

THE EPOCH TIMES

MIND &

BODY

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New Behavioral Vaccines Raise Unsettling Questions

Government and drug makers are looking to treat drug addiction with vaccines

MARTHA ROSENBERG

In its 2016 to 2020 strategic plan, the National Institute on Drug Abuse (NIDA), part of the National Institutes of Health (NIH), promoted the promise of “anti-addiction vaccines aimed at eliciting antibodies that block the effects of a specific drug.”

Certainly addiction is a huge problem, with opioid addiction leading the way, taking more than 140 American lives per day, in part because lethal fentanyl is being peddled. Addiction to other drugs, including meth and, of course, alcohol, also has tragic and often deadly consequences.

The quest for an anti-addiction vaccine began in earnest when Drs. Nora D. Volkow, NIDA director, and Francis S. Collins, then-NIH director, called on scientists and industry to help develop vaccines specific against opioids in a New England Journal of Medicine Special Report in 2017. The quest for such treatments continues.

How exactly do anti-addiction vaccines work? According to Chemical and Engineering News, in the case of heroin, the vaccine “would stimulate a person’s immune sys-

tem to produce antibodies that bind to heroin. The antibodies would block the drug from crossing the bloodstream into the brain, stopping the person from experiencing a high and preventing a relapse.”

In short, these antibodies “would shut down the narcotic before it could take root in the body, or in the brain,” according to The New York Times.

Limits to Behavioral Vaccines

While many medical voices salute such vaccines and hope that they become available, others are more skeptical. Some point out that, like the alcoholism treatment Antabuse (disulfiram), which causes a person to get sick if they imbibe, a vaccine requires motivation on the part of the addicted person—they have to want to stop.

An anti-addiction vaccine will likely require continued motivation, such as a potential anti-cocaine vaccine discussed in the journal *Clinical Pharmacology & Therapeutics*, which might require “six additional boosters given as one every 3 months,” to produce “a period of protection lasting 2 years.”

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New vaccines aim to interfere with the brain’s reaction to addictive drugs but raise concerning questions about free will and personal responsibility.

A vaccine requires motivation on the part of the addicted person—they have to want to stop.

Toxic Mold Illness 101

Ask a doctor: What are the health effects of living or working in water-damaged buildings?

ANN CORSON

Buildings used to breathe. It was inevitable and somewhat helpful, but it can make it more expensive to heat and cool those spaces with common central heating and cooling systems. When the oil embargo of the 1970s came along, building practices shifted to focus on more hermetically sealed buildings as a means to save energy.

And just as our wooden furniture and cotton clothes gave way to cheaper particle board, plastics, and polymers, building materials also shifted from stone, brick, and post-and-beam framing to stick framing, and OSB board (pressed plywood), and drywall. We sealed these spaces with sheets of plastic inside the walls or thicker membranes under the exterior finish.

Many multi-use buildings, such as office buildings, are built with fixed windows that can’t be opened. Central HVAC systems that move air through an entire house or building are situated in basements, attics, or roofs where changes in temperature in ductwork can cause condensation. Such changes in building practices and heating/cooling methods have resulted in significant health problems because they create environments conducive to toxic indoor mold. Beyond condensation that forms inside, any kind of water intrusion from a roof leak, basement leak, or burst pipe will contribute to a moist environment where toxic mold species and bacteria can flourish.

Molds and bacteria that grow in water-damaged buildings produce toxins that affect human health. Bacteria make endotoxins that are found in bacterial outer cell membranes or cell walls. Typical toxic bacteria include actinomycetes, mycobacteria, and gram-negative species. Mold species release toxin-containing spores into the environment to kill other organisms nearby to secure their own territory. Typical toxic molds include species of *Penicillium*, *Aspergillus*, *Stachybotrys*, *Fusarium*, and many others. The antibiotic penicillium is an example of a toxic released by mold that is useful to humans.

Unfortunately, many mold and bacterial toxins are very damaging to human health regardless of whether the mold or bacteria are alive or dead. This means actively growing and dried-out dead mold and bacteria can all present health challenges.

Bacteria growing in water-damaged buildings may release endotoxins that have been associated with asthma and sarcoidosis, a progressively damaging disease in which granulomas or clumps of inflammatory cells form, most frequently in the lungs. Other health effects or diseases associated with inhaling bacterial endotoxins include fever, diffuse aches, headache, cough, shortness of breath, chest tightness, airway inflammation, nose and throat irritation, and nausea.

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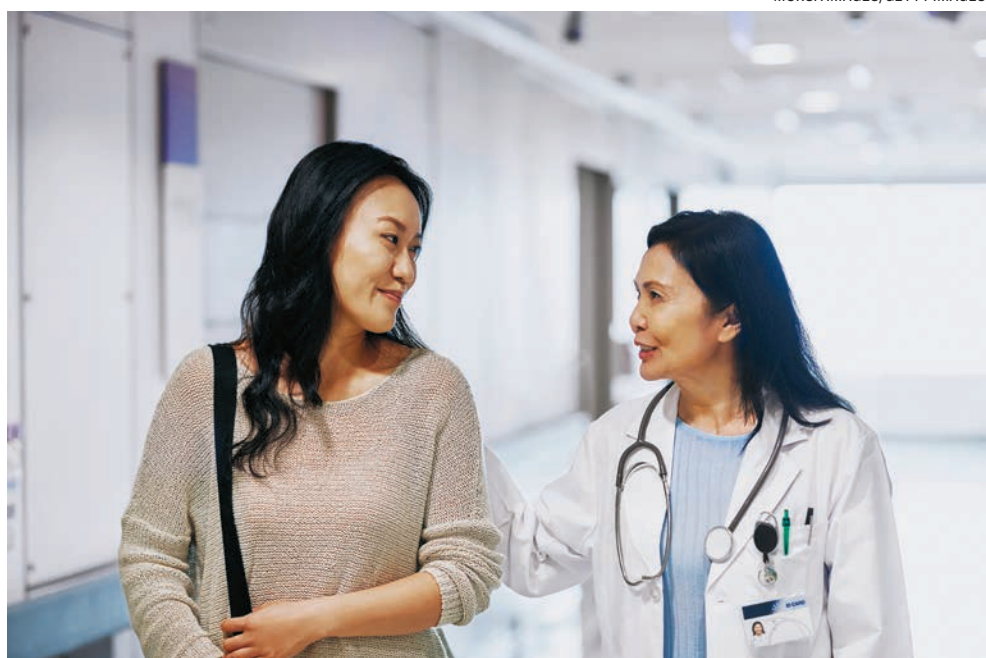
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Doctors can be vastly different in their preferences and performance. If you're dealing with something serious, get a second opinion.

MEDICALLY CORRECT

Get a 2nd Opinion, Maybe Even a 3rd

Medicine is part science, part art, and always personal to you

PETER WEISS

There's an old joke about second opinions. What do you call a doctor who finishes in the bottom of their class? Doctor. So always get a second opinion—maybe even a third.

P.L. was a lovely 42-year-old woman who had two kids and wasn't planning on having any more. She was getting more and more frequent and heavy periods. Her bleeding made her anemic, and her hemoglobin was 8.8 (normal would be 12-15). She was exhausted and wanted it to stop. I was her third opinion.

Her first doctor told her that she needed a hysterectomy (surgery to remove her uterus) and said her bleeding was because of her fibroids (benign growths in her uterus). The second doctor wanted to put her on medicine to "shrink" her fibroids and stop the bleeding. Then it was my turn.

She had failed numerous attempts at using different birth control pills, and she was tired of trying different medications. She read about the medication to shrink the fibroids to stop the bleeding and was scared about the potential side effects. She also knew that she didn't want a hysterectomy. P.L. wasn't ready to surrender to such a drastic solution—not yet.

Medicine is still an art mixed with science.

She was also very smart and realized that she would most likely not go into menopause until she was about 51 years old. The second doctor wasn't wrong either in suggesting these new medications, but P.L. just wasn't comfortable with a therapy of that long duration, nor with the side effects.

Abnormal or dysfunctional uterine bleeding is broken down into two categories, acute bleeding episodes and chronic episodes. P.L.'s problem was chronic bleeding. She had already had an endometrial (lining of the uterus) biopsy, which was negative, meaning that she didn't have cancer. She had undergone several pelvic ultrasounds, which showed several small fibroids, with one small one-centimeter-sized fibroid in the cavity of the uterus. She also had a negative MRI, and her blood work showed no coagulation issues. I thought all she needed was a simple endometrial ablation.

According to the Committee on Practice Bulletins, Gynecology Practice bulletin 128 about the diagnosis of abnormal uterine bleeding in reproductive-aged women, between 10 to 30 percent of reproductive-age women suffer from abnormal uterine bleeding. The treatment options are many, from the use of different medical therapies as simple as birth control pills or other hormones to something called tranexamic acid (which can reduce the amount of bleeding by almost half) to getting a hysterectomy.

The endometrial ablation lies in the middle range of invasive. P.L. chose the endometrial ablation, and her problem was solved.

The point of this story isn't that I was

right. All three options given by three different physicians were good ones, but the solutions need to be tailored to the patient; second and even third opinions matter.

Second opinion in surgery versus internal medicine is a little different, but both are critical to improved patient outcome.

A study published in 2020 in PLOS One found that a new diagnosis was found in 13 percent of all patients. A new treatment was initiated in 56 percent of all patients. This mainly involved giving a new prescription medication. The fascinating finding wasn't the 13 percent new diagnosis, but that even in patients who had confirmation of the first diagnosis, there was a 28 percent resolution or improvement for the patient's symptoms.

One key area where most patients don't recognize the importance of a second or even a third opinion is from pathology. Patients may question a diagnosis or treatment plan by their internist or surgeon, but they always seem to hold the pathology finding as final.

According to a research review published in the Journal of Clinical Pathology in 2018, "The rate of inaccurate diagnoses (assessed as a major discordance) ranged from 3 percent to 9 percent among the different specimen groups, with the highest mean percentage of inaccurate diagnoses in gynaecology, dermatopathology and gastrointestinal specimens."

I'm not recommending a second opinion for every doctor visit. However, you should be very open to getting one when it involves a significant treatment plan that may affect your well-being.

Don't be afraid to ask for a second opinion, and that opinion shouldn't come from the physician's colleague in the same office. Find an independent qualified physician either through a friend or your insurance company. Also be aware that the second opinion may be the wrong opinion. This is where a third opinion comes in. Medicine is still an art mixed with science.

I actually give my patients all options when deciding on a treatment plan, even if I don't like one of those options. Then they ask about each choice, and they may ask what I would suggest. If after all of that, there's still some doubt, I tell them that they should get a second opinion to make sure they've exhausted all options. With cancer patients, I refer them to surgeons who will look at the pathology themselves before making a final treatment plan.

Second opinions are very important, especially when it comes to cancer treatments. Just remember to get a second opinion from a medically trained qualified physician and not Dr. Google.

A few months after her surgery, P.L. sent me a coffee mug on which she had printed, "Hello Doctor, I already diagnosed myself on the internet. I'm only here for a second opinion."

Dr. Peter Weiss is a nationally known physician and health care thought leader who has advised CEOs, and political leaders on current and future health care trends affecting our country. He was a national health care adviser for senator John McCain's 2008 presidential campaign and was an assistant clinical professor of OB/GYN at UCLA School of Medicine for 30 years. Dr. Weiss is the co-founder of the Rodeo Drive Women's Health Center in Beverly Hills, Calif., and remains in private practice. He also spends part of his time writing and lecturing on health care in America.

The Essentials of Protein

Protein is an essential macronutrient, especially as we age

STEPHEN SOWULEWSKI

The headlines behind the macronutrient needs of the body (also called "macros"), which make up carbohydrate, fat, and protein, have been either glorified or demonized over the years. In the 1990s, fat was supposedly the undisputed culprit for heart disease, and at the advent of the 2000s, the Atkins Diet and South Beach Diet had us wary of going anywhere near carbohydrates for fear of weight gain. Fast forward to today, and the pendulum is swinging toward increasing our protein consumption.

Protein Quality

For the most part, Americans have no problem meeting their protein needs, according to the American Journal of Clinical Nutrition. But does it matter what type of protein you consume?

Proteins are considered complete or incomplete depending upon whether they contain the full range of nine essential amino acids. Of the 20 amino acids that make up all protein, the body can create 11. The other nine we need to get from food.

A few plant foods and all animal foods (meat, fish, dairy, and eggs) provide complete proteins. Incomplete proteins from plant-based foods typically lack one or more of these essential building blocks. Fortunately, if we eat a variety of plant foods, we can make up for the shortfall through protein complementation.

For example, beans contain low levels of the amino acids methionine and cysteine, while rice tends to be low in lysine. But if you pair the two of these foods together, they provide all of the essential building blocks the body needs. Soy and quinoa are examples of plant foods that contain all the essential amino acids to form a complete protein.

Protein's healthy halo is due in part to the feeling of satiety or fullness we feel after eating it. This macronutrient helps us fill up instead of filling out.

Processed foods full of empty calories are devoid of real nutrition and can confer weight gain, whereas protein foods that are more nutrient dense can help us lose weight or maintain our current weight due to that increased satisfaction after the meal.

If we eat a variety of plant foods, we can make up for the shortfall through protein complementation.

A study in 2011 examined the differences between carbohydrate and protein calorie yield. While protein provides the same four calories per gram as carbohydrates, researchers posit that it takes about 25 percent more energy to process protein. This means that the calories expended along with the thermic effect of food (energy used to metabolize the protein meal) are higher for protein. So if you eat 100 calories of carbohydrates, that all goes into your bloodstream or fat deposits. But if you eat 100 calories of protein, you get 25 calories burned off in the process of digestion and turning that protein into energy for the body, which means only 75 calories remain to be worked off.

