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THE EPOCH TIMES

MIND & BODY

The Mental Powers of Storytelling

Brain benefits from this ancient folk art make a compelling case for classroom inclusion **5**



4

Ways to Enrich Your Life by
Prospecting Your Future
PAGE 9

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Surviving cancer is difficult, and new research suggests that challenge brings a substantial risk increase for other potential ailments.

Childhood Cancer Survivors Face Variety of Heart Risks

Childhood cancer survivors' risks for heart problems may be broader than previously recognized, researchers say.

It's been known for years that some treatments for childhood cancer increase the risk of heart failure. But in a new study of more than 43,000 children, Canadian researchers found young cancer survivors had as much as a three-fold increased risk of developing a variety of other cardiovascular problems, too, according to the report published in *Circulation*.

The new findings suggest that survivors of childhood cancers should focus on improving modifiable heart disease risk factors, such as high blood pressure and diabetes, said study co-author Dr. Paul Nathan, a professor of pediatrics and health policy, management and evaluation at the University of Toronto and a staff oncologist at The Hospital for Sick Children.

There's a chance that there will be new cancer treatments that are less toxic to the heart, Nathan said.

"However, we can't eliminate the use of these (cardio-toxic) treatments completely because they are needed to cure cancer," Nathan said in an email. So, it's important to make "sure survi-

ors and their doctors are aware of the risks and (know) what to look out for."

The heightened risks also mean that childhood cancer survivors should be screened for heart disease so it can be caught early, Nathan said.

To take a closer look at the impact of childhood cancer therapies on the heart, Nathan and his colleagues turned to a pediatric cancer registry called the Pediatric Oncology Group of Ontario Networked Information System, along with health data from the general public collected by

The Institute for Clinical Evaluative Sciences (ICES) a non-profit corporation.

The researchers focused on 7,289 cancer survivors who had been diagnosed before age 18, treated at a pediatric cancer center between 1987 and 2010, and survived at least five years. Each of those survivors was matched in age, gender, and postal code to five cancer-free individuals from the general population, for a total of 36,205 individuals in the control group.

Half of the patients were tracked for more than 10 years. During follow-up, 203 survivors (2.8 percent) experienced one or more cardiac events as compared to 331 of those in the control group (0.9 percent).

When the researchers analyzed their data, they found that even at relatively young ages, cancer survivors had a three-fold increased risk for any type of heart event and as much as a ten-fold increased risk for heart failure compared to their peers. Childhood cancer survivors also appeared to be at increased risk of metabolic conditions such as diabetes, hypertension, and high cholesterol. And those conditions increased the risk of heart disease.

Cancer survivors diagnosed with diabetes were more than three times more likely to develop cardiovascular disease and more than four times more likely to develop heart failure compared with nondiabetic survivors. Similarly, those diagnosed with high blood pressure were three times more likely to develop heart failure compared to non-hypertensive survivors.

This study is a useful reminder to not overlook traditional risk factors and more common types of cardiovascular disease in childhood cancer survivors, said Dr. Prashant Vaishnava, a cardiologist at The Mount Sinai Hospital in New York City. "This is becoming a recurring theme in medicine as patients are able to survive diseases that once may have been quickly fatal. The treatment paradigm for these survivors shifts to the management of those conditions which are ubiquitous in the general population."

These days, many pediatric cancer centers follow survivors of childhood cancers for possible heart damage, said Dr. Kirsten Rose-Felker, a pediatric cardiologist at UPMC Children's Hospital of Pittsburgh.

While many will just need to be monitored for the rest of their lives, some children suffer severe damage to their hearts from the cancer treatments, Rose-Felker said. "We've taken care of patients who needed a heart transplant," she added. "The damage can be so bad that it completely destroys the heart muscle."

The number of children who will need to be watched for heart problems is on the rise, Rose-Felker said. "There are half a million childhood cancer survivors in the U.S. and that number continues to grow as treatments get better," she added.

The good news, Rose-Felker said, is that this is "something we can actually affect."

