WEEK 43, 2019
THE EPOCH TIMES

MIND & BODY

How Understanding Your Brain Can Help You Learn

A new book explains 6 keys to learning that can help anyone overcome barriers to success 2

Obstacles to learning are often more a function of our approach than of our ability.

5
Questions to Keep in Mind When You're Reading Media Stories About New Studies
PAGE 13

TANIA KOLINKO/SHUTTERSTOCK

How Understanding Your Brain Can Help You Learn

JILL SUTTIE

Recently, a close friend's niece was having trouble graduating from college. She needed to pass a math class to graduate, but she wouldn't take it because she feared flunking it. A belief that she just wasn't "good at math" was keeping her stuck in graduation limbo, unable to move on with her life.

I know my friend's niece isn't the first person to be cowed by a math course or some other seemingly insurmountable barrier to success. Maybe someone gave you the message that you weren't talented enough to succeed in a particular field, or you just didn't have the confidence to persevere when you struggled.

Now, a new book, "Limitless Mind: Learn, Lead, and Live Without Barriers," by Jo Boaler, explains what's wrong with this attitude. Boaler, a Stanford University math professor, argues that people can learn just about anything once they understand how their brains work and how to support their own learning. Her book is a call to discard old notions of "giftedness" and to fully embrace the new science of the mind, thereby transforming schools, organizations, and workplaces into environments that support, rather than limit, success.

The Problem With Talent

"Millions of children, every year, start school excited about what they will learn, but quickly become disillusioned when they get the idea they are not as 'smart' as others," writes Boaler. That's because parents and teachers inadvertently give out the message that talent is inborn–you either have it or you don't.

As a math professor, Boaler has seen this firsthand. Many young adults enter her class anxious about math, and their fear about learning impacts their ability to learn.

"The myth that our brains are fixed and that we simply don't have the aptitude for certain topics is not only scientifically inaccurate, it is omnipresent and negatively impacts not only education but many other events in our everyday lives," she says. Even though the science of neuroplasticity–how our brains change in response to learning–suggests learning can take place at any age, this news hasn't made it into classrooms, she says.

How Our Minds Help Us Learn

Luckily, Boaler doesn't stop at pointing out the problem but also provides tips to help anyone–whether they're math-phobic or worried about other impediments to learning–to create a new mindset.

1. Understand that your brain is always changing. "Every time we learn, our brain forms, strengthens, or connects neural pathways," writes Boaler. This means that no one is stuck at birth with a limit on what they can learn. Instead, it's the belief in giftedness–and how that impacts the way teachers teach–that actually hampers people's learning.

For example, when schools practice tracking (dividing students into different reading groups or math groups based on ability) it can produce worse results for students than keeping mixed-ability students together. As research from Teresa Iuculano and her colleagues has shown, the brains of people who have been labeled early on as "learning disabled" can be completely rewired after a short program involving one-on-one tutoring.

2. Learn to embrace struggle, mistakes, and failure. Students and teachers commonly believe that getting the right answer on a test shows that students are learning. But, as Boaler points out, it's actually when students practice difficult things–problems just beyond their ability–that the brain works harder and imprints new knowledge. This also makes knowledge more accessible later on. Practicing what they can already do well actually hinders students' learning, while making mistakes helps them focus in on different ways of considering a problem, which helps strengthen learning. When teachers encourage students to struggle and students give themselves permission to make mistakes, it can be incredibly freeing for both.

3. Change your beliefs about your mind, and your brain will follow. When you change your mind about yourself, it turns out that this will also change your body and brain. For example, researchers found that adults who had negative ideas about aging in their younger years–between 18 and 49 years old–were more likely to experience a cardiovascular event during the next 38 years, regardless of their initial age, heart health, race, or many other factors.

The same is true for how you think about your learning. For example, if young kids learn that their success in school is tied to being smart rather than tied to their effort, they may be less motivated to learn later on.

> **An important change takes place when students work together and discover that everybody finds some or all of the work difficult.**
>
> *Boaler, author and Stanford University professor*

4. Try multiple approaches to learning. Though it's important to have a growth mindset for learning–a belief that knowledge and skills aren't fixed but can be developed through effort and perseverance–it's also important to try new learning strategies. Multidimensional approaches to teaching and learning work best because they engage many areas of the brain at once, and communication between different brain areas aids in learning. Even math proficiency can be enhanced by seemingly unrelated knowledge or skills–such as verbal skills or finger perception (the ability to perceive and differentiate our fingers without looking at them).

"The new discoveries about the working of the brain are revealing the need for a different approach to teaching that is more physical, multidimensional, and creative than the approaches that have been used in the past in most institutions of learning," Boaler says.

In her own research, she found that this multi-pronged approach to teaching math–challenging students to consider problems using different strategies, such as storytelling or visual art–was much more effective for learning, especially for girls, English-language learners, and economically disadvantaged students.

GORODENKOFF/SHUTTERSTOCK

Practicing what they can already do well actually hinders students' learning, while making mistakes helps them focus in on different ways of considering a problem, which helps strengthen learning.

This suggests that approaching something you want to learn from multiple angles is better than just trying to get it "right."

5. Aim for flexible thinking rather than speed. Too often, teachers and learners think that being fast at something means you're good at it. But, as research suggests, that's not often the case. Trying to do something under pressure–such as a timed test–can cause stress, which compromises the working memory needed to recall important information. That's why Boaler argues that giving students long problem sets to solve at home, or trying to measure math performance under timed conditions, is not useful. It could also unnecessarily discourage potential future math scholars who give up early because they think speed equals competency. While some students thrive in timed tests and are adept at cramming for exams, it's not likely their learning will stick, says Boaler. Instead, engaging with material in flexible ways over time is key to learning.

6. Try collaboration. Schools that teach a growth mindset won't necessarily help students learn better if there is not peer support for the idea–meaning, if students still buy into the myth of the gifted student. It's crucial for schools to reinforce the idea that learning together is better than learning alone. As one study showed that working together instead of alone can make the difference between passing a difficult math class and giving up and failing the class.

"An important change takes place when students work together and discover that everybody finds some or all of the work difficult," writes Boaler. It reinforces the idea "that learning is a process and that obstacles are common." Focusing on collaboration in the classroom–rather than trying to test students individually–also more closely resembles the work world, says Boaler, and can help reduce the gender bias so often found in science-related subjects.

In the case of my friend's niece, she ended up drawing on the support of her aunt and connecting with a tutor who encouraged a growth mindset, taught her new strategies for problem-solving, and helped reduce her math anxiety. Eventually, she took the math class and passed with flying colors.

Her story is an important reminder that the obstacles to learning are often more a function of our approach than of our ability. As Boaler's work–and that of countless others–suggests, our minds may be less limited than we think.

Jill Suttie holds a doctorate in psychology. She is Greater Good Magazine's book review editor and a frequent contributor to the magazine. This article was originally published in the Greater Good Magazine online.

Just Because It's Work Doesn't Mean You Can't Like It

We can all find joy in our work if we nurture the ability to think about it constructively

JEFF GARTON

"It's work! You're not supposed to like it. You're paid to do it."

You've probably heard this statement before. It overlooks the possibility of contentment with your work. That kind of work involves swapping your time for dollars and putting your nose to the grindstone to fulfill your part of the bargain. And if you're not satisfied, you can always leave.

But anywhere you go, it's still work.

Even if this point of view is true, so is the possibility of recognizing your contentment. You can fulfill your part of the employment contract and still look for ways to appreciate your work by choosing to focus on what's going right. Disney's "Snow White" referred to this ability we all have as 'whistling while you work,' a metaphor for how you should be thinking while working.

In any job you take, or even in your life more broadly, you have the option to make yourself content even in dissatisfying situations. This self-sustaining ability is made possible by the fact that contentment is an emotional response to your own thinking. Emotions aren't dependent on your circumstances or what employers do, they're dependent only on how you choose to think.

The benefit of thinking intentionally in a non-negative manner is your improved attitude, motivation, and performance. This is in addition to your increased resilience, your ability to persevere when faced with frustrations linked with such things as low pay, long hours, lack of recognition, poor supervision, etc.

You also have the option to think habitually in a negative manner about your work. Rather than look for what's going right, you could ruminate about what's going wrong. So instead of whistling, you whine and complain.

But when you allow yourself to think this way, you risk creating the emotions of fear, worry, envy, doubt, and anger. You risk jeopardizing how well you feel and perform and the impressions you create. You might even lose your job and the income it provides.

The following is an excerpt from my book titled, "Career Contentment: Don't Settle for Anything Less."

This is about a man called Clay, who managed to recognize his contentment while painting an old rusty fence.

"While home from college one summer, our family doctor hired me to paint a rusty iron fence surrounding his home. It was located on Main Street of my hometown. I initially dreaded this job because the fence seemed like a mile long, and required a lot of sanding. I had to keep telling myself that I was doing it for the money.

> **You can fulfill your part of the employment contract and still look for ways to appreciate your work by choosing to focus on what's going right.**

"The job took nearly four weeks because of the rain, and it turned out to be one of the most enjoyable tasks I was ever paid to do. Things started slowly and then gradually went faster as I understood what I was doing and how to do it. Literally, everyone who walked by had something nice or encouraging to say like, 'big job, nice work, you're making progress, never saw this old fence look so good.'

"I began to look forward to each day. I knew what to expect, what to do next and how to do it, and no one was looking over my shoulder except the whole town. I found enjoyment in how the rust came off and the paint went on. I even enjoyed cleaning the brushes at the end of the day. When it rained, I didn't work, but I was concerned about whether the rain would affect the new paint.

"I frequently entertained myself by imagining how wonderful this old fence would look by the time I was done. Only after I finished the job did I realize how content the work had made me. I thought of this experience each time I went back home and saw that fence.

"The paint I applied lasted for years, but eventually the rust started to reappear. Then one summer while I was visiting home, I was glad to see someone was hired to repaint the same fence. I parked the car and made a point to walk by and tell him, 'big job, you're making good progress, and I've never seen this old fence look so good.'

"I won't repeat what he said, but I knew firsthand the job would go faster and be a lot more enjoyable if his thoughts were more upbeat and optimistic. But then again, he was just getting started and had a long way to go."

Clay discovered how each of us has the option to recognize contentment in any work we're given to do. He knew the task would be difficult before starting. But he also realized that unless he focused his thoughts, he might not finish or receive a paycheck.

