Putting your knees through their range of motion paces helps avoid stiffness and loss of mobility as you age.

7) If you need to kneel, do so on a soft surface or cushion. Kneeling for extended periods of time on a hard surface can irritate or damage the bursae, the small gel-filled protective cushions in your knees.

8) Avoid standing on hard surfaces or squatting for long periods of time. Both are a recipe for knee pain and damage.

9) Keep your knees healthy through your diet. Eating lots of vegetables, whole grains, and light proteins such as fish, and avoiding processed foods and saturated fats will help keep inflammation at bay.

10) Don't ignore knee pain. Think about acupuncture or physical therapy when it comes to pain in your knees. Researchers have documented that acupuncture can be an effective treatment for many types of knee pain. It works by decreasing inflammation in the area, increasing circulation, and relieving pain. If you've injured a knee, acupuncture can also help speed up the healing process. And physical therapy is a great way to strengthen your legs, increase your flexibility, and keep your knees moving.

The bottom line is that your knees will age as you age. However, with some care and a little movement, you increase the likelihood that your knees will stay healthy and functional as you get older.

Lynn Jaffee is a licensed acupuncturist and the author of "Simple Steps: The Chinese Way to Better Health." This article was originally published on AcupunctureInTwinCities.com

Taking Bone Meds? They Increase Your Risk of This Type of Fracture

Bisphosphonates are used to treat osteoporosis based on a bone density test that has come under scrutiny for limited relevance

Bisphosphonate drugs are a go-to treatment for osteoporosis, but they come with a significant risk of triggering an atypical femoral fracture, especially if you use them for more than five years. Their use is controversial, particularly because bone mineral density isn't an accurate measure of bone strength and fracture risk.

And yet, bisphosphonate drugs are the first-line therapy for the prevention and treatment of osteoporosis, with 14.7 million prescriptions written annually in the U.S.

The drugs, which include alendronate (Binosto, Fosamax), ibandronate (Boniva), risedronate (Actonel, Atelvia), and zoledronic acid (Reclast, Zometa), work to inhibit bone resorption by blocking the action of osteoclasts, which are cells that degrade bone.

Bone mineral density isn't an accurate measure of bone strength and fracture risk.

Osteoclasts, however, have many functions beyond bone resorption, including affecting immune responses, and their role of bone degradation serves to initiate the normal bone remodeling process. Drugs that inhibit osteoclast activity, therefore, may have "unexpected negative ... effects on bone homeostasis."

One risk that's been widely known for at least a decade is an increased risk of atypical femoral fractures—an ironic side effect for drugs that are prescribed for "bone health." Bisphosphonates are typically taken for three to five years, although they may be taken longer—a duration that may significantly increase your risk of suffering from a serious fracture as a result.

Serious Fracture Risk Highest After 5 Years

In a study reported at the American Society for Bone and Mineral Research (ASBMR) 2020 virtual meeting, researchers analyzed data from the Danish National Healthcare database on 1.9 million people aged 50 and over.

The relative risk of atypical femoral fracture among those taking bisphosphonates was highest after five years of use. During years five to seven of taking the drugs, the relative risk of atypical femoral fracture was 35.57, which rose to 40 after seven years of use.

Among the people who suffered an atypical fracture, 58 percent had used bisphosphonates, as had 19 percent of those who suffered a non-atypical fracture. For comparison, 9.9 percent of the healthy control group had used such drugs.

"Since first reported more than 10 years ago, it has become clear that atypical femoral fractures are a rare but serious com-



ALL PHOTOS BY SHUTTERSTOCK

plication of bisphosphonate therapy, and fear of these events discourages the use of osteoporosis medications," Dr. Douglas Bauer of the University of California San Francisco said in a release.

The risk of atypical fracture dropped rapidly when bisphosphonate drugs were no longer used, leading the researchers to suggest that "drug holidays"—during which the drugs aren't taken—may help lower the risk of atypical femoral fractures in some people taking the drugs.

Separate research revealed that women who took bisphosphonates for five years and then discontinued treatment had about the same risk of hip fracture as those who continued taking the drugs for another five years. This suggests taking the drugs for more than five years offers little benefit, yet may increase the risk of atypical fracture.

High Bone Mineral Density Doesn't Equal Healthy Bones

Bisphosphonates are said to be good for bones because they increase bone mineral density, but using bone mineral density as a measure of bone health is controversial because it is not the same thing as bone quality and strength.

While bone mineral density is associated with bone strength, they are not equivalent. As noted in the book "Osteoporosis in Men":

"Bone strength is the bone's resistance to fracture. It is difficult to quantify exactly what makes up the 'strength' of bone. It is related to, but not equivalent with, bone mineral density (BMD). BMD is a strong predictor of fracture, but there are also other factors, such as bone structure, bone remodeling and the newly coined term 'bone quality' to consider."

BMD is easy to measure via an x-ray device known as dual-energy x-ray absorptiometry (DXA or DEXA), but the other measures of bone strength are not so easily quantified.

What's more, even the World Health Organization's definitions of osteopenia and osteoporosis—which are diagnosed



The relative risk of atypical femoral fracture among those taking bisphosphonates was highest after five years of use.

Knowing your BMD isn't an accurate gauge of your future fracture risk and that alone shouldn't push you into using bisphosphonate drugs with serious side effects.

One risk that's been widely known for at least a decade is an increased risk of atypical femoral fractures—an ironic side effect for drugs that are prescribed for 'bone health.'

at 1 and 2.5 standard deviations below the average peak bone mass of a Caucasian, young adult woman—are highly suspect, as it turns the natural decrease in bone density that occurs with age into a disease that needs to be treated with drugs.

Simply put, knowing your BMD isn't an accurate gauge of your future fracture risk and that alone shouldn't push you into using bisphosphonate drugs with serious side effects. In fact, there are risks associated with high bone mineral density, including breast cancer.