By Linda Carroll
From Reuters



JULIA WONG/SHUTTERSTOCK

The new findings suggest that survivors of childhood cancers should focus on improving modifiable heart disease risk factors, such as high blood pressure and diabetes.

CANCER UP CLOSE

Finding My Cancer Team

A cancer treatment journey begins with choosing who will help you travel it

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.

When I last left you, I had shared details of my three-day orientation at the Cancer Treatment Centers of America (CTCA) in Philadelphia. The intense but helpful schedule gave me a peek inside their whole-person cancer treatment approach.

My initial impression was that CTCA was different from the cancer center I was first referred to by the gastroenterologist that diagnosed me in New Jersey. CTCA was smaller and felt more like a hotel than a hospital. I remember sitting near their gas fireplace in the main lobby and feeling soothed by its warmth as I cried my eyes out.

I also liked the idea that I could get the medical care I needed, and join a support group, talk to clergy for religious-based counseling, join a music therapy session, or have a nutrition consultation—all free of charge. And, if I just wanted some "me" time to get my nails done or have a massage in their spa, it was there for a reasonable rate (hello \$40-per-hour massage).

As for the medical assessment and treatment proposal, I was given at the end of my third day, the CTCA doctors were much more hopeful than the New Jersey surgeon and oncologist I had met with.

I am not the type of person who looks for a "lollipops and rainbows" prognosis if it isn't true. I only want to hear optimism if it is at all reasonable. I want doctors to at least share some successful cases they've had treating those in similar circumstances.

The biggest highlight from the CTCA oncologist was him saying stage 3 rectal cancer has the possibility of being cured if the cancer cells are fully taken out during surgery. Oncologists normally avoid the word "cure." He also said there were two possible chemotherapy protocols to choose from that were equally effective based on clinical information.

One regimen (FOLFOX) required a port in the chest, while the other regimen (CAPOX) didn't and would be administered with oral chemo pills as well as three-hour infusions given at the hospital.

With this news, I almost jumped out of my chair with joy. I was thrilled to hear I had a chance to be cured and didn't need the chest port that I didn't want.

The final part of my visit sealed the deal. That was when the surgeon I met with, who was referred to me by CTCA and worked for Drexel Medical in downtown Philadelphia, took a look at my MRI slides and concluded that I was not borderline stage 4 as the New Jersey oncologist had painted me.

He was much more optimistic and said it didn't look like the tumor had spread outside of the immediate area into surrounding structures. He also said that he thought my tumor was just high enough to spare me a permanent colostomy, although a temporary ileostomy to let my colon heal after surgery was going to be necessary. I was incredibly relieved to hear all of this news (although not so much the part about the ileostomy).

The surgeon was very kind, and as I exited his exam room after finishing a manual finger and scope assessment, he looked at me and asked, "Do you believe in God?" I said yes.

He said, "Pray, ask God for help, and have

faith. You're strong, I can see it. You can get through this." With tears in my eyes, I thanked him. His words meant more to me than he will ever know.

At that moment, I knew that I had finally found my cancer team.

After ending the three-day orientation at CTCA, I told them I needed some time to think about whether I wanted to proceed with them for my treatment. They were very supportive and told me to take the time I needed, but not to wait too long. In fact, the surgeon told me I should make a decision and strive to start my radiation treatments in ten days, because my tumor was almost fully blocking my colon at that point, and the radiation would begin to shrink it.

Before I left CTCA, I took it upon myself to "pop in" unannounced on the financial counselor to ask for a print screen of my account as proof of the financial assistance "deal" they were telling me about. She was surprised by my visit, but cooperative, and told me that CTCA would take off a certain percentage of any costs that my insurance would not cover. Although medical billing is a very complex topic that my exhausted mind could not handle at that moment, I was satisfied enough that I probably wasn't going to end up with a \$100,000 bill for choosing an out-of-network hospital.

