



AMERICAN
MEDICAL CENTERS

YOUR HEALTH

Nº3

A Publication of American Medical Centers Group



AMC ATYRAU

THE REGION'S LEADING PRIVATE
FAMILY HEALTHCARE NETWORK

PERSONALIZED,
LIFESTYLE,
AND CONCIERGE
OUTPATIENT
CARE SERVICES

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Mr Alex Sokol
President and CEO

AMC and Your Health

From our beginnings, AMC has held a simple goal: to design and structure our clinics and care model with you and the patient experience at its core. For over 25 years we have sought to bring the best that western medicine could offer, to provide care with service excellence, without compromise.

AMC remains loyal to our belief that quantity cannot replace quality, trust, and integrity. We continue to commit to a patient-centered model in all we do: no access fees, living-room comfort, direct insurance billing, and a genuine and caring relationship with your AMC physician.

As a regional healthcare network with 250 professionals, 8 locations and nearly 25,000 patient visits per year, we are expanding rapidly.

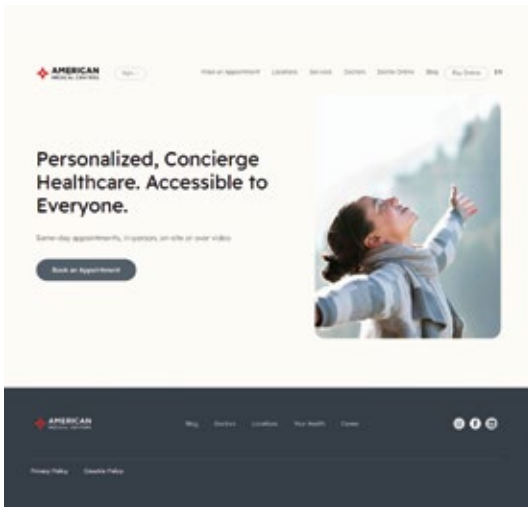
This summer we are excited to announce the opening of AMC Atyrau and our first health venture in Western Europe, AMC Assist Milan! AMC's website re-launches with direct and immediate online physician capabilities, personalized medical cabinets, and unlimited physician consultation subscriptions. Further, we continue to develop our insurance and assistance partnerships, creating unique and beneficial referral and in-clinic collaborations with local and global healthcare partners. Finally, our online and in-clinic services and health product development remain a top priority as we invest in existing and greenfield sites and online technology platforms. Stay up to date on all AMC developments at www.amcenters.com.

Any goal means little without purpose and the right intention. We seek nothing less than to be your preferred health partner, in clinic or online, a health network committed to you.

Yours Sincerely,

R. Alex Sokol,
President / CEO
asokol@amcenters.com





AMC'S WEBSITE REDUX

American Medical Centers is excited to announce the launch of its newly redesigned website: www.amcenters.com.

AMC's site offers easy navigation, a user-friendly interface, tons of health content, and AMC's Direct online portal providing monthly, quarterly and annual online subscriptions with unlimited physician access.



WELCOME AMC MILAN

This autumn, AMC dives into Europe with a wholly unique care model, centered on you, the individual.

The AMC Milan office is a phone call away for direct physician visits and best referrals, expanding our promise to you of no access fees, insurance billing, ample visit time, continuous medical education, and top service.



AMC ATYRAU

We are very excited to announce a June 2022 opening of our third Kazakhstan health facility.

Introducing AMC, Atyrau's only 24/7 concierge-based healthcare solution from the region's largest premium clinic network and most trusted healthcare provider.

AMC is committed to compassionate and individualized healthcare.



Dr. Richard Styles
Medical Director AMC Group

It has of course been another amazing year that has in some ways changed all our lives. My first thoughts are to thank our Medical Staff across all our Clinics who have shown great professionalism in dealing with Covid-19, often placing themselves at risk of infection and in using a huge degree of emotional energy in caring for our patients. Thank you.

Covid-19 has changed all our lives and some changes, such as home working, may continue long into the future. In many ways the virus has driven us to have a closer relationship with our own health, both physical and emotional. In terms of physical health, we have become more involved in good nutrition, exercise and in gaining a health status that helps us increase our immunity and prevent the serious consequences of viral infection. Because of the lack of entertainment and home working, decreasing the need for early morning travel, we have learnt to sleep more which had benefits both for our immune systems and for our psychological well-being. Our relationships with partners and children have been modified, and often with positive effects.

This edition of our newsletter helps us to capitalise on all these factors, encouraging us to obtain better health and more resistance to disease. Its format is fun and applicable to all ages, both for individuals and families. AMC and all its staff have a similar approach to health, projecting a modern approach both with professionalism and huge positivity.

Richard S. Styles



YOUR HEALTH

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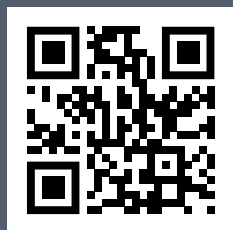
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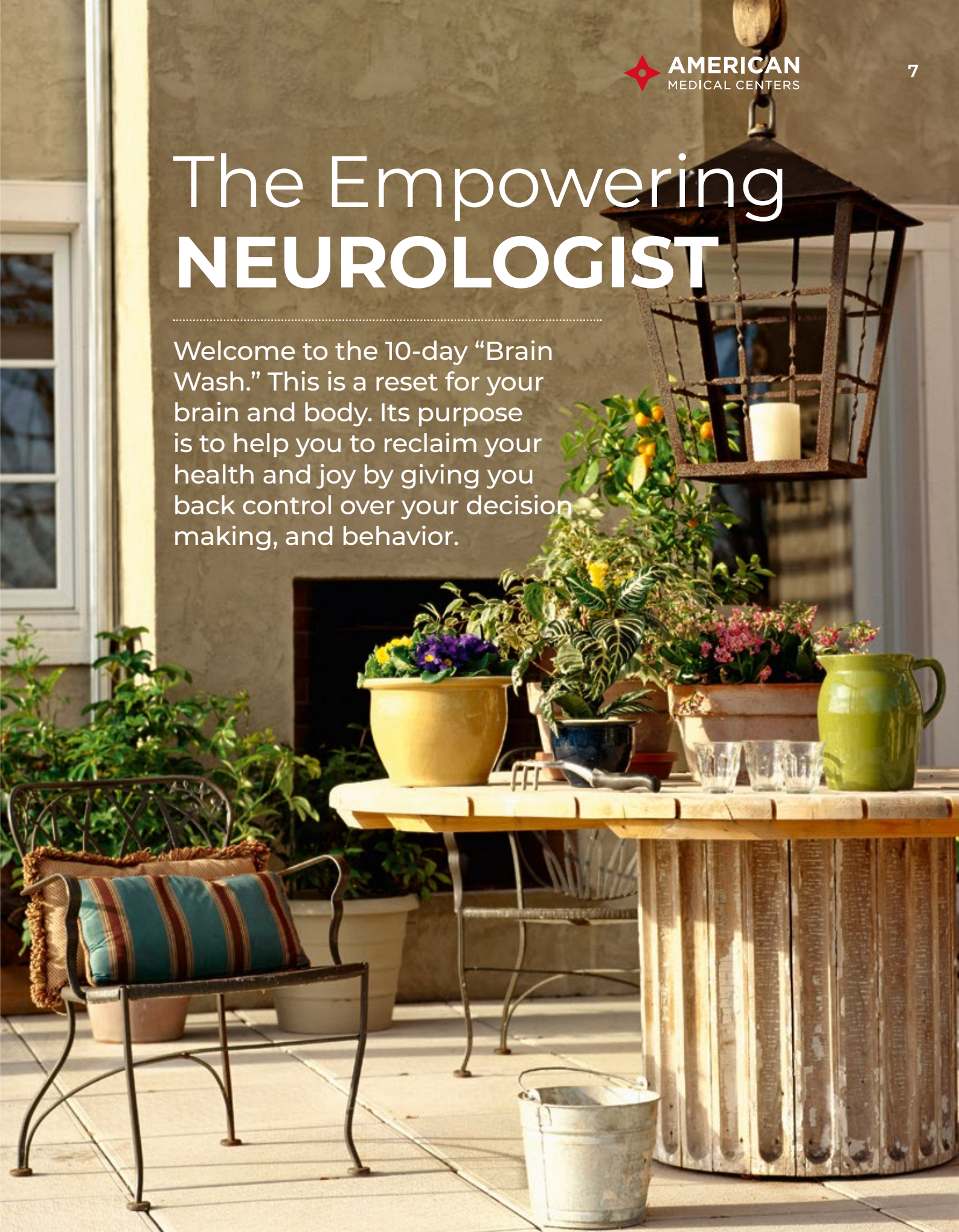


1.1

HACKING YOUR BRAIN

The Empowering **NEUROLOGIST**

Welcome to the 10-day “Brain Wash.” This is a reset for your brain and body. Its purpose is to help you to reclaim your health and joy by giving you back control over your decision making, and behavior.



You will transform your habits, your relationships, and the way you experience your life. It starts with just 10 days of focused effort. You can do this.

DAY 1: THE DIGITAL DETOX

First and foremost, you need to create barriers between your brain and the incessant influence of digital distraction. The idea is not to completely cut technology out of your life. Instead you will overhaul your use of digital devices. You will get what you need from technology while limiting its ability to hijack your time.



DAY 2: PRACTICING EMPATHY THROUGH GRATITUDE

Reflecting on the positive aspects of your life and the people you care about is an exercise in mindfulness and empathy, and studies show that more gratitude means more empathy. On Day 2, write down five things you are thankful for. These can be as specific as a delicious meal or conversation with a friend or as general as your good health.

DAY 3: NATURE THERAPY

We understand that most people don't live within walking distance of an expansive forest. That's fine. Instead, the idea is to do what is possible given your individual circumstances. We're asking you to spend at least 30 minutes today somewhere in nature.



DAY 4: FIGURING OUT FOOD

Dietary change has to start in the places where you have the most control: your kitchen and pantry. Now is the time to take a good look at what you've been eating. While it's easy to make exceptions (such as saving those cookies and cans of soda for guests or keeping the cereal "just in case"), this is the moment to embrace the word no. This would include:

- All forms of processed, refined carbs, sugar, and starch.
- All artificial sweeteners and products made with artificial sweeteners. Evict even the sugar substitutes that are marketed as "natural."
- Sugar alcohols, including sorbitol, mannitol, xylitol, maltitol, erythritol, and isomalt.
- Processed meats, such as bacon, sausage, ham, salami, smoked meat, canned meat, dried meat, hot dogs, corned beef, and cold cuts.



DAY 5: SUCCESSFUL SHUT-EYE

Who would have thought that those hours of semi-unconsciousness at night could be so valuable? The research on the health benefits of sleep is absolutely stunning. There are three ways to prepare for successful sleep that you'll focus on:

- Create a sleep sanctuary: Make your room as quiet, peaceful, and sleep-friendly as possible. This means removing distractions (e.g., TVs, computers, phones, tablets, and so on).
- Plan to cut out all caffeine after 2 p.m. Establish a bedtime routine that tells your body it's time for sleep. Even if you're not in your bedroom, limit all exposure to bright light within an hour of bedtime.
- Wind down: Just before bedtime, consider taking a warm bath or shower, listening to calming music, or reading a book.





DAY 6: EMBRACING EXERCISE

Getting consistent exercise may seem daunting. The idea is not to force yourself into something disagreeable but to see exercise as a form of medicine that preserves your brain and body while improving your mood and decision-making. Be realistic about your starting point: If you haven't exercised in several years, you shouldn't get up and run 10 miles. The goal is sustainable movement!



DAY 7: MEDICATE WITH MEDITATION

Meditation is one of the best ways to debug your mind. We're not recommending a specific type of meditation because the main goal is just to make it part of your day – like exercise. If you want to start with a basic technique that doesn't require technology, just sit and focus on your breathing for 12 minutes. Use Day 7 to try one form of meditation and continue the practice daily thereafter.

DAY 8: STRONG BONDS

You'll benefit from this activity by spending at least 10 minutes of unbroken time connecting with another person each day. The catch: The connection has to take place in person or on the phone (or on a video chat), and it has to entail a conversation dedicated to learning something new about the other person.



DAY 9: TAKING STOCK

How's it going? You might feel like you're just getting started, but now is the time to evaluate how the previous eight days went and where you want to go from here. Review any notes you've taken so far. What parts of the plan were the most challenging? What has been relatively effortless? You probably have work to do in some areas, and that's OK.



DAY 10: MOVE FORWARD

Bravo!

You are on your way to a better life. You've begun to make significant changes that are affecting you right now on many levels, including your mood, metabolism, and brain function.

Most importantly, you've started down the path of taking back your thoughts and actions – allowing you to break free from disconnection syndrome.

The last step of this plan is to create a framework so you can continue to benefit from the lessons in this book for years to come.

Ping Pong, Walks, and Mind EXERCISES

Brain doctor Daniel Amen says “mental hygiene” is just as important as washing your hands. As a psychiatrist and brain disorder specialist for more than 30 years, Amen says being on lockdown and dealing with the spread of coronavirus can lead to “unhealthy thinking patterns,” which could have detrimental long-term effects.

Amen, the author of books including “Change Your Brain Change Your Life,” says the absolute worst thing people can do during this time is “to believe every stupid thing they think.”

“We call it killing ‘ANTs,’” Amen explains. ANTs are “automatic negative thoughts” that come into your mind and try to ruin your day and throw you off balance, Amen says. “If you watch the news too much, you’re loaded with an automatic negative file,” he says.

To combat such thinking, Amen created some daily, simple techniques to help decrease negative thought patterns and improve brain health. In fact, he uses them himself.

MORNING POSITIVITY

Like most doctors, Amen believes in making sleep a priority,

especially during a pandemic. So he sticks to the same sleep schedule, going to bed at 10 p.m. every night and waking up at 6:30 a.m. But he says the most crucial part of his morning routine, is what he does as soon as he opens his eyes in the morning.

“I say to myself, ‘Today is going to be a great day.’” It sets up his mind to look for what’s going right in his day rather than what’s going wrong, he says.

10,000 STEPS


As the founder of a chain of national brain health clinics called Amen Clinics, the doctor’s day consists of multiple conference calls. But Amen makes it a point to never sit down during calls. Instead, he walks and talks. Each day, Amen says he makes an effort to get in at least 10,000 steps. It’s not only for exercise; it’s also good for brain health, he says.

When a person is standing or walking, the brain showers itself with a growth factor called BDNF (brain-derived neurotrophic factor, essentially a protein for the brain), which helps the brain thrive, neuroscientist Rahul Jandial told Make It in July.

PING PONG

During the pandemic, Amen says he has been playing a lot of ping pong with his 16-year-old daughter, which he considers to be one of the “world’s best brain games,” saying it can help your mind stay sharp.

Amen cites a recent small study published in the American Academy of Neurology with “promising” results – it found that people with Parkinson’s who played ping pong once a week for six months showed “improvement in their Parkinson’s symptoms.”