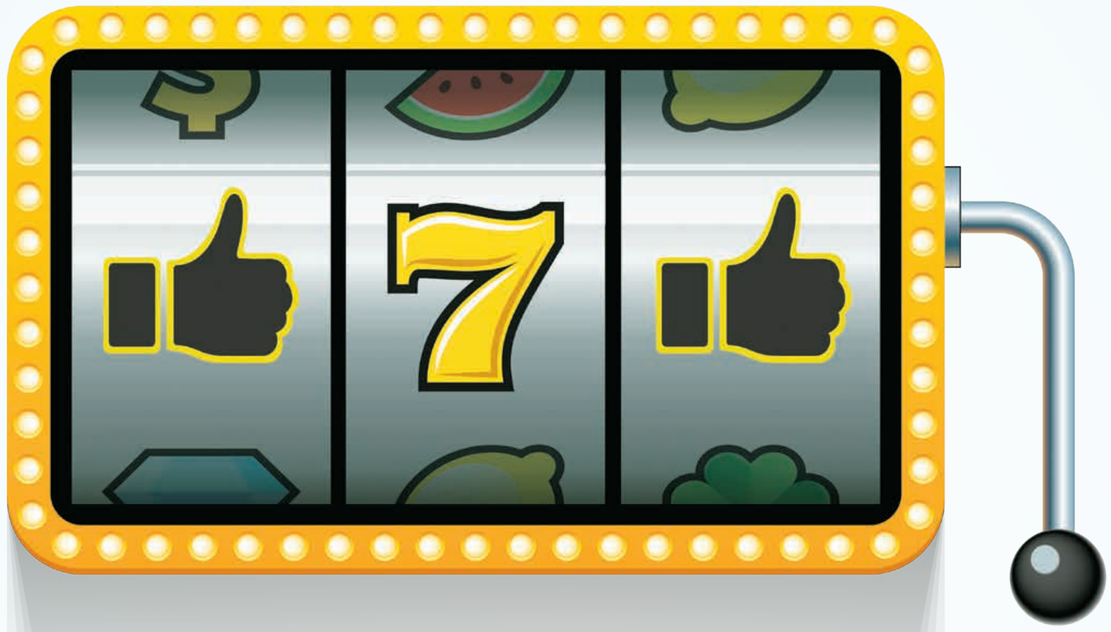
He succeeded in controlling his thoughts, finished the job, and was handed a check. In the process, Clay unexpectedly created contentment in a dissatisfying situation. Furthermore, his contentment with this task lasted for years, and will probably continue for the rest of his life.

> **In any job you take, or even in your life more broadly, you have the option to make yourself content.**

LEMUSIQUE/SHUTTERSTOCK

The benefit of thinking intentionally in a non-negative manner is your improved attitude, motivation, and performance.

Jeff Garton is a Milwaukee-based author, certified career coach, and former HR executive and training provider. He holds a master's degree in organizational communication and public personnel administration. He is the originator of the concept and instruction of career contentment.



ALL IMAGES BY SHUTTERSTOCK

HOW TO OVERCOME YOUR DIGITAL ADDICTION

Computer science professor says our drive for social approval is one factor behind the rise of digital addiction

BARRY BROWNSTEIN

In a 2016 essay, "I Used to Be a Human Being," Andrew Sullivan explored his debilitating digital addiction. His subtitle likely reads true for many people: "An endless bombardment of news and gossip and images has rendered us manic information addicts. It broke me. It might break you, too."

There is at least a bit of Sullivan in many of us, judging by the popularity of computer science professor Cal Newport's latest book "Digital Minimalism: Choosing a Focused Life in a Noisy World."

Many of us need to ask ourselves if we are mindlessly spending too much time online and not enough time in the real world.

If your online habits are interfering with your productivity, your leisure time, or your relationships, Newport deserves your rapt attention. Newport has already written several of the most important professional and personal development books of the past decade. In "So Good They Can't Ignore You: Why Skills Trump Passion in the Quest for Work You Love," Newport debunks the conventional wisdom that following your passion leads to success. In "Deep Work: Rules for Focused Success in a Distracted World," Newport convincingly argues that we've fooled ourselves into believing we are effective multitaskers, when in fact we would all benefit by more distraction-free concentration.

You May Be Addicted

Some scoff at the idea of social media addiction, thinking of addiction as something afflicting drug or alcohol abusers.

But Facebook and other social media sites are designed to addict you. They use, in Newport's words, "intermittent positive reinforcement and the drive for social approval" as tools to get you to use their products at the expense of better uses of your time.

Former Google engineer Tristan Harris likened the frequent checking of your phone to using a slot machine: "Every time I check my phone, I'm playing the slot machine to see, 'What did I get?'"

When you post, Newport asks, "Will you get likes (or hearts or retweets), or will it languish with no feedback? The former creates what one Facebook engineer calls "bright dings of pseudo-pleasure." In 2017 during an Axios event in Philadelphia, Sean Parker, the first president of Facebook, described Facebook's objective as "exploiting a vulnerability in human psychology" to hijack our attention.

"How do we consume as much of your time and conscious attention as possible?" Parker recalls the company asking itself. The answer, recounted Parker, was features like the "like" button, which would give users "a little dopamine hit" to keep them engaged.

Every swipe on our phone is a play at the slot machine in hopes something new and interesting will pop up, or even better, that a "like" or comment will roll in.

> **[By] cultivating a high-quality leisure life first, it will become easier to minimize low-quality digital diversions later.**
>
> *Cal Newport, author*

If you aren't a Facebook user, don't think you're immune to digital addiction, Newport says.

"Many people have the experience of visiting a content website for a specific purpose—say, for example, going to a newspaper site to check the weather forecast—and then find themselves thirty minutes later still mindlessly following trails of links, skipping from one headline to another. This behavior can also be sparked by unpredictable feedback: most articles end up duds, but occasionally you'll land on one that creates a strong emotion, be it righteous anger or laughter.

Another factor reinforcing behavioral addiction is the drive for social approval, Newport says.

"If lots of people click the little heart icon under your latest Instagram post, it feels like the tribe is showing you approval—which we're adapted to strongly crave," he writes.

Meanwhile, "a lack of positive feedback creates a sense of distress."

With this sense of distress, Newport says people can develop an urgent need to constantly monitor what seems like vital information about their social standing.

Toward a Philosophy of Technology Use

If your attention has been hijacked, Newport is convinced you need a philosophy of technology use.

This philosophy should be "rooted in your deep values," he writes. It should provide clarity about what digital tools you should use and how you should use them. Equally important, he writes, is that it "enables you to confidently ignore everything else."

Newport recommends digital minimalism: "A philosophy of technology use in which you focus your online time on a small number of carefully selected and optimized activities that strongly support things you value, and then happily miss out on everything else."

Are You a Technological Minimalist or a Maximalist?

Most of us, Newport observes, deploy our digital life with an unquestioned maximalist mindset, ready to start using any technology that catches our attention if there is a potential for benefit.

The maximalist is like a politician who looks at the benefits of a program without ever considering its costs.

"Techno-maximalism," Newport writes, "contends more is better when it comes to technology—more connections, more information, more options."

On the surface, Newport writes, techno-maximalism seems to dovetail with liberal humanism's aim to offer individuals an ever-expanding sense of personal freedom. This makes it seem "vaguely illiberal to avoid a popular social media platform or decline to follow the latest online chatter."

On the contrary, Newport says, a techno-maximalism approach may not be leading you to freedom.

"Outsourcing your autonomy to an attention economy conglomerate—as you do when you mindlessly sign up for whatever new hot service emerges from the Silicon Valley venture capitalist class—is the opposite of freedom, and will likely degrade your individuality."

Newport says these are low-value activities. Rather than provide freedom, they clutter up our time and attention, to our detriment and someone else's benefit.

Out of a fear of "missing out on small things," are we "diminishing the large things" that "make a good life good"?

If You Want to Change

Awareness of an issue is the foundation for change. The next step is behavioral change. Newport provides many suggestions for behavioral change that may inspire our own. Here are just a few:

A Digital Decluttering

Are you cluttering your life with devices, apps, and services? These offer small benefits but can keep us socially isolated. A solution is to be more intentional about technology use.

For example, I gave up on Twitter many years ago; it just took too much of my time and attention. Newport observes that when people evaluate the tools and habits of their digital lives, they often overlook the side effects, and focus on the benefits.

"Maintaining an active presence on Twitter, for example, might occasionally open up an interesting new connection or expose you to an idea you hadn't heard before. How much of your time and attention ... must be sacrificed to earn the small profit of occasional connections and new ideas that is earned by cultivating a significant presence on Twitter?"

Newport exhorts us to treasure our time as a valuable and finite substance. Each digital activity must be measured against the time we trade for the value it gives us versus the value we could get from other activities.

Clean Up Your Phone

Take social media apps off your phone. Having removed these apps, you won't be tempted to browse their feeds as a knee-jerk response to boredom," says Newport.

He points out that you can still gain the benefits of those sites through your computer browser.

Have Real-World Conversations

Millennials and others are struggling with face-to-face communications. Newport, building on the work of MIT professor Sherry Turkle, points out that digital interactions are no substitute for face-to-face conversations. Face-to-face, in Turkle's words, is "where we develop the capacity for empathy. It's where we experience the joy of being heard, of being understood."

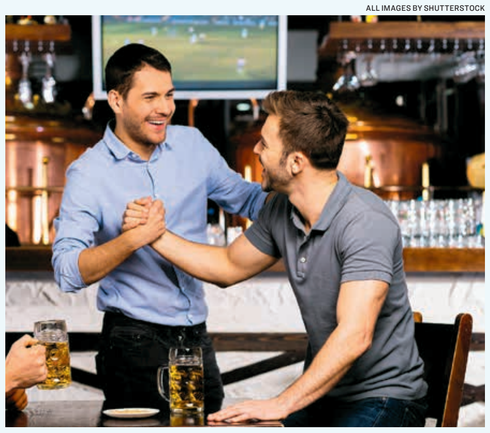
Digital interaction makes a connection but doesn't truly count as conversation because this highly sanitized form of connection is devoid of the immense volume of information we provide each other through our tone, body language, and eye contact.

Reclaim Your Leisure

Newport points to a crucial element of lasting change: "[By] cultivating a high-quality leisure life first, it will become easier to minimize low-quality digital diversions later."

In other words, look for better ways to enjoy free time. Otherwise, you will be subject to the ease and allure of digital temptation.

"It's now easy to fill the gaps between work and caring for your family and sleep by pulling out a smartphone or tablet, and numbing yourself with mindless swiping and tapping," writes Newport.



Rather than trying to use your phone less, focus instead on spending more time with people you value.

His recommendation: "Prioritize demanding activity over passive consumption."

Build things and fix things. Write something. Compose something. Learn to cook. Turn back toward long-abandoned hobbies. Discover new hobbies. You may have abandoned the piano or guitar years ago, but you can begin again.

Newport endorses activities that require structured social interaction in the real world.

For example, Newport waxes eloquently about the camaraderie in today's CrossFit community. Major parts of my leisure life were hiking club and bicycling club—at least until my 30s. Clubs such as the Appalachian Mountain Club still thrive in today's digital era.

> **An endless bombardment of news and gossip and images has rendered us manic information addicts.**
>
> *Andrew Sullivan, author*

The Question Social Media Companies Don't Want You to Ask

It's easy to see why we use social media, but the question we rarely ask is how we use it. Newport writes, "Once people start thinking seriously about the [how], they tend to recognize that they're spending way too much time online."

Consider the fact that Facebook had fewer than a million users ten years ago, Newport says. Now the social media giant has two billion users and is the fifth most valuable company in the United States, with a market capitalization larger than ExxonMobil.

"Extracting eyeball minutes, the key resource for companies like Google and Facebook, has become significantly more lucrative than extracting oil," says Newport.

Newport's book helps us examine how we use technology well, with practical advice about how to be selective and intentional with our digital time and ensure that it yields valuable returns.

Barry Brownstein is professor emeritus of economics and leadership at the University of Baltimore. He is the author of "The Inner-Work of Leadership." To receive Barry's essays, subscribe to Mindset Shifts at BarryBrownstein.com. This article was originally published on the Foundation for Economic Education.

How Much Do Sedentary People Really Need to Move?

Research finds that the amount of exercise needed to offset a sedentary lifestyle is less than you might expect

EMMANUEL STAMATAKIS, JOANNE GALE & MELODY DING

People who spend much of their day sitting may need to move around less than we thought to counteract their sedentary lifestyle, new research shows.

Our research, published in the Journal of the American College of Cardiology, found that about 20 to 40 minutes of physical activity per day seems to eliminate most health risks associated with sitting.

That's substantially lower than the one hour a day a previous study has found.