Recommended Protein Intake

Eating protein helps us build and maintain muscle throughout our lives. For the average adult with a healthy body weight, the current recommended dietary allowance (RDA) is 0.8 gram (g) of protein per kilogram (kg) of body weight per day. This is equivalent to 0.36 grams of protein per pound of body weight per day.

Many of us weigh ourselves in pounds (lb.), but don't let kilograms confuse you: 1 kg = 2.2 lb. Let's do the math. For example, for a male or female weighing 70 kg (154 lb.), simply multiply (70 kg x 0.8 g/kg) and their consumption would be equal to 56 grams, about the amount of protein in an 8-ounce steak or a four-egg omelet.

If that flashback to the metric system has you feeling a bit uneasy, keep it simple. In order to find out how many grams of protein to consume per day on average, simply multiply your current body weight by 0.36. Lastly, if you prefer to look at protein intake as a percentage of your total calories for a



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Plant Options

Animal foods have all nine essential amino acids but you can get similar nutrition by eating a variety of protein-rich plant foods.

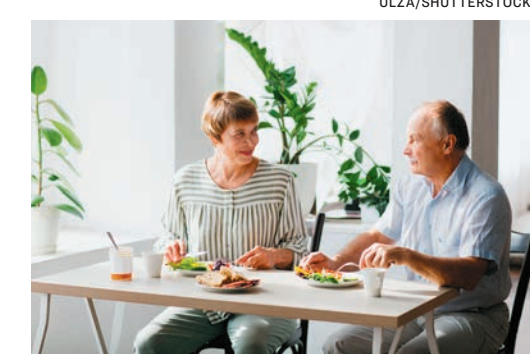
Quinoa is an example of a plant that contain all of the essential amino acids to form a complete protein.

Spinach is a vegetable with one of the highest counts of protein. It is also nutrient dense and can help in losing weight.

Fresh fruits and vegetables are preferable over canned or frozen as they retain more of their nutrients and proteins.

Avocados are actually a berry that is packed with protein, essential vitamins, nutrients, and is high in fiber, which helps satiate the stomach.

Eating protein can fill you up with out filling you out, just one more reason to make sure you eat enough of it.



As we age, it becomes more important to make sure we are eating enough protein.

Of the
20
AMINO ACIDS
that make up all protein, the body can create 11.

to 65), higher protein intakes don't offer added benefit.

In this age group, consuming protein as recommended by the RDA (0.8 g) has been found to be more beneficial in preventing cancer, overall death, and possibly diabetes. Further, this amount of protein is significantly less than most U.S. adults currently consume.

Research into the health benefits of both a higher protein intake in older adults and a lower protein intake for middle-aged adults is being examined based on consuming more plant-based foods.

Final Takeaway

Next time you visit the grocery store consider variety, balance, and adequacy, especially when it comes to protein. If you are eating chicken only, you may be missing out on the omega-3s in fish or the fiber in chickpeas (hummus), both of which are excellent sources of protein.

Secondly, though it's fine to swig down a protein shake post-workout, shakes won't be as satiating as eating protein in its whole form. This goes back to the thermic effect of certain foods. The body has to work much harder to process a steak than it does a shake, which means that you will feel fuller longer with solid protein foods.

Finally, as enticing as protein-infused animal crackers sound, they don't have enough protein to matter. Moreover, they are replete with added sugars. Therefore, buyer beware.

Dr. Stephen Sowulewski is a professor in the School of Health Professions at Reynolds Community College, an adjunct professor in Virginia Commonwealth University's Honors College and the University of Richmond's School of Continuing Studies. He also serves on the board of directors at the Men's Health Network in Washington, D.C.

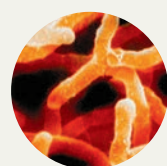


Protein's healthy halo is due in part to the feeling of satiety or fullness we feel after eating it.

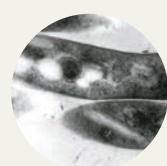
Toxic Mold 101

Ask a doctor: What are the health effects of living or working in water-damaged buildings?

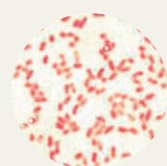
Typical Toxic Bacteria



Actinomycetes.



Mycobacteria.

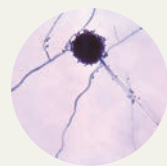


Gram-negative species (Pseudomonas aeruginosa).

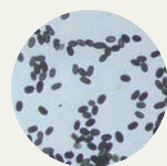
Typical Toxic Molds



Species of Penicillium.



Aspergillus.



Stachybotrys.

Continued from Page 1

What Is Sick-Building Syndrome?

Sick building syndrome (SBS), also known as biotoxin illness or chronic inflammatory response syndrome (CIRS), is the constellation of symptoms that occur in those exposed to either growing or dead mold found in water-damaged buildings or vehicles. Building practices and materials in use over the past several decades have unfortunately made buildings more susceptible to mold growth.

A full 25 percent of the world's population has the genetic predisposition to develop chronic illness when exposed to indoor toxic molds that grow in water-damaged buildings. This means that fully one-quarter of the employees, students, and families who spend time in these buildings may develop chronic illnesses of varying degrees that affect their respiratory systems, immune systems, and central nervous systems.

Biotoxin illness or CIRS can manifest as any combination of flu-like syndromes, chronic headaches, nasal congestion, sinusitis, pharyngitis, bronchitis, pneumonitis, pneumonia, asthma, fatigue, brain fog, profound fatigue, cognitive dysfunction, focus and concentration problems, memory abnormalities, emotional lability, irritability, anxiety, paranoia, anger and rage, hormonal dysfunction, gastrointestinal distress, leaky gut, inadequate digestive function, peripheral vascular disease, autoimmune disease, muscle pain and weakness, aerobic exercise intolerance, and more.

Short-term exposure is associated with many of the symptoms listed above, whereas long-term exposure causes ongoing up-regulation of systemic inflammation with resultant damage to the body that may or may not be reversible. Patients can develop chronic restrictive lung disease or asthma from long-term inflammation of the airways. The central nervous system's control of the neuro-immune and neuro-endocrine systems is damaged with resultant deficiencies in crucial central regulatory hormones such as melanocyte-stimulating hormone, vasoactive intestinal peptide, and antidiuretic hormone.

The entire hypothalamic-pituitary-adre-

nal axis and thyroid gland can be affected. Alterations in leptin metabolism affect the body's entire energy metabolism of fats, carbohydrates, and proteins. Salt and water balance, blood osmolality, and blood pressure control are disrupted. Immune system confusion and dysfunction result in chronic polymicrobial infections. Needless to say, the clinical ramifications are diverse and highly significant.

Many aspects of indoor toxic molds cause adverse reactions in genetically susceptible individuals. The toxins on the mold spores, any portion of cell wall fragments or any microparticles of the mold cells or cell contents, as well as mold gases released from actively growing molds, can all stimulate an inflammatory innate immune response.

Variability in response from individual to individual has to do with prior lifetime exposure as well as other comorbidities. Patients who have had prior mold exposure will react more strongly to new exposures. This inflammatory innate immune response can occur even at mold levels that might be considered "within normal limits" on air quality testing or at levels that might not affect other people.

Often people are confused and think that the sick-building syndrome is just a mold allergy. It's not. This is a different branch of the immune system that's not involved with true IgE mediated allergic reactivity. Yet the adverse inflammatory response does occur as quickly as an anaphylaxis type reaction when sensitized individuals are exposed to mold.

Biotoxin patients' immune systems don't recognize the mycotoxins given off by molds in water-damaged buildings as foreign things to be eliminated from the body. Innate immune system activation occurs but the cellular branch of the immune system doesn't get adequate messaging to start making antibodies to bind and eliminate the mold toxins or mycotoxins. These small mycotoxins, which include ochratoxins, aflatoxins, trichothecenes, and zearalenones, are both fat and water-soluble and thus can enter every cell in the body. They migrate to the nuclei and turn on the cell's production of inflammatory cytokines, acting as epigenetic modifiers that alter how the cell's genetic material is transcribed.

Treating Biotoxin Illness

The first and most crucial thing to do in treating biotoxin patients is to remove them from any ongoing mold exposure. Unless ongoing exposure to the mold that is causing the illness is stopped, there is little hope for improvement.

Due to chronic inflammation and dysregulated immune systems in these patients, a complete medical workup is required. Many will be suffering from significant systemic inflammation, leaky guts with markedly abnormal gastrointestinal microbiomes and poor digestive function, nutritional deficiencies, inadequate liver detoxification pathways, damaged mitochondrial energy production, abnormalities of coagulation, and chronic vector-borne and community-acquired infections. Laboratory testing to elucidate comorbidities helps to guide treatment. Both inflammatory markers in the blood and mycotoxins measurable in the urine provide useful means for following treatment progress.

Treatment begins with reducing inflammation, healing the gastrointestinal tract, normalizing liver detoxification, optimizing organ drainage and regulation, and binding toxins for elimination via the stool. If the patient has enough vitality to exercise or sauna, sweating is another good way to eliminate toxins. Active infections also need to be addressed. As treatment progresses, patients recover gastrointestinal integrity, physical and psychic energy, aerobic exercise tolerance, and cognitive function.

Unfortunately, most doctors have little understanding and no training in the recognition, evaluation, and management of patients suffering from mold illness. Thankfully, over the past 15 years, there has been a growing acknowledgment of the profound health effects of mold exposure and refinement of treatment practices among the environmental and integrative medical communities.

Addressing Mold in Buildings

Patients need to be guided on how to safely eradicate mold from water-damaged buildings. If the patient owns the home or building, this will be easier to accomplish. It's more challenging to deal with situations when the patient is a tenant in an apartment or house, or employee in a business



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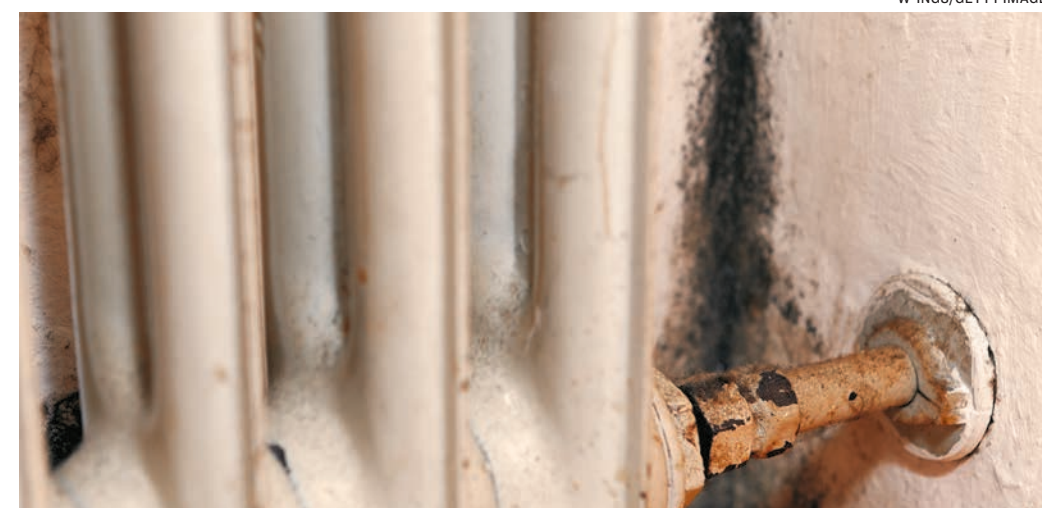


JULIEKZ/SHUTTERSTOCK



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Where moisture collects and cannot escape, mold inevitably develops.



W-INGS/GETTY IMAGES

or work vehicle, or a student in a moldy school. In these cases, the owners may not adequately address the water damage and mold growth. The best action for health is to leave the home, apartment, business, or school immediately and not return.

The source of water intrusion into a building must be found. Heating and air-conditioning systems and all ducting must be closely evaluated. Plumbing conduits, basement, crawl spaces, roof and soffits, flashing and stucco need thorough examination for signs of moisture or microbial growth.

The contents of a water-damaged building may also be contaminated with mold particulates and toxins and need special attention. Anything that is nonporous, such as most dishes, utensils, pots and pans, metal, glass, porcelain, or stone objects, can be cleaned with a nontoxic moldicide. Simple household cleaners such as borax, bleach, and vinegar may be useful. Porous materials such as rugs, drapes, bedding, furniture, and clothing may or may not be salvageable. Wool and leather clothing, drapes, and area rugs can be dry cleaned. Other bedding, clothes, and towels can be washed in a hot wash load with moldicide soaps. Be sure to check washing machines for mold. Many front load washers become moldy if the unit is not allowed to dry completely between loads. In severely contaminated homes, mattresses, washing machines, and vacuum cleaners may need replacing.

When the water intrusion is fixed and all the mold remediated by a reputable company, the building will need deep, deep cleaning. All the interior surfaces, including ceilings, walls, and floors should be both

dry and wet mopped. Remove all dust with a HEPA-rated vacuum cleaner. It's also advised to do a whole house fogging to remove all microparticulates of mold and then vacuum again. Some remediation companies routinely do this for clients.

Now the home is ready for all the cleaned belongings to be replaced and true healing can begin in a clean and healthy environment.

Epoch Health articles are for informational purposes and are not a substitute for individualized medical advice. Please consult a trusted professional for personal medical advice, diagnoses, and treatment.