Writing in the journal *Clinical Diabetes and Endocrinology*, researchers stated "skeletal biomechanics, size, shape, and ultra-structural properties are the ultimate predictors of bone strength" and detailed just some of the limitations of DXA scans and the many complexities that go into evaluating your actual bone health:

- Bone size, shape, architecture, and composition are the major determinants of bone strength
- Bone composition is difficult to measure non-invasively
- Collagen crosslinking and density contribute to bone matrix strength
- The number, thickness, and connectivity of plates and rods determine trabecular bone strength
- Newly formed protein matrix and the arrangement of hydroxyapatite crystals within the matrix, along with the degree of mineralization, contribute to bone hardness and strength
- Your genetics play a role in your bone health and may determine up to 70 percent of their strength and structure
- Habitual loading, repetitive damage, diseases such as diabetes, biomechanical factors, and rate of bone turnover also influence bone health and fracture risk
- Bone size is directly related to bone strength, but DXA does not account for bone size in assessing fracture risk; bone thickness isn't measured either

If you're interested in reducing your risk of bone fractures, there are many evidence-based natural approaches that can help. Several examples follow, and you can find more details in our bone health guide:

- Supplements like vitamin K and vitamin D
- Exercises such as whole-body vibration and tai chi

Dietary modifications, including increasing carotenoids, fruits, and vegetables

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Limit the Risk of Stress Fractures This Spring

MAT LEGOMPTE

Warmer temperatures and brighter days may be calling your name, motivating you to get outside for a walk or run.

But tread carefully—it's been a long winter, and your bones might not be ready for the impact of daily runs on concrete just yet. Along with rejuvenation, spring is the season of stress fractures.

Stress fractures are small breaks or cracks caused by repeated impact on a bone that's getting weak from too much use (or not enough). Feet and legs are particularly vulnerable, especially if you've been sitting on your sofa through the winter.

Pain, swelling, and bruising are the symptoms, so if you notice any of these, it's good to stop what you're doing and get

some rest. Ice and rest are how to handle these common injuries.

When your body is inactive, it gets weaker. That's why injuries are so common this time of year, particularly in older individuals, who inevitably get weaker with age.

When your body is inactive, it gets weaker.

But don't worry. You can better avoid a stress fracture by easing into activity and giving your bones a chance to strengthen and adjust to your new demands.

So, instead of going out for a jog or hard-core power walk, start a little more leisure-



TOM WANG/SHUTTERSTOCK

You can better avoid a stress fracture by easing into activity and giving your bones a chance to strengthen and adjust to your new demands.

ly. After a few days or a week, slowly pick up the pace and duration. It won't take long for your bones to realize they've got a little more work to do and make the adjustment.

Wearing well-fitting supportive shoes can also help lower the risk for a stress fracture. If you've been wearing the same pair of running shoes for the last two or three years, it's probably time for a new pair.

Although it's enticing, don't opt for the cheapest pair you can find. It'll be a recipe for injury. Go to a specialty shoe store that focuses on running and walking shoes to help you find the best fit for your needs. Trust me—it's a worthwhile investment.

Mat Legompte is a freelance health and wellness journalist. This article was first published on BelMarraHealth.com.

What People Are Saying



I read The Epoch Times daily. I still like hard papers [...] and I still like to grab that paper in my hand, but I get more printed versions of stories than ever before. You guys have done an amazing job, and really—I think there's such a void in media, especially newspapers. They slant so solidly one way that there are very few papers that I can really feel that I can rely on, and The Epoch Times is one.

SEAN HANNITY
Talk show host



I congratulate you and The Epoch Times for the work you are doing, especially with regard to keeping the menace of the communist threat in front of us.

DR. SEBASTIAN GORKA
Military and intelligence analyst and former deputy assistant to the president



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THE EPOCH TIMES

TRUTH AND TRADITION

Minerals provide the very elements of good health.

Why Most People Are Deficient in Minerals

Deficient food, chronic disease are leaving us malnourished

Continued from Page 9

DiNicolantonio cites three primary reasons why so many people are deficient, including the fact that our foods are more nutrient-depleted. People also aren't selecting the right foods to reach optimal intakes of minerals, and chronic disease states are compounding the problem.

For instance, gastrointestinal damage can decrease the amount of minerals you absorb; living in a state of significant inflammation taxes your system, and will increase the burn rate of minerals. Kidney damage increases the excretion of minerals, while high insulin levels will cause minerals to be excreted in your urine.

"Those three key factors are why so many of us are depleted in so many minerals," DiNicolantonio said.

Minerals for Antioxidant Defense and Immunity

You may associate antioxidants with vitamins, such as vitamins C and E, but minerals were the first antioxidants in living organisms. DiNicolantonio uses the example of blue-green algae that lived billions of years ago, producing oxygen and creating an abundance of oxidative stress. They utilized selenium and iodine as antioxidants. In humans, we use these similarly.

Iodine is an essential mineral that helps prevent polyunsaturated fats from oxidizing, provides your thyroid with the necessary nutrients to produce thyroid hormones, and is a natural antibacterial agent. Thyroid hormones are essential for normal growth and development in children, neurological development in babies before birth and in the first year of life, and in regulating your metabolism.

However, DiNicolantonio states that thyroid hormones also act as antioxidants, with effects 100 times stronger than vitamin C, vitamin E, and glutathione.

You need minerals, including iodine and selenium, to form your thyroid hormones, and your levels of powerful antioxidants such as glutathione are directly dependent on your selenium and magnesium status.

There's also superoxide anion, a free radical that causes many types of cell damage. It's the product of a one-electron reduction of oxygen, which is the precursor of most reactive oxygen species and a mediator in oxidative chain reactions.

These oxygen free radicals attack the lipids in your cell membranes, protein receptors, enzymes, and DNA that can prematurely kill your mitochondria. Superoxide dismutase neutralizes superoxide anion, rendering it harmless. But superoxide dismutase depends on copper and zinc. DiNicolantonio explained:

"If you're low in copper and zinc, you can't neutralize the superoxide. It combines with nitric oxide, reducing your nitric oxide levels, increasing blood pressure, leading to atherosclerosis and heart disease, and then you form the toxic peroxynitrite. So it goes to show you how just having a low mineral status can lead to high inflammation."

RDAs Are Inadequate

"The recommended dietary allowance (RDA) for many minerals may be inadequate to protect your health and won't help you reach the levels needed to optimize your antioxidant defenses," DiNicolantonio said, calling this issue the crux of the book.

RDAs are based on studies to make sure you're not deficient, but this level isn't the



Manganese helps us with blood clotting, bone formation, and metabolize amino acids, carbohydrates, glucose, and more.

same as the one that will give you optimal health. In the case of enzymes dependent on vitamin C, for example, you need to consume 120 milligrams (mg) to 150 mg of vitamin C to make sure those enzymes are highly optimized, which is far more than the 6 mg to 8 mg of vitamin C needed to prevent scurvy.

"You can have up to a 1,000-fold difference between preventing deficiency and optimal intake," according to DiNicolantonio. Magnesium is another example, but with lower differences between deficiency and optimal levels. You only need about 150 mg to 180 mg a day to prevent deficiency, but optimal levels are closer to the 600 mg/day level.