We spend almost all our waking day sitting, standing, or moving. The health impact of each one of these can be complex.

For example, too much standing can lead to lower back problems and a higher risk of heart disease. But sitting for too long and not moving enough can also harm our health.

Then there are people who sit for many hours and also get in reasonable amounts of physical activity. For example, someone who has an office job but walks to and from work for 20 minutes each way and runs two to three times a week easily meets the recommended level of physical activity.

While we know moving is better than sitting, what is far less clear is how much of a good thing (moving) can offset the harms of a bad thing (sitting).

That's what we wanted to find out in our study of almost 150,000 Australian middle-aged and older adults.

> **About 20 to 40 minutes of physical activity a day seems to eliminate most health risks associated with sitting.**

We followed people enrolled in the 45 and Up Study for nearly nine years. We looked at links between sitting and physical activity with deaths from any cause, and deaths from cardiovascular disease such as heart disease and stroke, over that time. We then estimated what level of moderate-to-vigorous physical activity might offset the health risks of sitting.

This kind of activity is strenuous enough to get you at least slightly out of breath if sustained for a few minutes. It includes brisk walking, cycling, playing sports, or running.

What We Found

People who did no physical activity and sat for more than eight hours a day had more than twice the risk (107 percent higher) of dying from cardiovascular disease compared to people who did at least one hour of physical activity and sat less than four hours a day (the "optimal group").

But it wasn't enough just to sit less. People who did less than 150 minutes of physical activity a week and sat less than four hours a day still had a 44 to 60 percent higher risk of dying from cardiovascular disease than the optimal group.

We also calculated the effects of replacing one hour of sitting with standing, walking, and moderate and vigorous physical activity.

MICHAELJUNG/SHUTTERSTOCK

A brisk walk is a great way to get the blood flowing and keep your body functioning smoothly.

Among people who sit a lot (more than six hours a day) replacing one hour of sitting with equal amounts of moderate physical activity like strenuous gardening and housework, but not standing, was associated with a 20 percent reduction in dying from cardiovascular disease.

Replacing one hour of sitting with one hour of vigorous activity such as swimming, aerobics, and tennis, the benefits were much greater, with a 64 percent reduction in the risk of dying from cardiovascular disease.

What Does It All Mean?

The great news for people who sit a lot, including sedentary office workers, is that the amount of physical activity needed to offset the health risks of sitting was substantially lower than the one hour a day a previous study found.

Even around 20 to 40 minutes of physical activity a day—the equivalent of meeting the physical activity guidelines of 150 to 300 minutes a week—seemed to eliminate most risks associated with sitting.

For people who sat a lot, replacing sitting with vigorous physical activity was better than replacing it with moderate activity, and replacing sitting with moderate activity or walking was better than replacing it with standing.

What's the Take-Home Message?

Our study supports the idea that sitting and exercise are two sides of the same health "coin." In other words, enough physical activity can offset the health risks of sitting.

Should we worry about sitting too much? Yes, because sitting takes up valuable time we could spend moving. So too much sitting is an important part of the physical inactivity problem.

We also know that only a minority of adults get enough physical activity to offset the risks of sitting.

For those who sit a lot, finding ways to reduce sitting would be a good start, but it isn't enough. The most important lifestyle change would be to look for or create opportunities to include physical activity into their daily routine whenever possible.

How to Widen Our Activity 'Menu'

Not everyone has a supportive environment and the capacity to create opportunities to be active. For example, lack of time, and physical activity being low on people's list of priorities, are the main reasons why inactive adults don't exercise. Also, many don't have the motivation to power through a strenuous workout when they're juggling many other life challenges.

There are no known remedies to a lack of time or low motivation. So perhaps we need to add new approaches beyond exercising and playing sport for leisure, to the "menu" of physical activity options.

Incidental physical activity like active transportation—walking fast, cycling to work, or taking the stairs—are great ways to be active without taking much extra time.

Emmanuel Stamatakis is a professor of physical activity, lifestyle, and population health at the University of Sydney in Australia. Joanne Gale is a research fellow biostatistician at the University of Sydney. Melody Ding is a senior research fellow of public health at the University of Sydney. This article was first published on The Conversation.

Lack of Toothbrushing Creates Risk for Seniors in Nursing Homes

Poor support for dental hygiene isn't just gross, it's a serious public health issue

FRANK SCANNAPIECO

DAVID PEREIRAS/SHUTTERSTOCK

Many seniors that are unable to take care of themselves are left with little support within nursing homes when it comes to taking care of their teeth.

Elderly people in nursing homes often go without a good toothbrushing.

While it might be icky to imagine the horrible way that feels to our elders, there are consequences worse than grossness. The mouth and other parts of the oral cavity are a gateway into the body, allowing bacteria inside our bodies that can cause serious disease.

This lack of basic care is big issue for seniors in nursing homes, who number about 1.3 million. It is an example of serious challenges that these facilities face in keeping people healthy. One recent study published in Special Care in Dentistry in 2017 found that only 10.3 percent of patients admitted to a nursing home over a five-year period utilized dental services within the home at least once during their stay.

I am a dentist and periodontist also trained in microbiology. About 30 years ago, I began to investigate how bacteria in the mouth could affect overall health. My colleagues and I determined, for example, that bacteria that cause pneumonia likely first stick to teeth before being aspirated or inhaled, into the lungs, especially in vulnerable patients such as those who are intubated in intensive care units or who reside in nursing homes. In one study, we found that the bacteria cultured from the lungs of hospitalized patients with diagnosed pneumonia were identical to those cultured from the teeth of the same patients.

No One's Ideal Residence

There is good documentation that oral hygiene in hospitalized and nursing home patients is often overlooked, deficient, and sometimes ignored. The lack of care, including toothbrushing, has been ignored for years, in part because basic Medicare doesn't cover dental care.

Thousands of people a day who are in nursing homes often go without their teeth being brushed. The bacteria that arise as a result of the poor care often are resistant to antibiotics, and contribute to infections that are commonly found in these places.

And, there is considerable evidence and general agreement that microbes that cause pneumonia in health care facilities can enter the lungs through the mouth to cause severe lung infections.

This problem will certainly worsen as the population ages and more people will require nursing home care.

Of Oral Biofilms and Pneumonia

One of the best-documented connections between the oral cavity, which includes the teeth, tongue, and gums, and overall health is pneumonia. A substantial body of evidence suggests that attention to oral hygiene can reduce the risk of pneumonia. This is especially well documented in the case of hospital- and nursing home-acquired pneumonia, common forms of pneumonia that kill many people and have a large economic impact. Bacteria first make a home in the mouth and can then be aspirated, or inhaled, into the lungs to cause serious infections.

Bacteria first make a home in the mouth and can then be aspirated, or inhaled, into the lungs to cause serious infections.

The bacteria that normally reside in the mouth grow as dental plaque, a biofilm that firmly attaches to teeth and oral surfaces such as the tongue. Dental plaque is difficult to remove, and the bacteria within them are more resistant to antimicrobial rinses.

While toothbrushing and flossing help, the best way to remove biofilm like dental plaque is for a professional such as a dentist or hygienist to remove it with sharp instruments or ultrasonic scalers. This mostly doesn't happen since payment for such services are rarely covered by medical insurance. Various interventions have been explored and show promise, including nurse-assisted toothbrushing, oral rinses such as chlorhexidine and betadine, and topical antibiotics.

For toothbrushing and flossing to work, they must be performed meticulously twice a day.

Older patients are often too sick to do this themselves, or they may not do it well enough. While nurses and nursing aids can perform this task, they are often overwhelmed with doing other things, and they themselves may not be sufficiently practiced to this task well. Performing effective oral hygiene is quite difficult and time-consuming. It is also often unpleasant due to the fact that oral biofilms often produce unpleasant odors, and may contain food debris.

As a result, oral hygiene is, at best, usually performed inadequately for these patients, and at worst, not performed at all.

As a practitioner and researcher, I find it frustrating that proposals to study more effective methods to improve hygiene in older people are almost always passed over by granting agencies. The reasons for this aren't clear, but I wonder if there is bias from medical researchers against the idea that dental care is worth the cost in this setting?

There are some glimmers of hope. A number of scientific studies have been published to document how the implementation of oral care strategies can reduce the level of serious infections such as pneumonia. One recent study found that enhanced oral care before surgery and on the units, along with other tasks, such as enhanced management of tubes inserted into the trachea and appropriate stress ulcer medication, statistically reduced pneumonia rates over a four-year period. Such outcomes require widespread attention not only by caregivers such as nurses, but also by attending physicians, managers, and ultimately insurance providers.

Frank Scannapieco is a professor and chair of oral biology at the State University of New York–Buffalo. This article was first published on The Conversation.

These Commonly Used Antibiotics Are Tied to Heart Problems

Researchers link common antibiotics to conditions where the blood backflows into the heart

METTUS/SHUTTERSTOCK

Physicians need to be aware that certain antibiotics come with additional risks that may outweigh the benefits for some patients.

MAT LECOMPTE

Two types of routinely prescribed antibiotics have recently been linked with heart problems in a study published in the Journal of the American College of Cardiology.

Researchers in Canada found that patients taking fluoroquinolone antibiotics, such as Ciprofloxacin or Cipro, face a 2.4 times greater risk of developing aortic and mitral regurgitation compared to patients who take amoxicillin, a different type of antibiotic. Aortic regurgitation and mitral regurgitation are conditions where the blood backflows into the heart.

"You can send patients home with a once-a-day pill. This class of antibiotics is very convenient, but for the majority of cases, especially community-related infections, they're not really needed. The inappropriate prescribing may cause both antibiotic resistance as well as serious heart problems," said Mahyar Etminan, lead author and associate professor of ophthalmology and visual sciences in the faculty of medicine at the University of British Columbia.

Broad Spectrum of Antibacterial Activity

Many doctors tend to prescribe fluoroquinolones over other antibiotics because of their broad spectrum of antibacterial activity. They are also as effective through oral absorption as they are through intravenous, or IV, treatment.

"One of the key objectives of the Therapeutic Evaluation Unit is to evaluate different drugs and health technologies to determine whether they enhance the quality of care delivered by our programs or improve patient outcomes," said Dr. Bruce Carleton, director of the unit and research investigator at British Columbia Children's Hospital, a program of the Provincial Health Services Authority.

"This study highlights the need to be thoughtful when prescribing antibiotics, which can sometimes cause harm. As a result of this work, we will continue working with the B.C. Antimicrobial Stewardship Committee to ensure the appropriate prescribing of this class of antibiotics to patients across British Columbia and reduce inappropriate prescribing."

Researchers in the study analyzed data from the U.S. Food and Drug Administration's adverse reporting system. They also looked at a database that holds massive private insurance health claims in the United States that captures demographics, drug identification, dose prescribed, and treatment duration.

They found 12,505 cases of valvular regurgitation with 125,020 case-control subjects in a random sample of more than 9 million patients. The findings were divided into three different groups including current fluoroquinolone exposure, as an active prescription or 30 days prior to the adverse event; recent exposure, as within days 31 to 60; and past exposure, as within 61 to 365 days prior to an incident.

The conclusion of the study showed that the risk of aortic and mitral regurgitation, blood backflow into the heart, is highest with current use, followed by recent use. There was no evidence of increased risk aortic and mitral regurgitation with past use.

Recent studies have also linked this same class of antibiotics to other heart problems, so researchers hope this study will help to inform the public and physicians of additional health risks. Fluoroquinolone antibiotics could potentially be a danger for patients with cardiac issues, where no other cause has been discovered.

Mat Lecompte is a health and wellness journalist. This article was first published on Bel Marra Health.