For more information on doctors who treat mold illness, please visit The American Academy of Environmental Medicine, The International Society for Environmentally Acquired Illness, and SurvivingMold.com

Dr. Ann Corson obtained her MD degree from the Perelman School of Medicine at the University of Pennsylvania in Philadelphia in 1982 and is board certified in family medicine and integrative holistic medicine. Her solo practice in Philadelphia is devoted full time to the treatment of patients suffering from all forms of chronic disease. In 2008, Dr. Corson joined Doctors Against Forced Organ Harvesting (DAFOH) to help raise awareness of China's live forced organ harvesting of innocent prisoners of conscience, primarily Falun Gong practitioners. Since 2016, she has been the editor-in-chief of DAFOH's newsletter.

Mycotoxins

Much of the scientific literature describing the health effects of mold toxins (mycotoxins) has focused on the ingestion of foodstuffs contaminated with mold toxins, yet also note that exposure to mycotoxins also occurs by inhalation or through intact skin. Effects can be either acute or chronic. Chronic toxicity results from low-dose exposure over prolonged periods of time that may lead to health effects such as cancer, liver failure, kidney failure, chronic fatigue, and neuropsychiatric symptoms attributed to other causes.

Mycotoxins are known to cause: cancer; inhibition of protein synthesis, which interferes with growth and bodily repair; immunosuppression, which makes fighting infections more difficult; rashes and skin irritation; asthma; chronic respiratory infections; and damage to metabolic processes.

Not all molds produce mycotoxins but those that do are of public health and agricultural concerns. Some of the worst mycotoxins that are found in contaminated food as well as in water-damaged buildings include aflatoxins, ochratoxins, zearalenones, and trichothecenes.

AFLATOXINS, made by some Aspergillus species, mainly damage the liver but also suppress the immune system and cause cancer and birth defects. Exposure to aflatoxins in synergy with concomitant hepatitis B infection are extensively linked to liver cancer. Aflatoxin-induced impairment of human cellular immunity may decrease resistance to infections in general. They have also been linked to inflammation of the brain and fatty degeneration of liver and kidneys.

OCHRATOXINS are produced by some strains of Aspergillus and Penicillium molds. Ochratoxin A,

the most toxic, has been shown to damage the kidneys, suppress the immune system, and cause cancers and birth defects.

ZEARALENONE, a mycotoxin produced mainly by fusarium molds, is known for its estrogenic effects which include precocious or early puberty and atrophy of the testes. Fumonisin, another fusarium toxin, has been linked to hypertensive emergencies in pregnancy and with neural tube defects.

TRICHOTHECENES are mycotoxins produced mostly by fusarium molds, which include Trichoderma and Stachybotrys (the deadly black mold). In high doses, trichothecenes are so deadly that they are considered biowarfare agents. The main effect is to stop the body from making new proteins, which affects rapidly dividing cells in the gastrointestinal tract, the skin, the lymph nodes, and the bone marrow.

STACHYBOTRYS molds growing in water-damaged buildings were found to cause a syndrome known as "sick-building syndrome" where people complained of cold and flu-like symptoms, sore throats, diarrhea, headache, nose bleeds, blurred vision, rashes, itchiness, intermittent focal hair loss, lung damage with bleeding and shortness of breath, burning pain in the hands or feet, nausea, stomach aches, generalized aches and pains, chronic fatigue, anxiety, depression, and even personality changes. Medical case reports have described the death of infants from bleeding into the lungs or pulmonary hemorrhage from living in homes contaminated with trichothecene-producing molds.

In one rat study, the trichothecene T-2 toxin caused gastric ulcers, decreased food intake, and elevations of blood cholesterol and triglycerides. Another studied the toxic effects of trichothecenes on the liver and brain.

25 PERCENT

A full 25 percent of the world's population has the genetic predisposition to develop chronic illness when exposed to indoor toxic molds that grow in water-damaged buildings.



SBS SYNDROME

Sick building syndrome, also known as biotoxin illness or chronic inflammatory response syndrome, is the constellation of symptoms that occur in those exposed to either growing or dead mold found in water-damaged buildings or vehicles.

BURDUN ILIYA SHUTTERSTOCK

New Behavioral Vaccines Raise Unsettling Questions

Government and drug makers are looking to treat drug addiction with vaccines

Continued from Page 1

If the addict craves the escape the high provides and isn't ready to face the world without it, a vaccine is only part of the solution. The addict could just find a different drug.

And there are other challenges. Addicts might simply use more of a drug to override the vaccine effects, Angela Garcia wrote in the Los Angeles Times. The vaccines may even be forced on addicts or their children, Garcia said, a concern echoed in the BMJ's Journal of Medical Ethics.

Many critics of the vaccine are uncomfortable with the biological approach to addiction embraced by NIDA, which can overlook the root cause of the addiction, which often comes back to previous trauma.

NIDA sees the problem in less personal terms.

"We have identified many of the biological and environmental factors [of addiction] and are beginning to search for the genetic variations that contribute to the development and progression of the disease," Volkow, NIDA's director, said in 2007.

A flier promoting Volkow's presentation to the Commonwealth Club of California in 2013 reads that she believes "that all addictions can be eliminated if the brain's receptors can be controlled." Some regard such remarks as Orwellian or disturbingly similar to the more subtle dystopia envisioned in "Brave New World."

If addiction can be solved in the brain, what



ANSHU A/UNSPASH

Pharmaceutical companies have created drugs so addictive, the government wants to vaccinate people against them.

other socially undesirable diseases may be inclined to treat? And after COVID-19, what penalties might an individual face if he or she refuses?

Addiction Isn't Just a Brain State Say Experts

NIDA's "brain disease" model not only enriches psychiatric drugmakers and Big Pharma, but it ignores all the societal reasons for drug addiction.

"Even the most effective anti-addiction vaccine can't cure the underlying factors that make people prone to using drugs, including poverty, violence and lack of opportunity," Garcia wrote. "[The] underlying issues of addiction causality, including inequality, hopelessness, and the human desire for pleasure, cannot be addressed by a vaccine alone."

Certainly drug addiction has features of a social disease, and the areas where it's concentrated reveal something about our broader culture and the daily conditions in which people find themselves. People don't seek the escape of drugs or alcohol for no reason at all, and some do become addicted. Nor should we ignore the fact that even as lawsuits against opioid makers and sellers have proceeded, the opioid treatment drug Suboxone was a top seller in 2018 with sales of \$859 million.

Drug addiction can clearly be a drug industry profit center.

Treating addiction as a brain disease has

other risks, according to an editorial in the journal Addiction. It can deemphasize social and psychological influences.

"Depicting addiction as a 'brain disease' could privilege the development and use of expensive and sometimes risky medical interventions, such as drug vaccines and deep brain stimulation, to the neglect of proven social policies," the editorial reads. "The idea that addiction is a 'brain disease' might also lend itself to the view that we should identify the minority of people who are most susceptible and subject them to individually focused preventive measures (e.g. vaccines) rather than using strategies that target the entire population."

Another issue that The Epoch Times recently covered is the positive effects that a sense of free will and self-efficacy exert on many, perhaps most health conditions, versus the feeling that nothing can be done.

Several studies have indicated that a person's sense of self-efficacy—that they have the ability to affect the course of their life through their own choices—is an important factor in recovering from addiction.

If addicts believe a medical professional or injection can cure their addiction, it further removes their sense of self-control and could lead to unintended consequences.

Research published in the journal Culture, Medicine, and Psychiatry in 2021 concurs about the problem of addicts abdicating personal responsibility.

"While NIDA's neurobiological understand-

If the addict craves the escape the high provides and isn't ready to face the world without it, a vaccine is only part of the solution. The addict could just find a different drug.

ing of addiction has been crucial in advancing pharmacotherapeutic interventions and advocacy for people experiencing problematic substance use, it can nevertheless be internalized by people such as Vivian [a cited case] who understand their chronic relapse as 'just part of being an addict,'" the article reads.

Like other voices, the article in Culture, Medicine, and Psychiatry notes that epidemics of drug use aren't uniformly found among different groups of people and can be linked to "chronic experiences of dispossession and postindustrial decline and dislocation."

On a brighter note, the researchers noted that NIDA may be enlarging its very limited brain-and-vaccine model of addiction and integrating social and environmental factors into a more "biopsychosocial model" that recognizes the "complex interactions between biology, behavior, and environment."

"Anti-addiction vaccines aren't intended to be used on their own, nor would they work that way," an article posted by the Texas Addiction Treatment Centers reads. "They are designed to be a part of a comprehensive treatment plan that incorporates other evidence-based treatment methods and behavioral therapies like cognitive behavioral therapy, 12-step therapy, or individual and group counseling sessions."

Will Anti-Addiction Vaccines Take Off? So far, human trials with vaccines against nicotine and cocaine in 2008 were failures, Ivan Montoya of NIDA said in 2018. This

didn't bode well for newer vaccines.

But if anti-addiction vaccines succeed, another issue may arise. The COVID-19 vaccines have revealed a lack of firewalls between government officials and industry. Volkow has personally collaborated with five pharmaceutical companies in research that seeks to help translate "basic information ... into Food and Drug Administration-approved treatments." This appears to be a serious conflict of interest. While faith-based and 12-step recovery programs are free, the search for high-tech treatments such as anti-addiction vaccines promises lucrative windfalls to drugmakers, which should be concerning to us all.

And given that the current opioid crisis can be directly linked to the misleading claims of drug makers when they marketed those products and the continued over-prescription of those products, the fact that this massive social epidemic could become a major source of profit for some of the same companies is unethical, to say the least.

Martha Rosenberg is a nationally recognized reporter and author whose work has been cited by the Mayo Clinic Proceedings, Public Library of Science Biology, and National Geographic. Rosenberg's FDA expose, "Born with a Junk Food Deficiency," established her as a prominent investigative journalist. She has lectured widely at universities throughout the United States and resides in Chicago.

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Life After Loss

Becoming resilient in the face of grief

The truth is that grief gets better when you're ready to let it get better.

AMY DELCAMBRE

Two months earlier, Mita's partner had died suddenly. "I hate this. I hate it so much. When will it get better?" she asked. Her plea carried the familiar chest-crushing tune of grief. As a widow of three years, I knew too well that the truth would seem incongruous if not insulting. So all I said was, "I'm so sorry."

The truth is that grief gets better when you're ready to let it get better.

For those beginning a grief journey, it's complicated to accept that the pain of grief can only alleviate when you accept it. This is why the final leg of the grief journey is called acceptance.

Many suggest that this internal peace comes with the passage of time. That's not quite true, however. Passively ticking days off of a calendar is not a panacea for loss, and those who cling to this axiom may avoid the necessary act of sitting still with grief.

Discovering life after loss is an active process in which you learn the art of resilience. Resilience doesn't mean toughing out hard times; rather, resilience encompasses awareness, wellness, motivation, compassion, forgiveness, and skillful courage.

Research supports the idea that by adopting a conscious practice of resilience, you can accept loss as a natural part of life and choose to continue living with purpose and joy.

The key to becoming resilient is remembering that it's a practice and that grief is of-

ten complex—especially when loss comes in succession. As we age, we can experience substantial losses, including the loss of loved ones, employment, health, pets, and more. We cycle through the stages of grief—denial, anger, bargaining, depression, and acceptance. But we don't go through these stages in a linear fashion, that's something I became aware of when my husband died. It's during our work through the stages of grief that we can become stuck in grief and develop maladaptive behaviors.

I was stuck for more than a year after my husband died. I expressed anger by cutting off people who I felt weren't understanding or supportive; I avoided, disassociated, and denied my grief by drinking or shopping

If you've lost your partner and had few meaningful relationships beyond your marriage, or you've lost someone particularly important to you, it's important to understand that you need people, and that may mean making new friends.

excessively; I bargained by dating too soon, creating a facsimile of the relationship I couldn't accept losing.

When a person disassociates, they distance themselves from their loss and grief. This is one of the most common ways people become stuck. Disassociating makes learning resilience particularly difficult because resilience requires conscious vulnerability.

Beyond avoiding maladaptive behaviors such as self-isolation, substance abuse, and so on, there are several things you can do to work through your loss and practice active resilience.

Therapy and Social Support

I started going to therapy and joined online support groups with other widows. Humans are social beings, and loss can be very alienating. As we lose partners, parents, friends, and most tragically, children, we feel both physically alone and emotionally abandoned. As a result, we may withdraw socially; however, in becoming resilient, maintaining a social network is important.

Social support can come from many places, including your religious community and peer support groups. A therapist can offer you a safe place to face your grief. Your friends can do the same. If you've lost your partner and had few meaningful relationships beyond your marriage, or you've lost someone particularly important to you, it's important to understand that you need people, and that may mean making new friends.



Building New Ties

Starting over with a new social group can be daunting. This is where the practice of awareness benefits you. Be aware that while you didn't create your life's circumstances, you're not a helpless victim. You couldn't control what happened, but you can control, to a reasonable degree, what actions you take next. Under the umbrella of wellness, maintaining a healthy social network is vital for resilience. Your network can comprise friends, family, a support group, or a therapist, for example. The experience of meeting new people and making new first impressions can be invigorating if you choose to allow it to be.

When I reached out, I made friends who understood my unique loss situation. Having that understanding made me feel less lonely. Through counseling, I was better able to see my own unhealthy avoidance and move away from those habits. I adopted new habits.

Journaling

Journaling is a resilience practice that helps you practice awareness, get unstuck, label behaviors and emotions, and set your intention for each day, or reflect on your day each night. Initially, I journaled twice daily—once upon waking and once before bed. Journaling let me map out my thoughts and emotions on the page.