For comparison, the RDA for magnesium is around 310 mg to 420 mg per day depending on your age and sex. But like DiNicolantonio, many experts believe you may need around 600 mg to 900 mg per day.

As noted in a study DiNicolantonio worked that was published in 2018 in *Open Heart*: "Investigations of the macro- and micro-nutrient supply in Paleolithic nutrition of the former hunter/gatherer societies showed a magnesium uptake with the usual diet of about 600 mg magnesium/day. ...

"This means our metabolism is best adapted to a high magnesium intake. ... In developed countries, the average intake of magnesium is slightly over 4 mg/kg/day. ... The average intake of magnesium in the U.S. is around 228 mg/day in women and 266mg/day in men."

Another important point that DiNicolantonio makes is that simply increasing your mineral intake by taking supplements may not be enough, because you need to be insulin-sensitive in order to utilize the minerals properly. If you're insulin-resistant, you can't drive the minerals into your cells to work well, and you'll be eliminating the minerals in urine as well.

"So really the first step," he says, "is to eliminate the harmful substances that are causing you to be insulin-resistant in the first place. That's automatically going to boost your mineral status, because you're going to be able to utilize those minerals better."

Top Food Sources of Minerals

The best way to increase your mineral intake is via healthy foods. For copper and iron, for instance, DiNicolantonio recommends pairing muscle meat with liver, or eating oysters, which are also high in zinc. A lot of oysters may be contaminated with cadmium, however, so they should be eaten in moderation depending on where they're sourced.

One of the foods with the highest minerals overall is mussels. They're high in manganese, chromium, and copper, which are minerals many people are deficient in. Liver is another nutrient-dense food that's rich in minerals, but it's possible to overdo it.

According to DiNicolantonio, in terms of mineral consumption, one-half to one ounce of liver per day is the ideal amount, which will give you vitamin A, folate, and copper. He recommends pairing this with about 10 to 12 ounces of pastured red meat per day for the vitamin B12, protein, zinc, and iron it provides.

If you don't like the taste of liver, try a blend of meat made with pastured liver, heart, and muscle meat. You can add in more pastured ground beef to make it more palatable and still reap the rich mineral benefits.

Women need more than twice the amount of iron as men, so animal-based sources of iron, which are 10 times more bioavailable than plant sources, are important. For those who don't eat meat, combining vitamin C with beans, spinach and other iron-rich greens may help make the iron more bioavailable.

Benefits of Mineral Waters

It's important to balance animal foods with alkaline minerals such as potassium and magnesium from plant foods or mineral waters, which will balance out the acid and help protect your kidneys. Mineral waters that contain bicarbonate can help with this acid-base balance while providing an additional source of minerals such as calcium and magnesium.

Drinking mineral water with a meal is also beneficial and can increase mineral absorption while lowering postprandial blood sugar.

"It's also useful to sip mineral water throughout the day," DiNicolantonio said, citing a study that found consuming seven ounces of mineral water seven times a day increases magnesium absorption and retention by 40 percent, versus consuming larger amounts twice a day.

"It's that slow infusion, which mimics more of an evolutionary intake—we would have just drank water throughout the day and it would have been natural. It wouldn't be these artificially softened waters, it would be natural waters that contain bicarbonate, that contain magnesium, that contain calcium. So it's something that I do."

Less-Known Minerals

That You May Be Missing
Minerals such as boron often get overlooked, yet they're extremely important for well-being and health. Boron, consumed at levels of about 3 mg daily, is beneficial for bone health and testosterone, but it's thought that most Americans only consume about 1 mg.

The highest concentrations of boron are found in bones and tooth enamel and, according to the *Natural Medicine Journal*, it "appears to be indispensable for healthy bone function," as it reduces the excretion of calcium, magnesium, and phosphorus.

There may also be other, as yet poorly understood, mechanisms by which it benefits bone-building and other aspects of health. The optimal dosage is unknown, but you can get significant amounts of this trace mineral by eating small amounts of raisins, peaches, prunes, dates, black currants, and avocados.

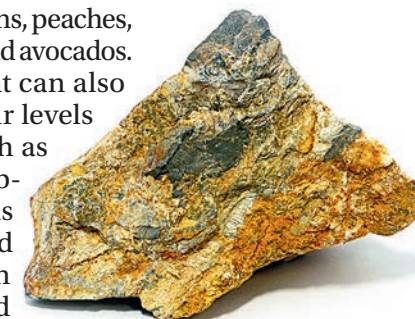
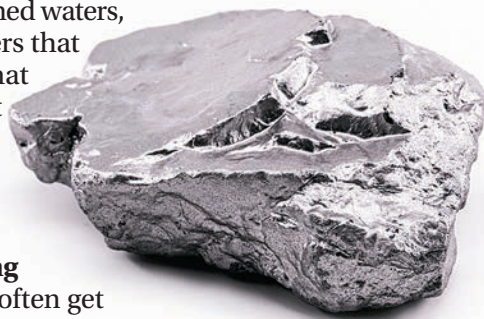
A trace mineral supplement can also be helpful in optimizing your levels of "overlooked" minerals such as boron, chromium, and molybdenum. Chromium, which has been linked to improved blood sugar levels, can be found in mussels, lobster, crab, and shrimp, as well as broccoli, in smaller amounts.

Further, chromium is lost in sweat, so you if sweat a lot due to living in a hot climate, sauna usage, or exercise, a chromium supplement may be necessary, especially if you don't regularly consume chromium-rich foods. Copper is another mineral lost through sweat, and since most people don't consume much copper, it's possible to lose more copper than you've taken in if you sweat heavily for about an hour a day.

Molybdenum is another often-overlooked mineral, which is an essential catalyst for enzymes to help metabolize fats and carbohydrates and facilitate the breakdown of certain amino acids in your body. The best dietary source of molybdenum, according to DiNicolantonio, is liver.

If you want to learn more, or are concerned that you're not getting enough minerals, "The Mineral Fix" goes much more in-depth about the role of the 17 essential minerals your body needs, including optimal intake levels, symptoms of deficiency, how to test your mineral levels, and best food sources.

Manganese helps us with blood clotting, bone formation, and metabolize amino acids, carbohydrates, glucose, and more.



FOOD AS MEDICINE

Fighting Autism Brain Inflammation With Food

A phytochemical in some vegetables offers a promising treatment for autism

MICHAEL GREGER

One food may be able to combat all four purported causal factors of autism: synaptic dysfunction, oxidative stress, mitochondrial dysfunction, and neuroinflammation. Research into this food-based treatment began with efforts to figure out what it is about a fever that has such a dramatic impact on children with autism spectrum disorder (ASD).