ALL PHOTOS BY SHUTTERSTOCK

Focus on One Sport Boosts Injury Risk for Kids

Parents need to be mindful of risk posed by intense practice and competition

KEVIN STACEY-BROWN

Kids who specialize in one sport may have a higher risk of injury, a new study suggests.

The findings, which draw from a multi-year, ongoing study of 10,138 older children and teens living throughout the United States, show that volume of vigorous activity strongly predicts injury for both boys and girls. In other words, those who engage in the most hours of intense activity per week are the most likely to suffer an injury.

"It's wonderful for a child to love a sport and to want to engage in it, but we must keep in mind the number of hours spent playing," says study author Alison Field, a professor of epidemiology and pediatrics at Brown University. "They add up pretty quickly."

She says she hopes the study's conclusions, which appear in the Orthopaedic Journal of Sports Medicine, will help coaches, parents, and doctors guide young athletes toward less intense, less specialized training.

Moderation Is Best

The study helps explain some of the dangers of sports specialization. Athletes who focus on one particular sport tend to practice more frequently and intensely compared to athletes who don't.

"But if we send out a message that says kids shouldn't specialize, the worry is that parents and kids will just add another sport on top," Field says. "So they'll keep their current sport and do it at a very high level and just add one more sport so they're not 'specializing.' That would really increase their volume, so it probably would not be a good idea."

Instead, Field says that moderating the amount of time young athletes spend engaging in vigorous physical activity may offer the best solution—and if they must specialize in a sport, replace some training with different forms of exercise, such as yoga and conditioning.

A common fear among parents is that if their children don't play more and more, they'll fall behind and won't ultimately be as good as an athlete.

A common fear among parents is that if their children don't play more and more, they'll fall behind and won't ultimately be as good as an athlete.

If they must specialize in a sport, replace some training with different forms of exercise, such as yoga and conditioning.

"But it may actually be the opposite," she says. "If children do too much, they may get injured and fall behind. And it's important also to remember that they should enjoy doing their sport; it should be something that doesn't overwhelm their life."

Differences Between Girls and Boys

The study also suggests that sports specialization carries risks even when considered separately from the volume of activity. These risk patterns differed for girls and boys. For girls, once volume was accounted for, no particular sport stood out as being extra risky to specialize in. However, specialization in general increased girls' injury risk by about 30 percent.

In contrast, specialization in general didn't significantly increase boys' risk of injury, once volume was accounted for. But certain sports—baseball or gymnastics and cheerleading—did increase their risk.

The precise reasoning behind the gender differences in risk isn't yet clear, but it's an area the researchers hope to explore further in future studies, Field says. For girls in particular, they also plan to examine age-related differences.

"There's been a lot of concern about females having a higher risk of certain injuries," Field says. "The question is: Is that risk highest just as they're going through their pubertal growth spurt, and then does it come back down a bit? And then we need to talk to coaches and trainers and say, 'What can we do to mitigate that risk?'"

Additional authors of the study are from Brown University. The National Institutes of Health and the orthopedic surgery department at Boston Children's Hospital funded the work.

This article was originally published by Brown University. Republished via Futurity.org under Creative Commons License 4.0.

Fewer C-sections When Low-Risk Deliveries Handled by Midwives

Study provides first step in comparing midwife and obstetrician care in hospital setting

Low-risk pregnant women who deliver in a hospital and receive care from midwives have fewer interventions and fewer cesarean sections than similar women who receive care from obstetricians, a study in the United States has found.

After analyzing more than 23,000 deliveries in 11 northwestern hospitals by women with no known medical complications or risk factors, researchers found that for births handled by a midwife, the C-section rate was 30 percent lower among first-time mothers and 40 percent lower among those who had previously given birth, compared to when women labored under the care of an OB-GYN.

"In the group of patients who had care from a midwife, there was a lower rate of interventions," said Dr. Vivienne Souter, research director at the Obstetrical Care Outcomes Assessment Program, a multicenter quality improvement collaborative of the Foundation for Health Care Quality, an independent nonprofit organization based in Seattle.

"They were less likely to have an epidural, oxytocin (to speed delivery), or an episiotomy compared to those looked after by an obstetrician. It's really important, however, to stress that we were looking at low-risk pregnancies in women giving birth in hospitals."

Most of the women–19,284–were cared for by obstetricians, according to the report in Obstetrics & Gynecology.

Among women who had given birth previously, Souter's team found that babies born under the supervision of a midwife had a higher rate of shoulder dystocia, which happens when a woman has trouble pushing the baby's shoulders out. The researchers weren't sure why this happened, but Souter suggested it might be because, in this study, babies born with a midwife in attendance tended to be somewhat larger than those born to mothers cared for by obstetricians.

There were some questions the researchers couldn't answer because there wasn't enough data, Souter said. "We didn't have a big enough study to evaluate all outcomes, particularly adverse outcomes," she noted. "We need more data like this to better understand maternal care in the U.S. and to derive strategies to improve it."

Another issue the researchers couldn't address was the possibility their results might have been affected by the women having chosen their providers. For example, it's possible that women who chose to be cared for by a midwife could have been more committed to having a vaginal birth, she added.

All the women in the study were pregnant with one baby, delivered at term, hadn't had a previous cesarean birth, and were healthy prior to and during pregnancy. Women were excluded from the study if they had their labor induced for a medical complication.

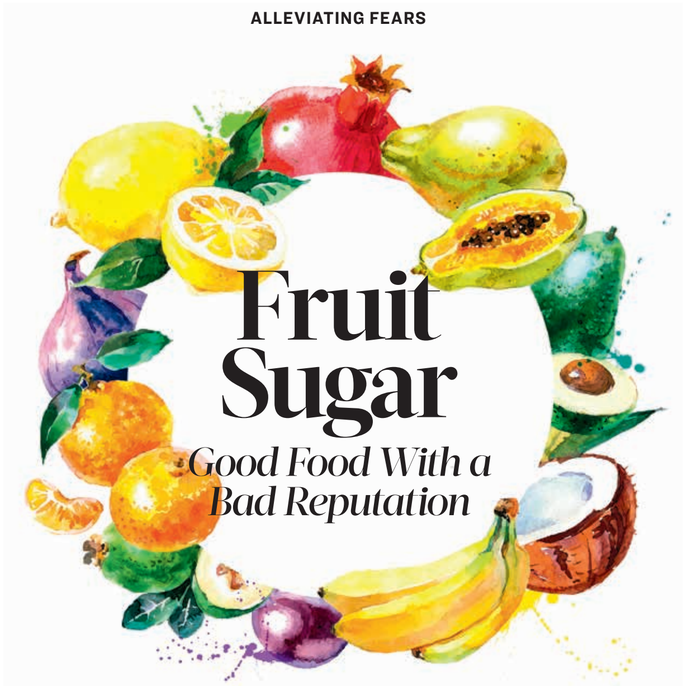
Souter cautions that the findings may not extend to more complicated pregnancies.

The new study "is a great first step in looking at the comparison of midwife care in a hospital setting to obstetrician care in a hospital setting," said Suzanne Shores, division director of midwifery and advanced practice providers at the University of Pittsburgh Medical Center Magee-Women's Hospital in Pittsburgh, Pennsylvania. "Hopefully it will spur more research in this area."

More research might answer questions, such as how the fact that women self-selected their providers affect outcomes like C-section rates, Shores said. A lot of women who choose to be cared for by midwives "want a low-intervention birth and no epidural."

By Linda Carroll
From Reuters

ALLEVIATING FEARS



PIMLENA/SHUTTERSTOCK

Fruit Sugar

Good Food With a Bad Reputation

Fruit is a sweet and essential treat that has been unfairly maligned

LISA ROTH COLLINS

Although we are urged to eat lots of fresh fruits and vegetables, fruit consumption isn't what it should be, and one reason may be a fear of fruit sugar. According to the Centers for Disease Control and Prevention, only about 10 percent of adults eat enough fruits or vegetables. In 2015, only 12 percent of adults met the recommendations for fruit consumption, with the lowest intake among men, young adults, and adults who live in poverty.

What Is Fruit Sugar?

Fruit sugar is the type of sugar you find in fruit; that is, fructose. It's been shown that very high levels of fructose are harmful to your health, but this isn't a concern with fruit itself.

Concentrated fructose has been associated with high uric acid which can lead to high blood pressure and gout, belly fat resulting in type 2 diabetes, increased hunger, and high triglycerides, which can lead to heart disease.

However, the natural fructose found in fruits is present in relatively low amounts, which is important to keep in mind.

Added sugars such as high fructose corn syrup are what we like to avoid.

Is Fruit Sugar Bad for You?

No, and here's why. While added sugars are not good for your health, fruit is different. You would have to eat an incredible amount of fruit to get excessive amounts of fructose. Fresh fruit also contains a wealth of vitamins, minerals, antioxidants, fiber, and water, all essential for overall health and well-being. The fiber allows the fructose to be absorbed more slowly. Fruit is a healthy package and one you should enjoy daily. Fruit shouldn't be an indulgence, it's an essential part of an overall nutritious lifestyle.

Why Is Fruit Sugar Good for You?

Not all sugar is the same. Added sugars are vastly different from the sugars naturally present in fruits and vegetables.

Our body and brain need sugar to function. Our cells require the right kind of sugar to operate, and that right kind is found in fresh fruits and some vegetables, such as winter squash and sweet potatoes.

The brain stores glycogen, which is composed largely of glucose. Glycogen is the main storage form of glucose in the human body. Since the body converts fructose into glucose (29 to 54 percent of fructose is transformed into glucose in the liver), you need fructose, but you need the healthy kind, like that found in fruit.

How to Enjoy More Fruit

What will it take for you to include more fruit in your diet? Here are a few incentives to get you to make fruit your friend.

Keep in mind what constitutes a serving:

1 medium apple, banana, orange, pear

1/2 cup of chopped fresh, cooked, or canned fruit

1 cup of fruit juice

- Add fruit to what you are currently eating. Fresh fruit enhances cereal, salads, and smoothies. Some fruits, such as berries and bananas, are refreshing and delicious when eaten frozen.
- If you are watching your carb intake, choose low-carb, low-sugar, nutrient-dense fruit such as strawberries, raspberries, kiwi, cantaloupe, watermelon, honeydew, and avocado.
- When choosing fruit juices, make sure they don't contain any added sugar and pick organic products when possible.
- Enjoy frozen fruit juice in DIY popsicles. Kids and adults love them.
- Limit the amount of high-sugar fruits you eat. These include dates, dried fruit such as mango, and pineapple.
- If you choose dried fruit, select those that are sulfite-free. By weight, dried fruit contains up to 3.5 times the vitamins, minerals, and fiber as fresh fruit, so you can eat less and get a powerhouse of nutrients. Dried fruit is especially high in polyphenols, which have been shown to improve blood flow, reduce inflammation, and support better digestive health. They also are high in fruit sugar and calories, so monitor how much you eat.
- You can add fruit juice to vegetables and protein to get a complete meal.

Bottom Line

Have no fear of fruit sugar. If you enjoy the recommended amount of fruit per day and avoid added processed sugars, you will be doing your body a really sweet favor.

Lisa Roth Collins is a registered holistic nutritionist and also the marketing manager at NaturallySavvy.com, which first published this article.

NEW AFRICA/SHUTTERSTOCK

How to Get Some Emotional Distance in an Argument

Getting angry? Try a practice called 'self-distancing' to help resolve conflict

We still often default to very simplistic fight, flight, or freeze reactions during conflicts in our everyday lives.