In the context of resilience, a daily journaling habit is helpful especially as we move into our twilight years. The practice is reliable and familiar—like a companion—and it can help us express our feelings of vulnerability, fear, and insecurity in a constantly changing and inconsistent world. The stability of journaling and its vitality in a resilience practice can't be overstated.

Meditation and Mindfulness

A part of my own healing included meditating and practicing yoga and mindfulness. It's normal to experience an identity crisis after a loss, whether it's the loss of a partner, a friend, a job, a home, mobility, or something else. After all, the loss isn't just of the person or thing that you lost; it includes who you were within the context of that relationship or role. It's easy to lose your sense of self during periods of grief.

Because yoga is a holistic practice that involves the mind, body, and spirit connection, it was logical for me to incorporate it into my grief journey. Through yoga and meditative breathing, I became more flexible physically and emotionally. Making space for muscles to stretch and grow conditioned me to make space for grief in my life; it gave me space to accept that loss and grief are ongoing parts of life. I mourned the loss of stability I'd clung to, and accepted that our world is in constant flux.

Note that yoga isn't for everyone; you may find that you experience a similar transformation through ruminative prayer, painting, engaging with nature, or taking a daily walk.

Mindfulness practices, which are very much in alignment with stoic philosophy and biblical teachings, taught me to not label experiences but to observe them. Becoming resilient helps us face our feelings and contemplate them objectively.

For example, many observe that special dates like birthdays and anniversaries can trigger episodes of intense grief. Awareness allows you to prepare for these emotional landmines and give yourself more patience and space, and to ask those in your circle to help however you feel you need.

Ultimately, resilience is built on a continued practice of self-care—it's an ongoing practice that allows you to exercise compassion, forgiveness, and kindness toward yourself and others. Building resilience is an active process that requires you to take steps to support your own well-being and face the loss you're experiencing.

Becoming resilient in the face of grief doesn't happen overnight; as Heather Stang of the Mindfulness & Grief Institute notes: "Time is not what heals grief either. It is what you do with your time." Actively practicing resilience by adopting whatever practices feel comfortable and natural for you will prove transformative and will allow you to choose love and life when you feel overwhelmed by loss.

Amy Delcambre is a writer and editor specializing in memoir. She holds a master's degree in creative writing and publishing. She owns Creative Editing Services (CreativeEditingServices.com), and is president of the Mobile Writers Guild in Mobile, Ala.,—where she resides with her three wonderfully wild daughters.



Building resilience is an active process that requires you to take steps to support your own well-being and face the loss you are experiencing.

MINDSET MATTERS

The Nocebo Effect

Our negative expectations can create or worsen an illness

EMMA SUTTIE

Most people are probably familiar with the placebo effect, but may not be aware of its less popular cousin, and opposite, the nocebo effect. According to the latest research, this mysterious phenomenon is perhaps more prevalent than many people realize, even medical professionals.

Let's define them both. The placebo effect occurs when someone is receiving either medication or having a medical procedure and experiences positive results even though the treatment or medication is inert. An example would be a clinical trial studying the effects of a new drug. There is usually a control group of participants given a "placebo," often a sugar pill, that looks identical to the actual drug but contains no active ingredients.

The placebo effect occurs when the participants taking the sugar pill experience positive results even though the medication they took contained no medicine whatsoever.

It seems that words, thoughts, and expectations play a more significant role in our health than we may realize.

The nocebo effect is the exact opposite. The nocebo effect is when a patient experiences negative effects, symptoms, or side effects of a medication or treatment even though the drug or treatment was inert or contained no active ingredients.

Let's use another example. A patient is told she needs medication for her diabetes, and it comes as an injection. The doctor reads her the possible side effects, which include headaches, nausea, and stomach pain. The patient decides to proceed with the injection and afterward reports feeling all the listed side effects—when the injection she received was just water. These negative side effects demonstrate the nocebo effect.

The word nocebo comes from the Latin "nocere," meaning "to harm." By contrast, the word placebo comes from the Latin "placere" meaning "to please."

What Causes the Nocebo Effect?

Apparently, the nocebo effect is prevalent in medicine, but its mechanisms aren't well understood. Various studies on the subject suggest a number of contributing factors. Some of them are listed below.

- The nocebo effect seems to be more common in women than men.
- People with anxiety and depression seem more susceptible to the nocebo effect.
- Those with aggressive, competitive, or hostile personalities tend to experience the nocebo effect more than other personality types.
- Pessimistic people seem to experience the nocebo effect more than those that are more positive.
- The nature of the physician-patient relationship and the way the medication or treatment is presented is a factor.
- Nocebo effects are influenced by the patient's perception and the context in which medication or treatment is given.

Nocebo effects happen due to many factors and vary extensively depending on the individual. This makes trying to pinpoint the exact causes difficult.

The Nocebo Effect in Action

In a 2012 study of the nocebo effect, researchers from the Technical University of Munich in Germany conducted one of the most thorough reviews of the nocebo phenomenon at the time. Researchers took 31 empirical studies involv-

ing the nocebo effect and examined their biological mechanisms and the problem they caused for doctors and researchers in clinical practice.

They concluded that, although puzzling, the nocebo effect was surprisingly common and something that should be taken into consideration by medical professionals in their daily practice.

In many of the experiments they studied, the suggestion or expectation of pain elicited significantly more negative responses from participants.

In one study, 50 participants suffering from chronic back pain were given a flexibility test. Half the test subjects were told they might experience some pain beforehand, and the other half weren't. Afterward, the first group reported significantly more pain than the group that was kept in the dark, despite doing the same test.

Our perceptions may even prove fatal. In one case study, researchers noted one individual that attempted to commit suicide by swallowing 26 pills. Although the pills were only a placebo and unable to harm him even at such high doses, the patient experienced dangerously low blood pressure and needed fluid injections to be stabilized. His physiological reaction was based solely on his belief that he had taken a deadly dose of medication. Interestingly, after the patient was told that the medication was only sugar pills, his symptoms quickly disappeared.

It seems that words, thoughts, and expectations play a more significant role in our health than we may realize.

So how does the medical establishment treat patients effectively while being forthcoming about all the possible side effects they might experience, knowing that this information may cause them to occur?

The Tricky Issue of Informed Consent

This presents medical professionals with a bit of a conundrum because of something called informed consent. Physicians are obligated to inform their patients of all possible outcomes, side effects, and adverse reactions resulting from medications, treatments, and procedures to stay compliant with informed consent laws. The patient must consent to most treatments, having been told about all possible outcomes beforehand.

One way medical personnel can counteract the nocebo effect is by being mindful of how they talk to patients and the way they describe procedures. Reframing and focusing on the positives has been suggested as a way to buffer a possible nocebo effect.

An article from John Hopkins Medicine states that doctors-in-training spend just 12 percent of their time interacting with patients directly. Perhaps more time spent with patients and more time in medical school spent on learning how to communicate with patients effectively could help counteract nocebo effects.

Final Thoughts

It seems the healing process may be more complex than we may realize. Studies of the nocebo effect, and its counterpart the placebo effect, suggest that there are other things at play we don't fully understand. An individual's beliefs, expectations, the environment, the medical personnel they interact with, as well as their demeanor and the way the information is presented, all seem to play a role. Although the medical profession has made great strides in understanding how the human body works, we may still have a long way to go to unravel the mysteries of human healing.

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



The mind is more powerful than medical researchers can explain but they are starting to measure it, including the placebo and nocebo effects.

ISRAEL SEBASTIAN/GETTY IMAGES

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Becoming more attuned to our thoughts and emotions around food is a critical step in eating more healthfully.

Reforming the Diet Industry, Mindfully

Mindfulness practices are becoming the backbone of disordered eating programs

AMY DENNEY

The complication of disordered eating is that food cannot be avoided, unlike the source of other addictive behaviors.

It's a delicate mental illness that hides on the fringes of a diet-obsessed culture driven to focus on the exterior. Yet experts are finding that shifting exceedingly to psychology—particularly the practice of mindfulness—is altering the success rate of programs.

An examination of in-patient programs and diet programs shows that there's a pivot to focus on behaviors by lining them up side by side with opportunities to explore emotions. In both cases, mindfulness is getting the credit it deserves by being a force for lasting change.

Mindfulness is a conscious attentiveness to our internal world, be it thoughts, feelings, or physical sensations. In most cases, the practice of mindfulness calls for nonjudgment. The goal is to become more self-aware and attuned to how we respond to different situations, whether they be outside ourselves or inside.

A review of previous research on the role of mindfulness, mindful eating, and intuitive eating in changing behaviors conducted five years ago discovered that these approaches to disordered eating seem most effective in addressing binge eating, emotional eating, and eating in response to external cues. There were 68 publications reviewed as part of the summary, which found that mindfulness-oriented approaches can prevent weight gain by altering food intake.

Holy Yoga, which offers Christian yoga instructor training programs, added a new certification program a few years ago specifically for disordered eating.

"We started this program because we were seeing so many people coming

through our 200 hour [certification] and finding healing from their struggles with eating and eating disorders through their practice," said Jennifer Moye, director of marketing for Holy Yoga Global.

The on-demand disordered eating program is a personal development program that provides education for understanding the effects of disordered eating on the body and soul. It guides participants through exploring spiritual disciplines, meditation, and breath practices.

Noom, a mobile weight loss app begun in 2008 strictly to track fitness goals and calories, has reflected the new shift in understanding dieting.

In fact, the subscription-based app has dropped the word diet and encourages focus on mindset above calories and fitness. These days, Noom emphasizes forming new neural connections to overcome the root cause of unhealthy habits. Daily psychology lessons help users understand why they eat the way they do.

Just as many mental health disorders are on the rise post-COVID-19, disordered eating is also increasing. The National Eating Disorders Association (NEDA) Helpline has experienced a 107 percent increase in contacts since the start of the pandemic.

More than 28 million Americans experience an eating disorder at some point in their life, according to NEDA. Every 52 minutes, someone dies as a direct result of an eating disorder.

Among the barriers to getting help for disordered eating is access to treatment. Only one in 10 people receive treatment, and only about 20 percent stay in recovery. The cost is prohibitive, ranging from \$500 to \$2,000 per day in the United States.

But what experts are discovering is that developing mindfulness allows clients to evaluate their triggers and impulses. Mindfulness also improves engagement in therapy, according to Oliver-Pyatt Centers,

which provides day and in-patient recovery for eating disorders.

Oliver-Pyatt Centers' approach is to help clients trust their bodies so they'll have a "greater capacity for mindful eating, mindful movement and eventually mindful living. Mindfulness can become their new anchor as they learn to live day-by-day without the intrusion of the eating disorder," according to the OPC website.

Mary Dye, director of nutrition services for OPC, says the foundation for clients is intuitive eating.

"An individual with an eating disorder typically has little to no awareness, connection or ability to appropriately respond to their bodily cues," she wrote in an article for the OPC website. "A key characteristic of the eating disorder is dissociation—a person comes to disregard their body's hunger and fullness cues for so long that they forget what it feels like to be comfortably hungry for a meal and what it feels like to be satiated after eating. Our work is to reorient our clients with their own body's language."

Besides yoga, some of the disciplines that are taught in the Holy Yoga disordered eating program are silence, prayer, rest, and journaling.

Here are some tips for how to incorporate these as a lifestyle:

Silence

Set your alarm for 10 minutes earlier than normal and retreat for a quick respite to an area of your home that's free from distractions. Leave your phone behind and just focus on your breath. Light a candle or diffuse essential oil to ground yourself with aroma. Read a poem, or simply rest your body consciously, or recite affirmations.

Prayer

Read a prayer from a book, write a prayer, or listen to a prayer on a podcast. If you aren't sure what to do, start by listing out everything you're grateful for as your prayer. Confession prayers can be cleansing, as well as being honest about your needs. Prayer journals are very useful to bear witness to answered prayers and turn those into gratitude prayers.

Rest

First, make sure you are getting enough sleep at night. This kind of rest isn't to make up for lost sleep; it's to allow your nervous system to come back to balance from the stress of daily life. Find pockets of rest throughout your day and week. For instance, a yoga class or short meditation can be helpful. Consider the need for emotional and spiritual rest as much as physical rest. Taking breaks from taxing activities by doing brain breaks or grabbing a few breaths of fresh air can bring much-needed emotional rest.

Journaling

The outlet provided by journaling can help work out complex feelings and areas of struggle. A blank notebook can sometimes be intimidating for beginners, so start with a guided journal or use a personal development book or spiritual study that incorporates journaling. There are also a wide variety of guided journals available.

Each of these activities is mindful in itself and comes with a plethora of mental-emotional benefits. Don't be overwhelmed, but pick one that sounds like a good starting point and make a plan to develop a new habit.

Amy Denney is an award-winning journalist, certified Holy Yoga instructor, and light therapy specialist. She works with clients looking for natural, side-effect free solutions to pain and stress.



Light a candle or diffuse some essential oils and take some time in silence to rest and de-stress.



Rest is critical to overall well-being and ensuring your body isn't sending you stress signals that can lead to emotional eating.



Journaling can help you unwind complex feelings and bestow a myriad of mental-emotional benefits.

“An individual with an eating disorder typically has little to no awareness, connection or ability to appropriately respond to their bodily cues.”

Mary Dye, director of nutrition services, Oliver-Pyatt Centers



Time in reflection or prayer can bring you toward self-awareness and self-control.

Every 52 MINUTES someone dies as a direct result of an eating disorder.