Already, up to 1.5 percent of American children have autism, and it appears to be on the rise. What about fever's dramatic effect? "Dramatic relief of autistic behavior by infectious fever continues to tantalize parents and practitioners," reads an article in the *European Society for Clinical Nutrition and Metabolism's* journal, adding that researchers are hesitant to test this mechanism for fear of the damaging impacts fever can have.

"Yet what could be more revealing than a common event that virtually 'normalizes' autistic behavior for a time?" they ask. Once it became understood that one cause of autism may reside in the synapses—the "soul of the brain," the nerve-to-nerve junctions where information is transmitted—attention turned to heat shock proteins, which are released by the brain when you have a fever.

They can improve synaptic transmission and, thus, may be capable of improving long-range brain connectivity, which is depressed in autism. A compound, sulforaphane, upregulates those heat shock proteins, so you could potentially get the benefits without the fever. Which drug company makes it? What do I ask for at the pharmacy? You don't. As I discuss in my video "Fighting Autism Brain Inflammation with Food," you just need to check out the produce section at your local market.

Sulforaphane is not made in a chemical plant—it's made by a plant. Sulforaphane is made by cruciferous vegetables: broccoli, kale, cabbage, collards, and cauliflower. Perhaps if we give broccoli to those with autism, it will make things better by boosting the heat shock proteins.

But synaptic dysfunction isn't the only contributing cause of autism. There's also oxidative stress, which the brain is particularly vulnerable to. This is because many free radicals are forged in the brain, and the brain has few antioxidant defense capacities. This view is supported by a long history of studies showing that autism is associated with oxidative stress and diminished antioxidant capacity.

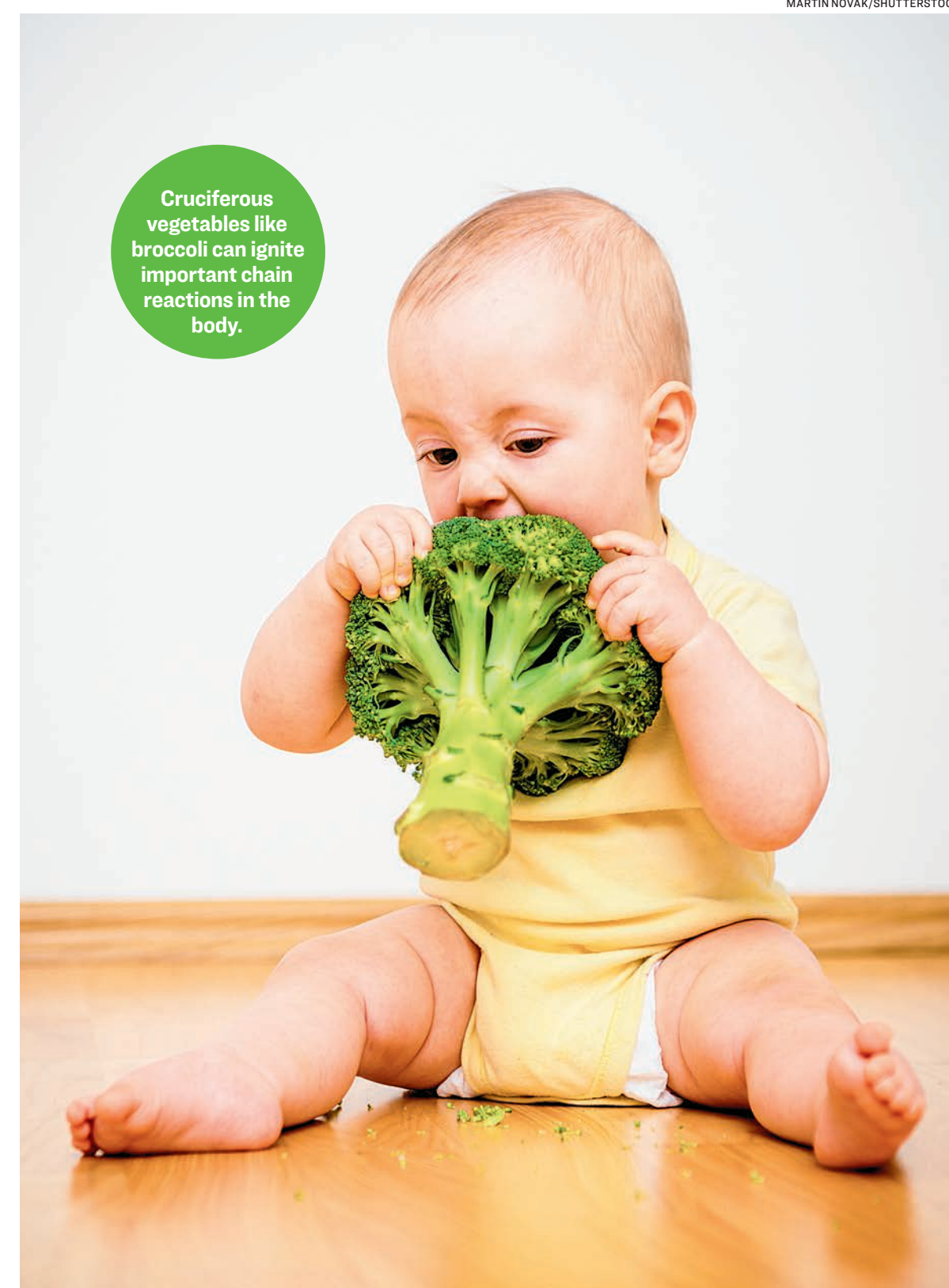
Nrf2 levels are cut nearly in half, which is what triggers our body's antioxidant response. Nrf2? What is that? It's "considered to be a master regulator" of our body's response to environmental stressors, according to a 2016 article published in *Seminars in Oncology*. If only there were a way to boost Nrf2 with foods. Well, there is.

Sulforaphane just so happens to be perhaps "the most potent naturally occurring inducer" of Nrf2 on the planet, note the authors. Under any kind of stress—oxidative stress, inflammatory stress—Nrf2 triggers our antioxidant response elements, activating all sorts of cell-protective genes that balance out and detoxify the free radicals and facilitate protein and DNA repair. So, maybe if we give some broccoli to those with autism, it will also make things better by triggering Nrf2, which activates those antioxidant response elements.

There's also the mitochondrial dysfunction. Children with autism are more likely to suffer from dysfunctional mitochondria, the little powerplants within our cells where metabolism takes place. If only there were some food that could improve mitochondrial function. And, there is: "A diet rich in cruciferous vegetables effectively retunes our metabolism by ... restoring metabolic homeostasis," or metabolic balance, notes a study published in *The American Journal of Clinical Nutrition* in 2013. These vegetables are power plants for our cellular power plants.