ZAID JILANI

Your heart races. Your blood pressure soars. You can feel the adrenaline pumping.

Are you being attacked by a bear? No. You're just arguing with your uncle on Facebook. The comments fly fast and furious.

In conflict situations, writes professional mediator Teresa Frisbie in a 2018 article, our bodies often react like we're being physically threatened by a predator when in reality we might be having a disagreement about politics or the dishes or our favorite movie.

The roots of the confusion go back to our early history when danger came from every direction. But as human lives have grown more complex and multifaceted, we still often default to very simplistic fight, flight, or freeze reactions during conflicts in our everyday lives. "The brain perceives social threat similarly to how it senses physical threat," Frisbie writes.

And in these polarized times, we may encounter intense social threats when we glance at the news or scan our Facebook or Twitter feed–anytime we encounter someone voicing an opinion that challenges our identity and worldview. One response could be to disengage from those debates altogether, lest we get too worked up and flip our lid. That might help keep our blood pressure down, but it may also prevent us from understanding other points of view.

Recent research suggests a different approach, a skill that may actually help us keep a level head at times of conflict and disagreement. It's called self-distancing. Instead of creating some distance from a perceived adversary, self-distancing actually encourages us to get some distance from ourselves.

How does it work? The main trick involves shifting your perspective on a situation from the first person to the second- or third-person. For example, if your name is Bob, instead of asking, "Why do I feel this way?" you can instead ask, "Why does Bob feel this way?"

That might sound odd, but research suggests it can help you effectively regulate your emotions and keep your cool in challenging situations. There's a reason we're often better at giving advice to our friends and colleagues than to ourselves–our calmer emotional state and distance from the problem allows us to reason things through in a way that we often can't when it's personal. Managing your feelings can help you constructively respond to perceived threats and worries.

"The first prong of self-distancing is calming yourself down," says Frisbie, who serves as director of the Dispute Resolution Program at Loyola University's School of Law. This, in turn, can help calm your antagonists–which can open the door to resolving the conflict.

The Benefits of Getting Some Distance

University of Michigan psychologist Ethan Kross has studied the impact of self-distancing on reasoning, attitudes, and behaviors–and has found that all three can be enhanced by encouraging individuals to create psychological distance from their problems.

In one paper, originally published in 2011, Kross and co-researcher Igor Grossman used the backdrop of the Great Recession to examine whether self-distancing would improve the reasoning skills of college seniors and recent graduates facing a dire job market.

Instead of creating some distance from a perceived adversary, self-distancing actually encourages us to get some distance from ourselves.

They specifically picked senior students and recent graduates who weren't successful in obtaining a job post-graduation and asked them about how the recession would influence their future careers.

The participants were told to "take a few minutes to think about how the current economic climate will impact you personally," and then were asked to explain how the recession would affect their careers from either an "immersed perspective"–such as imagining the "events unfolding before your own eyes as if you were right there"–or from a "distanced perspective," which would involve imagining the "events unfolding as if you were a distant observer."

The researchers then analyzed the participants' responses and looked for intellectual humility and dialectical thinking, which recognizes that the world is constantly changing.

Continued on ***Page 15***

THE ROOT CAUSE

The Road to Optimal Metabolic Health

Movement in mind, body, and hormones can set you on a path of well-being

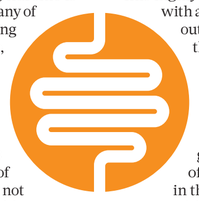
ARMEN NIKOGOSIAN

Only 1 in 8 Americans, about 12 percent, enjoy optimal metabolic health.

That's important because metabolic syndrome is the shadow behind many of the top killers, including heart disease, stroke, and diabetes.

A recent study in the journal Metabolic Syndrome and Related Disorders determined that 88 percent or seven out of eight Americans were not in good metabolic health. Researchers used the widely accepted guidelines of waist circumference, blood pressure, fasting glucose, triglycerides, and HDL cholesterol to assess metabolic health.

Optimal metabolic health is of vital interest to patients looking to lower their risk for heart disease, or those looking for more energy, vitality, and vigor, or even those just looking for a more youthful appearance. Every journey needs a map and here is the beginning of an integrative path that will lead you to optimal metabolic health.



Good gut function and robust and balanced gut microbiome are essential to optimal health.

ARCHIVECTOR/SHUTTERSTOCK

Your Naughty and Nice List

This highly personal path starts with a very simple concept: out with bad and in with the good.

Classify your diet and lifestyle habits into a simple list of "do's" and "don'ts." Most people have a good comprehension of the negative habits in their lives but it can be trickier to choose which positive habits to develop.

While I recommend enlisting the assistance of a health-care practitioner as a guide, those people with a clear vision of what positive steps their unique journey requires may reach their destination without help.

Start With Food

Are you eating more whole foods and less processed foods? Are you eating clean, organic, non-GMO and sustainable foods as much as availability and your pocketbook allow?

Beware of organic junk food. It is still not good for you. Do you have any special conditions which require a special diet? These include heart disease, diabetes, and cancer, but also lesser-known disorders which can also be helped with diet, like autoimmune disease, mood disorder, chronic fatigue, and autism.

Are you sensitive to any foods? I frequently remind my patients that food sensitivity does not necessarily need to present itself with a gastrointestinal complaint. It can trigger pain, brain fog, low energy levels, or even changes in mood.

Does everything inside of me move properly? Optimal health rests on the foundations of five types of movement:

- Movement of the body (exercise)
- Movement of the bowels (gut function)
- Movement of the mind (cognition)
- Movement of the hormones (cortisol/melatonin, sex hormones etc.)
- Movement of the liver (detoxification and biotransformation)

Body

Exercise has more documented health benefits in the medical literature than any medication, herb, or supplement known to man. How to exercise based on your individual needs is not a simple question and may require some help, but a good start is to incorporate three components into your exercise plan: cardiovascular, resistance, and balance.

Bowels

The gut is our primary interface with the outside world and home to over 70 percent of our immune system. Good gut function and robust and balanced gut microbiome are essential to optimal health. Poor gut function and an imbalanced microbiome (gut dysbiosis) can have significant effects on dysregulating inflammation and immune function in the body. Unchecked, they can require large amounts of nutrients to maintain a metabolically "expensive" state for the body.

Mind

Keep your mind moving by engaging in daily challenging cognitive activities. These will keep your brain on par with your healthy body and gut. Just like your body, using your mind, and even straining it a bit, will help keep it fit.

Hormones

So how do I move my hormones? Most people only have control over one hormone, cortisol, the stress hormone. Stress is not what happens to a person in their life. Stress is how that person reacts to their environment.

In other words, stress isn't caused by what happens to you nearly so much as it is caused by how you think about the things that happen to you.

While we may not be free from the demands of life, we have total control over the amount of stress those demands place on us. Cortisol makes up the active/waking half of the circadian rhythm and melatonin the relaxed/sleeping half.

Persistently elevated cortisol levels have been associated with scores of downstream effects from shrinking brains and decreased memory to expanding waistlines and elevated blood sugar. After years of elevated cortisol, a phenomenon known as "cortisol steal" can occur in which the levels of progesterone, estrogen, testosterone and other hormones can be reduced.

Metabolic syndrome is a major killer but it can be out maneuvered pretty easily.

Exercise has more documented health benefits in the medical literature than any medication, herb, or supplement known to man.

The first thing elevated cortisol, or stress hormone will impact is sleep which will then affect the next day's cortisol rhythm. This creates a vicious cycle that is best broken by eliminating the stress and creating an environment where you are able to get around 7-9 hours of restful sleep every night.

Liver

Influencing the movement of your liver or detoxification is best achieved by the practices outlined above and removing the toxic sources to the best of your ability.

Unfortunately, we live in a world today where human toxicants are present in almost every aspect of our everyday life and growing. Whether it be alcohol, aluminum, vaping, diesel exhaust, electromagnetic fields or the thousands of other known toxicants in our environment, the focus should be put on the area where you have control over your exposure.

A good starting point would be to eat and drink clean, stay out of traffic, and turn your phone to airplane mode when you go to sleep.

Don't Start Tomorrow

If you're thinking about getting on the path to optimal metabolic health tomorrow—don't. Do it today. Do it as soon as you are done with this article. The path to optimal health is not some paradigm shift in thinking which occurs some Thursday evening. It is a daily conviction to further your mind, body, and health to the best level that you can achieve.

Armen Nikogosian, MD, practices functional and integrative medicine at Southwest Functional Medicine in Henderson, Nev. He is board-certified in internal medicine and a member of the Institute for Functional Medicine and the Medical Academy of Pediatric Special Needs. His practice focuses on the treatment of complex medical conditions with a special emphasis on autism spectrum disorder in children as well as chronic gut issues and autoimmune conditions in adults.

CURTIS MACNEWTON/UNSPLASH

CANCER UP CLOSE

Coping With Long-Term Radiation Side Effects

Ask your doctor about the potentially permanent consequences of cancer treatment

MICHELE GONCALVES

Cancer is one of the most common diseases of our age, and yet those who face it rarely know what's about to happen to them beyond the broadest terms. "Cancer up Close" is an open recount of Michele Goncalves's cancer journey from pre-diagnosis to life after treatment.

There were long term side effects that I wasn't mentally (or physically) prepared for.

When I met my radiation oncologist for the first time, it was during a three-day orientation just a few weeks after my stage 3 rectal cancer diagnosis. My head felt like it was stuffed with cotton balls, and all my conversations seemed to happen in slow motion. Many of the things we discussed during that visit didn't register.

I did hear him describing the side effects of radiation treatment, but I didn't really "hear" what he was saying. Of course, there were short term side effects like burns, pain urinating, and the like, which I expected and understood clearly. However, there were also long term side effects like being forced into menopause and damage to vaginal tissue that I wasn't mentally (or physically) prepared for.

By the time I went in for my radiation simulation appointment a week later, I had done some further internet research on the typical side effects. I asked questions like, "Is this for sure going to put me into permanent menopause, or could I possibly get my cycle back after a while?"

He said it was permanent. My heart sank. Although I wasn't planning to have children, the harsh fact that my female reproductive system was going to be damaged and shut off forever was devastating. I was only 46, and on top of dealing with cancer, I'd have to start facing the rollercoaster ride of menopause. This was hard, but I think it would have been even worse if I still had hopes of having a family.

I did hear him describing the side effects of radiation treatment, but I didn't really 'hear' what he was saying.

What really surprised me was how quickly the effects came.

I started my first radiation treatment on Jan. 24, 2018, and by mid-February, my monthly cycle had stopped. My normally oily skin became extremely dry and shriveled up. I also had my first hot flash the day before my final dose of radiation on March 2. I had heard older women describe them, but it was still surprising when it happened to me. It really does feel like you are being cooked at 700 degrees from the inside out. Then after the heat, comes a flash of freezing cold. Nobody told me about that part. And to top this all off, I also felt more emotional. I was crying even more than I already had. I knew this was also part of the menopause "gift."

The peak of my accepting this new "normal" was when I had a nuclear meltdown at my last radiation appointment. I apologized for my craziness and announced to everybody in a loud voice that I was now a "menopausal woman." That scene is a bit funny reflecting back on it, but at the time I was a hot mess—literally and figuratively.

Another long-term side effect of having a radiation treatment targeted at your private region is something called vaginal stenosis. I will let you look up for yourself the scientific explanations for it, but basically the tissue of your vaginal canal is damaged. It shrinks and develops scar tissue. This makes it excruciating and sometimes impossible to be intimate or get a gynecological pelvic exam.

I didn't feel informed about this going into my treatments. I really don't remember this being explained to me well. Instead, I researched it online. I was disappointed not to have received a handout or website to help me prepare.