A recent Telegram post from election security expert Dr. Douglas Frank:

"I was invited to speak on voter fraud a couple months ago in Mabel, Minnesota. My host there manufactures and sells lotions and potions, and he gave me some samples when I left. As it turns out, I ended up using the samples during my travels, and I really liked them. Later, he shipped me some larger samples, and I hadn't even said anything about it. Normally I wouldn't say anything, but I LOVE the Skin Care Plus and Steuart's Foot Cream. And the guy is a patriot. I haven't tried the pain stuff, so I can't recommend it yet. But something tells me it is the real deal too. While we were visiting in the car he said, "We started out making products for dairy cattle & what works in the barn we bring into the house." As someone who spent many years in the barns caring for the animals, I appreciate this. He also mentioned that the Amish mothers in the region use his creams while they are nursing. I've treated cows with mastitis, so I understand this too. What do you say we surprise him with a bunch of sales this month?"



Dr. Douglas G. Frank
Election Security Expert

A quote from Political Podcaster Doug Billings:

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5 Tips for Improving Your Spiritual Well-Being

Life offers us endless opportunities to elevate our character, if we have the wish

TATIANA DENNING

"A human being is a part of the whole called by us universe, a part limited in time and space. He experiences himself, his thoughts and feelings as something separated from the rest, a kind of optical delusion of his consciousness. This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few persons nearest to us. Our task must be to free ourselves from this prison by widening our circle of compassion to embrace all living creatures and the whole of nature in its beauty."

- Albert Einstein

In today's fast-paced world, with so many things to distract us, it's easy to focus on the outside world and neglect what's on the inside. In our quest for more, it often seems like we're trying to fill some sort of void that we can't quite identify; perhaps the void is a spiritual one, which is why it never seems to be filled by material pursuits or empty distractions.

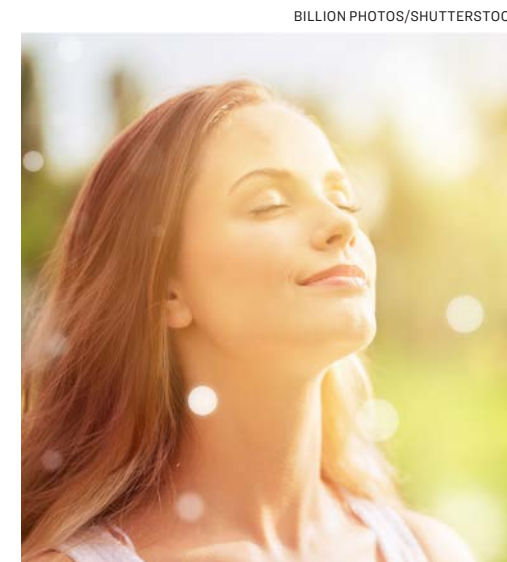
Research shows that when we are out of touch with our internal selves, and particularly when we lack a spiritual connection, both our mental and physical health can suffer.

Continued on Page 15

Every step we make toward being a kinder, more honest, and patient person moves the world around us likewise.

How to Conquer Fatigue and Low Energy

Use sun, food, and stress to improve energy production where it counts—at the subcellular level



Human beings are solar powered, in part, and need sunlight to feel fully energized.

JOSEPH MERCOLA

Nutrition and lifestyle expert Ari Whitten has provided a collection of key insights to explain and address low energy levels in his new book, "Eat for Energy: How to Beat Fatigue, Supercharge Your Mitochondria, and Unlock All-Day Energy."

Whitten also has written an excellent book about infrared light exposure or photobiomodulation as a healing modality, called "The Ultimate Guide to Red Light

Therapy: How to Use Red and Near-Infrared Light Therapy for Anti-Aging, Fat Loss, Muscle Gain, Performance, and Brain Optimization."

As you might guess, the focus of his latest book is fatigue, and the foundational core for addressing that is to improve mitochondrial energy production. Mitochondria are the energy generators in your cells. They play a key role in converting energy from food into adenosine triphosphate (ATP), which is the energy your cells need for everything from muscle contraction to generating nerve impulses. Your circadian rhythm also plays an important role in this process.

Whitten explains the premise of the book: "It's a collection of science-based strate-

gies as far as what to eat, how to eat, and when to eat, that can be tied in with any particular dietary pattern that you've already adopted. So, I'm not asking if you're paleo or vegan or keto or Mediterranean. I'm not asking you to change that.

"It's dozens of strategies that you can incorporate into the dietary pattern of your choosing. So, I feel like it's a really key piece of the puzzle for a lot of people. They can just immediately plug in with pretty minimal effort and get big results ..."

Whitten is writing in reaction to a stark increase in dozens of diseases over the last 100 years. These diseases aren't the result of random reactions to the environment or genetics, he said.

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THE EPOCH TIMES



Muscle melts as we age. In this use it or lose it scenario, the key to maintaining strength is pushing yourself, but not too hard.

How to Become Stronger

Weight training for middle-aged and older people

GABE MIRKIN

The best way to make your muscles stronger is to exercise them against resistance strong enough to damage the muscle fibers. Then, when they heal, they will be stronger.

A review of 22 studies published in the journal *Human Movement* in 2020 looked at how to grow larger and stronger muscles. It found that the best way for untrained people to grow muscles is to use lighter weights with more repetitions, even though most trained athletes gained more strength by using heavier weights with fewer repetitions. Lifting lighter weights with more repetitions reduces your chances of injury.

How to Build Muscle Without Injuries

When middle-aged and older people start a weight lifting program, they often become injured, usually because they try to train like young people who pick the heaviest weight they can lift 10 times in a row and do three sets of 10 lifts. They feel sore for the next few days and when the soreness goes away, they lift heavy weights again, usually two or three times a week. This type of training often injures older novice weight lifters and ends their training program.

The best way for middle-aged and older people to prevent injuries is to lift lighter weights.

The best way for middle-aged and older people to prevent injuries is to lift lighter weights.

Why You Lose Muscle With Age

Muscles are made up of hundreds of thousands of individual fibers, just as a rope is made up of many strands. Each muscle fiber is innervated by a single motor nerve. With aging, you lose motor nerves, and with each loss of a nerve, you also lose the corresponding muscle fiber that it innervates. For example, the vastus medialis muscle in the front of your thigh contains about 800,000 muscle fibers when you are 20, but by age 60, it probably has only about 250,000 fibers. However, after a muscle fiber loses its primary nerve, nerves covering other fibers can move over to stimulate that fiber in addition to stimulating their own primary muscle fibers.

Lifelong competitive athletes over 50 who train four to five times per week didn't lose as many of the nerves that innervate muscles and therefore retained more muscle size and strength with aging than their non-athlete peers, according to a study published in *The Physician and Sportsmedicine* in 2011.

How Muscles Become Stronger

Each muscle fiber is made of a series of blocks called sarcomeres that are lined up end to end. Each sarcomere is attached to the one next to it at a "Z line." Muscle fibers don't contract equally along their lengths; they contract only at each "Z line."

To strengthen a muscle, you have to put enough force on the muscle to damage the Z-lines, as evidenced by bleeding and swelling into the Z-lines. You can tell you have damaged the Z-lines by the feeling of muscle soreness that begins eight to 24 hours after you have lifted weights or done any form of

resistance exercise. That's the amount of time it takes for the swelling to occur in the Z-lines, which is called delayed onset muscle soreness (DOMS). Exercising your muscles intensely enough to damage them makes muscles stronger so they can withstand higher loads and be more resistant to injury.

When a muscle is damaged, your immune system sends large amounts of the same cells (lymphocytes) and chemicals (cytokines) to the damaged tissue. These are used to kill germs when you have an infection. This causes inflammation, characterized by soreness (pain), increased blood flow to the injured fibers (redness), and increased flow of fluid into the damaged area (swelling). The immune cells release tissue growth factors to heal the damaged muscle fibers.

You should allow the muscle soreness to decrease or disappear before exercising intensely again. If you don't wait until the soreness goes away before exercising intensely again, the fibers can be torn, the muscles weakened, and you can become injured.

How to Start Resistance Training

If you aren't already doing strength training, check with your doctor to make sure you do not have any condition that may be harmed by exercise. Then read about resistance exercises you can do at home (like the article on my site), or find a gym. For each exercise, pick the resistance that you can comfortably repeat 10 times in a row without straining or hurting your muscles. End the workout immediately if you feel pain that doesn't go away as soon as you stop the movement.

If your muscles still feel sore 48 hours after your first workout, wait until the soreness is gone before you try again. As you become stronger and the resistance feels very easy for you, try to lift 15 times in a row, then perhaps 20 times. Only when you can lift that weight at least 20 times in a row, and not feel sore the next morning, should you try to increase the resistance level.

The key to this program is to avoid injuring your muscles by increasing the number of repetitions gradually so that you don't cause muscle soreness that lasts longer than a day. You shouldn't increase the weight (resistance) until you can lift a set of at least 20 repetitions in each exercise without feeling sore the next morning.

My Recommendations

This program is designed for beginners and is intended to prevent injuries that plague older people when they first try to lift weights. It won't build very large muscles, but it will increase your strength and provide all of the other benefits of a weight training program.

After many months (injury-free) on this program, if you wish to build larger muscles, you can transition to a more traditional weight training program, such as the strength training guidelines I discuss on my website.

Otherwise, you can continue with this safe and effective program of resistance exercise for the rest of your life.

Dr. Gabe Mirkin has been a practicing physician for over 50 years. He is board-certified in sports medicine, allergy and immunology, pediatrics, and pediatric immunology. "The Dr. Mirkin Show," his call-in show on fitness and health, was syndicated in more than 120 cities. This article was originally published on DrMirkin.com

The Dairy Dilemma

Milk is a nutritious, delicious, and problematic food



Dairy is packed with nutrients but many dairy products are too high in sugar and fat for those facing obesity, heart disease, or diabetes.

SANDRA CESCA

We've been consuming dairy products for centuries. But is dairy still the nutritious food it once was? Today, many are asking that question, especially since antibiotics, estrogen, and radioactive elements have been found in milk over the past several years.

More people are developing allergies to milk and milk products. There's also a worldwide increase in obesity, diabetes, and inflammatory disorders that research has linked to the high fat and sugar content of cow's milk, although other dietary and lifestyle issues also contribute.

History of Dairy

When did we start drinking animal milk and why? Studies have shown that humans began drinking raw milk from animals at least 10,000 years ago. Archeological evidence includes milk traces in pottery vessels, dental remains, and analyses of ancient bones.

People discovered long ago that milk was a complete, nutritious food that provided a steady source of nutrition when other food was scarce.

Through the centuries, more animals, including camels, cows, goats, sheep, donkeys, horses, water buffalo, and reindeer, became domesticated and their raw milk was used for food. The lack of proper refrigeration during these times also resulted in the introduction of yogurts, cheeses, and butter.

Numerous scientific studies have shown that raw milk from cows is correlated with decreased rates of asthma, allergies, eczema, otitis, fever, and respiratory infections. Raw milk also aids in recovery from antibiotic use and provides many gut-healthy probiotics and enzymes. Raw milk is a real superfood providing a wide variety of nutrients including calcium, phosphorus, vitamins, iron, protein, fats, and other substances important for the body.

It also has been discovered that drinking raw milk facilitates the lactase enzyme in the intestinal tract. This enzyme is important in the digestion of milk products, especially after age 2, since breastfed babies get this enzyme from their mother and thus when breastfeeding stops, lactase may decrease.

In the late 1800s, however, it was recognized that some diseases such as tuberculosis, typhoid, diphtheria, and scarlet fever were caused by the unsanitary conditions of dairy farms, especially those close to cities. It was during this time that the pasteurization of raw milk was introduced to alleviate that problem. Pasteurization eventually became the standard for ensuring safe milk even though it was known to destroy the lactase enzyme and degrade many of milk's other nutrients.

The first law to require the pasteurization of milk was passed in Chicago in 1908. In 1987, the FDA mandated the pasteurization of all milk and milk products for human consumption, effectively banning the shipment of raw milk in interstate commerce except for cheese made from raw milk, provided the cheese had been aged a minimum of 60 days and was clearly labeled as unpasteurized.

The Benefits of Drinking Milk

Cow's milk is a significant source of pro-

tein, vitamin D, vitamin A, and calcium, as well as other essential nutrients. Lactose or milk sugar is a carbohydrate and is split into its two sugars, glucose and galactose, by the lactase enzyme for better digestion and absorption into the body.

It has long been recognized that milk has the highest concentration of calcium necessary for healthy teeth and bones, especially during the growing years. Additionally, calcium helps with blood clotting and wound healing, maintaining normal blood pressure, and controlling muscle contractions, including the heartbeat. The emphasis on calcium and the pasteurization process launched the popularity of milk in the United States beginning in the 1920s. This was considered one of the major breakthroughs in public health.

Vitamin D was added to milk in the 1930s to eradicate rickets, a disease caused by vitamin D deficiency. This disease softens and weakens the bones and was rampant at the time among poor children, particularly in northern U.S. cities with less sunshine, resulting in lower levels of vitamin D. This fortified milk also increases calcium absorption more effectively.

People discovered long ago that this milk was a complete, nutritious food that provided a steady source of nutrition when other food was scarce.

Ditching Dairy

Some folks may consider ditching dairy when following vegan or paleo diets. Others have concerns about dairy farming methods and their impact on the environment.

One of the top benefits of cutting out dairy is the removal of excess cholesterol, saturated fats, sugar, and salt, thus lessening calorie intake and promoting a healthy weight. These fats clog the body's arteries increasing the risk of heart disease. Cheese can be especially dangerous due to its high fat content.