Not only can sulforaphane boost the gene expression of heat shock proteins as much as sixfold within six hours, but it can also double the mass of mitochondria in human cells growing in a petri

Cruciferous vegetables like broccoli can ignite important chain reactions in the body.



Sulforaphane is not made in a chemical plant—it's made by a plant.

dish. So, maybe if we give some broccoli to those with autism, it will also make things better by relieving some of that mitochondrial dysfunction that is creating even more free radicals.

Can we just try giving these kids some broccoli already? Before we do, there's one final factor. Neuroinflammation—brain inflammation—is another causal factor in autism. If, at autopsy, you look at brain tissue of those with autism, you can see inflammation throughout the white matter, and if you do a spinal tap, you'll find up to 200 times the levels of inflammatory mediators, such as interferon, bathing their brains. What's causing all that inflammation?

Well, the master regulator of the inflammatory cascade is a protein called NF-kappa-beta, which induces inflammation. If overexpressed, as in autism, it can lead to chronic or excessive inflammation. If only there were a food ...

Really? Broccoli does that, too? Yes! In fact, the major anti-inflammatory mechanism for sulforaphane is inhibiting NF-kappa-beta.

That completes the picture. Give broccoli to someone with autism, and heat shock proteins are released to boost synaptic transmission, Nrf2 is activated to wipe out the free radicals, mitochondrial function is restored, and we suppress the inflammation triggered by NF-kappa-beta. One food counters all four purported causal factors of autism.

That's one of the differences between foods and drugs. Drugs tend to have single effects. But, autism spectrum disorder is multifactorial, so it's no wonder there are no drugs that work. Unlike drugs, however, the complex chemistry of plants includes phytochemicals that spur multiple biochemical reactions in the body.

And when researchers tested this theory out, giving people with autism spectrum disorder (ASD) a treatment of sulforaphane, the results were important. Researchers from Harvard Medical School, the University of Massachusetts Medical School, and other institutions say they "observed consistent and large im-

provements in behavior in the majority of sulforaphane-treated ASD [participants]."

They note, however, that the sample size and diversity of participants was limited, and broader studies are required.

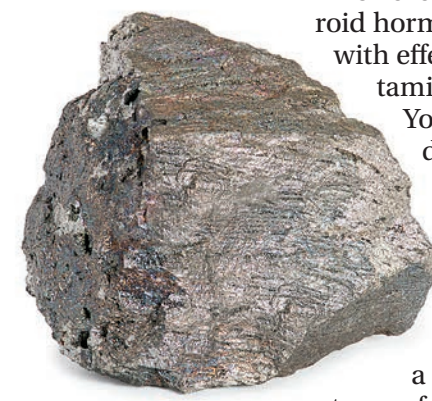
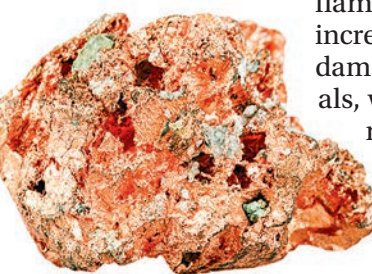
The findings were published in *PNAS* (Proceedings of the National Academy of Sciences of the United States) in 2014.

Broccoli spurs a rise in heat shock proteins that boost synaptic transmission.

"Most clinical studies and medications aim to restrain ASD's troublesome symptoms. In contrast, this study was, to our knowledge, one of the few designed to target core clinical features as well as the fundamental biochemical abnormalities of ASD (oxidative stress and antioxidant deficiency, increased susceptibility to electrophile toxicity, and inflammation) by the administration of sulforaphane," they state.

"Unlike the rapid onset of changes in behavior during fever in ASD, responses to sulforaphane in this study appeared over several weeks. This finding suggests that sulforaphane may cause increases in gene transcription in multiple underperforming cell-signaling pathways." The implications of the study and previous findings that fever could dramatically alleviate ASD behaviors have profound significance.

Michael Greger, M.D., FACLM, is a physician, *New York Times* bestselling author, and internationally recognized professional speaker on a number of important public health issues. He has lectured at the *Conference on World Affairs*, the *National Institutes of Health*, and the *International Bird Flu Summit*, testified before Congress, appeared on "The Dr. Oz Show" and "The Colbert Report," and was invited as an expert witness in defense of Oprah Winfrey at the infamous "meat defamation" trial. This article was originally published on NutritionFacts.org



Getting the recommended dietary allowance (RDA) isn't enough for optimal health.



RDAs Are Inadequate

"The recommended dietary allowance (RDA) for many minerals may be inadequate to protect your health and won't help you reach the levels needed to optimize your antioxidant defenses," DiNicolantonio said, calling this issue the crux of the book.

RDAs are based on studies to make sure you're not deficient, but this level isn't the

Dr. Joseph Mercola is the founder of *Mercola.com*. An osteopathic physician, best-selling 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. This article was originally published on Mercola.com



Sulforaphane therapies offer a promising treatment for autism.

How Pandemic Fatigue Made Us Antisocial

COVID-19 took a toll on our relationships. Understanding why might help us come back together.

*Continued from R1
Continued from Page 9*

We are spent. We have nothing left to say. We are tired of saying “I miss you” and “I can’t wait for this to end.” So we mostly say nothing, put our heads down and get through each day.

If the response to Ashworth’s poem is any indication, something happened early in the year—after the distraction of the holidays and before vaccinations really ramped up—where many of us withdrew into ourselves, cutting down on social interaction.

According to University of Essex social psychologist Gillian Sandstrom, the lockdown got harder as it went along, even for people who coped well last year. Over in the United States, therapist Lindsey Antin has seen her clients’ energy and social activity go up and down in waves, depending on how hopeful they feel at any given moment.

Why would we withdraw, even though we desperately need each other?

Perhaps, if we understand the roots of our social behavior during the pandemic, we’ll be more likely to forgive ourselves and the people around us for withdrawing. This could help us come back together in a post-COVID world.

COVID-19 Blues

It’s not news that the pandemic has brought us extra stress, loneliness, and depression—but what perhaps went unappreciated is how much these mental states led us to avoid interacting with others.

Loneliness, rather than prompting us to connect, actually makes us withdraw, according to research. We start to feel unworthy of our relationships, worried that people are judging us or don’t enjoy being around us. Depression saps our energy and motivation, and affects our sense of self-esteem. It makes it hard to do the things that would help alleviate the depression, including engaging with other people.