Over the next day, mind swirled as I struggled with the fact that I was about to accept a very conventional medical approach to treating my cancer versus one that was more holistic and aligned with my ideas about healing illnesses. Yet in the end, I was comfortable enough with CTCA's doctors that I felt like I could still try out some "holistic" things on the side. For example, I wanted to try special supplements my functional medicine doctor suggested, and Frankincense essential oil that even some medical literature I saw on PubMed was touting as a promising tumor-shrinking therapy. Importantly, I felt like I could try these while being able to openly discuss what I was doing with my cancer team.

Once I signed on the dotted line, the next appointment to create a mold of my body for the radiation machine was quickly set for eight days later.

It's been five months since I had the final surgery that ended my official "cancer treatments" with CTCA. I now go back every three months for check-ups. Overall, I am happy with the choice I made to go with CTCA, and if I had to do it again, I'd choose them.

Are they perfect? No. I don't believe any cancer center is. However, the hugs and support I've received—from the drivers who would take me to my surgeon's office, to the clergy who prayed with me at desperate times in my hospital room, to the sweet and encouraging receptionists, and of course the nurses and doctors—has been great overall.

In case you're wondering, I haven't been paid by CTCA to write this article. Everything I've shared is my own personal experience, written with the hope that it can help give a bit of insight into what CTCA has to offer.

However, before I sign off, I do feel there is something important to clarify about my initial discussion that I had with CTCA. In my previous article entitled "Getting a Second Opinion," I described how the CTCA "sales rep" mentioned to me that they had more than 10 radiation options, and other innovative approaches to treating cancer, such as immunotherapy, which sounded very interesting and was a big selling point for me to try them.

While I'm sure many treatment options do exist at CTCA, the important thing to know is that your doctors will be the ones to select everything for you.

Come back next week when I will share how working with an Eye Movement Desensitization and Reprocessing (EMDR) trained trauma therapist has helped me face my fears during my cancer journey, and the interesting conversation I had with my tumor.

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*.

I want doctors to at least share some successful cases they've had treating those in similar circumstances.

Carefully choosing the doctors and others who will help you on your cancer journey can ease some of the burdens that treatment inevitably brings.



ALEXANDER RATHS/SHUTTERSTOCK

Doctors Slow to Change Opioid Over-Prescribing Habits

In sheer numbers, opioid prescribing rates in the United States peaked in 2010 but remain among the highest in the world.

Research verifies that guidelines to reduce pill counts work but few states undertake such efforts

JULIE APPLEBY & ELIZABETH LUCAS

Most surgeons say that when they started practicing medicine, there was little or no information about just how many pain pills that patients needed after specific procedures. As a result, patients were often sent home with handfuls of powerful and addictive medications. Then the opioid crisis hit, along with studies that showed one possible side effect of surgery is long-term dependence on pain pills. These findings prompted some medical centers and groups of physicians to establish surgery-specific guidelines. But questions remained: Would anyone pay attention to the guidelines and would smaller amounts be sufficient to control patients' pain?

Yes, appears to be the answer to both—in some measure—according to a study that encompassed nearly 12,000 patients at 43 hospitals across Michigan. The researchers published details of their work in a recent letter in the *New England Journal of Medicine*.

Seven months after specific guidelines for certain operations were issued in October 2017, surgeons reduced by nearly one-third the number of pills they prescribed, with no reported drop in patient satisfaction or increase in reported pain, according to the research.

"We're not trying to deny patients narcotics," said Dr. Joceline Vu, one of the paper's authors and a general surgery resident at the University of Michigan. "But there's an acceptable level where people are still happy and still have their pain under control, but we have dropped the number to a minimum."

Overall, doctors prescribed eight fewer pills per patient—to 18 from 26—across nine common surgical procedures, including hernia repair, appendectomy, and hysterectomy, based on guidelines from the Michigan Opioid Prescribing Engagement Network (Michigan OPEN), a collaboration of hospitals, doctors, and insurers.

Patients also reported taking fewer pills, dropping to nine from 12 on average across those procedures, possibly because they were prescribed fewer in the first place.

Still, while researchers say the study offers a considerable reason for encouragement, it illustrates how difficult it is to change pre-

“We're three years into the opioid crisis. We're talking about mopping up the floor while the spigot is still on.