Ping pong has been shown “in the general population to improve hand-eye coordination, sharpen reflexes and stimulate the brain,” said study author and doctor Ken-ichi Inoue of Fukuoka University in Fukuoka, Japan, in a statement

1.2

LONGEVITY

5 a Day for **BETTER HEALTH**

If you're getting five daily servings of fruits and vegetables, good news – you may be on track for a longer life.

An analysis of multiple studies published online March 1, 2021, by *Circulation* found that people eating the government's daily recommended amount of fruit and vegetables had a lower risk of early death than people who ate only two servings per day. This included a lower risk of death from cardiovascular disease, cancer, or respiratory disease. But daily servings from starchy options – such as peas, corn, or potatoes – or from fruit juices, didn't seem to have the same beneficial effect.

The Harvard researchers looked at 66,719 women and 42,016 men from two large studies. They also included an analysis of 24 other studies. The risk reduction from eating fruits and vegetables was seen across all the various studies.

At the start of the study periods, participants were free from cancer, diabetes, and cardiovascular disease. They were asked to fill out dietary questionnaires at the beginning of the study and every two to four years after that. During a nearly 30-year follow-up, more than 18,000 participants died. The researchers found that people who ate two servings of fruit and three of vegetables each day were least likely to die during the study period compared those who ate fewer servings. And five seems to be the magic number, because additional daily servings of fruits and vegetables didn't reduce overall or disease-specific death rates any further. The benefit plateaued after people reached five daily servings.





HATE BEETS?

Beets are a healthy vegetable but how often do they appear on your plate? Let's talk about what you are missing if you are not eating organic beets either fresh or prepared in a way to preserve the nutrients (not canned).

BEETS LEAVE HEALTH CLUES. THEY BLEED!

If this clue leads you to believe that **beets** might be good for the cardiovascular system - you are right! If you start to ponder all the ways that healthy blood flow benefits the body, you might wonder if it is helpful for athletic

performance, cognitive function, and libido. Again, you are right!

Beetroot is rich in vitamins, minerals, anthocyanin, betacyanin, phenolic compounds, flavonoids, vitamin C, and other biologically active components. Beets are unique because they contain powerful betalains. These compounds have antioxidant,

anti-inflammatory, detoxification, and anti-**cancer** properties.

HEALTH BENEFITS OF BETALAINS

- Antiviral, antibacterial, antifungal and anti-protozoal activity.
- Anticancer properties.
- Improves ratio of HDL cholesterol to LDL cholesterol and lowers the level of oxidized LDL.
- Lowers blood glucose and body weight.
- Liver protective. Induces detoxification phase II enzyme.
- Improves mitochondrial function.
- Lowers blood pressure.
- Fights **inflammation**.

BETES ENHANCE EFFICIENCY OF MITOCHONDRIA – BENEFITS FOR ATHLETIC PERFORMANCE, STAMINA, AND ENERGY

Studies have demonstrated that beetroot juice can enhance **exercise** performance. Beets are high in dietary nitrate shown to increase the production of nitric oxide. Mitochondria, the energy producers in cells, work more efficiently, and physical performance increases.

Researchers stated, “We conclude that dietary nitrate has profound effects on basal mitochondrial function. These findings may have implications for exercise physiology- and lifestyle-related disorders that involve dysfunctional mitochondria.”

Increasing nitrate intake by consuming beets improves endurance exercise performance. Consumption of nitrate-rich, whole beetroot improves running performance in healthy adults.

Dietary nitrate supplementation from beetroot juice improves performance during intense intermittent exercise.

Aging is associated with an impaired ability of the vascular endothelium to increase plasma nitrite and nitric oxide during exercise. Adding dietary nitrate in the form of beets gives the body a ready source of nitrates to produce nitric oxide which results in lower oxygen demand during exercise. A 2007 study concluded that energy production becomes more efficient.

BETROOT SUPPLEMENTATION PROVIDES CARDIOVASCULAR HEALTH BENEFITS

Beetroot juice ingestion substantially lowered blood pressure by up to 3-10 mm Hg over a period of a few hours in healthy volunteers. Vasoprotective and antiplatelet aggregation properties were attributed to the conversion of nitrate in beetroot to nitrite which is reduced to nitric oxide.

HOW TO CONSUME BETES FOR HEALTH BENEFITS

Once one understands the many health benefits of consuming beets, we need to consider what form is best. When purchasing beets, look for organic beets. Beets grow underground and their

thin skin means they easily absorb chemicals and heavy metals.

- Avoid long cooking times to keep the betalains from being damaged.
- Cut medium beets into quarters. No need to remove the skin before steaming. Steam for 15 minutes. Rub the skin off with a paper towel.
- Grate raw beets for salads or use them to garnish soups.

BET SHOTS, JUICES, POWDERS, AND SUPPLEMENTS

When purchasing beet products, consider the country of origin and the extent of processing. Many “budget beets” are grown in Asia and then processed somewhere else into beet shots, beet juice, and beet powders. Choose products using organic beets with minimal processing. Canned beets and boiled beets will be deficient in desired nutrients.

As with any supplement, consider the “other ingredients” added to the beetroot. Guar gum, citric acid, natural flavor, silica, maltodextrin, rice powder, magnesium stearate, and cheap juices for filler and flavor are often added.

A good alternative is a high-quality beet powder prepared from organic beets. These powders can be mixed into water or smoothies and some come in capsules.

A **home freeze dryer** will give you the ability to make your own beetroot powder and you control the quality of the beets. Researchers suggest using this method to prepare beet powder and adding the beet powder to your daily smoothies.

IRON and Your Health

One-quarter of the world's population is anemic, meaning they don't get enough iron to produce the red blood cells and oxygen-carrying hemoglobin needed to nourish their myriad cells.

In developed nations like the United States, iron-poor blood is uncommon. Anemia attributable to iron deficiency affects perhaps 1% to 2% of American adults.

"Because our country usually has a problem of eating too much, most adults meet the minimum requirements for iron intake," says nutrition researcher Howard Sesso, an associate professor of epidemiology at Harvard Medical School.

In the United States, blood loss is the main cause of iron deficiency and anemia. Among women, heavy menstrual periods and childbirth account for this. Among those age 65 and older, the causes of iron deficiency and anemia are likely to be internal bleeding, difficulty absorbing iron and other nutrients, and eating a less varied diet.

The average American man harbors about 3.5 grams (one-eighth of an ounce) of iron in his body. The average woman has about 2.5 grams.

Where do we keep this iron? Roughly 60% of it is held by the oxygen-carrying hemoglobin protein in red blood cells. The next largest storehouse is ferritin, a protein that latches onto iron and sequesters it in the liver, spleen, and bone marrow. When the body needs to draw on its iron account, it comes out of the ferritin bank.

Without enough stored iron, an individual can develop anemia. Symptoms include fatigue, loss of stamina, shortness of breath, weakness, dizziness, and a pale, unhealthy complexion. So precious is iron for your health that the body uses a protein called transferrin like a scrap metal collector to scrounge iron from old red blood cells before they are destroyed.

KEEPING THE RESERVOIR FULL

Most of us get the iron we need from food. Proponents of the Paleo or "caveman" diet should be cheered to know that red meat, poultry, and fish contain the most easily absorbed form of dietary iron – called heme iron. This is iron attached to the hemoglobin protein. The body absorbs heme iron more easily than the iron found in plants.

"In the typical American diet, the main sources of iron tend to be animal products," Sesso says. "Typical meat consumption in the United States is usually more than adequate to meet one's iron requirements."

In plant foods, iron is not attached to such a protein. The body doesn't absorb non-heme iron from fruits, vegetables, beans, and other plant foods as

easily as it absorbs heme iron. That means those who eat little or no meat must take in more iron from leafy greens, legumes, whole grains, mushrooms, and other iron-rich plant foods. They also need to get enough vitamin C, which helps the body absorb iron from food.

The USDA recommends that women between the ages of 19 and 50 get 18 mg of iron a day, while women ages 51 and older and men 19 years and beyond need 8 mg a day. Moderate amounts of meat plus fruits and vegetables can provide that amount, helped along by the many foods fortified with iron and other vitamins and minerals, like milk, flour, and breakfast cereals. And half of all Americans get some iron from a daily multivitamin.

One caution about iron: If you don't think you are getting enough iron, or feel pooped out and assume it's your "tired blood," you may be tempted to pop an iron supplement as insurance. But beware. The body does not excrete iron rapidly. That means it can build up over time and, in some people, becomes toxic. The genetic disorder hemochromatosis causes iron to build up in organs, causing heart failure and diabetes.

So don't just prescribe yourself an iron supplement on a whim; ask your doctor if you need it.



FOOD	PORTION	IRON CONTENT
Fortified cold breakfast cereal	3 ounces	30 to 60 mg
Spirulina seaweed	3 ounces	28 mg
Oysters	3 ounces	9 mg
Cream of Wheat	1 serving	9 mg
Pumpkin seeds	3 ounces	8 mg
Spinach, boiled and drained	1 cup	7 mg
Lentils, cooked	1 cup	7 mg
Soybeans, cooked	1 cup	5 mg
Kidney beans, cooked	1 cup	4 mg
Beef, ground	4 ounces	3 mg
Turkey, ground	4 ounces	3 mg

1.3

FATIGUE



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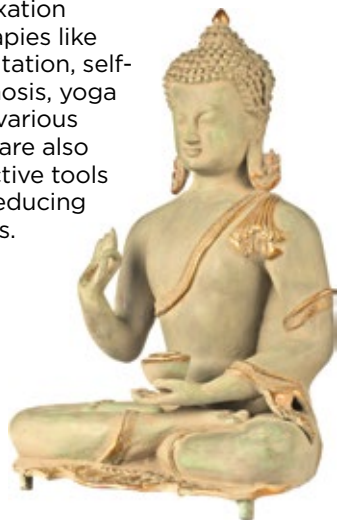
9 Tips to Boost Your Energy – **NATURALLY**

Go to the store, and you'll see a multitude of vitamins, herbs, and other supplements touted as energy boosters. Some are even added to soft drinks and other foods. But there's little or no scientific evidence that energy boosters like ginseng, guarana, and chromium picolinate actually work. Thankfully, there are things you can do to enhance your own natural energy levels. Here are nine tips:

1 **CONTROL STRESS**

Stress-induced emotions consume huge amounts of energy. Talking with a friend or relative, joining a support group, or seeing a psychotherapist can all help diffuse stress.

Relaxation therapies like meditation, self-hypnosis, yoga and various teas are also effective tools for reducing stress.



2 **LIGHTEN YOUR LOAD**

One of the main reasons for fatigue is overwork. Overwork can include professional, family, and social obligations. Try to streamline your list of "must-do" activities. Set your priorities in terms of the most important tasks. Pare down those that are less important. Consider asking for extra help at work, if necessary.

3 **EXERCISE**

Exercise almost guarantees that you'll sleep more soundly. It also gives your cells more energy to burn and circulates oxygen. And exercising can lead to higher brain dopamine levels, which helps elevate mood. When walking, pick up the pace periodically to get extra health benefits.



4 AVOID SMOKING

You know smoking threatens your health. But you may not know that smoking actually siphons off your energy by causing insomnia. The nicotine in tobacco is a stimulant, so it speeds the heart rate, raises blood pressure, and stimulates brain-wave activity associated with wakefulness, making it harder to fall asleep. And once you do fall asleep, its addictive power can kick in and awaken you with cravings.



5 RESTRICT YOUR SLEEP

If you think you may be sleep-deprived, try getting less sleep. This advice may sound odd but determining how much sleep you actually need can reduce the time you spend in bed not sleeping. This process makes it easier to fall asleep and promotes more restful sleep in the long run. Here's how to do it:

- Avoid napping during the day.
- The first night, go to bed later than normal and get just four hours of sleep.
- If you feel that you slept well during that four-hour period, add another 15–30 minutes of sleep the next night.
- As long as you're sleeping soundly the entire time you're in bed, slowly keep adding sleep on successive nights.



6 EAT FOR ENERGY

Eating foods with a low glycemic index — whose sugars are absorbed slowly — may help you avoid the lag in energy that typically occurs after eating quickly absorbed sugars or refined starches. Foods with a low glycemic index include whole grains, high-fiber vegetables, nuts, and healthy oils such as olive oil. In general, high-carbohydrate foods have the highest glycemic indexes. Proteins and fats have glycemic indexes that are close to zero.



7 USE CAFFEINE TO YOUR ADVANTAGE

Caffeine does help increase alertness, so having a cup of coffee can help sharpen your mind. But to get the energizing effects of caffeine, you have to use it judiciously. It can cause insomnia, especially when consumed in large amounts or after 2 p.m.

8 LIMIT ALCOHOL

One of the best hedges against the midafternoon slump is to avoid drinking alcohol at lunch. The sedative effect of alcohol is especially strong at midday. Similarly, avoid a five o'clock cocktail if you want to have energy in the evening. If you're going to drink, do so in moderation at a time when you don't mind having your energy wind down.



9 DRINK WATER

What's the only nutrient that has been shown to enhance performance for all but the most demanding endurance activities? It's not some pricey sports drink. It's water. If your body is short of fluids, one of the first signs is a feeling of fatigue.



Is Adrenal **FATIGUE** **REAL?**



Low energy and tiredness are among the most common reasons patients seek help from a doctor. Despite being so common, it is often challenging to come up with a diagnosis, as many medical problems can cause fatigue.

Doctors engage in detective work, obtaining a medical history, doing a physical exam, and doing blood tests. The results often yield no explanations. It can be frustrating for clinicians and patients when a clear-cut diagnosis remains elusive. An attractive theory, called adrenal fatigue, links stress exposure to adrenal exhaustion as a possible cause of this lack of energy.

The adrenals are two small glands that sit on top of the kidneys and produce several hormones, among them, cortisol. When under stress, we produce and release short bursts of cortisol into the bloodstream.

The adrenal fatigue theory suggests that prolonged exposure to stress could drain the adrenals leading to a low cortisol state. The adrenal depletion would cause brain fog, low energy, depressive mood, salt and sweet cravings, lightheadedness, and other vague symptoms.

WHAT ARE THE SYMPTOMS?

If you have tiredness, brain fog, lack of motivation, among other symptoms, you should first have a thorough evaluation with a medical doctor. Anemia, sleep apnea, autoimmune diseases, infections, other hormonal impairments, mental illnesses, heart and lung problems, and kidney and liver diseases are just some among many medical conditions that could cause similar symptoms.

If the workup from your medical professional turns out normal and you believe you might have adrenal fatigue, I would recommend you consider a fundamental question: Why would your adrenals be drained? Take a better look at what types of stress might be affecting you. For many, the hectic pace of modern life is to blame.

The lack of a biological explanation can be disappointing. To make things worse, it's not unusual for doctors to say "there is nothing wrong with you" or "this is all in your head." The overwhelming amount of information on the Internet that recommends many types of treatment causes even more stress.

Mental health conditions, such as depression or anxiety, may have symptoms similar to adrenal fatigue and may not respond well to antidepressants and counseling. And some patients do not believe that a mental health concern is the primary cause of their symptoms and many refuse medications due to concerns about their side effects.

SO WHAT'S A PERSON TO DO?