According to Antin, people with depression often feel like they don’t have much to bring to the table in conversations with others. Particularly if they’ve been isolated and inactive, they don’t always know what to talk about that would be interesting to another person.

The same is probably true for many of us during the pandemic, stuck at home and unable to eat out at restaurants, enjoy many of our hobbies, or take vacations that would make for good stories.

Sandstrom agrees, adding that many of us are probably sick of talking about COVID. Her own research focuses on people’s expectations and experiences around social interactions, and it suggests that we underestimate how enjoyable interacting with other people will be. At the prospect of talking to a stranger, we worry about whether they will like us and enjoy talking to us, and about our ability to sustain a conversation. And people probably worry about many of the same things around their friends, she says.

“We might think, ‘Oh, I could have told that story better than I did,’ or ‘Oh, why did I say that? What if they don’t understand me? What if they’re offended?’” she says. “We have this voice in our head judging ourselves the whole time, and it’s not very positive.”

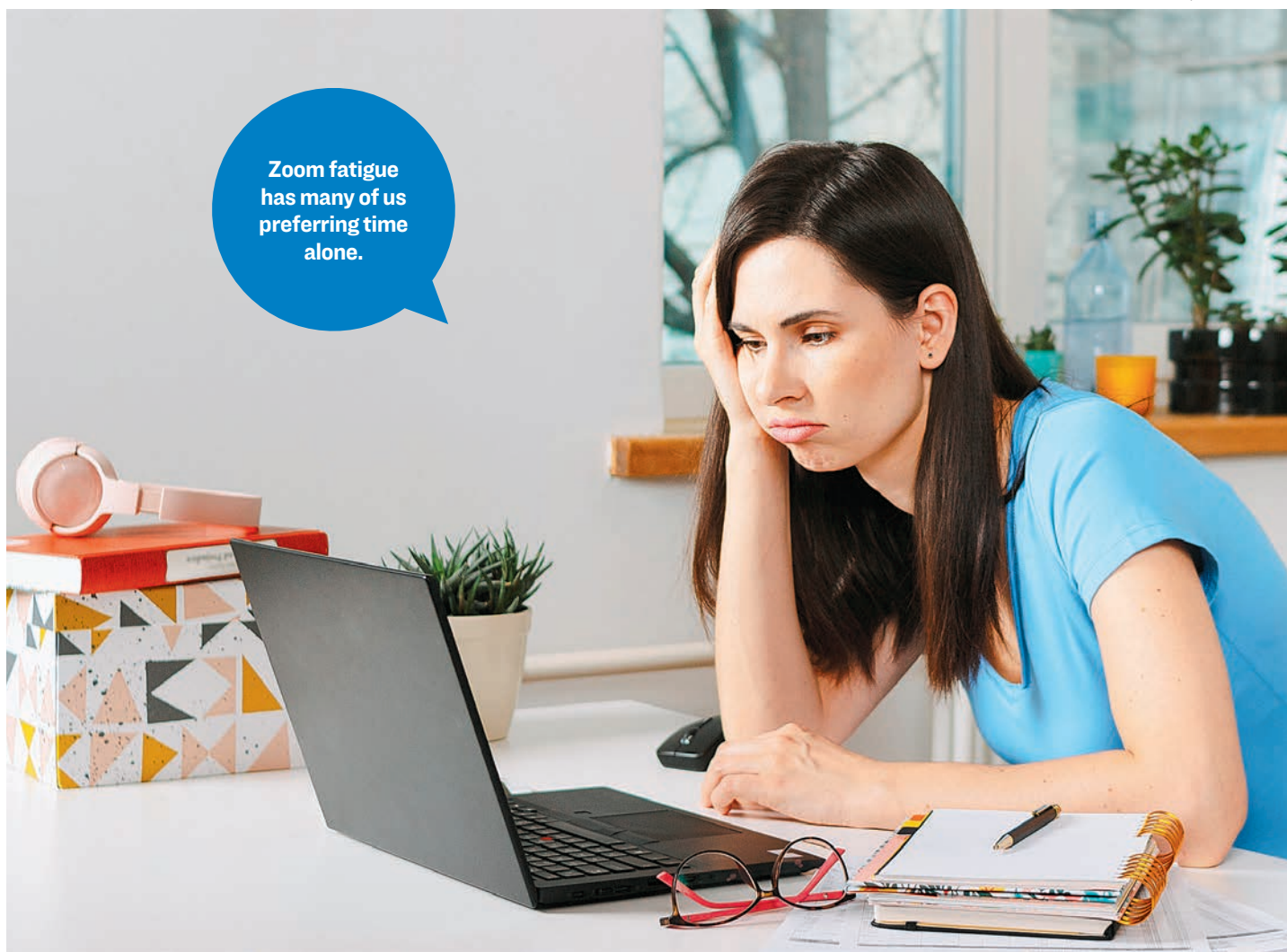
In addition to feeling pressure to be interesting, some also feel pressure to be positive. Early in the pandemic, many people rallied together with optimism—the collective sense of “we can do this.” We reassured kids and elderly parents that things would be fine. But after a year, keeping up that positive spirit isn’t so easy anymore.

It’s exhausting to constantly act cheerful and hopeful when you don’t feel that way. But if all we have to share are complaints, pessimism, and sadness, we may worry about being a burden to others. This was certainly the case for Ashworth, who has always played the role of uplifting and encouraging the people around her.

“I think nobody had anything positive to add, so everybody just kind of shut up for a while,” she said.

By not sharing those heavy thoughts with others, she said, we also managed to avoid really examining them ourselves. The losses and uncertainty of the pandemic felt so monumental, from worries about whether our kids will be damaged to the inequities in who gets sick and who gets treatment; avoiding people meant we wouldn’t be forced to face them.

“Nobody really wants to dig too deep anymore because the answers are so dis-



appointing,” Ashworth said.

Pandemic Fatigue

Even for those of us who aren’t struggling as much, we are simply lacking in time and energy. We are overwhelmed.

It’s natural that our social worlds would contract right now, focusing on the people who live in our household, and maybe our closest friends and family. Last year, many adults were suddenly tasked with homeschooling their kids, supporting partners who lost their jobs, or constantly cajoling older relatives to stay home and take the pandemic seriously.

Indeed, around the world, in just one year, millions of people lost their lives to the pandemic, and millions more suffered severe cases of COVID-19, which affected an uncountable number of other people in ways that were incredibly stressful and even traumatic. We all knew that death and suffering lay outside the walls of our homes. Every apartment was like a tiny lifeboat.