Basically, what I learned is that after radiation treatment, a woman will need to either have intimate relations regularly or purchase a dilator kit to use two or three times a week in order to stretch the tissue internally. If this isn't done, the canal becomes extremely narrow.

On top of dealing with cancer, I'd have to start facing the rollercoaster ride of menopause.

AFRICA STUDIO/SHUTTERSTOCK

At the mid-point of my radiation treatments, I brought it up with my radiation oncologist and his patient assistant. I had already purchased a dilator kit. They told me not to use anything during the treatments, and that the tissue would only start to be affected probably three months afterward.

So, with that advice, I didn't do anything for more than three months and then went right into my big tumor removal surgery.

This knocked me down for nine weeks and I feel that I missed the window to address this issue properly. Now I am faced with extreme narrowing issues that will not allow me to endure a typical gynecological exam, never mind anything else.

I met with a pelvic floor physical therapist, who examined me manually and confirmed my tissue had narrowed considerably. They recommended that I use a dilator kit five times a week for 10 minutes or so to try and expand it.

Needless to say, I'm not a diligent patient in regards to this therapy. This whole subject makes me uncomfortable and is even hard for me to talk about. I am normally an open book (hence writing my cancer story for a newspaper), but this I have to admit is an exception.

I hope this information helps anyone else facing similar circumstances. Of course, even though I didn't talk about it, men also face tissue damage to their private area during radiation treatment for rectal cancer. This will, of course, have an effect on their intimate relationships as well. Be sure to ask your radiation oncologist enough questions to go into this phase fully knowing what to expect.

Join me next time when I will share the story about a huge scare I got from a hard lump that developed in my armpit just after my radiation therapy ended, and my experience getting breast thermography to check it out.

Until then, breathe deep, be kind, and take it one day at a time.

Michele Goncalves is a financial compliance and fraud auditor for a Fortune 500 company by day and a passionate pursuer of holistic and functional medicine knowledge by night. She is also the author of the column The Consummate Traveler.

FOOD IS MEDICINE

Bodily Tissues That Regenerate Through Nutrition

Spontaneous recovery from disease is often painted as superstition but our body is built to heal itself

The body is in a constant state of replacing itself and healing itself. Medicine can help that process, but too often doesn't.

ALL PHOTOS BY SHUTTERSTOCK

SAYER JI

It may come as a surprise to some, especially those with conventional medical training, but the default state of the body is one of ceaseless regeneration. Without the flame-like process of continual cell turnover within the body—life and death ceaselessly intertwined—the miracle of the human body would not exist

In times of illness, however, regenerative processes are overcome by degenerative ones. This is where medicine may perform its most noble feat, nudging the body back into balance with foods, herbs, nutrients, and healing energies and intentions.

Today, however, drug-based medicine invariably uses chemicals that lack regenerative potential; to the contrary, they commonly interfere with bodily self-renewal in order to suppress the symptoms against which they are applied.

In other words, most medicines attack disease symptoms rather than support the body's own ability to combat disease.

Over the course of the past few years of trolling MEDLINE (the National Institutes of Health's website produced by the National Library of Medicine), we have collected a series of remarkable studies on a topic considered all but heretical by the conventional medical system—spontaneous remission.

Nerve Regeneration

There is actually a broad range of natural compounds with proven nerve-regenerative effects. A 2010 study published in the journal Rejuvenation Research, for instance, found a combination of blueberry, green tea and carnosine have neuritogenic (i.e. promoting neuronal regeneration) and stem-cell regenerative effects in an animal model of neurodegenerative disease. Other researched neuritogenic substances include:

1. Curcumin, lion's mane mushroom
2. Apigenin (compound in vegetables like celery)
3. Blueberry
4. Ginseng
5. Huperzine
6. Natto
7. Red sage
8. Resveratrol
9. Royal jelly
10. Theanine
11. Ashwagandha
12. Coffee (trigonelline)

There is another class of nerve-healing substances, known as remyelinating compounds, which stimulate the repair of the protective sheath around the axon of the neurons known as myelin. Myelin is often damaged in neurological injury and/or dysfunction, especially autoimmune and vaccine-induced demyelination disorders.

It should also be noted that even music and falling in love have been studied for possibly stimulating neurogenesis, regeneration and/or repair of neurons, indicating that regenerative medicine does not necessarily require the ingestion of anything; rather, a wide range of therapeutic actions may be employed to improve health and well-being, as well.

[To view the first-hand biomedical citations on these neuritogenic substances, visit GreenMedinfo's neuritogenic research page online.]

Liver Regeneration

Glycyrrhizin, a compound found within licorice that is also a powerful anti-SARS virus agent, has also been found to stimulate the regeneration of liver mass and function in the animal model of hepatectomy. Other liver regenerative substances include:

1. Carvacrol (a volatile compound in oregano)
2. Curcumin
3. Korean ginseng
4. Rooibos
5. Vitamin E

[To view the first-hand biomedical citations, visit GreenMedinfo's liver regeneration research page on the topic online.]

Suppressing symptoms with drugs that cause side effects requiring other drugs is a non-sustainable, infinite growth model.

A 2010 study published in the journal Rejuvenation Research, for instance, found a combination of blueberry, green tea and carnosine have neuritogenic (i.e. promoting neuronal regeneration) and stem-cell regenerative effects in an animal model of neurodegenerative disease.

Beta-Cell Regeneration

The medical community has yet to harness the diabetes-reversing potential of natural compounds. Whereas expensive stem cell therapies, islet cell transplants, and an array of synthetic drugs in the developmental pipeline are the focus of billions of dollars of research, annually, our kitchen cupboards and backyards may already contain the long sought-after cure for type 1 diabetes. Nature has a way of providing the things our bodies need.

The following compounds have been demonstrated experimentally to regenerate the insulin-producing beta cells, which are destroyed in insulin-dependent diabetes, and once restored, may (at least in theory) restore the health of the patient to the point where they no longer require insulin replacement.

1. Gymnema sylvestre ("the sugar destroyer")
2. Nigella sativa ("black cumin")
3. Vitamin D
4. Curcumin (from the spice Turmeric)
5. Arginine
6. Avocado
7. Berberine (found in bitter herbs such as goldenseal and barberry)
8. Bitter melon
9. Chard (yes, the green leafy vegetables)
10. Corn silk
11. Stevia
12. Sulforaphane (especially concentrated in broccoli sprouts)

[To view the first-hand biomedical citations on beta cell regeneration, visit GreenMedinfo's research page on the topic online.]

Hormone Regeneration

Secretagogues are substances in the body that cause other substances to be secreted, like sulfonylureas, which triggers insulin release. Secretagogues, including synthetic secretagogues, can increase the endocrine glands' ability to secrete more of a hormone. But even better are substances that truly regenerate hormones which have degraded. They do this by emitting electrons into potentially carcinogenic "transient hormone" metabolites. One of these substances is vitamin C.

A powerful electron donor, this vitamin has the ability to contribute electrons to resurrect the form and function of estradiol (estrogen; E2), progesterone, and testosterone, for instance. In tandem with foods that are able to support the function of glands like the ovaries, vitamin C may represent an excellent complement or alternative to hormone replacement therapy.

Cardiac Cell Regeneration

Not too long ago, it was believed that cardiac tissue was uniquely incapable of being regenerated. A new and rapidly growing body of experimental research now indicates that this is simply untrue. A class of heart-tissue regenerating compounds, known as neocardiogenic substances, are able to stimulate the formation of cardiac progenitor cells which can differentiate into healthy heart tissue. Neocardiogenic substances include the following:

1. Resveratrol
2. Siberian ginseng (eleuthero)
3. Red wine extract
4. Geum japonicum
5. N-acetyl-cysteine

Another remarkable example of cardiac cell regeneration is through what is known as the fetomaternal trafficking of stem cells through the placenta. The amazing process known as "fetal microchimerism" allows a fetus to contribute stem cells to the mother which are capable of regenerating her damaged heart cells, and possibly a wide range of other cell types.

Cartilage/Joint/Spine Regeneration

Curcumin and resveratrol have been shown to improve recovery from spinal cord injury. Over a dozen other natural compounds hold promise in this area, which can be viewed on GreenMedinfo's spinal cord injury page online. As far as degenerative joint disease, i.e. osteoarthritis, there are a broad range of potentially regenerative substances, with 50 listed on the site's osteoarthritis research page.

Conclusion

Regenerative medicine poses a unique challenge to the current medical paradigm, which is based on costly drug trials, patents, and an economic infrastructure supported by drug-based interventions. It is a simple truth that symptom suppression is profitable. It guarantees both the perpetuation of the original underlying disease and the generation of an ever-expanding array of additional, treatment-induced symptoms known as side effects.

But cures, especially those that come from natural sources, don't have this built-in income potential. Worse perhaps, from a Big Pharma perspective, they can not be easily patented. In the current regulatory environment, that means that companies have no incentive to conduct the costly trials required to have these cures approved by the FDA and then used in clinical settings. Without patents, they can't be controlled and sold.

But suppressing symptoms with drugs that cause side effects requiring other drugs is a non-sustainable, infinite growth model. It is doomed to fail and eventually collapse.

The current approach also interferes with the body's natural regenerative and immune capabilities. Cultivating diets, lifestyles and attitudes conducive to bodily regeneration can interrupt this pathological circuit. With true health, we can attain the bodily freedom that is a precondition for the liberation of the human spirit.

Sayer Ji is the founder of Greenmedinfo.com, a reviewer at the International Journal of Human Nutrition and Functional Medicine, co-founder and CEO of Systome Biomed, vice chairman of the board of the National Health Federation, and steering committee member of the Global GMO Free Coalition. This article was originally published on GreenMedinfo.com

Is This Study Legit?

Questions to ask when reading news stories about medical research

HASSAN VALLY

D13/SHUTTERSTOCK

Until we have a significant body of evidence that is in agreement, we have to be very careful about our interpretation of the findings from any one study.

Who doesn't want to know if drinking that second or third cup of coffee a day will improve your memory, or if sleeping too much increases your risk of a heart attack?

We're invested in staying healthy and many of us are interested in reading about new research findings to help us make sense of our lifestyle choices.

But not all research is equal, and not every research finding should be interpreted in the same way. Nor do all media headlines reflect what was actually studied or found.

So how can you tell? Keep these five questions in mind when you're reading media stories about new studies.

1. Has the Research Been Peer Reviewed?

Peer review is a process by which a study is checked by experts in the discipline to assess the study's scientific validity.

This process involves the researcher writing up their study methods and results and sending this to a journal. The manuscript is then usually sent to two to three experts for peer review.

If there are major flaws in a study, it's either rejected for publication, or the researchers are made to address these flaws.

Although the peer-review process isn't perfect, it shows a study has been subjected to scrutiny.

Any reported findings that haven't been peer-reviewed should be read with a degree of reservation.

2. Was the Study Conducted in Humans?

Findings from studies conducted in animals such as mice or on cells in a lab (also called in vitro studies) represent the earliest stage of the scientific discovery process.

Regardless of how intriguing they may be, no confident claims about human health should ever be made based on these types of study alone. There is no guarantee that findings from animal or cell studies will ever be replicated in humans.

3. Are Findings Likely to Represent a Causal Relationship?

For a study to have relevance to our day-to-day health, the findings need to reflect a causal relationship rather than just a correlation.

If a study showed that coffee drinking was associated with heart disease, for example, we want to know if this was because the coffee actually caused heart disease or whether these things happened to occur together.