Navigating this ocean of uncertainty is not an easy task. Symptoms associated with adrenal fatigue probably have multiple causes. Frequent follow-up visits and a strong patient-clinician partnership are critical elements for success.

Alternative and complementary clinicians often have

better results, because the appointments tend to last longer and they view patients through a more holistic lens.

“

An important word of caution: some medical professionals prescribe cortisol analogs to treat adrenal fatigue. Cortisol replacement can be dangerous even in small doses. Unintended consequences can include osteoporosis, diabetes, weight gain, and heart disease.

Regardless of what we call it, there are millions of people suffering from similar symptoms, and a personalized plan that involves counseling, medications, supplements, lifestyle change, among others could work for many.

Improvement following these programs is slow, and the evidence is weak, but I hope advances in big data, genomics, and its relationship with the environment and the microbiome, may shine a light on how to better help people who suffer from these ailments.

The adrenal fatigue theory may fit like a glove to explain your symptoms, which are very real. But before buying expensive protocols over the Internet to treat something we're not even sure exists, take a deep dive and reexamine your lifestyle. The path to feeling better may be closer than you think.

SLEEP to Solve a Problem

“Sleep on it. Things will look better in the morning.” This advice, often given by a parent, is said with love and good intentions, but it still makes us roll our eyes because we just want to go to sleep – not think, not assess options. We certainly don’t want to wait until tomorrow. But ...?



"We all do that," says Dr. Robert Stickgold, professor of psychiatry at Harvard Medical School. "We solve problems while we're asleep."

More importantly: we're supposed to. The brain is doing its nighttime job of finding connections, so when we wake up, we have a different take. It can feel like stress, but rather than fight it, there are ways to accept the nightly review of the day so it doesn't turn into a sleepless assessment of our entire lives. The first step is understanding how it works.

HOW THE BRAIN SOLVES PROBLEMS DURING SLEEP

When you're awake and trying to work through a sticky problem, the go-to approach is often taking a piece of paper and listing the pluses and minuses. But there are usually too many items, and you don't know how to sufficiently rate the importance of each one, so "it doesn't help you," Stickgold says.

But when you get into bed, the brain does a triage and "rifles through the events of the day and sees what's left unfinished," he says. It's picking out what has some "effective buzz," the emotions that happened during or shortly after something took place. The brain uses these memory "tags" as indicators that the event was important and that there's more to figure out. Essentially, the brain is saying, "I think I can help you."

Two elements make this happen. The prefrontal cortex gets shut down. This part of the brain handles executive decision-making (which includes rational thinking and impulse control), but now there's no critical edge or categories to put ideas in. The brain can freely associate and, as

Stickgold says, "process in the background."

And when you get into the REM stage of sleep, the neuromodulators norepinephrine and serotonin are turned off. Norepinephrine enhances focus on immediate, concrete problems.

"It's the reason you don't want to hear about someone's 'brilliant idea' when you're approaching a deadline," he says.

There's little known about what happens when serotonin is shut off, but Stickgold suggests it biases the brain into identifying looser connections as valuable. With both neurochemicals at bay, fragments of ideas can come together.

"You have enhanced discovery of weak associations, ones you'd never notice," Stickgold says.

The result is that you wake up the next day suddenly thinking, "I don't want to take a job in Iowa," or "yeah, Iowa." It can feel like a gut decision, one you can't necessarily explain. It also may not be the final one, but something has shifted.

"You're not in the same place as when you went to sleep," says Stickgold, adding that it can't all be explained, and science can't calculate whether what you decide is right. "It's a nonrational process."

STAYING UP TO WORK ON A PROBLEM DOESN'T WORK

You might be a person who turns problems over and over while waiting for sleep. What the brain wants to do before you fall asleep is see a thought and go

to the next one. What you may end up doing is latching on to one thought, then you ruminate; regrets start creeping in, and that triggers a rush of adrenaline, which can take 10 to 15 minutes to burn off, Stickgold says.

It helps to acknowledge a thought and let it keep moving, similar to the practice of observing thoughts without judgment during meditation. There are a number of imaging devices that can work: having a ticker tape or balloon shuttle it away, or putting it on a tee and knocking it down the fairway. The main thing is to realize that the mere existence of the thought is not a problem.

But if thoughts persist, there are calming steps. If you are worrying whether the garage is closed or the oven is off, rather than continuing to wonder, "there's nothing wrong with getting up and checking," Stickgold says. For less immediately fixable issues, keep a notepad by your bed and write down a reminder for tomorrow. If you're worried you'll forget a particular concern or idea, this gets it out of your head and guarantees you'll see it in the morning.

What doesn't help is getting up in the middle of the night to "work" on a problem. You just end up being exhausted the next morning, and you're no closer to a decision or solution. The answer, however uncomfortable it might initially feel, is to let the thought parade march on through.

“

"Look at the period of fretting as a gift," Stickgold says. "It's setting up the brain for taking issues and lining them up for an incredibly productive eight hours. It's kind of elegant in a way."

1.4

LIFESTYLE

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No Equipment **NECESSARY**

Not ready to return to the gym, post-COVID? All you need for a great all-body workout is your own body weight. Before dumbbells, 24-hour gyms, and workout videos, people exercised using only their own body weight. This is still a popular and practical choice for fitness.



“Don’t underestimate the power of moving and lifting your body weight against the force of gravity and resistance,” says Robert Correia, a physical therapist assistant with Harvard-affiliated Spaulding Rehabilitation Hospital. “You can get an all-around workout by using only your body, and the results are often comparable to using weights and workout machines.”

HOMEGROWN BENEFITS

Body-weight exercises offer many unique benefits for older adults. First of all, they are versatile: you can do them anywhere and don’t need any equipment. Body-weight training is also ideal when returning after an injury or long layoff, when you need to build endurance and confidence.

“You have greater control and comfort not having to deal with equipment,” says Correia. “You can increase or lower the intensity of body-weight exercises as needed by varying your pace, position, and speed.”

There are all kinds of body-weight exercises – lunges, jumping jacks, sit-ups, squats, to name but a few – and most offer variations to fit your fitness level. But here is a three-move body-weight routine to get you started. Perform it on its own or as part of your regular workout.

PUSH-UPS

The classic old-school exercise works several muscle groups at one time: the arms, chest, shoulders, and core. Push-ups can also be modified to fit your current ability.

- 1 Begin in a full plank position with your arms extended, palms flat and just below shoulder level, feet together or about 12 inches apart.
- 2 Keep your back straight and your weight evenly distributed.
- 3 Look down and lower your body until your elbows are at 90° (or go to the floor to rest, if needed) and then push back up to complete one rep. Try to take two seconds to go down and one second to go up.
- 4 Do eight to 10 reps while maintaining good form. (Take a break between reps, if needed.) As you improve, work toward two to three sets of 10 reps.

“Whether you do push-ups on the ground or against a wall or counter, go slowly and push with a force like you are trying to move a stalled car,” says Correia.

CHAIR SQUATS

Squats strengthen your upper-leg and core muscles, which will improve your overall stamina and help prevent falls.

- 1 Sit on a chair with your feet hip-width apart. Place your hands on your thighs, by your sides, or out in front.
- 2 Tighten your buttocks and abdomen. Exhale and push your feet into the floor as you slowly stand up.
- 3 Inhale and slowly sit down. Repeat the movement eight to 10 times to complete one set and work up to three sets.

Make sure to move at a normal pace – one second to rise and one second to sit. For greater intensity, slow the pace to two or three seconds each.

STEP-UPS AND STEP-DOWNS

Step-ups strengthen your legs and are similar in motion to using a leg press machine. Any type of step is suitable for performing step-ups, like the bottom step of staircase or a sturdy step stool.

- 1 Stand with your feet parallel, about hip-width apart, and your arms at your sides. Maintain good posture.
- 2 Slowly place your right foot firmly on the step or platform while keeping your torso upright. Shift your weight forward and push your right leg into the step, straighten your right leg to raise your body up, and place your left foot alongside your right foot. Hold for a second or two.
- 3 With your weight on your right leg, step backward with your left leg and place your left foot on the floor in its original position. Then shift your weight to your left leg and step off the platform with your right foot, returning to the starting position. This is one rep.
- 4 Do eight to 10 reps; then switch, so you lead with the left foot, and do another eight to 10 reps. This completes one set. Work up to three sets.

Cultivating Joy as a **FAMILY**



The pandemic has been hard on families. There has been so much loss, so much hardship, so much stress, and so much change. What makes it even harder is that there is so much uncertainty about when and how it will end; our lives, and the lives of our children, are going to be disrupted for the foreseeable future.

There is so much we cannot control in all of this that it's easy to lose sight of what we can control. One thing we absolutely can do is cultivate small moments of joy in each and every day. It doesn't have to be a lot, or anything fancy or complicated. That's the thing about joy: it can be very simple.

Children have a great capacity for joy. It doesn't take much to make them happy. It's even easier to make them happy if you do something with them – which can have the added benefit of making parents happy too, as the joy of children can be infectious.

BRINGING THE JOY

Here are some ideas for simple, fun things you can do as a family that can bring joy. You can adapt them to the age and temperament of your child.

- **Play board games**
If you feel like it, change the rules (which may make them more accessible for younger children). You can even make up your own board game, with some cardboard and markers and whatever you want to use for board game pieces.
- **Bake!**
There's nothing like making sweets to make everyone happy. A box of brownie mix or premade cookie dough is fine. Nobody is going to judge you.
- **Paint and draw**
If you can, go outside and do it.
- **Build things –**
from blocks, cardboard, anything. Make a city. Leave it up and add to it. Build a fort, inside or outside, and have a picnic or sleepover in it.
- **Go for walks as a family;**
play I Spy as you go. Family bike rides can be fun, too. Or

just kick a ball around. Anything you can do to be active somewhere without a ceiling is great.

- **Play dress-up**

Dig out clothes from your closet. Be fancy (your local dry cleaner could use some business) or silly.

- **Put on a play**

(perhaps while dressed up). You could hang a sheet as a curtain. Or do a puppet show. If you don't have puppets, they are easy to make with socks and markers. Have someone film it on their phone so you can all watch it together.

- **Read out loud**

There are so many books that are exciting and fun to listen to. You can start with books written for children and branch out to classics. My children really enjoyed books by E.B. White and Roald Dahl, as well as the Chronicles of Narnia series by C.S. Lewis. You can take turns reading if you have older children.

- **Put on music,**

clear a space, and have some fun.

You can get everyone in the family involved in coming up with ideas. Have people write things down on index cards or pieces of paper and put them in a bag or bowl, and then choose randomly or together.

Try to devote some regular time at least a few times a week to just being happy. It could be a family ritual – maybe even one that takes root and becomes a permanent part of your family life.

Those moments can add up, you'll see. It doesn't change the way the world is now, but anything we can do that makes us relax and be happy, and gives us a pleasant memory, is good – and good for us.

How to Upgrade YOUR HEALTH

The fall season marks the end of sunny summer months and the beginning of cooler fall weather. As with any change of season, this transition often means a time of self-reflection, personal transformations and goal setting for many. From deep cleaning the house to purging your closet to committing to a new routine for your mental and physical health, autumn seems to be an excellent month for new beginnings.

Committing to a daily routine can benefit your overall health and wellness in many ways: it can help to reduce stress, increase your focus, and remind you to take critical steps toward your health goals. Incorporating health supplements – especially probiotics and multivitamins – into your day, making room in your schedule for movement, and taking “me time” are a few ways to help you upgrade your day with your health in mind.

START THE DAY STRONG

Creating an easily achievable morning routine is an essential first step to structuring your entire day. Still, your morning routine relies heavily on what you choose to do the night before. Ensuring you go to bed early enough for a full night's sleep is critical if you want to start waking up in a bright and productive mood. From there, create a list of things you'd like to accomplish each morning to

help you ease into the day. For example:

- Don't hit the snooze button – wake up on the first alarm
- Drink a full glass of water
- Take your daily multivitamins and/or health supplements
- Read a book before looking at your phone or any other devices
- Enjoy the quiet, or listen to your favourite music to get you ready for the day ahead
- Make yourself a healthy breakfast and include a natural probiotic to help promote healthy digestion throughout the day.

KEEP YOUR NUTRITION ON TRACK

Nutrition is one of the most important factors when it comes

to developing healthier habits. You must eat a variety of whole grains, vegetables and proteins – meat-based or vegetarian alternatives – throughout the day to keep your body and mind functioning at their peak. If you find it challenging to incorporate wholefoods into your daily diet, healthy vitamins and supplements can help. Try adding a probiotic or a multivitamin into your meal plan.

KEEP YOUR NUTRITION ON TRACK WITH PROBIOTICS

Probiotic supplements deliver a variety of benefits, primarily when it comes to digestive and immune support – but probiotics can also help support the brain and heart.* Natural probiotic supplements are made of live bacteria and yeast that help improve functions in the body.

KEEP YOUR NUTRITION ON TRACK WITH MULTIVITAMINS

Based on your age, lifestyle and specific needs, multivitamins provide a range of benefits that help to upgrade your health. The main goal of a multivitamin is to fill in any nutritional gaps that you may have, increasing your intake of important vitamins and minerals.

In addition to supplementing your nutrition with probiotic supplements and multivitamin tablets, it's essential to stay hydrated throughout the day. Drinking plenty of water benefits the entire body, including your digestive system, heart, joints, skin and other organs.

KEEP MOVING AND STAY ACTIVE

With a new morning routine and improved nutrition under your belt, daily movement is another important strategy for structuring your day for better health. Moving your body every day – whether that's lifting weights or a simple stroll around the block – can benefit your health both physically and mentally. The key to incorporating daily movement into your routine is to find a workout, sport or activity that you love – even better if it's something you can do with friends or family.

Even if you find you're strapped for time in your busy day, taking a break away from work to stretch your legs can make a huge difference. From making external physical changes like building a morning routine and exercising daily to boosting your health internally through nutrition and supplementation, there are so many positive ways to structure your day for better health. Get started today by seeing which probiotics or multivitamins might work best for you.



1.5

MANAGING LIFESTYLE DISEASES

How to Change Your **GENES** and **DESTINY**

How can we harness the power of epigenetics for good? In 2008 the National Institutes of Health (NIH) announced it would pour \$190 million into a multilab, nationwide initiative to understand “how and when epigenetic processes control genes.”

Dr. Elias Zerhouni, who directed the NIH when it awarded the grant, said at the time – in a phrase slightly too dry for its import – that epigenetics had become “a central issue in biology.”

This past October, the NIH grant started to pay off. Scientists working jointly at a fledgling, largely Internet-based effort called the San Diego Epigenome Center announced with colleagues from the Salk Institute – the massive La Jolla, Calif., think tank founded by the man who discovered the polio vaccine – that they had produced “the first detailed map of the human epigenome.”

The claim was a bit grandiose. In fact, the scientists had mapped only a certain portion of the epigenomes of two cell types (an

embryonic stem cell and another basic cell called a fibroblast). There are at least 210 cell types in the human body – and possibly far more, according to Ecker, the Salk biologist, who worked on the epigenome maps. Each of the 210 cell types is likely to have a different epigenome. That’s why Ecker calls the \$190 million grant from NIH “peanuts” compared with the probable end cost of figuring out what all the epigenetic marks are and how they work in concert.