Dr. Marty Makary, the surgeon who spearheaded the development of guidelines at Johns Hopkins Bloomberg School and whose staff helped perform the Medicare analysis for KHN.

scribing habits. In May 2018, at the study's conclusion, the average number of pills prescribed exceeded the most up-to-date recommendations for all nine procedures.

And that's in Michigan, where there has been a concerted push to change prescribing habits. Most states don't have such a broad ongoing effort.

"There is a misconception that this is all fixed," said Dr. Chad Brummett, co-director of Michigan OPEN and one of the researchers in the study. "I do think people are still overprescribing. Definitely."

The guidelines come amid concern about the opioid crisis and a continued examination of the role that prescription drugs played in its escalation.

The likelihood of persistent opioid use rises with the number of pills and the length of time opioids are taken during recuperation from surgery. But there's another avenue of concern. When doctors write scripts with a generous number of pills, the chance that patients won't take them all increases, along with the potential for the unused pills to make their way from medicine cabinets to the street, or to fall into the hands of other family members.

"That can be a bigger concern for many of us," said Vu. "It seems that in surgery, for whatever reason, we wrote prescriptions for a lot more opioids than people actually needed."

The Michigan OPEN guidelines recommended amounts based on how much pain medication patients actually took following surgery.

Other institutions developed their own surgery-specific prescribing principles, including Johns Hopkins Medicine in Baltimore and the Mayo Clinic in Minnesota. Although they use different methods to determine the number of pills, most ended up with similar parameters, often in the range of zero to 20 pills, depending on the procedure.

All the prescribing directives apply to patients with acute pain, such as those who had surgery, not people with chronic pain. Vu and other researchers emphasized. Even so, chronic-pain patients argue that the focus on setting postsurgical prescribing levels has made it far more difficult for them to get treatment.

"These patients feel besieged ... and say, 'I need these pills to get out of bed in the morning,'" said Vu. "This project and study is not about chronic pain. It's about preventing harm to healthy people coming in for surgery."

What are some of the guidelines? Michigan, in its initial recommendation, called for no more than 10 pills, equivalent to 5 milligrams of oxycodone, for a minor hernia repair, and no more than 20 for a minimally invasive hysterectomy.

The resulting changes offer important context.

Before the guidelines, for instance, patients with minor hernia repair operations

were being prescribed 29 pills, according to the study. That fell to 14 by May 2018, which is still four more pills than the guidelines suggest.

For a hysterectomy, though, patients received 31 pills before the guidelines and 19 after, just below the "no more than 20" recommended. And following their initial guidelines, Michigan OPEN revised its recommendations, further lowering the range amounts to zero to 10 for hernia repair and zero to 15 for a hysterectomy.

In sheer numbers, opioid-prescribing rates in the United States peaked in 2010, but remain among the highest in the world, according to studies and other data. The post-surgical prescribing falloff seen in Michigan doesn't likely reflect a broader trend, especially where there is less emphasis on such guidelines.

An analysis of national Medicare data by Kaiser Health News and the Johns Hopkins Bloomberg School of Public Health, for example, found only a small drop—one to two pills on average, per patient—in postsurgical prescribing across seven different procedures from 2016 to 2017.

The KHN/Hopkins analysis originally found that prescribing from 2011 to 2016 was well above levels now recommended by organizations such as Michigan OPEN and the Hopkins medical center. For example, Medicare patients took home 48 pills in the week following coronary artery bypass; 31 following laparoscopic gallbladder removal; 28 after a lumpectomy; and 34 after minimally invasive hysterectomies.

According to postsurgical guidelines spearheaded by Hopkins in 2018, those surgeries should require at most 30 pills for a bypass and 10 pills for minimally invasive gallbladder removal, lumpectomy, and minimally invasive hysterectomy.

In July, when 2017 Medicare data became available, KHN and Hopkins did an additional analysis, which showed, on average, small decreases in the number of pills taken home from the pharmacy by patients in the first week after leaving the hospital. But the drop was smaller than the reductions seen in Michigan.