In a number of studies that found this association, researchers subsequently found that coffee drinkers were more likely to be smokers and therefore, these results were more likely to reflect a true causal relationship between smoking and heart disease.

In observational studies, where researchers observe differences in groups of people, it can sometimes be difficult to disentangle the relationship between variables.

The highest level of evidence regarding causality comes from a double-blind placebo-controlled randomized controlled trials (RCTs). This experimental type of study, where people are separated into groups to randomly receive either an intervention or placebo (sham treatment), is the best way we can determine if something causes disease. However it, too, is not perfect.

Any reported findings that haven't been peer-reviewed should be read with a degree of reservation.

Although other types of studies in humans play an important role in our understanding of health and disease, they may only highlight associations that are not indicative of causal relationships.

4. What Is the Size of the Effect?

It's not enough to know that an exposure (such a third cup of coffee or more than nine hours of sleep a night) causes an outcome, it's also important to clearly understand the strength of this relationship. In other words, how much is your risk of disease going to increase if you are exposed?

If your risk of disease is reported to increase by 50 percent (which is a relative risk), this sounds quite frightening. However, if the original risk of disease is low, like 1 in 100,000 then a 50 percent increase in your risk may not represent a big actual increased risk of disease. A 50 percent increased risk of disease could mean going from a 0.01 percent risk of disease to your risk being 0.015 percent, which doesn't sound quite so dramatic.

5. Is the Finding Corroborated by Other Studies?

A single study on its own, even if it's a well-conducted randomized controlled trial, can never be considered definitive proof of a causal relationship between an exposure and disease.

As humans are complex and there are so many variables in any study, we can't be confident we understand what is actually going on until findings are replicated in many different groups of people, using many different approaches.

Until we have a significant body of evidence that is in agreement, we have to be very careful about our interpretation of the findings from any one study.

What If These Questions Aren't Answered?

If the media report you're reading doesn't answer these questions, consider looking at the original paper. Ideally, this would be linked in the news article you're reading, or you can search PubMed for the article using a few keywords.

The journal article's abstract should tell you the type of study, whether it was conducted on humans and the size of the effect. If you're not blocked by a paywall, you may be able to view the full journal article which should answer all of the questions you have about the study.

Hassan Vally is an associate professor at La Trobe University in Australia. This article was first published on The Conversation.

FITNESS FOR LIFE

A Bedside Gym Can Get You Working Out (Finally)

With just three tools, I can manage a good range of the activities that help me stay fit

JAMES WALPOLE

FENG YU/SHUTTERSTOCK

I decided a while back to make some form of daily exercise a regular part of my life. The secret to consistency? I can literally roll out of bed and be in the gym.

Taking a cue from Isaac Morehouse, I set my sights stupidly low. Even 10 crunches might count for the day.

But I've made a few fitness acquisitions over the years that have added up to make a convenient "bedside gym" so I can do as much as I'm motivated to do.

1. Yoga Mat

I usually start the morning with an abbreviated, accelerated stretching routine, which I learned from a good yoga teacher (who also happens to be a friend).

Yoga mats are cheap to acquire, easy to transport, and make a great place to stretch out, lay down for crunches, or do some for push-ups.

2. Pull Up Bar

This hangs niftily in the door frame of my bedroom-bathroom entry-way, in easy wait for me in between waking up and taking a shower. I can get in pull-ups, chin-ups, or both in a morning. These make for great arm workouts and (so I've read) can help boost testosterone levels.

3. Barbell

The barbell has fixed weights on the end, so it's not good for muscle-building (go to the real gym for that), but it is good for maintaining muscle and doing exercises like squats.

When I do push-ups, I'll occasionally lift up one arm and make a ringing "ding" against the bar before letting myself down. I also find the bar useful for holding my feet when I need to do sit-ups.

With just these three tools, I can manage a good range (though definitely not all) of the activities that help me stay fit. And I don't have to go far from bed to do it.

James Walpole is a writer, startup marketer, intellectual explorer, and perpetual apprentice. He is an alumnus of Praxis and a Foundation for Economic Education's Eugene S. Thorpe fellow. He writes regularly at jameswalpole.com. This article was originally published on FEE.org

NIKIPARONAK/SHUTTERSTOCK

Some Veggies Are Healthier When Cooked

A bit of heat can unlock more of the nutrients in some of your favorite vegetables

DEVON ANDRE

Eating more vegetables, in any form, is a good idea. Whether you prefer them raw or cooked, they are a terrific source of vitamins, minerals, fiber, and plenty of healthful compounds.

But sometimes cooking them can make a difference, turning nutrient-dense foods into superfoods. There are a few instances where heat activates antioxidants, making them more accessible to you. In some cases, the heat breaks down cell walls, so nutrients are easier to digest and absorb.

If you want to unlock the full potential of your diet and get as many healthful nutrients as possible, here are some vegetables with enhanced nutrition when cooked.

- **Spinach:** When cooked, much more iron and calcium become available from spinach. Oxalate acid blocks these nutrients from being absorbed, but it breaks down under high temperatures.
- **Mushrooms:** Many nutrients in mushrooms, like potassium, niacin, zinc, and magnesium are all doubled during cooking.
- **Carrots:** Carotenoids are a powerful antioxidant in carrots, and there is research to suggest levels go up by 14 percent when they are boiled or steamed until tender. On the other hand, pan-frying carrots results in a reduction in carotenoid availability.
- **Asparagus:** Multiple studies have shown asparagus gets a nutritional boost from cooking. Antioxidants, in addition to six other nutrients, can jump by more than 16 percent. Another study showed that cooking asparagus could double its levels of phenolic acid, which can promote a lower risk for some serious chronic illnesses.
- **Tomatoes:** Cooking tomatoes can substantially boost the availability of lycopene, an antioxidant associated with improved heart health, lower rates of heart disease, and other chronic illnesses.
- **Broccoli and cauliflower:** Uncooked broccoli and cauliflower can cause all kinds of digestive problems, like pain, gas, and bloating. Cooking these cruciferous vegetables not only makes them easier on your stomach but also activates enzymes that enhance disease-busting compounds.

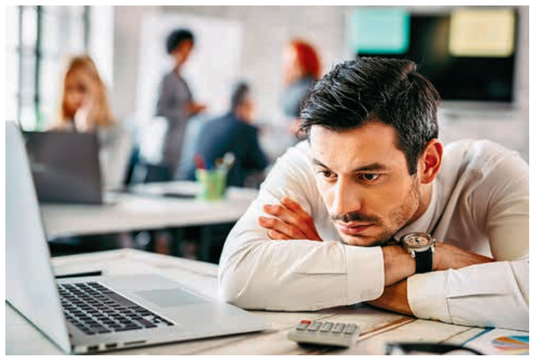
Although cooking methods vary, steaming has been identified as an excellent way to add and maintain nutritional value. Frying, on the other hand, tends to inhibit nutritional value. Timing also plays a role, and shorter cook times are also associated with improved nutritional value.

Devon Andre holds a bachelor's of forensic science from the University of Windsor in Canada and a Juris Doctor from the University of Pittsburgh. This article was first published on Bel Marra Health.

Routines Are Meant to Be Broken

Novel experiences have the power to stretch time

DRAZEN ZIGIC/SHUTTERSTOCK



While we may feel most comfortable when things are routine, we feel most alive when they are not.

JAY HARRINGTON

Routines are important. Having solid routines in place allows us to have productive days. By making certain actions habitual, such as when we get up in the morning, when we work out, and what we eat, we can allocate willpower and discipline (both finite resources) toward the unexpected variables that life inevitably throws our way.

At the same time, routine becomes, well, routine. A life marked by uncompromising rigidity can feel like a hamster wheel you can't get off. One day starts slipping into the next, and before you know it years pass by and you start wondering where the time went.

How can you get off the hamster wheel of monotony? Make a purposeful and intentional commitment to introduce more novelty into your life.

Time's Subjective Expansion

Speaking of hamster wheels, recently my workouts have been in a rut. Too much treadmill, not enough dopamine. Instead of being energized from them, I've left the gym feeling irritable. So last Tuesday morning, instead of heading for the gym as I usually do, I went for a 45-minute run on a trail system near our house. It was dark when I got started, but when I reached the high-point of the trail, the sun was just starting to break the horizon. The air felt really crisp and clean. It was quiet—I saw only one other person that morning out on the trails.

It was a great way to start the day, and I felt a surge of energy when I was done. Not only that, but it's an experience that is firmly and vividly stuck in my mind. Despite the fact that I woke up at the same time and engaged in the same general routine (exercise), Tuesday's trail run stands out. In fact, I can't recall with specificity the details of any other morning last week. While most mornings seem to go by in an indistinguishable flash, Tuesday morning unfolded—at least in my mind—slowly and deliberately. My trail run may have only lasted 45 minutes, which is the same as all of my other workouts, but it felt much longer.

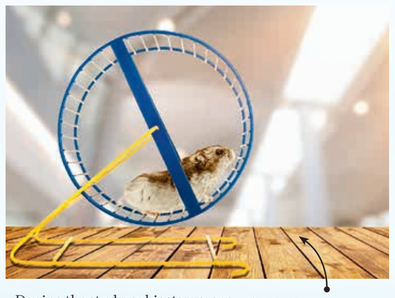
Psychologists call this phenomenon "time's subjective expansion." Your watch may tell you one truth about time, but your mind tells you another. Time, in the literal sense, is objective—we all have the same 24 hours in the day. But how we experience time is a deeply individualized experience. When we break free of routine and experience new and novel things, time seems to slow down. Joshua Foer, author of Moonwalking With Einstein: The Art and Science of Remembering Everything, writes: "Monotony collapses time; novelty unfolds it."

The Oddball Effect

A great deal of research has been done to try to explain why "new and novel" seems to slow down our interpretation of time. One study gave rise to what is known as the "oddball effect."

Make a purposeful and intentional commitment to introduce more novelty into your life.

BILLION PHOTOS/SHUTTERSTOCK



A life marked by uncompromising rigidity can feel like a hamster wheel you can't get off.

During the study, subjects were repeatedly shown images of a simple brown shoe. After the subjects were sufficiently accustomed to the routine and repetition of the same brown shoe image, an image of a single clock was inserted into the image cycle. Despite the fact that the clock image was on-screen for exactly the same amount of time as the shoe images, subjects perceived that it was displayed for far longer than it actually was. They became so conditioned and accustomed to the shoe image that a novel image shocked their brains into a wholly different perception of time. Brown-shoe monotony made them hungry for change, and their brains latched onto a different experience that was introduced into the mix.

The point is, if you're interested in living a life full of rich, colorful, and memory-filled experiences, you need to find ways, both big and small, to break routines and introduce more novelty and "first moments" into your days.

It's important to schedule time for spontaneity. As English poet William Cowper famously wrote: "Variety's the very spice of life, that gives it all its flavor."

It seems crazy because we work so hard to establish good routines, but breaking free of the very patterns that give our lives structure is what gives our lives "spice." While we may feel most comfortable when things are routine, we feel most alive when they are not.