Remember the Human Genome Project? Completed in March 2000, the project found that the human genome contains something like 25,000 genes; it took \$3 billion to map them all. The human epigenome contains an as yet unknowable number of patterns of epigenetic marks, a number so big that Ecker won’t

even speculate on it. The number is certainly in the millions. A full epigenome map will require major advances in computing power. When completed, the Human Epigenome Project (already under way in Europe) will make the Human Genome Project look like homework that 15th century kids did with an abacus.

But the potential is staggering. For decades, we have stumbled around massive Darwinian roadblocks. DNA, we thought, was an ironclad code that we and our children and their children had to live by. Now we can imagine a world in which we can tinker with DNA, bend it to our will. It will take geneticists and ethicists many years to work out all the implications, but be assured: the age of epigenetics has arrived.



PREDIABETES DIAGNOSIS as an Older Adult



As our bodies age, the risk of type 2 diabetes increases.

It is estimated that 25% of adults older than 65 have type 2 diabetes, while half of people over 65 have prediabetes.

We know that having type 2 diabetes as an older adult requires proper lifestyle, and sometimes medications, to control the disease and reduce the risk of diabetes-related complications, but the implications of having prediabetes at this age are not totally clear.

Prediabetes is a phase that often precedes the development of type 2 diabetes. Both diabetes and prediabetes are diagnosed based on laboratory test results. The most traditional test is known as fasting plasma glucose (sugar) (FPG). It is usually measured in the morning after fasting for eight to 10 hours.

Diabetes and prediabetes can also be diagnosed by an oral glucose tolerance test (OGTT). Plasma glucose is measured before and two hours after orally ingesting a drink containing 75 grams of sugar.

A third test to diagnose diabetes and prediabetes

is the measurement of glycohemoglobin (A1c) in the blood. A repeat test is usually required to confirm a prediabetes or diabetes diagnosis for all of these laboratory tests.

In young and middle-age adults it is extremely important to know if someone has prediabetes, as it not only implies a higher risk of developing type 2 diabetes, but it also frequently occurs with conditions such as obesity, high blood pressure, and elevated fats in the blood (like cholesterol and triglycerides), all of which increase the risk for cardiovascular disease.

The good news is that type 2 diabetes can be prevented, or at least delayed. Therefore, lifestyle modifications are usually recommended to all adults who are diagnosed with prediabetes.

ARE THE IMPLICATIONS OF BEING DIAGNOSED WITH PREDIABETES AS AN OLDER ADULT THE SAME AS FOR A YOUNGER OR MIDDLE-AGE ADULT?

The Atherosclerosis Risk in Communities (ARIC) Study followed 4,000 adults who were 45 to 64 years old in the late 1980s. A recent analysis of 3,412 individuals from that group who were 71 or older found that those who had prediabetes (based on FPG or A1c levels) at the start of this analysis were more likely to remain in this intermediate state of prediabetes, or return to normal glucose values instead of progressing to diabetes, after a follow-up period of 6.5 years.

In fact, fewer than 12% of people in this study progressed from prediabetes to diabetes, no matter what test was used to measure blood sugar levels.

These findings would suggest that having prediabetes as an older adult does not seem to be as important in identifying the risk of progressing to type 2 diabetes as it is in younger adults.

YOU CAN'T GO WRONG WITH EATING HEALTHY AND BEING ACTIVE, NO MATTER WHAT AGE YOU'RE DIAGNOSED WITH PREDIABETES

Whereas it is very likely that having prediabetes as an older adult does not have the same implications as it does in younger adults, following general lifestyle recommendations to eat healthy and engage in regular physical activity seems prudent when possible.

In fact, healthy lifestyle changes were very successful in reducing the risk of type 2 diabetes in people 65 and older in the DPP. Having a healthy lifestyle as an older adult provides many additional health benefits to the body and mind.

It is important to acknowledge that not all older adults are able to follow these recommendations, due to the presence of multiple acute and chronic medical issues that affect their eating habits and limit their physical activity, and managing these conditions may be more important than a slight elevation in their blood sugar levels.

“

In the end, it is important to discuss the implications of being diagnosed with prediabetes with your health care providers, and to individualize your treatment.

1.6

PREVENTION



Q & A

with Max Lugavere

Max Lugavere is a filmmaker, health and science journalist and the author of the New York Times best-seller *Genius Foods: Become Smarter, Happier, and More Productive While Protecting Your Brain for Life*, published in 8 languages around the globe. He is also the host of the #1 iTunes health podcast *The Genius Life*. Lugavere appears regularly on the *Dr. Oz Show*, the *Rachael Ray Show*, and *The Doctors*.

DO MEDITATION APPS WORK?

Meditation apps can be helpful, but I'm not a big fan of relying on them because doing so keeps you tethered to your mobile device, and I believe we all outsource too much to our devices already.

Learning to meditate (without using your device as a crutch) gives you the power from within; it's akin to learning how to fish as opposed to being given a fish – and we all know how that goes. Thankfully, there are now many meditation teachers, so find one in your neighborhood who can coach you.

I'M LIVING ON A RELATIVELY LOW INCOME. I CAN'T AFFORD TO BUY EVERYTHING ORGANIC, FOR EXAMPLE. WHAT DO I DO?

Not everything you buy must be organic. Here is a simple rule of thumb: if you eat the whole fruit or vegetable, try to buy organic. For example, bell peppers, cruciferous vegetables, berries, and leafy greens like spinach.

Conventional (i.e., non-organic) spinach have more pesticide residues by weight than all other produce, with an average of 7.1 different pesticides on every sample collected in 2016 according to the Environmental Working Group (one was a neurotoxic pesticide that is banned from use on food crops in Europe).

If there is skin or a peel, it's safe to buy conventional. There is no need to purchase organic bananas, avocados, melons, or citrus, but if you plan to use or eat the peel (to zest for example), buy organic.

SHOULD I WEAR SUNBLOCK?

A slew of meta-analyses performed over the past few decades have questioned the effect of sunscreen against melanoma, the most dangerous

type of skin cancer. Plus, most drugstore chemical-based sunscreens absorb into the bloodstream at levels that are likely unsafe. Still, that doesn't make it smart to burn.

Be smart about your sun exposure, and if need be, use a safe, mineral-based sunscreen (e.g., zinc oxide) to prevent sun damage. Remember: in biology, too much of a good thing can become a bad thing!

CAN'T I GET ALL THE PROTEIN I NEED FROM PLANTS?

While animal-sourced protein is the among most concentrated and highest-quality protein, it is absolutely possible to get adequate protein on a plant-based diet – but you're going to have to work for it. Prioritize beans and lentils, and incorporate variety.

Fermented soy like tempeh can also be an option, but make sure to go organic, as soy is a major commodity crop and subject to heavy spraying of industrial agrichemicals.

And keep in mind that some protein-containing foods like nuts are actually higher in fat than protein, which can carry a huge caloric load of being used to reach your protein goals. This can inadvertently cause you to pack on the pounds if you aren't careful.

WHAT IS THE HEALTHIEST SALT TO BUY?

Modern table salts are unnatural distillations of pure sodium chloride (aka NaCl), usually combined with added iodine, a small amount of sugar to stabilize the iodine and anticaking agents.

Many people looking for a more natural alternative have begun shifting away from these processed salts to pure sea salt, though many commercially available sea salts have been found contaminated with microplastics from our increasingly polluted oceans.

The best salts, then, are minimally processed and come from pristine sources. Pink Himalayan salt is one option, containing over eighty-four minerals and trace elements, including calcium, magnesium, potassium, copper, and iron.

If you go that route, just be sure to attain adequate iodine from your food (some top sources include turkey, shrimp, and sea vegetables like kelp).

SHOULD I BE IN KETOSIS ALL THE TIME?

Certain neurological conditions may warrant round-the-clock ketosis. However, for the average person, full-time ketosis may be unnecessary and can in fact be suboptimal.

When we're in a fasted or ketogenic state, our cells begin to clean house, initiating the process known as autophagy whereby old and worn-out proteins, organelles, and even cells get recycled. But fed state physiology is important, too; it is associated with repair, protection, and rebuilding.

To be in optimal health, a balance between both must be struck on a daily, weekly, or even seasonal basis. Minimizing your intake of sugar, and grains - particularly the refined ones - and combining that with exercise and short fats, which I'll explain in the next chapter, encourages metabolic flexibility and allows for intermittent ketosis. Don't fear

veggies or in-season fruit. Even starches have a place.

CAN I DRINK COFFEE DURING MY FASTING WINDOW?

Coffee is fine to drink during your fasting window. If black, or with a little heavy cream or your fat choice, coffee will not elevate insulin or activate mTOR.

In fact, some research suggests that coffee can independently inhibit mTOR while stimulating AMPK, the energy sensor of cells that imparts a number of benefits, like improved fat burning and the creation of healthy new mitochondria.

Therefore, coffee should not disturb any of the proposed benefits of fasting, and may in fact enhance them.

HOW MUCH WATER SHOULD I DRINK DAILY?

Even mild dehydration can lead to reduced cognitive function and mood, so it's important to stay hydrated. There is no one-size-fits-all approach to how much water you need to drink to achieve that goal, though a general guideline is to have a cup upon waking up and continue to hydrate throughout the day to ensure that your pee is clear or light yellow at the darkest.

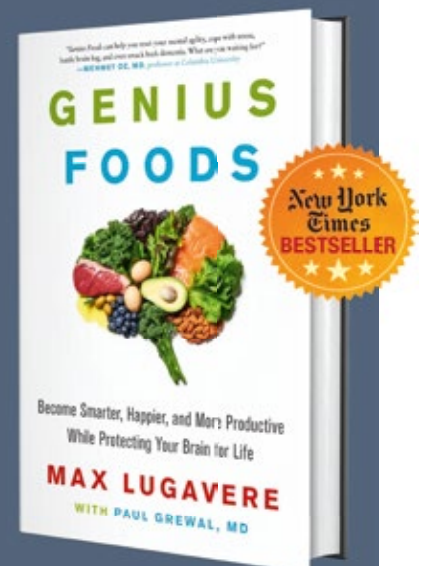
You can also reduce your need for drinking water by consuming water based foods like soups, broths, and decaffeinated teas or by eating fruits or vegetables, which provide significant water.

Activities that increase your need for fluids include caffeine consumption as well as any activity that makes you sweat (you can also lose water without sweating, which can occur in very dry climates).

MAX, YOUR FOOD RECOMMENDATIONS ARE GREAT, BUT OF COURSE NOT CHEAP?

It's commonly assumed that healthy food is more expensive, but with a little planning it can actually be cheaper. One study from Deakin University's food and Mood Center found that when people switched from a processed food diet to a whole food-based diet, they were able to save 19% on their food costs. Here are some tips:

- Stick to a smaller shopping list of non-negotiables
- Cut down on ingredients
- Buy 100 percent grass-fed ground beef and lamb instead of steaks
- Buy whole poultry
- Frozen is okay
- Buy in bulk
- Know when organic matters and when it doesn't





MALE MENOPAUSE: Myth or Reality?

Hormone changes are a natural part of aging. Unlike the more dramatic reproductive hormone plunge that occurs in women during menopause, however, sex hormone changes in men occur gradually. Here's what you need to know.

DEBUNKING THE MALE MENOPAUSE MYTH

The term "male menopause" has been used to describe decreasing testosterone levels related to aging. But aging-related hormone changes in women and men are different.

In women, ovulation ends and hormone production plummets during a relatively short period of time. This is known as menopause. In men, production of testosterone and other hormones declines over a period of many years and the consequences aren't necessarily clear. This gradual decline of testosterone levels is called late-onset hypogonadism or age-related low testosterone.

RECOGNIZING LOW TESTOSTERONE LEVELS

A man's testosterone levels decline on average about 1% a year after age 40. But most older men still have testosterone levels within the normal range, with only an estimated 10% to 25% having levels considered to be low.

Low testosterone levels in older men often go unnoticed. Testosterone levels can be checked by a blood test, but tests aren't routinely done. And many men who have low testosterone levels experience no symptoms. In addition, the signs and symptoms associated with low testosterone aren't specific to low testosterone. They can also be caused by a person's

age, medication use or other conditions, such as having a body mass index of 30 or higher.

Still, signs and symptoms suggestive of low testosterone include:

- **Reduced sexual desire and activity**
- **Decreased spontaneous erections or erectile dysfunction**
- **Breast discomfort or swelling**
- **Infertility**
- **Height loss, low trauma fracture or low bone mineral density**
- **Hot flushes or sweats**

Other possible symptoms include decreased energy, motivation and confidence, depressed mood, and poor concentration. It's also possible to experience increased sleepiness, sleep disturbances, mild unexplained anemia, reduced muscle bulk and strength, and increased body fat.

Experts recommend only testing older men for low testosterone if they have signs or symptoms. If an initial test shows low testosterone, the test should be repeated to confirm the results. If low testosterone is confirmed, further testing of the pituitary gland is recommended to determine the cause and rule out other hormone deficiencies. The pituitary gland is a kidney-bean-sized gland situated at the base of your brain. It is part of your body's endocrine system, which consists of all the glands that produce and regulate hormones.

TREATMENT RECOMMENDATIONS FOR OLDER MEN WITH LOW TESTOSTERONE

Recommendations on testosterone therapy for men with age-related low testosterone vary. In 2020, the American College of Physicians recommended

that doctors consider starting testosterone treatment in men with sexual dysfunction who want to improve their sexual function, after explaining the risks and benefits. In 2018, the Endocrine Society recommended testosterone therapy for men with age-related low testosterone who have signs and symptoms associated with low testosterone.

Some experts also recommend offering testosterone treatment to men with age-related low testosterone without the presence of signs or symptoms.

If you choose to start testosterone therapy, your doctor will explain the different ways testosterone can be administered, target levels and follow-up testing.

For some men, testosterone therapy relieves bothersome signs and symptoms of testosterone deficiency. For others, the benefits aren't clear and there are possible risks.

Though further research is needed, testosterone therapy might stimulate growth of metastatic prostate and breast cancer. Testosterone therapy may also increase the risk of heart attack and stroke and contribute to the formation of blood clots in the veins.

Your doctor will likely recommend against starting testosterone therapy if your fertility is important in the near future or if you have conditions such as breast or prostate cancer, untreated severe obstructive sleep apnea, uncontrolled heart failure or thrombophilia, or if you've recently had a heart attack or stroke.

If you think you might have low testosterone, talk to your doctor about your signs and symptoms, testing, and possible treatment options. Your doctor can help you weigh the pros and cons of treatment.

Healthcare At Your **CONVENIENCE**

Health concerns can pop up anytime, so we're here to help 24/7 with anything from headaches to back pain to COVID-19.

YOUR HEALTH IS IN YOUR HANDS

Get treated for a range of symptoms & conditions right from your smartphone. If you have a health issue in the middle of the night or you're not sure whether you should go straight to an urgent care facility or the nearest emergency room, you can just call our local office and request a Video consultation with a doctor at any time of the day.