Dairy is also considered an acidic food that can disrupt the body's acid/alkaline balance though some studies refute that claim. The debate continues.

Yogurt

The one dairy product you might consider keeping is low-fat or nonfat yogurt since it contains protein, vitamins, probiotics, and the calcium needed with a dairy-free diet. According to a recent study by UC San Francisco Health, nonfat yogurt is a healthy dairy product that contains the most calcium at 450 milligrams per cup. One 8-ounce serving provides about 45 percent of your daily calcium requirement.

Yogurt's protein content is around 14 grams per cup depending on the type. Greek yogurt may provide up to 20 grams of protein per cup.

Yogurt bacteria also break down the lactose during fermentation so even lactose intolerant people benefit from this product.

Plant Milks

Plant-based milk alternatives include soy,

almond, oat, coconut, rice, cashew, and hemp.

Plant milks are typically lower in saturated fat and calories than cow's milk and provide some of the nutritional benefits of the whole plants themselves. Plant milks are also a good option for those who have milk allergies or are lactose intolerant.

Soy milk has been one of the oldest and most popular milk alternatives since it closely resembles cow's milk. It can be traced back to 1365 in China. There has been some controversy around soy since the introduction of GMO soybeans. These have been shown to cause their own allergic reactions, so it's best to buy non-GMO organic soy milk.

Conclusion

As we age, the need and even the desire to drink milk declines. A balanced whole foods diet can help maintain your health without the risks of weight gain, diabetes, or cardiovascular disorders that can be partially caused by eating a diet high in dairy products, especially milk.

Switching to nonfat yogurt can be a wise choice if you are considering reducing your dairy intake. Also, taking calcium supplements can help, but check with your nutritionist for the correct type and dose. Eating other foods high in calcium, including leafy green vegetables, can help maintain normal calcium levels.

If you have no known allergies or intolerance to milk, it is best to consume organic, hormone-free milk from a reputable source. Always check the additives to any plant milk for increased sugars and artificial flavorings.

Sandra Cesca is a freelance writer and photographer focusing on holistic health, wellness, organic foods, healthy lifestyle choices, and whole-person medical care. Her background includes allopathic medicine, naturopathy, homeopathy, organic and biodynamic farming, and yoga practices.



Plant milks are typically lower in fat, sugar, and protein and offer a variety of other nutrients.

The Risks of Drinking Milk

Allergies

Babies and adults can both develop allergies to cow's milk. The body's immune system malfunctions producing allergic antibodies, mainly immunoglobulin E. There are two main proteins in cow's milk that can cause this allergic reaction. The first is casein, which is found in the curd when milk curdles. The second is whey, found in the liquid part of milk that remains after milk curdles.

Signs and symptoms of a milk allergy range from mild to severe and can include wheezing, vomiting, hives, itching, and digestive problems. Milk allergy also can cause anaphylactic shock. This is a severe, life-threatening reaction that requires immediate hospital attention. Avoiding milk and milk products is the primary treatment for milk allergy.

It also is possible to have an allergy to cow's milk, but not to other dairy products. Dairy allergy appears most often in children, especially if given cow's milk after breastfeeding. Most outgrow this by age 16.

Lactose Intolerance

Years ago, lactose intolerance may not have existed because raw milk contains the lactase enzyme needed to convert lactose for digestion. Additionally, without refrigeration raw milk would quickly ferment to create yogurt and cheese eliminating the lactose which is in most non-fermented dairy products today.

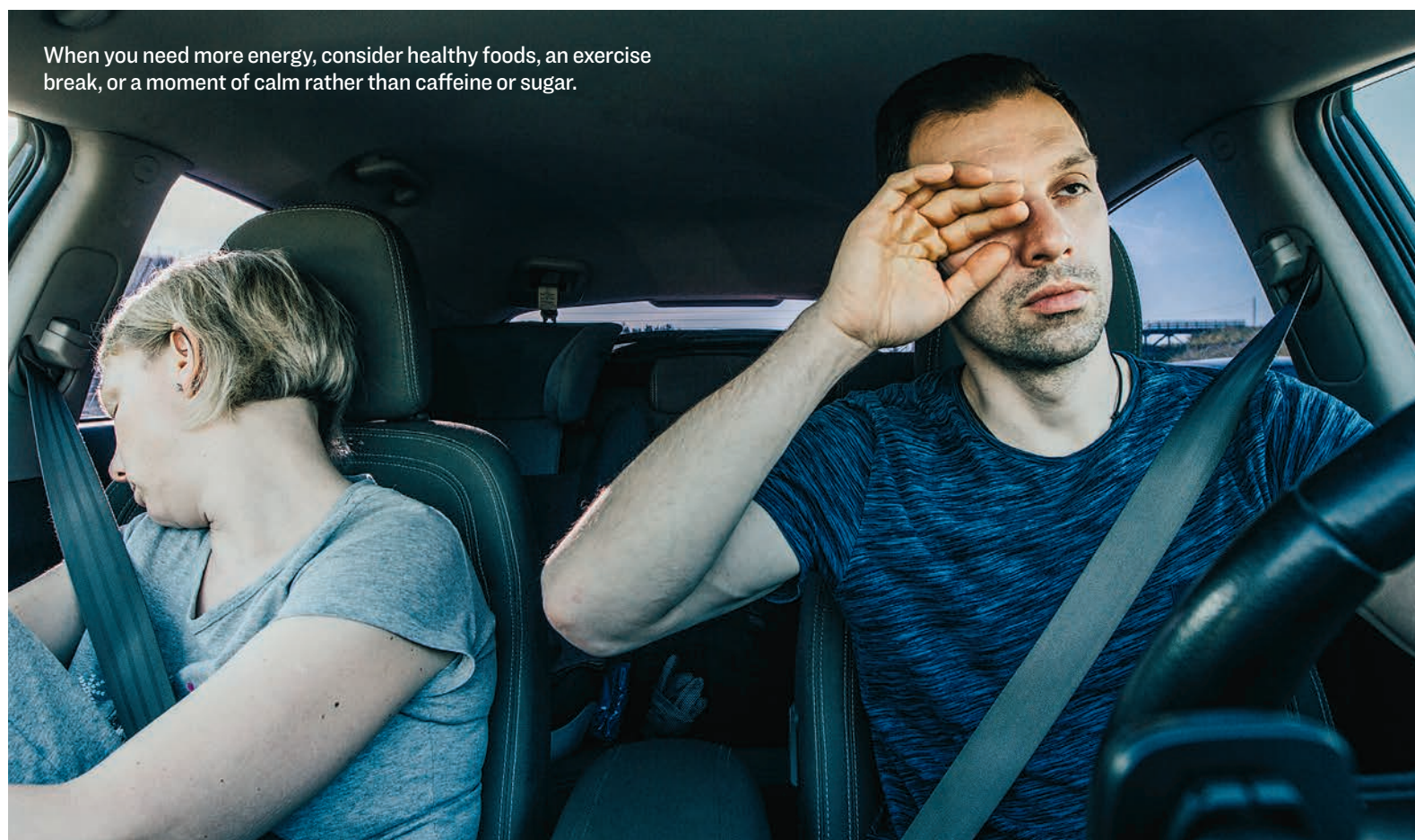
Lactose intolerance has developed since the introduction of pasteurization. Raw milk contains the lactase-producing bacteria *Lactobacillus*, which is destroyed during pasteurization. Some milk producers add lactase back into pasteurized milk but this changes the taste and makes the milk sweeter.

Lactose intolerance isn't an allergy but a disorder of the digestive system. In some people, lactose intolerance may be triggered by some other medical condition such as Crohn's disease. In others, it develops without a specific underlying cause.

Inflammation

There has been considerable research done to evaluate chronic inflammation, cancer, and other disorders such as sinus infections and mucus and their relationship to dairy. As expected, there is much controversy on this and ongoing studies may help find clearer answers.

Milk and other dairy products are the top sources of saturated fat in the American diet, contributing to heart disease, diabetes, and Alzheimer's. Studies have also linked dairy to an increased risk of breast, ovarian, and prostate cancers. More research is needed.



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The Importance of Sun Exposure

Light deficiency is another extremely common cause of fatigue. Sun exposure triggers vitamin D production, which is important, but it also has many other functions and benefits that can directly impact your energy level.

For example, in the past three years, it has been discovered that “mitochondria produce melatonin in many cells in quantities which are orders of magnitude higher than that produced in the pineal gland,” as noted by a 2019 paper published in Melatonin Research. Some researchers now hold that the vast majority of melatonin, some 95 percent, is produced in your mitochondria in response to sunlight (specifically red near-infrared light, which is what provides warmth). Melatonin is a potent anti-inflammatory, so sunlight allows you to target oxidative stress right where it’s needed the most.

“Melatonin is absolutely vital for protecting your mitochondria from harm and preventing them from accumulating damage as you age,” Whitten said. But swallowing melatonin is useless for this, as oral melatonin can’t reach the mitochondria.

Sunlight also allows for the conversion of retinol (vitamin A) to retinoids, which are crucial for the function of vitamin D, and interact with your melanocortin system, which involves alpha-melanocyte-stimulating hormone that helps regulate inflammation and appetite.

Sunlight also creates a surge of nitric oxide, which helps normalize your blood pressure and reduce your cardiovascular disease risk. Whitten cites a Swedish study that showed women with the lowest sun exposure had a cardiovascular disease risk equivalent to smoking a pack of cigarettes per day. Red and infrared light also have a long list of other health benefits.

Importantly, red and infrared light directly stimulate ATP production at the mitochondrial level. These wavelengths also create a transient increase in reactive oxygen species, which are signaling molecules that instruct the mitochondria to grow bigger and stronger.

Red and infrared wavelengths also stimulate tissue-specific growth factors. So, in muscle cells, it increases insulin-like growth factor I, which is a key growth factor for muscle growth. In your thyroid, it stimulates growth factors that help regenerate thyroid gland tissue in the brain.

In your skin, fibroblasts are stimulated by red and near-infrared light to increase collagen production. So, essentially, red and infrared light act as signals that trigger growth and regeneration at the cellular level, throughout your whole body.

Just as the hermetic stress from exercise makes the body stronger and helps our cells and mitochondria better adapt and withstand the stress of that exercise, so too does sunlight trigger adaptations in the body that protect it from the stress that sunlight can cause. The increase in melatonin production is a key example.

“This is something critical for protecting our mitochondria from a broad range of, basically, every type of stressor. You got to have those melatonin levels charged up, and that’s a function of exposing your body to light.”

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.

More Information

To learn more about how to energize your body, pick up a copy of “Eat for Energy: How to Beat Fatigue, Supercharge Your Mitochondria, and Unlock All-Day Energy.” The book addresses several foundational nutritional causes of fatigue and how to fix it, including:

1. The influence of your circadian rhythm and how to optimize it via nutrition
2. Time-restricted eating and how to sync your eating window with your waking-sleeping cycle
3. Calorie stacking—how stacking more of your daily calories toward the earlier part of the day results in increased energy levels (in part by enhancing neurotransmitters and hormones that are synced with the circadian rhythm)
4. How to optimize your body composition
5. How to optimize your gut health
6. Superfoods and supplements to optimize energy levels

You can also learn more by tuning into Ari Whitten’s popular podcast, “The Energy Blueprint,” where every week he delves into a wide variety of health-promoting strategies.

How to Conquer Fatigue and Low Energy

Use sun, food, and stress to improve energy production where it counts—at the subcellular level

Continued from Page 9

“It’s because the modern world changed in very fundamental ways, as far as diet, the modern lifestyle, as far as being sedentary, being in climate-controlled offices, losing all these forms of hermetic stressors, sleeping less, disrupting our circadian rhythm—these are the main drivers of pretty much all of these different chronic diseases.”

Hermetic stress is good stress, the kind that makes you stronger. Examples include physical exercise that stresses your muscles and causes them to strengthen, or the impact that walking and moving has on your bones, which spurs them to increased density. To resolve this increase in disease, it’s critical we address the root causes that are driving this disease, Whitten said.

“That’s where you have to start.”

A New Understanding of Mitochondria

In high school and college biology courses, we’re taught to think of mitochondria as mindless energy generators that take in the food we eat, mostly carbs and fats, and then pump out cellular energy in the form of ATP. However, in the past five to 10 years, we’ve gained a whole new understanding of mitochondria, largely because of the work of Dr. Robert Naviaux, who runs a mitochondrial medicine lab at the University of California, San Diego.

“Naviaux, I think, is one of the most brilliant scientists and has created one of the biggest breakthroughs in medicine in the last century, arguably. He figured out that mitochondria have a second role, other than energy production, and that is in cellular defense,” Whitten said.

“In his words, mitochondria are the central hub of the wheel of metabolism. They are not just energy producers, but also environmental sensors, and they are constantly sampling the environment around them, figuring out what’s going on in the body.”

“They’re asking one fundamental question: Are we under attack? Is there something we need to defend against?”

These dual roles of energy production and cellular defense are mutually exclusive, Whitten notes. That’s a key point because it means that when mitochondria are responding to dangers in their cellular environment, they downgrade their energy production.

And because human beings are a collection of trillions of cells, when those cells stop producing the energy we need, fatigue sets in.

“We can think of our energy levels as largely a function of the degree to which our mitochondria are detecting the presence of dangers or threats in the body,” Whitten said.

Common threats your mitochondria might be responding to if you feel fatigued include oxidative stress, poor nutrition, environmental toxins, psychological stress, and sleep deprivation, just to name a few.