“In some ways, our close relationships are the most positive but also the most taxing, because they’re the ones we have to be there for and deal with,” Sandstrom said. “It could be that with close relationships, we just feel like we really have to support right now and we don’t have any energy left over for other people.”

In a way, it’s similar to what happens with new parents: Having a baby—a novel experience that keeps us at home more and deprives us of sleep, not unlike the pandemic—increases our contact with neighbors and decreases our contact with friends.

With so many demands on our attention, when we do have a moment to ourselves, sometimes all we crave is a bit of peace and quiet. But we can’t always get it, especially when we’re stuck sharing space with other people in lockdown.

We Need Solitude, Too

According to research, “aloneness”—the opposite of loneliness, the lack of solitude—is a real problem. People who are lacking in solitude can “end up feeling irritable, overwhelmed, or drained,” wrote psychologist Virginia Thomas. They are more stressed and less satisfied with their lives.

In an effort to avoid this fate, some of us may be clinging to any moments of solitude we can get, rather than responding to a text or joining a digital catchup.

Even Antin’s first-grade son was feeling it. One day recently, she went to check on him and found him alone upstairs, eating graham crackers and reading a book. So, she invited him to sit with her while she worked. “He’s like, ‘No, I need some time by myself,’” she recalled with a laugh.

When we do have enough energy to connect, the options are fraught and often unsatisfying. Spending time in person requires an elaborate risk-reward calculation based on the other person’s pandemic behaviors, and possibly an uncomfortable conversation about whether you’ll wear masks, physically distance, and meet outdoors.

Online social interaction was fun and novel for a while, as we discovered new platforms for watching movies, playing games, and even dancing together-but-apart. But now, many of us are just exhausted. According to researchers, Zoom fatigue is real, and it comes from the fact that most video calls involve unnatural levels of eye contact, the distraction of staring at our own reflection, the inability to move around, and difficulty interpreting people’s body language.

“We’re tired of the options available to us,” says Antin. No solution is perfect, so sometimes we opt for no solution at all. “Virtual hangouts tend to be less fulfilling than in-person ones and leave us longing for that physical connection,” wrote Kelsey Borresen for the Huffington Post. And the opposite happens, too, when the hassle of getting all suited up to meet someone outdoors and then barely being able to hear them through masks and distance makes you wish you’d just had a phone call.

Closing the Distance

More than a month after Ashworth wrote her viral poem, she is seeing a shift in people’s moods. Vaccine rollouts have many feeling more excited about the future, even as we worry about being disappointed again as lockdowns get extended and timelines pushed back.

When all this is over, our relationships—digital or distanced—won’t be the same right away. Even being around other breathing humans may be anxiety-provoking at first. Our social skills may still need practice, because they are skills, after all, Sandstrom says. And the effects of pandemic-related trauma or depression won’t immediately go away with a shot in the arm.

There are a few things we can do to ease the transition. We’d do well to remember Sandstrom’s research on how surprisingly fun it is to interact with others. Even during the pandemic, when she paired up strangers online, they ended up talking longer than expected—40 minutes, on average, as opposed to 14—and found the conversation more enjoyable and easier to maintain than they thought it would be. We are built for this, even when the little voice in our head says otherwise.

Our relationships will bounce back better and stronger if we don’t take the past year’s unreturned messages or declined invitations personally. It will help to be patient and understanding of the people around us who are finally emerging from their homes, perhaps more slowly than we are, perhaps with more anxiety than they had before.

If we’re lucky, all the Zoom fatigue and loneliness and aloneness will remind us of what it was like to lose each other—and what it was like to find each other again.

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No solution is perfect, so sometimes we opt for no solution at all.



When we are lonely and depressed, we find ourselves seeking more time alone—which leaves us more depressed.

WISE HABITS

Working to Become More Trustable

When others can trust us, a deeper relationship can form

LEO BABAUTA

As a husband, father, and man, one of the things I crave most is for my loved ones to trust me. It’s something I want with my team, my readers, my coaching clients, and the members of my Sea Change and Fearless Training programs. And I’ve worked hard over the years to become more trustable.

It’s really a magical thing, when people start trusting you. When your wife and kids trust you, it can melt your heart. They can relax, and feel taken care of. When your clients trust you, you can go deeper with them. When you trust yourself, you can relax more in any activity.

There’s magic in becoming trustable. In this article, I’d like to share some of what I’ve learned. To be clear: I’m not perfect, and I don’t always do everything perfectly. This isn’t about perfection, but about being someone that people can count on—including taking responsibility when you’ve fallen short of what they were expecting.

An Example: What Happens in a Marriage When You’re Trustable

A marriage is a great example of where the magic of trustability can transform things. In a marriage, one partner will crave the radiant love of the other partner—a husband craving the abundant feminine love of his wife, for example.

But she can’t fully give her radiant love and affection if she can’t relax. And she can’t relax if she’s always worried about whether things are going to be taken care of, anxious about whether her life is safe, whether you’re going to follow through on what you said you’d do. I can’t tell you how many men I’ve worked with who said this is one of their wives’ main complaints.

When our partner doesn’t trust us and complains that we don’t do what we say we’re going to do, we can take that as criticism. We can say, “Why does she always have to complain about me?” But what we’re missing is truly getting her experience, of having to worry about things she doesn’t want to worry about. She feels tense, and she can’t relax enough to give her radiant love.

When they can relax and know that things are taken care of, they can give their love more easily and abundantly. Which is what we crave.

And so the magic comes when we become trustable—all of a sudden, they can relax more. And their love flows more easily and abundantly. It’s a wonderful magic! It turns out this is how all relationships often work, including professional relationships. When others can trust us and relax, a deeper relationship can form. Magic happens.

How to Become More Trustable

When we understand how all of the above works, then the question becomes, “How do I become more trustable?”

And my answer is that it doesn’t happen overnight. And it’s a never-ending process, like any kind of mastery. You’re never done growing in this area.



It can take time to re-earn lost trust from our loved ones—and it’s worth every effort.

When they can relax and know that things are taken care of, they can give their love more easily and abundantly.

Earning trust is an ongoing process that comes from continuous effort and growth.