24/7 EVERYDAY CARE

From preventive to urgent care and everything in between, our virtual care providers are there for you.

24/7 VIRTUAL PEDIATRIC CARE

Introducing Virtual Pediatric Care designed to fit your schedule, your needs, and your parenting philosophy.

COVID-19 CARE

Your AMC physician will work with you to come up with a personalized COVID-19 care plan.

SECOND OPINION

Get a second opinion from leading experts on more-serious conditions. We provide necessary consultation within minutes

MENTAL HEALTH

Need to talk things out? Book a virtual session.

Find a time that works for you and speak to a therapist on your time.

NUTRITION

Care based on nutrition and lifestyle modifications, stress management, supplements, and more is developed to help you live healthy.

WHAT WE TREAT?

- Cold and Flu
- Sore Throat
- COVID-19
- Travel illness
- Skin irritations
- Allergies
- Sports Injuries
- Eye irritations
- Diarrhea and Vomiting
- and UTI's

WE ACCEPT ALL MAJOR INTERNATIONAL INSURANCE PLANS

Please note that online consultations are completely covered by most insurance plans.

We are happy to check with your insurance provider if you have questions concerning your coverage.



Learn more:



2.1

CHILDHOOD and ADOLESCENCE

To ensure children and adolescents are receiving the nutrients needed for optimal body function and growth, it's important they meet daily intake requirements for fruit, vegetables, whole grains, protein and calcium. This includes $\frac{1}{2}$ -2 serves of fruit, 2-5 serves of vegetables, 4-7 serves of grain, 1-2 $\frac{1}{2}$ serves of protein and 1-3 $\frac{1}{2}$ serves of dairy or dairy alternative.

Zinc for immunity, pro biotics for healthy gut function, magnesium, fibre, iron, folic acid, A, B and C vitamins.





New Dietary GUIDELINES

The United States Department of Agriculture (USDA) has published new dietary guidelines to help Americans get and stay healthier across all parts of the lifespan. Babies and toddlers are included for the first time, because the recommendations cover our full lifespan.

The guidelines are called “Make Every Bite Count.” If we want to get and stay healthy, we shouldn’t be eating foods that are basically empty calories – or worse, foods that actually do us harm.

Because foods can do us harm. Eating an unhealthy diet can lead to obesity, with the cardiovascular disease, diabetes, high blood pressure, and everything else obesity brings. It can lead to cancer, tooth decay, anemia, high blood pressure, weak bones, and so many other problems. The adage “you are what you eat” is remarkably true.

WHY HEALTHY EATING IS SO IMPORTANT FOR CHILDREN

Children are building bodies and habits they will carry with them for the rest of their lives. The track they get on when they are young is very often the one they stay on, and we want that to be a good track.

Right now, 40% of children are overweight or obese, and research shows that they are likely to stay that way or get worse. Since children rely on parents and caregivers for their

food, this is on us. We literally have their lives in our hands.

STARTING WITH INFANTS AND TODDLERS: FIRST FOODS AND RESPONSIVE EATING

For infants and toddlers, the recommendations include:

- feeding with breast milk whenever possible, ideally for at least the first six months of life. When that isn’t possible, infants should be fed iron-fortified infant formula

- vitamin D for infants that are entirely or mostly breastfed
- responsive feeding: parents and caregivers are encouraged to pay attention to the cues babies give to us when they are hungry – and when they are full
- waiting to start solids until around 6 months of age.

When babies start eating solids, it's the first chance parents have to influence their tastes and food choices, so parents are encouraged to offer all sorts of different foods, including iron-fortified cereals, and also fruits, vegetables, meats, beans, and whole grains. They are also encouraged to give babies potentially allergenic foods like peanuts, eggs, tree nuts, seafood, dairy, and wheat. Research shows that giving those foods can actually help prevent food allergies!

FOODS TO AVOID AND ENCOURAGE AS CHILDREN GROW

What children shouldn't have, according to the recommendations, is anything that's made with sugar or has sugar added to it. In fact, it's recommended that children have zero sugar in their diet before the age of 2. It has no nutritional value, so it is truly empty calories – and a sugar habit is one of the many unhealthy habits that can be hard to break.

As children grow, the recommendations continue to be about healthy habits. Children should get lots of vegetables, fruits, grains (preferably at least half whole grains), protein (lean meats, poultry, eggs, seafood, beans, peas,

nuts, soy), dairy (including lactose-free and fortified soy dairy products), and healthy oils. They should get very little sugar or saturated fat (less than 10% of their calories should be from either one), and limited sodium.

Portion sizes should be appropriate for age (kids and grownups should not be served the same amount), snacks should be healthy, and the meal plate should be similar to the following: half fruits and/or vegetables, just over a quarter grains, and just under a quarter protein. That's not what most plates of food look like, if we are to be honest.

The reality is that very few children in the US eat a truly healthy diet. Almost none of them eat the amount of vegetables that they should, for example. We can turn this around, but it will mean all sorts of habit changes – not just for children, but for everyone in the household. Here are some suggestions:

- **Plan meals and snacks for the week.** Too often we end up grabbing unhealthy things because they are easy and available. Planning ahead can help, as can preparing some meals and snacks ahead of time.
- **Shop healthy!** Once you've made your plans, put the

ingredients and healthy snack foods on the list. Leave off soda, sweets, and junk food. If it's not in the house, you can't eat it.

- **Eat meals together.** Cook together, too. Family meals are good for kids and families, and the best way to set a good example.
- **Keep trying.** It can take a while for tastes and habits to change. Kids – and many adults – may need to try something again and again before they realize that it actually tastes good.

SMALL STEPS COUNT

It's okay to take things in little steps, like cutting one unhealthy thing from the shopping list a week, adding family meals gradually, or starting with one bite of vegetables and building from there. The important thing is to begin – and keep at it. That's how all good habits are built.

And good eating habits are habits we need to build, because our lives, and our children's lives, depend on them.



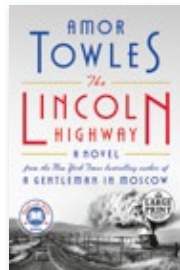
What We're **READING**...

1



A *New York Times* Notable Book of the Year. A *New York Times* Best Seller

2



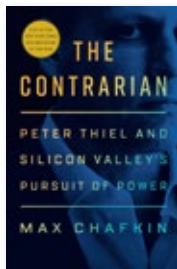
A *New York Times* Notable Book, and Chosen by *Oprah Daily*, *Time*, *NPR*, *The Washington Post* and Barack Obama as a Best Book of the Year

3



Jonathan Franzen's gift for wedding depth and vividness of character with breadth of social vision has never been more dazzlingly evident than in *Crossroads*

4



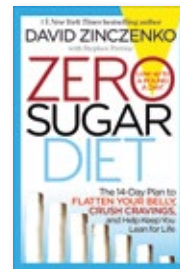
A biography of venture capitalist Peter Thiel, the enigmatic, controversial, and hugely influential power broker who sits at the dynamic intersection of tech, business, and politics

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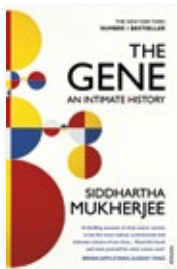
From the award-winning, bestselling author of *The Circle* comes an exciting new follow-up

6



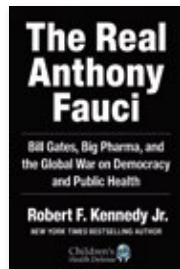
Lose up to a pound a day and curb your craving for sweets with delicious recipes and simple, science-based food swaps from David Zinczenko!

7



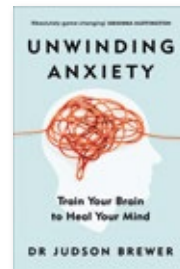
From the Pulitzer Prize-winning, bestselling author of *The Emperor of All Maladies*

8



#1 on Amazon, and *New York Times*, *Wall Street Journal*, *USA Today*, and *Publishers Weekly* National Bestseller

9



A step-by-step plan clinically proven to break the cycle of worry and fear that drives anxiety and addictive habits



EXECUTIVE Function in Children



Executive function refers to skills that help us focus, plan, prioritize, work toward goals, self-regulate behaviors and emotions, adapt to new and unexpected situations, and ultimately engage in abstract thinking and planning.

Just as a principal conductor would do for an orchestra, executive functions supervise and coordinate a multitude of cognitive, behavioral, and emotional tasks.

Executive functions in childhood are, by default, challenging. That's because, although our executive function skills begin to develop in the first year of life, they are not fully developed until early adulthood.

EXECUTIVE FUNCTION IN CHILDREN

As with other developmental milestones, there is some normal variability in the time at which children reach executive function milestones. But some children experience greater-than-normal challenges or delays related to their executive function skills.

In some children, executive function issues present as trouble with impulse control, tantrums, and difficulty in self-regulating

emotions. For others, challenges with school organization, time management, and remembering instructions are more visible. Adolescents who struggle with executive function often have a very difficult time reaching independence and making plans for the future.

Contrary to what we tend to think, executive functioning does not refer to a single ability, and executive functioning skills do not develop in a linear progression. The major components of executive functions include inhibitory control (the ability to control impulses); working memory (a type of short-term memory that involves temporarily storing and manipulating information); and cognitive flexibility, or shifting (the ability to switch between thinking about different topics). Each of these skills develops at different rates, with windows of growth and opportunity for intervention.

Executive function skills can be substantially fostered or

hindered by environmental factors including early childhood stress, family structure, and educational opportunities. Fortunately, this means these skills are extremely malleable and amenable to improvement. Evidence-based interventions have been rigorously studied and have shown that children's executive functions can be boosted following structured educational, neuropsychological, and socioemotional programs.

PROMISING INTERVENTIONS: COGNITIVE TRAINING, NEUROFEEDBACK, AND PHYSICAL ACTIVITY

Interventions targeting executive functions in children have exponentially increased in the last years. There is evidence of some benefit, which can vary depending on the child's cognitive characteristics (such as language, memory, or intellectual functioning), family functioning, and underlying medical or psychological conditions.

Perhaps the most widely known interventions are those using computerized programs, such as Cogmed cognitive training, or neurofeedback, such as Mightier. These child-friendly interventions consist of relatively intensive training (for example, several sessions per week for five to 15 weeks) of specific executive functions, such as working memory or impulse control. There are consistent data backing up the use of these interventions. But critics question whether these improvements generalize to support improved executive functions in daily life.

There is strong evidence that certain school curriculums improve executive function in young children, particularly those using a Tools of the Mind

approach. This educational approach involves a focus on teaching self-regulatory and socioemotional skills through dramatic play and cooperative learning. In these classrooms, children learn skills such as taking turns, active listening, and developing creative ways of problem-solving.

Interventions involving physical activity (such as aerobic exercise or yoga practice), as well as organized sports activities (such as soccer or basketball) and martial arts benefit the development of executive skills, as they require children to hold rules and strategies in mind, adapt flexibly to others' actions, and monitor their own performance and behavior. Physical activity is also critical for getting blood (and therefore oxygen) flowing to the brain and for emotional well-being, which are in turn essential for children's executive function development.

PROMISING INTERVENTION: MINDFULNESS

As we learn more about what improves executive functions, we also realize that stress is one thing that "freezes" children's ability to apply executive functions appropriately. Chronic stress and anxiety, often due to family, school, or health issues, is one of the biggest risk factors for executive dysfunction throughout the life span, particularly in children, for whom the executive functions that help us to manage stress have not yet matured.

To tackle both stress reduction and executive function improvement at once, mindfulness training seems like an ideal candidate. Mindfulness training involves the practice of bringing one's attention to the present moment, to what we are doing and what we are feeling,

without judgement. Mindfulness interventions have been increasingly adapted to children of all ages via simple exercises of breathing, body scanning, gratitude, and kindness towards oneself and others. The emerging data are promising, showing that children who participate in mindfulness programs show less anxiety, greater concentration and memory skills, and handle difficult emotions better.

THE TAKE-HOME MESSAGE

There is certainly not a one-size-fits-all intervention to improve executive functions in children. Typically developing children, and children with neurodevelopmental disorders such as ADHD, autism spectrum disorder, or learning disabilities, may respond very differently to each one of these interventions. Not all of them may be feasible or even appropriate for some children and families.

The best approach is one that considers each child's strengths and vulnerabilities, as well as each individual family's needs and functioning. For example, offering an overly intense computerized training to an already anxious and stressed child may not be the most appropriate option, as it would reduce the time they could have to unwind, exercise, and potentially practice emotional resilience.

Finally, regardless of the intervention, parent-child relationships are key. It is the parents' and the family's constant support, shared experiences, and time spent together enjoying everyday activities like reading books, cooking, or dancing that help scaffold children's self-regulatory skills. These are, undoubtedly, the most effective and lasting executive function foundations.

Lactobacillus helveticus is a type of lactic acid bacteria that's naturally found in the gut. It's also found naturally in certain foods, like:

- Italian and Swiss cheeses (e.g., Parmesan, cheddar, and Gruyère)
- milk, kefir, and buttermilk
- fermented foods (e.g., Kombucha, Kimchi, pickles, olives, and sauerkraut)

Lacto and PSYCHOBIOLOGICS

You can also find *L. helveticus* in probiotic supplements. *L. helveticus* has been linked to improved gut, oral, and mental health. Below we break down the research and look into the ways *L. helveticus* may benefit your health.

WHAT ARE THE BENEFITS?

Here we explain 16 possible health benefits. Some have proven results in human studies. Others are preliminary studies and results are reported in mice or in vitro. In vitro studies are done in cells in a lab. We've split them up so you can easily navigate. And while all of the studies and results are exciting, further studies, including human clinical studies, are needed to prove the results found in the preliminary mice and in vitro studies.

STUDIES IN HUMANS

1 Promotes overall gut health.

A controlled study found that consumption of *L. helveticus* promoted the production of butyrate, which helps with gut balance and stability.

2 Decreases blood pressure.

A study of 40 participants with high to normal blood pressure found the daily consumption of powdered, fermented milk tablets with *L. helveticus* reduced blood pressure without any adverse effects.

3 Improves anxiety and depression.

Preliminary results have shown that *L. helveticus* and *Bifidobacterium longum*, taken in combination, can reduce symptoms of anxiety and depression.

4 Improves sleep.

One study showed consumption of fermented milk with *L.*

helveticus improved sleep in patients aged 60–81 years.

5 Shortens the length of upper respiratory tract illnesses.

In a study that included 39 elite athlete participants, found *L. helveticus* reduced the length of upper respiratory tract illnesses.

6 Increases calcium levels.

In a study done in 2016, a group of participants between the ages of 64 and 74 ate yogurt with *L. helveticus* probiotic every morning. The study found serum calcium levels increased in those who ate the yogurt.

7 Has a positive effect on calcium metabolism.

A study of postmenopausal women between the ages of 50 and 78 found that there was a positive effect on calcium metabolism in women who were given milk with *L. helveticus*. It also found that it decreased parathyroid hormone (PTH), which is associated with bone loss.