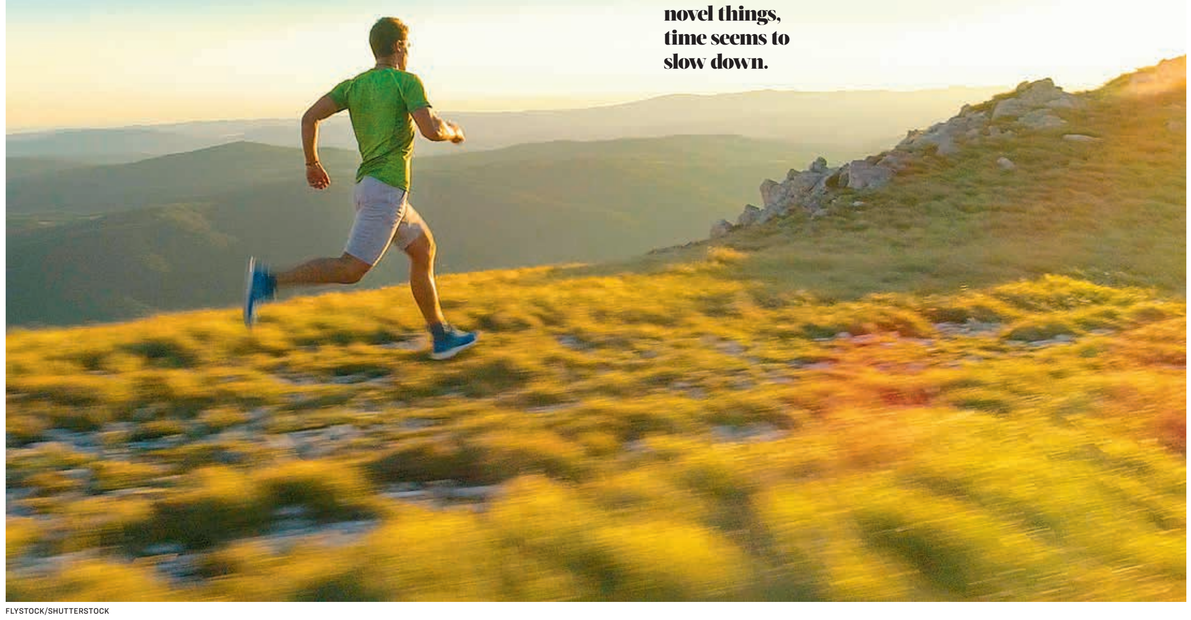
Want to add more "new and novel" into your days? Here are a few ideas that will help.

1. **Plan for spontaneity.** On its face, planning for spontaneity sounds contradictory, however, it's necessary if you want to open yourself up to new experiences. Create a list of activities that you've been meaning to try—playing an instrument, a new workout routine, a new recipe—and schedule a few open blocks of time for yourself each week to give them a try.
2. **Read great books.** If you want to try new things, you need to open yourself up to new ideas. Fiction, non-fiction, history, biography—books are chock full of explorations of the human experience. They're rich sources of inspiration for new and novel ways to get more out of life.
3. **Switch up the small things.** One of the reasons many of us have a hard time breaking free of our routines is that we aim too high. We want transformational change and immediate gratification. But change happens incrementally, not all at once. By focusing on making small changes—biking to work once a week, for example—we can create momentum for ourselves. After all, transformation happens one small change at a time.

What will you do differently today?

Jay Harrington is an author, lawyer-turned-entrepreneur, and runs a northern Michigan-inspired lifestyle brand called Life and Whim. He lives with his wife and three young girls in a small town and writes about living a purposeful, outdoor-oriented life.

When we break free of routine and experience new and novel things, time seems to slow down.



FLYSTOCK/SHUTTERSTOCK

PHOTOGRAPHEE.EU/SHUTTERSTOCK

Managing your feelings can help you constructively respond to perceived threats and worries.

How to Get Some Emotional Distance in an Argument

Getting angry? Try a practice called 'self-distancing' to help resolve conflict

Continued from ***Page 9***

Taken together, these two components form what the researchers dub "wise reasoning." With wise reasoning, we are able to understand that our own narrow view of the world may have its own limitations and shortcomings.

What they found is that "participants in the distanced group were significantly more likely to recognize the limits of their knowledge ... and recognize the future was likely to change." They were more easily able to shift into wise reasoning that de-personalized the impact of the recession in a way that would allow them to attain a calmer emotional state.

Essentially, by engaging in self-distancing, the participants were better able to produce a mental state that allowed room for healthy optimism about their economic futures.

Self-Distancing Makes Arguments Better

Kross and Grossman also performed a second study that has hopeful implications for those of us who get anxious about the state of politics in our country.

In the three weeks prior to the 2008 presidential election, researchers asked participants who identified as strong liberals or strong conservatives to "think about how various foreign and domestic issues would play out over the next four years if the candidate that they did not endorse wins the election," from either a distanced perspective or an immersed perspective.

Indeed, participants who used the distanced perspective were more likely to use wise reasoning; they also endorsed their own political views less strongly. The distanced participants also signed up to join a bipartisan political group at a higher rate than participants who weren't encouraged to look at things from a distance. This suggests that distancing can be a potent tool for escaping political polarization.

When dealing with "emotionally fueled" situations, says Kross, we tend to fall back on the default: fight, flight, or freeze. When that happens, we tend to see things only from our own point of view, and empathy becomes more difficult. "And so the theory is that getting people to take a step back and adopt a more detached, big-picture perspective could be helpful to people [in seeing] that it's not just their own view that exists, that there are alternative viewpoints," he says. "It can make people recognize the limits of their own understanding."

With wise reasoning, we are able to understand that our own narrow view of the world may have its own limitations and shortcomings.

It can be difficult to adopt a distanced perspective when you are facing an anxious situation, such as when you're involved in a political argument or if you have just been laid off. But, as Kross's research shows, doing so will help you engage in wiser reasoning that may help you be less anxious and pessimistic.

Frisbie emphasizes that we can all practice self-distancing without anyone even knowing. You don't have to refer to yourself in the third person during a verbal dialogue with another person—changing your perspective in your inner monologue is more than enough to practice this skill. Self-distancing might sound weird, but, as Frisbie notes, "It's invisible." No one will hear you talk about yourself in the third person.

So, if you're in a heated political argument, and someone tells you that you're a heartless conservative or a loony liberal, pause and take a second before you respond. Give yourself some breathing room by reframing the situation with some self-distancing. Instead of asking himself, "How should I respond?" Bob can instead ask, "How should Bob respond to what was just said to him?"

Bob may be surprised how much of a difference it makes in slowing him down, calming his body, and allowing him to respond in a wiser and more thoughtful way.

Zaid Jilani is Greater Good's Bridging Differences Writing fellow. This article was originally published on Greater Good Magazine online.

"The first prong of self-distancing is calming yourself down."

Teresa Frisbie, professional mediator

Step Away from Your Cellphone

Put down that digital mind trap for at least a few minutes and you might learn something

DEVON ANDRE

Please, for my sake and yours, focus on nothing but the words on this page (or screen) for the next few minutes. Any distraction may lead to hazy memory and an altered perception of reality. Put your smartphone on "do not disturb," or better yet, get it out of sight.

Distractions are always going to be a part of life. But in this day and age, modern technology has made them almost constant. One study found that cellphones distract people 80 times per day. But this broken focus is more than just an inconvenience: it could lead to memory trouble and an inaccurate perception of reality.

A new study by researchers at Ohio State University found that distraction may cause a person to believe a different reality than they experienced. This, in turn, can lead to false or inaccurate memories.

Distraction may cause a person to believe a different reality than they experienced.

The results of the study were published in the Journal of Experimental Psychology: Human Perception and Performance. Researchers asked participants to focus on a four-colored square on a screen. Sometimes, a brightly colored square light lit up another square to serve as a distraction. Next, the participants were asked to identify the color they were staring at on a color wheel. If they chose a slim range, it signaled confidence in the selection; a wider range indicated doubt.

The results showed that most people confidently picked the color of the distraction light or overcompensated by picking the furthest color from the distraction light. In any event, the focus altered their perception of reality and memory.

If you want to improve your chance to form good memories and experience reality as it's happening, as well as retain information, limiting distraction may be central to your efforts. Some ways to improve focus and encourage more accurate memories include:

- Limit cellphone use: Only use it when needed and come up with set times to check text messages and email.
- Exercise in the morning
- Be present with the tasks you are performing
- Eat healthy fats each day
- Say what you just learned or experienced out loud, or write it down.
- Don't answer questions, the phone, or anything else that pulls you away. If someone asks you something while working, tell them you'll respond when you're finished. Double back a moment to make sure you regain your train of thought.

Devon Andre holds a bachelor's of forensic science from the University of Windsor in Canada and a Juris Doctor from the University of Pittsburgh. This article was first published on Bel Marra Health.

One study found that cellphones distract people 80 times per day.

STORYTIME STUDIO/SHUTTERSTOCK

Waking Up at 5:30 Every Morning Has Changed My Life

Being productive in the early morning can make every day feel like a success

VERONICA BAUGH

Over the course of the past few months, I made a drastic lifestyle change: I am getting up at 5:30 a.m. instead of sleeping until 9 a.m. Lots of coffee was involved. But on the whole, the innumerable benefits I've experienced from early rising have far outweighed the losses (such as the loss of my ability to form coherent sentences after 10 p.m.)

Here is how getting up early has changed my life.

Increased Productivity

My personal theory is that morning hours are just better suited toward meaningful work.

When I stayed up till 2 a.m. every morning, my brain was far from thinking of those extra hours as ultra-productivity time. Usually, I would spend my bonus four-plus hours a day on the internet or binge-watching a favorite show. As my brain anticipated its coming rest, it wasn't exactly helpful in motivating me to begin a new project or finish a lengthy task.

On the other hand, after I shifted those extra hours into a morning slot, I found they magically became five times more productive. As my brain anticipated the coming workday, I felt very motivated to get as much work done as possible (sometimes before the sun even came up) in order to claim more free time during the later parts of my day.

As it turns out, scientific research done by Dr. Christoph Randler supports my personal theory. In a case study of 367 university students, those who rose earlier more frequently expressed personal agreement with proactive statements such as, "I spend time identifying long-range goals for myself," and "I feel in charge of making things happen."

While Randler admits that "night owls" are often more creative, funny, and social, "morning people" steal the show when it comes to career and scholastic productivity and efficiency.

Stress Reduction

Even though I still get roughly the same amount of sleep, the net effect of early-rising is that I spend far less time feeling like a zombie at work. My "zombie-time," still takes up the same few hours of my day, but now it has shifted to night hours instead of work hours. I can be a zombie while watching Netflix at night and a rational person while taking a test during the day. Win-win.

This increased wakefulness has also decreased my stress a great deal. I am better able to approach problems clearly, logically, and without the disturbing knowledge that "I was up so late last night," hanging over my head.

Also, being productive in the early morning just makes every day feel like a success before it has fully started. As I write this, it is currently 6:15 a.m. Already, and before any of my social/work obligations have begun, I've ticked something off my list for the day—and that just feels good.

Increased Orderliness and Freedom

As a night-owl, my workday seemed to have no beginning or end. Now that I wake up very early, the first few productive hours of my day have a sequential and logical flow that pretty much remains the same every weekday.

I have a set plan for the first few hours of my day. Not only does this allow me to accomplish tasks in a cleaner and more organized manner, but it also allows me to arrange (or not arrange) the rest of my free time as I please.

When my work was scattered in sporadic bursts throughout the day, I would often find that I had no time to fulfill my random desire for recreational activity. Understanding how to organize my work-time has increased my ability to be spontaneous during my downtime.

It's often suggested that schools and businesses adjust their schedules to make compensations for "night owls" whose genetics make it difficult to rise before 9 a.m. This is a nice gesture, but does such coddling cause many to miss out on the beauties of rising early? Beauties that they, like myself, never even realize they're missing?

Veronica Baugh is a high school senior from Chicago, a student ambassador for Prager University, and a member of the Crusaders for Life, Chicago. This article was originally published on FEE.org

ANTONIO GUILLEM/SHUTTERSTOCK