But it is possible to grow tremendously. I’m going to give some of the key learnings here:

- **Do your best to practice keeping your word.** That means when you say you’re going to do something, really commit to making that happen. Sometimes that means sacrificing some comfort to make it happen. But make it a top priority, and take it seriously.
- **When you can’t keep your word, own up to it.** Let them know ahead of time if you’re not able to do it. If you messed up, take responsibility and apologize, and let them know what you’ll do going forward to avoid the same mistake repeating. Do what you need to do to fix things.
- **Breathe deeply and slow down.** When we’re jumpy and anxious, they’ll feel it. When we stand solidly, breathe deeply, and go slower, they feel this as solidity and trustability. As with all of this, it’s a learning process. You’ll have moments of anxiety, but you can learn to breathe deeply even here. You’ll have moments of fidgetiness and jumpyness, but you can learn to slow down even here, with practice.
- **Create structure for yourself and them.** When you’re committed to making certain things happen (taking care of the car, getting the groceries, paying the bills), it will help greatly to have structure, like a schedule with reminders. When will this get taken care of? You might alter the structure, but having a structure for you and those around you helps them to know that things are in order and will be taken care of. Practice creating structure for others when it would serve them and without forcing it on them. Offer a plan, a schedule, a clear decision, an agreement.
- **When they complain about something you haven’t done ... listen.** Hold space for their complaint, and instead of taking it personally, see if there’s some way you can help them. But

listen first, and understand them. Then see what you can do to make it right, to create structure so they can trust it will get done, to clean up any mess you’ve accidentally made. You don’t need to feel blame or shame, but just understand them.

- **Take things seriously.** But not too

seriously! OK, it’s good to have a sense of humor, but if you dismiss their concerns or say, “Yeah, yeah, don’t worry,” they’ll worry. They can’t trust that you’re going to do your best. Give it your all. Hear their concerns. Make it clear you’re going to take care of it.

- **Take full responsibility.** Especially when you want to blame them. Instead of pointing the finger, look at what you might have done to contribute to this, or to allow this situation to happen. Have you not been clear? Have you not created an agreement around this? Have you not been acknowledging them for how great they are? Have you not been taking care of things? When you think you shouldn’t have to take on responsibility—that’s when you can take on more.

- **Take care of yourself.** If you can’t take care of yourself, how can you be trusted to take care of them? This means clean up your messes, put things in order, do some basic personal hygiene, take care of your emotions, and give yourself rest when you’re feeling stressed or burned out. Being trustable doesn’t mean you have to take on so much that you’re overworked.
- **Always look for ways to be more trustable.** Where have you dropped the ball? Is there something you could do to feel more solid to them? Where have you avoided taking on responsibility? Where have you let things lapse into a mess? This is a continual area of growth. You don’t have to be perfect, but you can continue to grow. For life.

Do your best to keep your word. That means when you say you’re going to do something, really commit to doing it.

If you take some of this on, a little at a time, I would be willing to bet that things will magically start to change for you in all of your relationships. And it just feels freaking good to be trusted.

Leo Babauta is the author of six books, the writer of Zen Habits, a blog with over 2 million subscribers, and the creator of several online programs to help you master your habits. Visit ZenHabits.net

Handshakes and Hugs Are Good for You

It's important that these customs make a comeback after the pandemic

SIMON NICHOLAS WILLIAMS
& KIMBERLY DIENES

When was the last time you shook someone's hand, or kissed them on the cheek to say hello? The pandemic has put a stop to these simple gestures, while social distancing and strict hygiene practices have become part of our everyday lives as a necessary way of minimizing the spread of the virus. But should this new way of interacting be permanent?

Some experts say that we might not, or even should not, return to the old ways once the pandemic is over. Anthony Fauci, chief medical adviser to the U.S. president, has said, "I don't think we should ever shake, hands ever again." He argues that it would reduce the spread of not only COVID-19 but also other viruses such as influenza.

The loss of casual touch may be detrimental to society as a whole in a way that can't be made up for by hugging only those few people closest to us.

We disagree. As soon as the pandemic is under control and it is deemed safe to do so, there are good reasons why we should start gradually embracing some of our old habits: hugging, handshaking, and gathering in groups. In cultures where such habits have been customary for centuries, doing so will have a host of social, psychological, and biological benefits.

The loss of casual touch may be detrimental to society as a whole in a way that

can't be made up for by hugging those few people closest to us or in our household. It may be that, once it is deemed safe to do so, the long-term benefits of the handshake, the hug, or the kiss on the cheek may outweigh the risks.

The Importance of Touch

From the moment of birth, physical contact increases our immunity, reduces stress, and connects us with loved ones. Skin-to-skin contact with a baby regulates heart rate, reduces pain reactions, and emotionally calms both mother and infant.

As adults, physical contact such as holding hands can provide a buffer against a stressful experience. Physical contact also increases immune function.

On a less intimate level, in many cultures, handshakes represent an important social ritual through which trust and belonging are formed and maintained. The philosopher Maurice Merleau-Ponty cited the handshake in his discussion of what he termed "inter-corporeality." This is the often tacit or unconscious mutual recognition of our connectedness as human beings.

The Wisdom of Crowds

In our research, we have found that many people are anxious about returning to the habit of gathering in groups, even after the pandemic has subsided. This anxiety is understandable, but in the long term, we should be encouraging group gatherings.

Crowds provide opportunities for what sociologist Emile Durkheim called "collective effervescence." Such gatherings help us form

and "catch" shared emotions, which can help provide the social glue for solidarity, togetherness, and shared identity. This is a good thing, provided the mood is a positive one, for example at weddings, concerts, and sporting events.

Behaviors That Are Here to Stay

With optimism over vaccines being tempered by concern over new variants, we need to reflect on which behaviors we should keep after the pandemic, and which we should discard.

The pandemic may have made many people more aware of the role they play in protecting others, even when they themselves may not be particularly vulnerable to a disease. In many countries, health information campaigns early on in the pandemic led to dramatic improvements in self-reported personal hygiene, and many more people now understand exactly what good hand hygiene is, the rationale

for it, and the benefits it brings.

We should continue to avoid touch and engage in physical distancing when suffering from a cold or the flu. Mask-wearing, long established in other cultures as a means to protect others rather than ourselves, is now being more widely understood and adhered to, with many of us assuming it will be an occasional part of our lives for years to come. This is also a good thing.

Bringing Back Rituals

The ingrained nature of social habits and rituals helps explain why social distancing has been so difficult and so unnatural for so many. Although we have, quite remarkably, suppressed these gestures and behaviors in the short term, the depth of social connection they create and symbolize may not be so easy to replace in the long term.

When it's safe to do so, policies that prevent us physically coming together as individuals will thankfully be lifted.

After the pandemic, we need to strike a balance between the old and new normal. We can take the best parts of both—regaining our need for physical touch while retaining our new and improved hygiene habits.



DIEGO CERVO/SHUTTERSTOCK

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Hugs and handshakes connect us beyond the moment of contact.

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