8 Treats gut infections.

A study published in *Frontiers in Microbiology* suggests that *L. helveticus* might help treat infections in your gut.

STUDIES IN MICE

9 Learning and memory.

When mice were given Calpis sour milk whey, an *L. helveticus*-fermented milk product, the mice showed improvement in learning and recognition tests.

10 Arthritis.

In an academic study conducted researchers found *L. helveticus* decreased the production of splenocytes in mice, which can improve the symptoms associated with arthritis.

11 Dermatitis.

The very same study included mice that were given *L. helveticus*-fermented milk whey orally. Researchers found it may be effective in preventing the onset of dermatitis.

12 Fungal growth.

It has been discovered that *L. helveticus* suppressed vulvovaginal candidiasis in mice.

13 Breast tumors.

In a controlled experiment scientists discovered that mice that were fed *L. helveticus*-fermented milk showed decreased growth rates of mammary tumors.

14 Infection.

Researchers found milk fermented by *L. helveticus* given to mice offered improved protection against salmonella infection.

STUDIES IN VITRO

15 Cancer.

There have been a few in vitro studies that looked at the cancer-fighting potential of *L. helveticus*. It has been discovered that *L. helveticus* inhibited the production of human colon cancer cells. Two different studies found *L. helveticus* subdued the production of human colon cancer cells. Meanwhile, halfway across the world another study has found that *L. helveticus* inhibited the production of liver cancer cells, specifically HepG-2, BGC-823, and HT-29 cancer cells.

16 Inflammation.

In a study conducted in Hangzhou University, China, researchers looked at the ability of *L. helveticus* to modify or regulate immune functions in vitro. Their results indicated it could be useful in the development of products used to prevent or treat inflammation-associated diseases.

2.2

20s and 30s

As we reach adulthood, life becomes busy and eating healthily can be challenging. The recommended daily intake for several key nutrients, including calcium, folic acid and iron should slightly increase. Aim to eat more fruit (2 serves per day), vegetables (5-6 serves), grains (4½-9 serves), protein (2-3½ serves) and as bone density continues to grow increase your calcium (2½-4 serves).

If looking to fall pregnant, taking adequate folate (also known as folic acid) is important both before and after conception to protect your baby against neural tube defects. Iron, protein, zinc, iodine, selenium, omega-3s, B12 and vitamin C requirements also rise when pregnant or breast feeding.



Avoid These ENERGY ZAPPERS



What may seem like harmless lifestyle habits may really be robbing you of your get-up-and-go. Let's face it: we all get more fatigued as we get older.

It's part of the aging process: we lose mitochondria (energy-producing engines in the cells) and we produce less adenosine triphosphate (ATP) – the molecule that delivers energy to cells throughout our body.

Other causes of fatigue, such as medication side effects or chronic illness like depression or heart disease, can increase the feeling of tiredness or sluggishness.

But age- and disease-related factors aren't the only drains

on your energy. Your lifestyle habits may be to blame for some of your daily fatigue. The following energy zappers are common culprits that you can change.

INACTIVITY

We naturally lose muscle mass as we age.

"If you have less muscle mass, you have fewer mitochondria and less ATP," points out Dr.

Marcelo Campos, a primary care physician with Harvard Vanguard Medical Associates in Boston.

Being sedentary compounds the problem by weakening and shrinking muscles and causing them to use energy inefficiently.

Physical activity strengthens muscles, helps them become more efficient and conserve ATP, and increases the production of energy-producing brain chemicals. Don't be intimidated by the recommendation of 30 minutes per day, at least five days per week, of moderate-intensity exercise. The 30 minutes can be spread out into several shorter periods. And you don't need to break a sweat.

"Whatever exercise you can do will help," Dr. Campos says. "It can be simple, like climbing stairs or walking farther in a parking lot."

TOO MUCH STRESS

Chronic stress can increase levels of cortisol, a hormone produced by the adrenal glands.

"Cortisol reduces production of ATP and it increases inflammation, which also reduces ATP production," explains Dr. Campos. However, stress-reduction techniques are associated with lower cortisol levels.

Try yoga, mindfulness meditation, tai chi, breathing exercises, or guided imagery. Even 10 minutes per day can help.

A POOR DIET

If you're not nourishing your body, you won't have the vitamins and minerals necessary to produce enough ATP, and you'll feel more tired.

"Eating too much processed food can increase inflammation, which impairs the production of ATP and energy. Or, if you're older and your appetite isn't what it used to be, you may not give your body the calories and fuel it needs to function," Dr. Campos explains.

On the flip side, if you're eating too much food at one time, that can cause blood sugar spikes and lead to fatigue.

The fix: eat whole foods, including vegetables, fruits, whole grains, and lean proteins like fish, chicken, nuts, and seeds. The fatty acids in protein-rich foods also help boost ATP. And aim for smaller meals with snacks in between to provide your body with a steady supply of nutrients and fewer blood sugar spikes.

TOO LITTLE SLEEP

A lack of sleep increases cortisol and also promotes inflammation. If sleep issues are caused by sleep apnea (pauses in breathing during sleep), the dips in blood oxygen levels lowers ATP and energy.

Talk to your doctor about underlying problems that may rob you of sleep, such as health conditions (sleep apnea or frequent trips to the bathroom) or medication side effects.

And work on improving sleep hygiene: go to bed and wake up at the same time each day, and keep your room cool, quiet, and free of electronics, which stimulate your brain.

POOR FLUID CHOICES

Drinking sugary sodas can cause blood sugar spikes followed by a drop that causes fatigue. Being dehydrated can also make you feel tired, as can drinking too

much alcohol or caffeinated drinks near bed time (alcohol interrupts sleep in the middle of the night). Healthy people need six to eight cups of fluid per day, and more if they're exercising. Avoid soda.

"And stop drinking caffeine or alcohol within six to eight hours of bed," Dr. Campos advises.

SOCIAL ISOLATION

Being isolated – not seeing others on a regular basis – is associated with depression, and depression is linked to fatigue.

"The power of interacting with other human beings and connecting with others can bring a different outlook and give you more energy. We are learning more about this. We probably produce different types of brain chemicals that make us happier and give us more energy when we connect to people," Dr. Campos says.

Resolve to get together with others at least once per week. It can be friends, family, neighbors, or even new acquaintances.

WHEN IS LOW ENERGY A PROBLEM?

"If fatigue is affecting your day," says Dr. Campos, "or if fatigue is accompanied by any other symptoms like headache, muscle or joint pain, fever, or stomach or urinary problems, it's time to see your doctor."

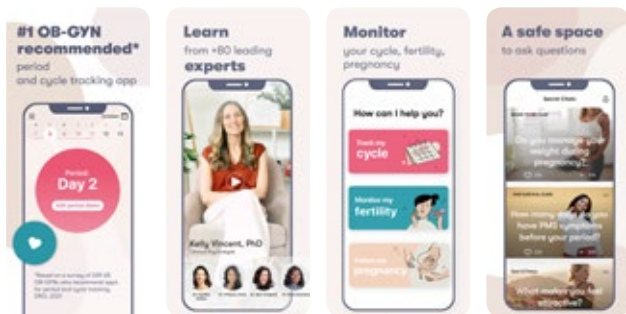
BEST PERIOD

All Free! Rated by Medical News Today



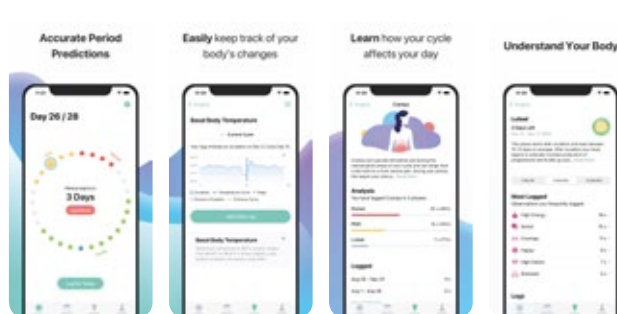
Flo

Over 200 million women around the globe have already chosen Flo as their menstrual calendar, period tracker and pregnancy assistant! Created together with 100+ scientists, doctors and health experts Flo is a #1 OB-GYN-recommended app for period and cycle tracking.



Cycles

No more feeling in the dark about your own reproductive health. With personalized observations and a unique design bringing you and your partner together, Cycles knows how to make the most out of period tracking.



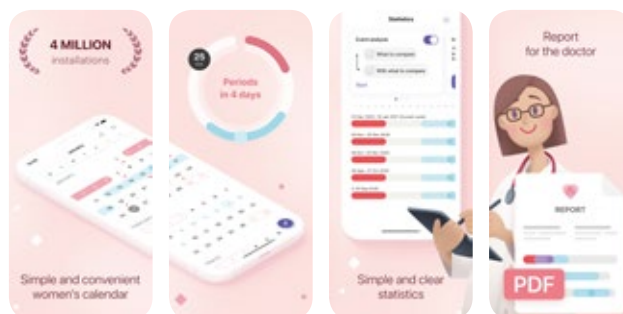
Glow

Whether you use Glow as an ovulation tracker or period calculator you will get unparalleled support. Trying to get pregnant naturally or undergoing IVF or IUI? Join the largest online community for women who are trying to conceive.



Clover

Woman's calendar - a convenient period tracker for women. This is a top-rated menstrual tracker for women, and a period tracker for teenagers as well. Menstrual cycle and ovulation calendar, for teens or women trying to keep a regular cycle.



Tracking Apps



Ovia

Ovia is the most accurate ovulation calculator and fertility tracker. Our algorithm is even an accurate predictor for women with irregular periods who are trying to conceive. Best of all, the app is free!



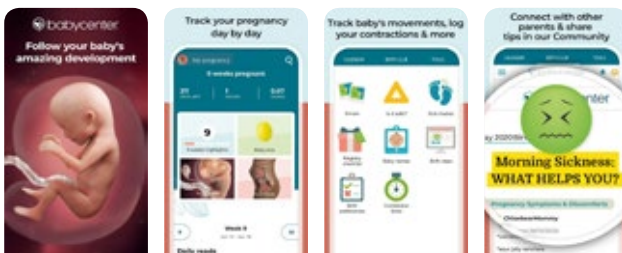
What to Expect

What to Expect, the world's best known, most trusted pregnancy and parenting brand, offers a pregnancy app that helps you prepare for parenthood and guides you through your journey day-by-day and week-by-week.



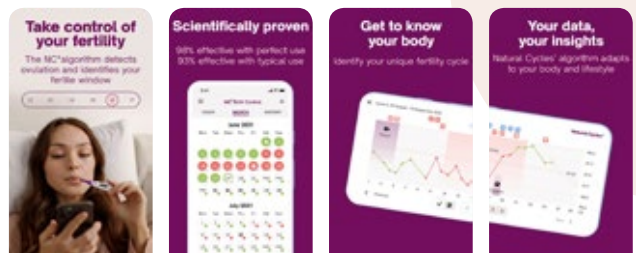
Babycenter

See how your baby is growing, track everything that's happening in your pregnancy, get help with symptoms, and talk with others due at the same time as you with the world's most beloved pregnancy app chosen by over 400 million expecting parents.



Natural Cycles

The first FDA cleared birth control app, putting power in the palm of your hand. Skip the pharmacy, no prescription needed.



90 SECOND Formula

People often receive conflicting information about how to achieve self-confidence. Confidence seems to have an amorphous quality, which makes the concept difficult to grasp and even more challenging to teach. But rest assured that it can be done – developing confidence is learnable and actionable.



Confidence develops when you have a deep sense that you can handle the emotional outcome of whatever you face or pursue. Another way to put it is that confidence is the felt sense of a “can-do” attitude.

Throughout my years working with clients and teaching and supervising graduate students, I’ve identified six ways that people build confidence, and five of them can be practiced daily. Trusting that you are emotionally strong is the foundation, followed by speaking, taking action, ending self-criticism, and absorbing compliments.

1. The first step is to allow yourself to be aware of, experience, and move through the full range of your feelings, both pleasant and unpleasant. Most of us do well with pleasant feelings but can be distracted by unpleasant ones. The key here is that you are choosing awareness, or “knowing what you know,” as opposed to avoidance and “trying not to know what you know.” In this case, it means dealing with eight unpleasant feelings: sadness, shame,

helplessness, anger, vulnerability, embarrassment, disappointment, and frustration. Allowing yourself to move toward pain and deal with the feelings that result from disappointment builds emotional strength. When you choose to be aware of and in touch with the full range of what you experience, it is very centering, grounding, and peaceful, and you feel more true to yourself. This is the start of building confidence.

2. The second step is speaking up or expressing yourself – with discretion and in a positive, kind, and well-intentioned manner – by telling the truth about what you experience. It is saying what you need to say, with whom you wish to speak, at the time you need. Think about how frequently a therapist or people close to you tell you to speak up. There’s a good reason why they advise you to do so. When you tell your well-intended truth, you’ll find that speaking up gives your confidence a major boost, because it helps you live more authentically.

3. The third step is to take actions that move you toward your goals even if it seems hard to take those risks. With both speaking up and taking action, it is not that you have confidence

and then speak or do something positive; instead, it is through speaking and taking action that you develop confidence.

4. The fourth is to end harsh self-criticism or negative self-talk. This behavior not only fosters doubt but can rob you of the will to pursue your goals. Despite some people’s beliefs that being mean to themselves helps motivate them, hurting yourself with thoughts and words is profoundly damaging. When you are tempted to belittle yourself, use your awareness of this temptation as a signal that something harder to know or bear is trying to make itself known to you. Then, ask yourself: What is difficult for me to know or bear? Any insights that emerge can help guide your future actions.

5. Though many of us are inclined to dismiss them, the fifth step is to accept the genuine compliments you receive. Compliments act as a mirror and reflection of yourself. As you let yourself take them in, they can help you settle into yourself, perhaps allowing you to see that you are already the person you want to become.

These actions can increase your confidence – the deep sense that you can handle the emotional outcome of whatever you face or want to pursue.