What’s Your Resilience Threshold?

Most if not all stressors can be boiled down to oxidative stress, reactive nitrogen species, inflammation, and purinergic signaling (a situation in which energy molecules leak out of the cell). Even something like psychological stress can cause this kind of reaction. But whether the stressor is serious enough to cause fatigue depends on your resilience threshold. What

wipes one person out might not affect another.

“I like to think of fatigue as having two fundamental causes,” Whitten said. “One is all of these different kinds of environmental and lifestyle stressors. The other thing that interplays with, and is often left out by a lot of people, is what is happening at the cellular level inside of your body.”

“The key thing to understand here is that our cells can either be filled with big, strong mitochondria, and lots of them, or weak, fragile, shrunken, broken, dysfunctional mitochondria, and very few of them.”

Research shows our mitochondrial capacity—the extent to which they can carry out their dual duties of cellular defense and energy production—declines by about 10 percent for every decade of our lives, Whitten notes.

“If you look at older people, they generally have somewhere between 50 percent to 75 percent lower mitochondrial capacity than a young person.

“But it’s not a natural function of aging, because we know from other research that when they look at mitochondrial capacity of healthy 70-year-olds, who are lifelong athletes, they don’t have lower mitochondrial capacity than an adult at 40 years old.

“What that tells us is the loss of mitochondria is not a function of aging, per se. It’s a function of lack of hermetic stress in your life. Mitochondria have to be challenged and stimulated in order to stay big and strong.”

Other Factors That Influence Energy Levels

While mitochondrial dysfunction is a central issue in fatigue, other factors also come into play, including:

- Low muscle mass: Greater muscle mass contributes to metabolic flexibility and health, because muscle acts as a sink for glucose, thereby reducing your risk of insulin resistance. Low muscle mass, on the other hand, is a leading contributor to early death, and it’s a major contributor to low energy and fatigue
- Elevated blood sugar and insulin resistance: This primarily goes back to a poor diet high in processed foods and constant grazing throughout the day. Eating a whole food



Nurture a healthy circadian rhythm and get more energy by avoiding screens before bed and going to bed at the same time each night.

diet and implementing TRE can go a long way toward normalizing your insulin and blood sugar

- Lack of hermetic stress such as insufficient amounts of exercise
- Stress
- Poor gut health

How Your Diet Influences Your Energy Level

Naturally, your diet has a central influence on your energy level. One key driver of low energy and ill health is excessive omega-6 linoleic acid (LA) intake. LA contributes to insulin resistance, obesity, and chronic inflammation, and as mentioned earlier, when mitochondria detect inflammation, they dial down energy production to shift resources toward self-defense.

High LA consumption has also been implicated in neurodegenerative diseases, cancer, and many other chronic diseases. Processed food, which is not only high in LA but also sugar, can also considerably impact your energy levels by impairing your hormone regulation.

Circadian Rhythm Disruption Is Common Culprit

According to Whitten, arguably one of the most important things you can do to improve your energy level is to optimize your circadian rhythm by going to bed at the same time each night and rising at the same time each morning. Another crucial factor is to get plenty of daytime sunlight exposure and minimize artificial light exposure at night. As explained by Whitten:

“The circadian clock in your brain learns to distinguish what is day and what is night based on the differences in light intensity, along with the color of the wavelengths of that light. When you start your morning in indoor environments, under indoor lighting, looking at screens, and end your day in indoor environments with indoor lighting, looking at screens, you don’t have a big [light intensity] differential.”

Your circadian rhythm is also influenced by nutrient sensors throughout your body. In other words, when you eat will affect how your body manages the sleep-wake cycle. This is why eating late at night can upset your sleep. While you use light to optimize the central clock in your brain, you use nutrition to optimize the peripheral clocks and sync them with the central clock. One way to do this is through time-restricted eating (TRE), where you eat all your meals within a six- to 10-hour window.



Maintain your mitochondria with regular exercise and activity so they stay strong and help slow the aging process.

New Generation of Livestock Drugs Linked to Cancer

As US regulators restrict antibiotic use, livestock producers turn to vaccines, hormones, and other problematic drugs

MARTHA ROSENBERG

Many people know about the routine use of antibiotics in livestock production—and object to it. The drugs are profitable to meat producers because they cause animals to gain more weight with less feed and prevent the outbreak of disease in often cramped concentrated animal feeding operation (CAFOs) conditions.

In 2017, the Food and Drug Administration began regulatory measures to prevent the use of livestock antibiotics for growth purposes and recently finalized the guidelines. Injudicious antibiotic use drives the development of antibiotic-resistant bacteria.

As the extent of antibiotic residues and antibiotic-resistant bacteria in meat has been revealed, there has been a public backlash against the drugs’ use, resulting in some meat producers labeling their products “raised without antibiotics.” The problem consumers are unaware that other drugs are now being used in meat production and left off the labels. Worse, in an effort to reduce the publicly spurned antibiotics, meat producers are turning to vaccines.

“Vaccines and other alternative products can help minimize the need for antibiotics by preventing and controlling infectious diseases in animal populations, and are central to the future success of animal agriculture,” read a 2018 article in Veterinary Research.

How prevalent are livestock vaccines? Drugmaker Merck markets 58 poultry vaccines for diseases that food consumers neither know about nor probably want to know about like coccidiosis, infectious bronchitis, Newcastle disease, infectious laryngotracheitis, mycoplasma gallisepticum, Marek’s disease (chicken herpes), infectious bursal disease, hemorrhagic enteritis, rhinotracheitis (turkey coryza), avian encephalomyelitis, fowl pox, and more.

In addition to vaccines for cattle, swine, and fish, food animals are also vaccinated as embryos.

By 2020, the animal vaccine market was estimated to be \$7.2 billion.

In Ovo Vaccination

More than 90 percent of broiler chickens in



When vaccinating poultry, it’s encouraged to inject the non-edible parts so vaccine residue is not consumed by humans.



There are many unlabeled hormones that are routinely used in U.S. cattle for growth production.



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



Vaccines used at the embryonic stage in chickens bring unique risks.

In an effort to reduce the publicly spurned antibiotics, meat producers are turning to vaccines.

\$7.2 BILLION

By 2020, the animal vaccine market was estimated to be \$7.2 billion.

trade agreements with non-EU states such as the USA. This report looks at the case of hormone-treated beef, which is permitted in the U.S., but which the EU refuses to import. The World Trade Organization has accepted the EU’s refusal to import hormone-reared beef. The report shows that at least one of the hormones routinely used in US beef production has been judged to be a significant cancer risk by the EU.”

China also restricts “beef from cattle implanted with growth promoting hormones,” the University of Minnesota Extension said, a research and outreach partnership between the university and the state, federal, and county governments. The Extension defends the drugs as promoting sustainability, and as natural as hormones found in plants.

A Problematic Growth Drug

Not many people are aware of ractopamine either—an asthma-like drug designed to add weight to livestock but banned in 160 countries by 2014. In an early Canadian study, monkeys given ractopamine “developed daily tachycardia”—rapid heartbeat. Rats fed ractopamine developed a constellation of birth defects like cleft palate, protruding tongue, short limbs, missing digits, open eyelids, and enlarged heart.

In Taipei City, Taiwan in 2007, 3,500 pig farmers gathered at the Department of Health and Council of Agriculture to protest the possible lifting of a ractopamine ban, Taiwan News reported. Chanting, “We refuse to eat pork that contains poisonous ractopamine,” and “Get out, USA pork” protesters threw eggs at police, soldiers, and reporters and pig dung at government buildings.

According to Temple Grandin, the famed American scientist and animal behaviorist concerned with humane slaughter, the “indiscriminate use of the beta-adrenergic agonist Paylean (ractopamine) has contributed to an increase in downer non-ambulatory pigs,” and pigs that “are extremely difficult to move and drive.”

“All of the studies showed that beta-agonists greatly increased muscle mass and the area of the loin. The cost of this increased amount of meat is poorer meat quality and bad effects on animal welfare unless beta-agonists are used very carefully,” Temple adds.

An article in the 2003 Journal of Animal Science confirms that “ractopamine does affect the behavior, heart rate and catecholamine profile of finishing pigs and making them more difficult to handle and potentially more susceptible to handling and transport stress.”

In Holsteins, ractopamine is known for causing hoof problems, Grandin said, and feedlot managers report the “outer shell of the hoof fell off” on a related drug, zilpateral, which is marketed as Zilmax.

In 2014, the Center for Food Safety and Animal Legal Defense Fund sued the Food and Drug Administration (FDA) for withholding information about ractopamine’s effects on “animal or human liver form and function, kidney form and function, thyroid form and function,” urethral and prostate effects and “tumor development.”

Conclusion

Thanks to consumer pressure, some meat sellers are producing their products without antibiotics. However, if they are replacing the controversial drugs with vaccines, is that really better? Moreover, the copious use of hormones and ractopamine, not on the label, should also be concerning to health-conscious food consumers.

Martha Rosenberg is a nationally recognized reporter and author whose work has been cited by the Mayo Clinic Proceedings, Public Library of Science Biology, and National Geographic. Rosenberg’s FDA exposé, “Born with a Junk Food Deficiency,” established her as a prominent investigative journalist. She has lectured widely at universities throughout the United States and resides in Chicago.

WISE HABITS

How to Put Life on Easy Mode

We often complicate our lives with habits that make everything harder



You can do all your normal activities and your day can also be one of ease, peace, and contentment, no matter what you're doing.

LEO BABAUTA

The other day I was having such a chill, easy day despite doing all of my usual work and chores and workout activities that the phrase, “life on easy mode” came to me. The rest of the week, I kept the question in my mind, “What would it be like to have life on easy mode?”

A lot of answers came to me, and I'll share some of them below. But the biggest answer is that you can do all your normal activities and your day can also be one of ease, peace, and contentment, no matter what you're doing.

You can try it right now: Keep reading this article, but see if you can do it with a feeling of relaxed effortlessness. Of ease and peace.

You might relax your muscles, breathe deeply and smoothly, smile very slightly, and feel a sense of appreciation for being alive in this moment.

What is that like for you? That's the essence of life on easy mode. Let's talk about some things you can do to access this during your day.

Easy Mode Mindset

Imagine that in any moment in life, you could access any kind of experience: happiness, joy, playfulness, sadness, anger, peace, awe.

That's not how we usually see it. We think that other people and external circumstances cause our internal states to happen. But what if we imagined that we can access any state, no matter the external circumstances, no matter what someone else is doing?

So with this in mind, imagine that you could access peace and ease in any moment and enjoy a sense of contentment, loving life, and appreciating every moment.

Try it right now. What does it feel like? Now practice it while doing something: drinking a glass of water, washing a dish, reading a message. Same mindset, different activities.

This ease is available in any moment. We just need to be willing to access it.

Things That Make Life Easier

You don't have to do anything different to live life on this easy mode. That said, here are some things I've found that make life so much easier. There might be a lot here, but think of these as ideas you might try one at a time:

- One thing at a time: When you walk, just walk, and appreciate each step. When you do something online, do one thing at a time,

as fully as you can. This is such a simple approach but we forget it so often.

- Put space between things: In between meetings and tasks, take a breath. Let yourself have some space, some downtime. Even if it's just a few minutes.

- Bring full appreciation: In every activity, can you fully appreciate the incredible nature of this moment?

- Clean as you go: Put away your clothes when you take them off. Wash your dishes after you eat or cook. Wipe the counter. Tidy up after yourself. This can apply to everything: reply to that email, clean up your downloads folder, close tabs on your browser. This simple thing is really underappreciated by most people. Not letting things pile up is such a wonderful way to live life on easy mode.

- Do less: You don't need to do less in order to live life on easy mode. But it can be really nice! Reduce how much you're trying to get done during the day. This can take some time to transition toward, including re-negotiating commitments with people or training people to do things for themselves.

- Rest and self-care: Prioritize rest so that you're not constantly exhausted. Self-care should also be an easy, loving act: floss your teeth, let yourself relax, take care of your emotions and body.

- Eat whole foods: There is a huge wellness benefit to eating mostly whole foods. For me, that means vegetables, fruit, nuts, and legumes. Don't be a fanatic about it; you can eat processed foods/junk, but see these foods as the spice rather than the main ingredients of your diet. My body and mind feel so much better when I follow this approach.

- Eat slowly: Whatever you decide to eat, take a bite and savor it. Leave a little space between bites, don't cram it in or automatically eat more. These two approaches, eating whole foods and eating slowly, really make a difference.

- Move often: Every 30 to 45 minutes, get up and move. Stretch, do a few yoga poses, walk outside for a few minutes, or do some bodyweight exercises. Once a day, do more than that: Go for a longer walk, go on a bike ride, do a workout, play a sport, do some yard work or bodyweight exercises. Rest some days if you're sore or tired, of course.

Movement throughout the day makes your body feel vibrantly healthy and at ease in the long run.

- Have a cushion: Build a buffer into your life wherever you find yourself living on the edge. Create a financial cushion by spending less for awhile or earning some extra money. Build a cushion into your schedule. Ask for longer deadlines so you don't overpromise and deliver late. Life is so much less stressful with a cushion.

- When you're overwhelmed, take small steps: A lot of time, we can get stopped by overwhelm. It's natural to feel overwhelmed when we're faced with a lot of tasks or decisions. Life on easy mode means just picking one thing off the pile and focusing on that. Then the next thing off the pile. Take a breath, and focus on one thing.