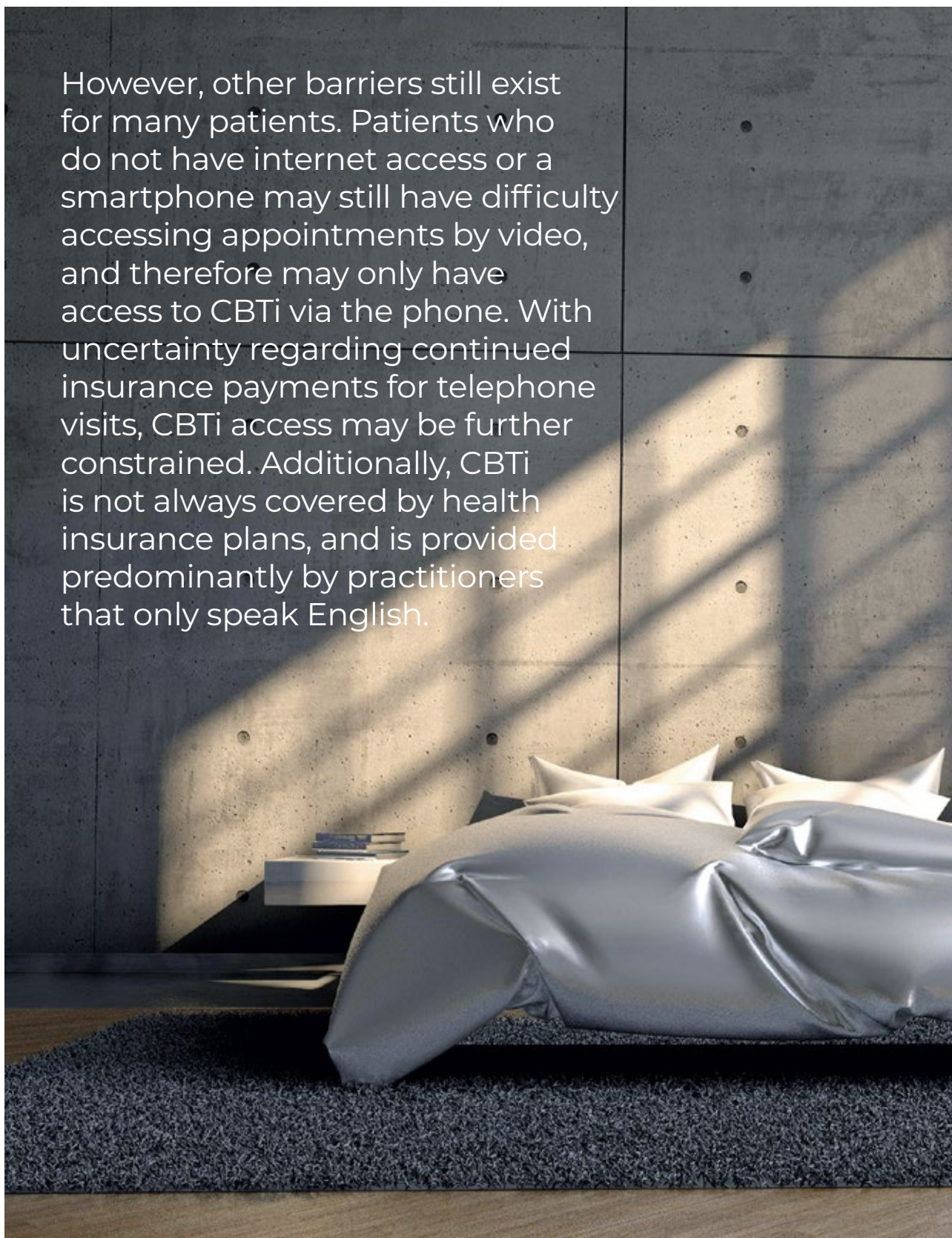
2.3

40s and 50s

Weight management is a priority during these years given the reduction in metabolic rate. Hormone levels also begin to change, and as a result we can lose collagen and muscle mass and be prone to aches and pains. Be mindful to eat lots of fruit and vegetables, essential fatty acids from oily fish, avocado, nuts and seeds, antioxidant-rich foods and be aware of meal portion.



However, other barriers still exist for many patients. Patients who do not have internet access or a smartphone may still have difficulty accessing appointments by video, and therefore may only have access to CBTi via the phone. With uncertainty regarding continued insurance payments for telephone visits, CBTi access may be further constrained. Additionally, CBTi is not always covered by health insurance plans, and is provided predominantly by practitioners that only speak English.



INSOMNIA

Treatment Through Telemedicine

Chronic insomnia, characterized by dissatisfaction in sleep quality or duration, is a common health problem affecting an estimated 10% to 15% of US adults.

Cognitive behavioral therapy for insomnia, or CBTi, is considered a first-line treatment for insomnia. CBTi often misrepresented as talk therapy or sleep hygiene, involves both behavioral and cognitive therapy to treat insomnia.

The behavioral components go beyond the information commonly found on the internet (or what your friends and family members tell you), such as avoiding caffeine or electronic devices close to bedtime, as there is a focus on limiting total time in bed (yes, you read that correctly, spending less time in bed), getting out of bed when awake, and keeping regular sleep and wake times. CBTi may also include relaxation strategies and mindfulness techniques.

While extensive research has established that CBTi is an effective treatment for insomnia, and current medical guidelines recommend CBTi as first-line treatment, there remains limited access to a small number of specialty-trained clinicians. It is also

known that self-guided approaches, such as using a book, are not as effective. CBTi is traditionally delivered in person. However, with the rapid shift to telemedicine during the global pandemic, CBTi is now commonly delivered remotely.

Is CBTi via telemedicine as good as in-person treatment for patients with insomnia?

This question was examined in a recent study, led by Dr. J. Todd Arnedt at the University of Michigan. Dr. Arnedt and his team randomized 65 adults with chronic insomnia to six individual sessions of CBTi, delivered either in person or by telemedicine. They wanted to know if CBTi via telemedicine performed similarly to (that is, not worse than) in-person CBTi in reducing the severity of insomnia symptoms. They also compared other outcomes: daytime functioning and patient satisfaction with the treatments.

What were the results?

At two different time points — at the completion of CBTi and at three months — CBTi delivered by telemedicine was not inferior to (or no worse than) CBTi delivered in person. That means that the telemedicine group did as well as the in-person group. Telemedicine was also not inferior for other outcomes, including response rates, daytime functioning, and patient satisfaction.

What does this mean?

This suggests that we have some evidence that CBTi delivered by telemedicine works, and the expected response is not reduced compared to CBTi delivered in person. This is an important piece of information — particularly now during the pandemic, when telemedicine has been rapidly adopted — and will improve access for more patients. CBTi is an effective and safe treatment for insomnia, and by eliminating travel time and geographic distance between practitioner and patient, CBTi can become more accessible.

Adult ADD

Life can be a balancing act for any adult, but if you find yourself constantly late, disorganized, forgetful, and overwhelmed by your responsibilities, you may have attention deficit hyperactivity disorder (ADHD), previously known as ADD.

While scientists aren't sure exactly what causes ADHD, they think it's likely caused by a combination of genes, environment, and slight differences in how the brain is hardwired. If you were diagnosed with childhood ADHD or ADD, chances are you've carried at least some of the symptoms into adulthood. But even if you were never diagnosed as a child, that doesn't mean ADHD can't affect you as an adult.

ADHD often goes unrecognized throughout childhood. This was especially common in the past, when very few people were aware of it. Instead of recognizing your symptoms and identifying the real issue, your family, teachers, or others may have labeled you as a dreamer, goof-off, slacker, troublemaker, or just a bad student. Alternately, you may have been able to compensate for the symptoms of ADHD when you were young, only to run into problems as your responsibilities increased as an adult.

The more balls you're now trying to keep in the air – pursuing a career, raising a family, running a household – the greater the demand on your abilities to organize, focus, and remain calm. This can be challenging for anyone, but if you have ADHD, it can feel downright impossible.

The good news is that no matter how overwhelming it feels, the challenges of attention deficit disorder are beatable.

With education, support, and a little creativity, you can learn to manage the symptoms of adult ADHD – even turning some of your weaknesses into strengths. It's never too late to turn the difficulties of adult ADHD around and start succeeding on your own terms.

MYTHS & FACTS ABOUT ATTENTION DEFICIT DISORDER IN ADULTS

Myth: ADHD is just a lack of willpower. People with ADHD focus well on things that interest them; they could focus on any other tasks if they really wanted to.

Fact: ADHD looks very much like a willpower problem, but it isn't. It's essentially a chemical problem in the management systems of the brain.

Myth: People with ADHD can never pay attention.

Fact: People with ADHD are often able to concentrate on activities they enjoy. But no matter how hard they try, they have trouble maintaining focus when the task at hand is boring or repetitive.

Myth: Everybody has the symptoms of ADHD, and anyone with adequate intelligence can overcome these difficulties.


Fact: ADHD affects people of all levels of intelligence. And although everyone sometimes has symptoms of ADHD, only those with chronic impairments from these symptoms warrant an ADHD diagnosis.

Myth: Someone can't have ADHD and also have depression, anxiety, or other psychiatric problems.

Fact: A person with ADHD is six times more likely to have another psychiatric or learning disorder than most other people. ADHD usually overlaps with other disorders.

Myth: Unless you have been diagnosed with ADHD or ADD as a child, you can't have it as an adult.

Fact: Many adults struggle all their lives with unrecognized ADHD symptoms. They haven't received help because they assumed that their chronic difficulties, like depression or anxiety, were caused by other impairments that did not respond to usual treatment.

A man in a light-colored t-shirt and khaki pants stands with his back to the camera in a field of tall grass and wildflowers. He is looking at a large, white, angular wall that stretches across the background. The wall is composed of several large, rectangular panels that meet at sharp angles, creating a complex, geometric structure. The sky is a clear, pale blue.

ADHD affects many adults, and its wide variety of frustrating symptoms can hinder everything from your relationships to your career.



PLANT PROTEIN

May Help You Live Longer

Men need sufficient protein to help maintain muscle mass and strength as they age.

A study published online July 13, 2020, by JAMA Internal Medicine suggests the source of that protein also may dictate how long they live. Scientists examined the diets of more than 400,000 people ages 50 and older, who consumed protein from plant sources, red meat, and eggs. They were then followed for more than 16 years. Those

who ate mostly plant protein instead of red meat or egg protein had a 13% to 24% lower risk of death from any cause.

HOW MUCH PLANT PROTEIN IS ENOUGH?

The researchers found that men in particular had a 12% lower risk of death for every 10 grams of plant protein per 1,000 calories they consumed.

The experts suggested that the benefits could increase if men ate even more plant protein. Guidelines recommend that healthy older adults need 1.2 grams of daily protein for every kilogram of body weight. A 175-pound man would need about 95 grams.

Good sources of plant protein include almonds (about 17 grams per 1/2 cup), tofu (20 grams per cup), lentils (about 18 grams per cup), and black beans and chickpeas (15 grams per cup).



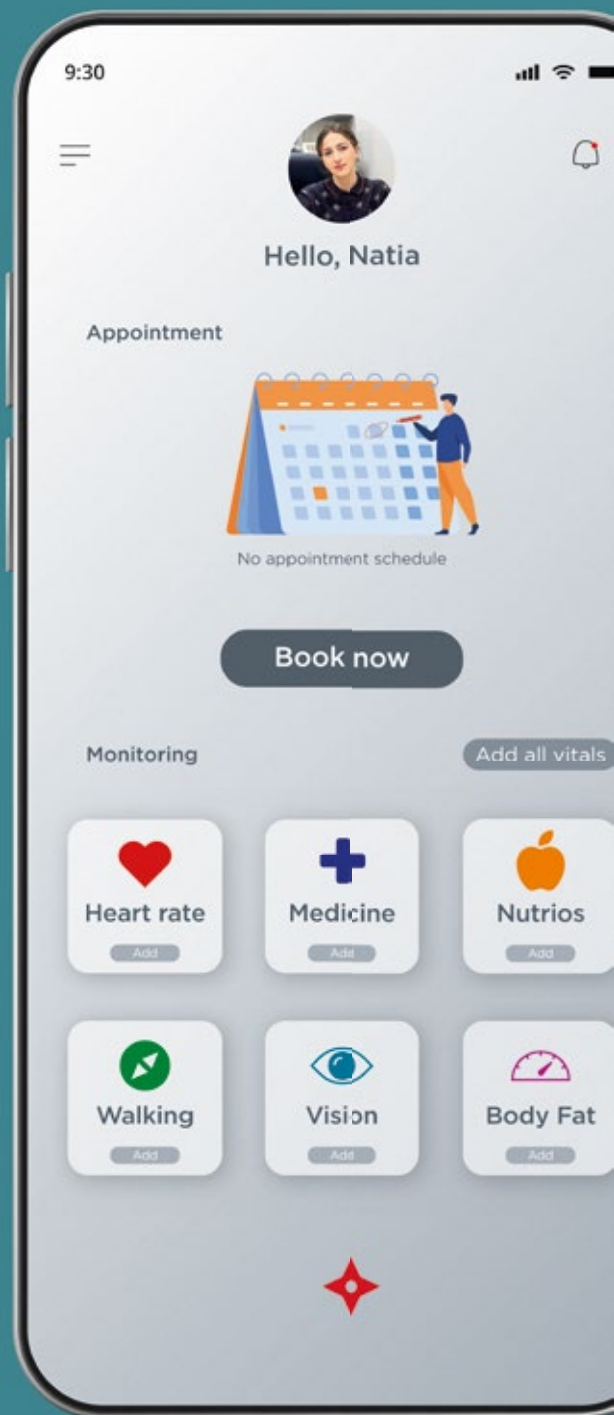
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Fermented GAZPACHO



INGREDIENTS

- 1 cucumber, peeled, seeded, and diced
- 4 tomatoes, seeded and diced
- 2 peppers, diced
- 1 small red onion, minced
- 3 cloves garlic, minced
- 1/2 to 1 cup fresh herbs such as cilantro, basil, parsley, or chives, minced
- 24-ounces vegetable juice (preferably organic)
- 2 Tbsp. balsamic vinegar
- 2 Tbsp. red wine vinegar
- 1/4 cup olive oil
- Juice of one lime, hot sauce to taste, pinch of chipotle powder (optional)
- Whey reserved from cultured dairy projects
- Sea salt

METHOD

1. Mix vegetables, liquids (except whey), and seasonings (except salt) together in a large bowl. For a smoother gazpacho, puree part or all of the mixture in the food processor
2. Place the gazpacho mixture in quart jars and add 4 Tbsp. whey and 1 Tbsp. salt to each quart
3. Allow mixture to sit for 2 days at room temperature, then transfer to cold storage



Fermented **GREEN BEAN** **SOUP**



INGREDIENTS

- 1 onion, chopped fine
- 4 potatoes, diced
- 1 quart water
- 1 quart lacto-fermented green beans, cut into 1-inch pieces
- 2 Tbsp. cold-pressed oil
- Sea salt

METHOD

1. Lightly wipe a tiny bit of oil over the bottom of a small stockpot and heat over medium heat
2. Brown the onion lightly, then add diced potatoes and water. Cover and bring to a rolling boil
3. When the potatoes are cooked, turn off the heat. Let the soup cool a bit, then add the green beans and cover but do not cook
4. Once the green beans are just warm, add the oil and a little bit of salt to taste. Serve immediately



2.4

Over 60

Re-write to the following: Protein becomes our focus, as it has been shown there is generally a decrease now in body weight and fat mass. It can be tricky to reduce heavy animal proteins and find clean organic protein but without enough protein your blood sugar levels drop and you are more likely to make bad food choices,” says Dr Laubscher. “I recommend eating more fish and including a clean organic vegan source of protein like WelleCo NOURISHING PLANT PROTEIN to fast track your day.”

A premium plant-based alternative to whey protein, NOURISHING PLANT PROTEIN is formulated with organic sprouted brown rice and pea protein to support a lean, fit and energised body. Powered by organic sprouted brown rice and pea protein that provide all 9 essential amino acids, it can be taken as a meal replacement or satisfying and filling snack to get you through until dinner.



“Sodium acetate is also available as a food additive, however, it is not advisable to use it in this form against osteoporosis, as our observed effect is very specific to certain cells. However, there are already first experiences with stem cell therapies for osteoporosis. Such a treatment with acetate could also work in such a case. However, we still need to investigate in more detail the effects on the whole organism in order to exclude possible risks and side effects,” explained Tessarz.



The Science That Could Shed **NEW LIGHT** on Aging

Aging brings with it thinner bones, more fractures, and an increased likelihood of osteoporosis. One reason for these aging ailments is the impaired function of the bone-marrow stem cells, which are required for the maintenance of bone integrity.

Now, researchers have shown that changes in the epigenome are one reason for the reduction in stem cell function. The team from the the Max Planck Institute for Biology of Aging and CECAD Cluster of Excellence for Aging Research at the University of Cologne found that acetate was a key factor in the reversal of these changes in isolated stem cells. These findings could be relevant for the treatment of diseases such as osteoporosis.

Epigenetics has been a key candidate for the cause of aging for some time – in particular, alterations in histones proteins. The research group of Peter Tessarz, PhD, Max Planck research group leader, studies the epigenome of mesenchymal stem cells. These stem cells are found in bone marrow and can give rise to different types of cells such as cartilage, bone, and fat cells.

“We wanted to know why these stem cells produce less material for the development and maintenance of bones

as we age, causing more and more fat to accumulate in the bone marrow. To do this, we compared the epigenome of stem cells from young and old mice,” explained Andromachi Pouikli, a PhD student and first author of the study. “We could see that the epigenome changes significantly with age. Genes that are important for bone production are particularly affected.”

The authors write that they study the effect of mitochondrial-nuclear communication on stem cell aging. They showed that, “aged mesenchymal stem cells exhibit reduced chromatin accessibility and lower histone acetylation, particularly on promoters and enhancers of osteogenic genes.”

The researchers investigated whether the epigenome of stem cells could be rejuvenated. To do this, they treated isolated stem cells from mouse bone marrow with a nutrient solution which

contained sodium acetate. The cell converts the acetate into a building block that enzymes can attach to histones to increase access to genes, thereby boosting their activity. The citrate remodels the chromatin landscape and “rescues the osteogenesis defects of aged mesenchymal stem cells.”

“This treatment impressively caused the epigenome to rejuvenate, improving stem cell activity and leading to higher production of bone cells,” Pouikli said.

To clarify whether this change in the epigenome could also be the cause of the increased risk in old age for bone fractures or osteoporosis in humans, the researchers studied human mesenchymal stem cells from patients after hip surgery. The cells from elderly patients who also suffered from osteoporosis showed the same epigenetic changes as previously observed in the mice.

Luke Storey commits his first hack at dawn – precisely when the sun crests the horizon at a 30-degree angle, providing a supercharged light that he swears optimally dials his circadian rhythm and neurotransmitters. Sungazing is often followed by a ten-minute plunge in an industrial freezer full of 40-degree water – a jerry-rigged ice bath.

After toweling off, the rangy, six-foot-three 50-year-old then ascends to the top of his Laurel Canyon property where he has converted a toolshed into a new-age gym that looks like it was outfitted by someone who has watched the Iron Man trilogy a few too many times.

There's a hyperbaric chamber that he meditates in before he flips on the mitochondria-boosting light panels that hang from the walls. Naked, he stands for five minutes on a full-body-vibration plate before he plops into a chair covered by an infrared heating pad and plugs himself into several gizmos as he absorbs the natural energies emitted from a \$15,000 machine called the Biocharger that, in theory, pumps up the voltage in human cells.

His favorite biohack gadget, however, is in a nearby utility closet: a suitcase containing an aluminum canister with a tube that runs through a cooling mechanism ending in a foot-long catheter, five inches of which Storey inserts into his anus several times a week to pump ozone directly into his body. Once that's all done, he's ready for a cup of coffee.

For anyone unfamiliar with Storey's popular podcast, The

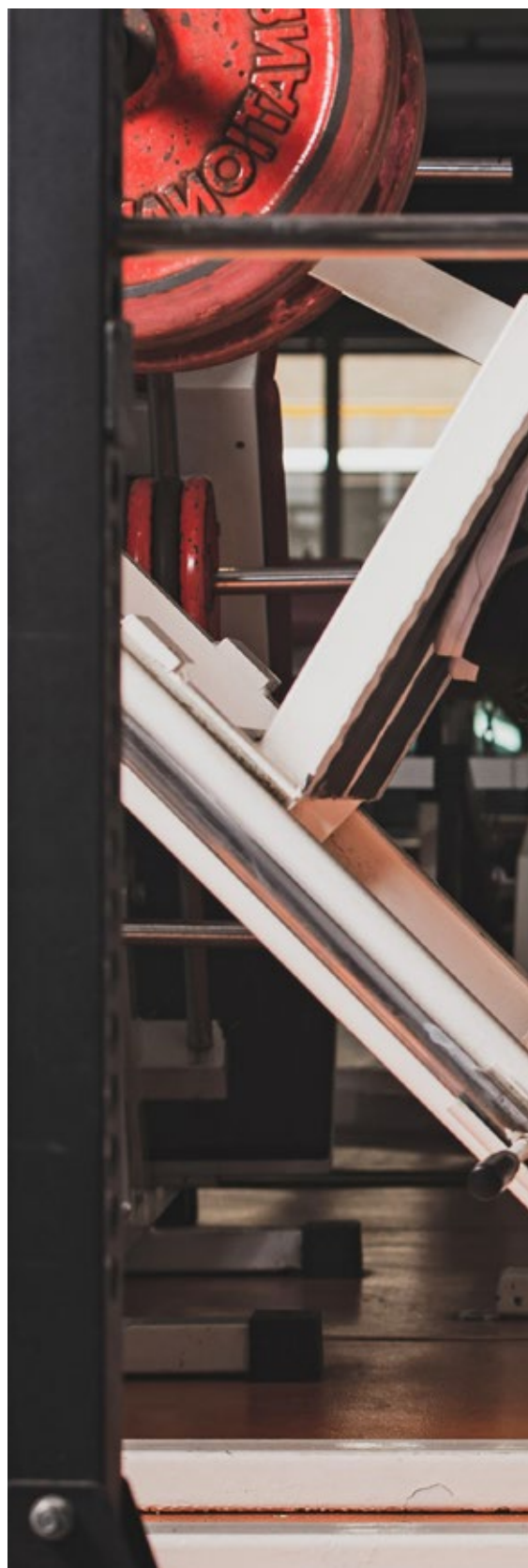
Life Stylist, on which he shares his experiences as one of L.A.'s preeminent biohackers, this daily protocol may seem like the routine of a madman.

Storey doesn't entirely disagree: "I'm amazed my girlfriend puts up with all of it," he says, referring to Alyson Charles, a local shaman who regularly walks in on her boyfriend with a contraption jammed into one of his orifices.

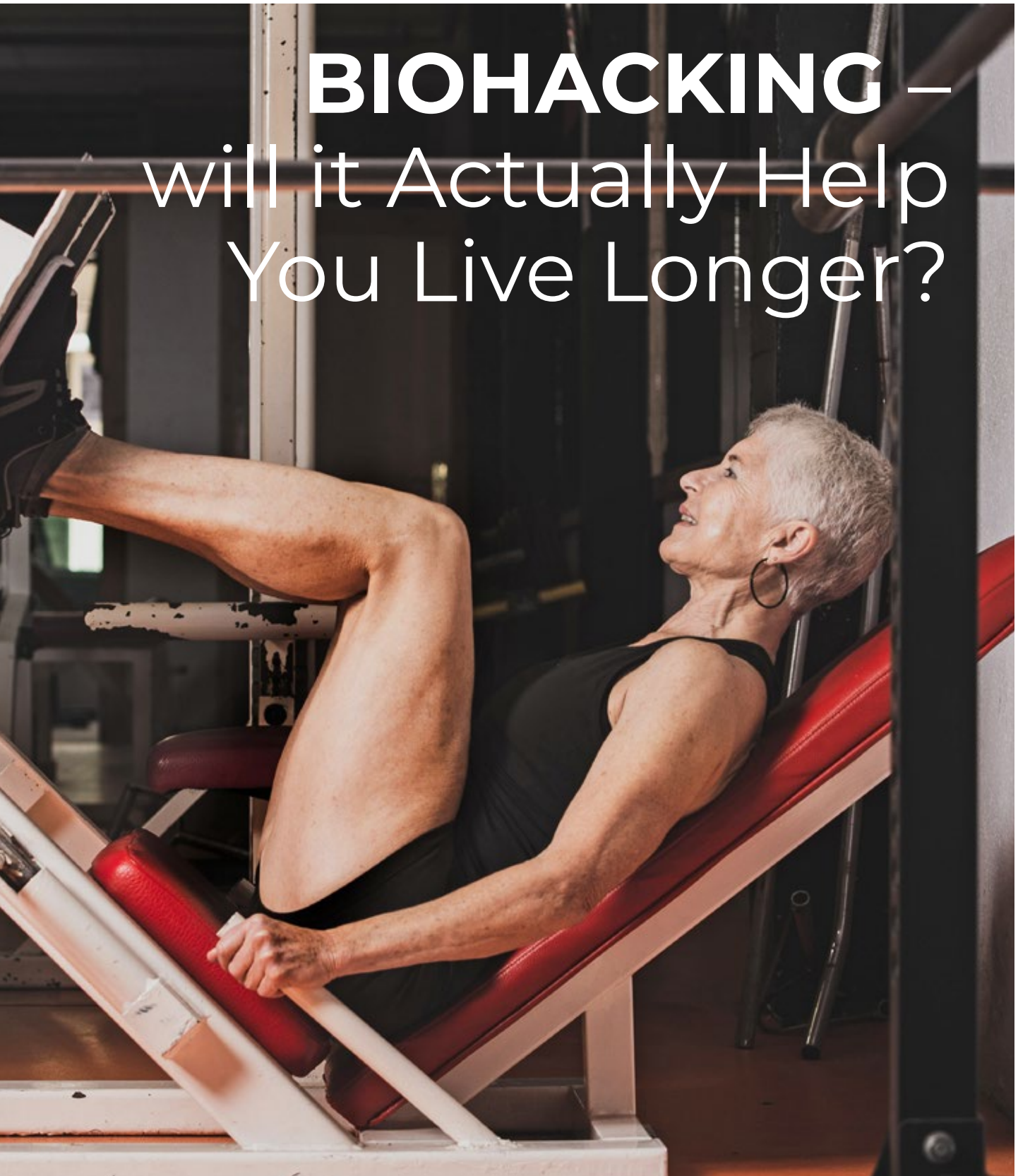
But Storey, a recovering addict and former stylist for bands like Aerosmith and Marilyn Manson, takes his profession seriously, almost messianically.

"What if you had a life where you never had to go to the doctor? And, instead, you became your own doctor? That, to me, is the essence of biohacking," he says when asked to define what he actually does.

In fact, biohacking is an amorphous term that includes a wide range of activities – everything from sleep tracking, fasting, and meditation, to implanting chips and hardware into the body. However you define it, though, it's becoming a booming new industry, with



BIOHACKING – will it Actually Help You Live Longer?



a vanguard of biohacking podcasters and deep-pocketed entrepreneurs pushing the movement into the mainstream – or at least mainstream adjacent.

Pioneers include Bulletproof Coffee founder Dave Asprey, 4-Hour Workweek lifestyle guru Tim Ferriss, and fitness mogul Ben Greenfield. (Twitter's Jack Dorsey is also an avid biohacking proponent.) In August, Tesla and SpaceX founder Elon Musk unveiled Neuralink, a new venture aimed at creating electronic-brain interfaces that can extend, enhance, or restore human capabilities.

Biohacking gyms and labs have taken root across the country, and especially in L.A., which has emerged, unsurprisingly, as the biohacking capitol of the world. Upgrade Labs has outposts in Santa Monica and Beverly Hills, Next Health is headquartered in West Hollywood and has a second lab in Century City, OsteoStrong and Peak Brain are in Culver City, while Monarch and Remedy Place are in West Hollywood.

Meanwhile, a new generation of L.A.-based biohacking thought leaders, like Storey, Max Lugavere, and Aaron Alexander, are becoming the sages of the biohack era, each boasting their own Avengers-like superpower. Keto! Movement! Consciousness!

Whether or not any of this actually adds years, or even minutes, to anybody's life is debatable. But it's clearly improving the health of a lot of people's bank accounts.

A recent McKinsey Global Institute study projects that biohacking could become a trillion-dollar industry over the next decade, an outlook that has attracted boutique investment firms like Laura Deming's Longevity Fund and Sergey Young's Longevity Vision Fund to

pour millions into start-ups within the biohacking and longevity space.

Apple, Amazon, and Google have all, in various ways, signaled an interest in competing in the sphere as well. And while the coronavirus pandemic has in some ways slowed growth, temporarily closing some of the biohacking spas, it's also opened up opportunities and helped expand the movement's reach.

Now more than ever, people are looking for novel ways to tweak and improve their immune systems and increase their life spans – even if that sometimes means getting an ozone enema.

It would be all too easy to dismiss biohacking as just the latest chapter in L.A.'s long and often fraught relationship with wellness fads. It's entirely possible that this movement is merely a dusted-off version of the countless health crazes that came before – like the Atkins Diet or Herbalife International – this time, with a high-tech twist designed for the iPhone and Erewhon era. Mitochondria-boosting light panels? Full-body-vibration plates? Does anybody really take this stuff seriously?

Biohackers do. They see themselves as part of a genuine movement that prides itself on empirical research and honors the scientific method.

"I like to be evidence-based but not evidence-bound" is how Max Lugavere describes his own rather nuanced relationship with science.

The former Current TV anchor and author of *The Genius Life* – who also hosts a podcast by the same name – is a self-taught biohacker who often cites peer-reviewed studies in his books and interviews but isn't married to them.

"The data and science are all very important," he says, "but I also recognize that science is not infallible, and that it's a continual process."

Dave Asprey, the coffee mogul and biohack pioneer, is on a Zoom call from British Columbia, where he's been hunkered down during the pandemic. He's deconstructing what he calls "shadow-banning," the alleged social media practice of silencing biohackers who publish information that challenges the status quo set by Big Pharma.

"Google destroys your search results so no one can find your blog anymore!" he says. "Your posts will get the big warning on them from Instagram, even if the post is true. But what they actually do is send less people to it so you slowly get silenced. I've interviewed the pioneers, the top people in the world – they've spoken at conferences about how ozone therapy has cured Ebola. Ozone therapy works very well for coronavirus. If I get COVID, I'd be doing ozone therapy on day one. So why is it that I'm not allowed to talk about that?"

Probably for the same reason Twitter slaps a "disputed" tag on so many of President Trump's tweets – because it's not true. There is no credible scientific evidence that ozone has cured Ebola or does anything to help with COVID.

"COVID has made people concerned about their mortality, and the data is very clear that if you're only kind of healthy your chances of dying are way higher," says Asprey. "And biohackers have been around making humans more resilient, giving them more energy and more power, and making them harder to kill."



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