- Do focus sessions to get stuff done: Sometimes we need to be extra intentional about getting a particular task done. Maybe it is a to-do item that is important, but you keep putting it off. In that case, simply block off some time, turn off your notifications, and make that task your sole and only focus for a specific amount of time or to a reasonable endpoint.

- Do things as simply as possible: We often overcomplicate things. What's the simplest way you can approach the things you have in front of you? How can you make decisions with ease, instead of overthinking it? Be straightforward in your communication; say what you want. Don't add extra meaning to things, extra layers of suffering.

- Live simply in every interaction and task.

Simplifying Versus Complicating

We're pretty much always making things complicated. It's our wonderful brains, always thinking. This often tends to make life more difficult than it needs to be.

Here are a few examples of how we overcomplicate things:

- We read things into what people say and do and create extra meaning out of things. For example, a friend says they don't want to go to coffee with us, and we might read that to mean that they don't want to spend time with us or they don't care about us. We might gripe in our minds that they're always doing this. The truth could simply be that

they're feeling tired today.

- We have a lot of things to do today, big and small, and it feels overwhelming. We get stuck, unable to do anything because we keep thinking how hard it's going to be to tackle all of it. We agonize over how we might not be able to stay above water. The simplest thing and most empowering approach would be to simply pick one thing and get started.

- We get anxious about an upcoming event, wondering whether we'll do a good job and worrying about what people will think about us. We spend a lot of time thinking about it, over-preparing, stressing about how it will go. The simple thing would be to take some care to do preparation without overdoing it, and then show up and be ourselves.

These are just a few examples of the kind of thinking and suffering we're putting on ourselves pretty much all the time. We overthink, worry, and complicate to the point where life is no longer on easy mode.

When we're doing this, we can simply notice. And instead of beating ourselves up about it (which complicates things), we can simplify the moment. What's the easiest thing you can do right now, the simplest? What's the least amount of thinking you can do so that you can simply do or be?

When people say or do things, prefer the most straightforward interpretation. The simplest meaning.

When you're going about your day, think about the simplest thing you could do right now that would be helpful. Then savor that simplicity.

What Life Can Be Like on Easy Mode

I'm not saying life will always be easy, nor would we necessarily want that. But it can be easy a lot of the time.

If we're always stressed, always on difficult mode, we'll get exhausted. Then when something really requires our full effort, we might not have the energy.

If we cruise along on easy mode for most of the day, then we'll be ready when something requires us to put in serious effort.

For me, life on easy mode is relaxing. It's simple, as simple as washing a dish, writing an email, or having a conversation. It's enjoying the exercise, taking care of myself, enjoying space and silence and breath.

Life on easy mode is flow. It's a tai chi sequence. It's smooth and fluid and lovely.

Leo Babauta is the author of six books and the writer of *Zen Habits*, a blog with over 2 million subscribers. Visit ZenHabits.net

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5 Tips for Improving Your Spiritual Well-Being

Life offers us endless opportunities to elevate our character, if we have the wish

Continued from Page 9

While spirituality varies among cultures and among individuals, there are some basic truths connecting those with upright intentions, and these principles can guide us in living as good people.

When we work on fostering our spiritual sides, studies show that memory and cognition improve, immunity is boosted, blood pressure improves, things like depression, stress, and anxiety lessen, anger and resentment decrease, and the risk of heart disease, diabetes, and other chronic conditions also decreases.

Strengthening our spiritual sides increases our overall levels of happiness, hope, optimism, and internal calm. We may find a deeper meaning and purpose for our lives. An analysis of research studies revealed that those who are more spiritual have stronger marital relationships, commit fewer crimes, have significantly lower rates of substance abuse, perform better in school, and thus have an overall positive impact on those around them and society as a whole.

With so many great benefits, let's take a look at a few simple things we can do to strengthen our spiritual well-being.

Cultivate Integrity

According to the American Heritage dictionary, integrity is “steadfast adherence to a strict moral or ethical code,” or “the quality or condition of being whole or undivided; completeness.”

Integrity is doing the right thing, even when no one is looking. Of course, looking at it from a spiritual perspective, nothing truly goes unseen.

Integrity requires being honest with oneself and others, self-discipline and willpower, and a commitment to upholding our values and principles, even if it means we lose out as a result. It means not taking the easy way out, and not choosing our self-interest over what's right.

There is a proverb that says, “There's no pillow as soft as a clear conscience.” A clean conscience comes only through living a life of integrity, and its importance was well-known to older generations, who were often heard saying, “The reason I sleep well is because I have a clean conscience.” Unfortunately, the value of integrity has been largely lost in modern times, and in its place, a focus on money and a desire to get ahead have taken its place. Coincidentally, problems sleeping are common.

To live with integrity, it's important that we identify our values to help determine the kind of person we are and who we want to be. This brightens our moral compass. As we strive to live this way, our character becomes more grounded in goodness, while our negative aspects are weakened and eliminated.

Forgive and Let Go

Forgiveness is an integral part of all upright spiritual teachings. For example, Jesus said, “But I say to you who hear: Love your enemies, do good to those who hate you, bless those who curse you, and pray for those who spitefully use you.” Luke 6:27-28

When we are treated unkindly or in a way we view as unfair, we may feel justified in our anger or resentment toward another person. But when we carry these things in our hearts, as the saying goes, it's like drinking poison and thinking it will harm the other person.

Several years ago, I had a co-worker who regularly disagreed with me. It created a lot of tension, and over time, I developed resentment toward her for being controlling and trying to tell me how to do my job. I found myself increasingly disliking going to work, and even considered looking for another job.

Then one day, a light bulb went off. I thought: “This is my job. I can either go to work and be miserable, or I can go to work and be happy. It's up to me.”

With this realization, I went to work the next day with a different attitude. I forgave what I viewed as my co-worker's transgressions, and began to let go of the resentment I'd had. I kept a pleasant demeanor and didn't let little things get to me, and as a result, I somehow felt lighter. The things that had bothered me now seemed so in-



Few things affirm our innate sense of dignity and goodness like sacrificing for others.

Being grateful for what we have, without desiring or asking for more, even in the face of difficulties and struggles, is most certainly a worthwhile endeavor.



Studies have shown that altruistic behaviors lead to more peace of mind, lowered cortisol levels, and even decreased risk of heart disease.

our son: “Every day when I wake up, I say a prayer. I don't ask for anything. I only say ‘thank you,’ even if it's just for my two arms and legs that allow me to go to work, or for the roof over my head.”

Being grateful for what we have, without desiring or asking for more, even in the face of difficulties and struggles, is most certainly a worthwhile endeavor.

Studies have shown that gratitude can be cultivated. By doing things like keeping a gratitude journal, or reflecting on three things we're grateful for at the end of every day, we strengthen our gratitude muscle. We can even learn to be grateful for the hard times.

Leonardo da Vinci said: “Obstacles cannot crush me. Every obstacle yields to stern resolve. He who is fixed to a star does not change his mind.” Our difficulties help steel our resolve to achieve our goals and strengthen who we are. And without the hard times, how would we know what we're capable of?

Look for the Lesson

Not a day goes by that we don't encounter multiple opportunities to improve ourselves. Everything happens for a reason. While we may not understand why things occur, what we can come to understand is the lesson contained within.

While working with my co-worker, I had another realization: The things that annoyed me about her were actually things that existed in me—she was just a mirror reflecting what was in me. At first, this wasn't something I even wanted to admit to myself, let alone anyone else, and wondered if I really had such a controlling way about myself.

As I paid attention to my thoughts and behaviors, sure enough, I saw the hard truth: I, too, had my own way of wanting to control things. As I reflected on the situation more later, I discovered that the situation was an opportunity to look at myself and learn some valuable lessons.

I also realized that when a certain type of situation kept repeating itself, though it might take different forms, it was trying to teach me a lesson. As I began to watch for patterns in the things that happened in my life, I also learned that if something about another person annoyed me, it was a sure sign that I had that thing in me in some form or another.

Over the years, I've seen that my most valuable lessons have actually come out of my most difficult situations. Though I didn't relish having those painful or hard times, I saw that they did, in fact, serve an important purpose—self-growth. And if I didn't work on improving that part of myself, the situation would keep recurring in different scenarios.

When my son entered elementary school, I began having regular talks with him that we dubbed “life lessons.” I tried to teach him the importance of being kind to others, no matter how he was treated, to be honest, thoughtful, patient, and to share with others. I also made up “what if” scenarios to get him to think about how he might handle different types of difficult situations, and then we would discuss possible solutions.

One day, when a little boy treated him unkindly in second grade, he came home and told me that he wasn't mean back to him, and said, “I think his momma must not teach him about life lessons.” When my son did do something wrong, I tried to get him to understand why it was wrong and to think about how he could do better next time.

My hope is that these lessons laid the groundwork for my son to learn how to reflect upon his own actions, see what he could learn from them, and continually strive to be a better person.

In my view, what happens in our lives is meant to teach us to rectify our wrongs and change ourselves for the better by improving our patience, honesty, kindness, empathy, and other good qualities.

In Conclusion

Research has borne out what common sense tells us: Strengthening our spiritual well-being is good for both our mental and physical health. It elevates our moral character, strengthens our relationships, improves our performance in school and at work—and is an essential underpinning of a good society.

As Rumi said: “Yesterday I was clever, so I wanted to change the world. Today I am wise, so I am changing myself.” By employing some of these techniques in our everyday lives, we can improve ourselves, and naturally have a positive influence on the world around us.

Tatiana Denning, D.O. is a preventive family medicine physician and owner of Simpura Weight Loss and Wellness. She believes in empowering her patients with the knowledge and skills necessary to maintain and improve their own health through weight management, healthy habits, and disease prevention.

Hospital Design Should Consider the Psychological Aspects of Healing

Research has long confirmed that aspects of hospital design can support a patient's health and well-being during their stay

**MOHSEN RASOULIVALAJOOZI
& GOLRIZ FARZAMFAR**

Long before COVID-19 made the public aware of the importance of good air ventilation, designers had been concerned with how physical environments affect people's well-being and mental health.

In the 20th century, hospital design underwent a profound change. Hospitals used to be a place for only the treatment of diseases and injuries—or places strongly associated with death.

By the mid-20th century, due to medical and technological advances, as well as the ongoing development of diverse approaches to health care, hospitals had become centers of health systems. Nowadays, hospitals are not only places for treating disease and illness; they're also institutions for promoting physical and psychological health, and places of recovery and healing.

Today, patients expect more than just treatment. And as hospitals' mandates and missions have shifted, so has hospital design.

Healing Environments

Over the decades, significant advances in hospital design have been made to better support a patient's process of recovery. The concept of a healing environment puts the patient at the center of hospital and health design.

To this end, in addition to patients' clinical needs, their psychological needs must also be considered in the design process.

For example, empirical research has shown that natural daylight, contact with nature, and a pleasant indoor environment promote a sense of well-being that benefits patient recovery.

Physical aspects of hospital interior can aid patients' health and state of mind.

Patients' Perceptions of Control

Design researcher Roger Ulrich's theory of

supportive design considers how the physical and social environments in health care settings can affect patients' well-being, including their stress levels.

According to this theory, the challenges and considerations for improving the health environment can be classified into three main branches: perceptions of control, social support, and positive distraction.

Each of these elements can be viewed as an opportunity for improving a patient's spatial experience.

To allow patients to perceive a sense of control in their environment, some studies have focused on the value of mapping and wayfinding in the planning phase of hospital design. These can help patients navigate the hospital independently.

The concept of a healing environment puts the patient at the centre of hospital and health design.

Social Supports

Access to social support reduces patient levels of psychological distress during their time in the treatment center environment. This can be done by providing patients access to private and quiet spaces where they can discuss personal information or express their needs to family, friends, and hospital staff.

As an example, arranging furniture so it provides acoustic and visual privacy for patients in hospital public spaces can provide a sense of social support.

Positive Distraction

Positive distraction is anything that can catch a patient's attention or interest and contribute to a positive state of mind or mood.

Visual distraction elements such as televi-



Patients might access nature not only through windows with scenic views, but also in paintings or art depicting nature.

sions, reading materials, indoor plants, views of nature, or artwork can make remarkable contributions to a patient's feeling of well-being. Patients might access nature not only through windows with scenic views but also in paintings or art depicting nature in abstract or realistic styles.

Patient, Family, Staff Roles

Patients, families, caregivers, and hospital managers can also help to create a healing environment for patients.

For example, patients can bring their personal belongings to their hospital room, such as a small plant, pillow and blanket or their own reading materials or arts and craft supplies. These can act as elements of positive distraction.

Families and hospital staff can help generate pleasant conditions for patients by helping hang the patients' family photos or artwork on the wall.

Design Incorporated Into Hospital Protocols

With adequate resourcing, health care providers could have more tools to improve patients' states of mind through small design ideas that can be incorporated into hospital protocols.

For example, providing a whiteboard on the patient room wall would allow family members, the patient, and staff to draw figures of

nature or write positive messages.

To help bolster a patient's perception of control, hospital staff could draw a patient's name on the glass window of their room with a smiley face to help them find their room.

To offer social support, hospital managers can provide free and easy access to Wi-Fi or a telephone for patients in all spaces of the hospital. Curtains or blinds can be considered in hospital public spaces, such as waiting areas, to offer flexibility for patients who prefer to communicate privately with hospital staff or their family members.

Including Health Care Staff, Patients in Design

Although patients, staff, and families can each help improve the patient's experience of the hospital environment, designers should also include patients in the design process.

Accordingly, designers and researchers can benefit from a design approach that is connected with the role that health care staff, caregivers, and patients each play in improving the healing environment of the hospital.

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