For example, nationwide prescribing following bypass surgery averaged 45 pills, a drop of three; after a hysterectomy, the drop was four pills from the six-year average to 30; and lumpectomy patients took home five fewer pills, for an average of 23.

"Those reductions are not sufficient," said Dr. Marty Makary, the surgeon who spearheaded the development of guidelines at Johns Hopkins Bloomberg School and whose staff helped perform the Medicare analysis for KHN. "The data represents prescriptions as recent as a year and a half ago, and we're three years into the opioid crisis. We're talking about mopping up the floor while the spigot is still on."

Julie Appleby is a senior correspondent and reports on the health law's implementation, health care treatments and costs, trends in health insurance, and policy affecting hospitals and other medical providers. Elizabeth Lucas is a data editor, specializing in data analysis and reporting for the KHN enterprise team. This article was originally published on Kaiser Health News.

The Mental Powers of Storytelling

Brain benefits from this ancient folk art make a compelling case for classroom inclusion

CONAN MILNER

W

e all enjoy hearing a good story. But a tale is more than just entertainment.

Teachers at the UCLA Lab School have found storytelling so important to the learning process that it's become an essential feature of the classroom.

The UCLA Lab School is unique because it encourages teachers to test-drive various educational techniques with a very diverse group of students. Over the past 20 years, a storyteller has come to visit the Lab School once a week. Teachers say it's the fastest way to teach younger kids to read.

For the past 10 years, professional storyteller Antonio Sacre has provided the tales. His material spans from accounts of his own childhood, to children's classics such as *The Three Little Pigs*.

"So I come in, tell stories to the kids, and 16 weeks later, whatever metrics they use to measure reading and writing are higher than they were before the storytellers were there," said Sacre. "Now, the teachers work super-hard and I'm one small component in that, but it's a crucial component."

Before his gig at UCLA, Sacre was sharing stories in classrooms across the country and around the world. In his experience, telling tales can hold a child's attention like nothing else can.

"I started telling stories in schools a long time ago, before everyone had handheld devices," he said. "What I was seeing was that kids were sitting and listening in a way that teachers were telling me they didn't normally listen."

The Story Inside Us

A story is a sequence of events that lead to a conclusion. It's typically driven by some kind of conflict, or some unattainable desire. Details give life to the characters, and their experiences give us insight.

Storytelling has always been mankind's primary teaching tool, but the form itself may facilitate learning. Once we get into a story, we're pulled along by the promise of hearing how it will end. This gravitational force makes a story an ideal vehicle for us to conceptualize and retain information. We can handle a bland list of bullet points, if necessary, but we would much rather hear about a character on a quest.

Modern researchers believe it's because our brains are hardwired for narrative. Brain imaging studies have shown that specific parts of our brain only become active when we're listening to stories. Storytelling has also been shown to trigger the release of oxytocin, a neurochemical that enhances our sense of empathy.

Sacre believes that what makes stories such an effective method for transmitting information is because we identify with the characters' struggles. We're not just passively listening; part of us gets to live the story being told. The tale may contain fictitious people from fantastic worlds doing impossible things, but once we fall under the story's spell, we become a part of that world.

"We get to see ourselves in these stories, and that's really complicated brain work," Sacre said. "We get to be the lion and the person being chased."

This is why many old stories



OP. BY JACOB BROWN FOR KHN

“What I was seeing was that kids were sitting and listening in a way that teachers were telling me they didn't normally listen.

Antonio Sacre, professional storyteller

still endure: because they speak to the same dramas that still dwell inside of us. Sacre says he's been rediscovering some of the lesser-known fairy tales from the Brothers Grimm and Hans Christian Anderson canons. The kids love them, and will often request that he tell more "magic stories."

"These stories are dealing with very elemental issues and concerns that we all have," Sacre said. "We all get lost. We're all afraid of not being loved. We're all afraid of death, and the unknown."

Movie in Your Mind

Stories have been told long before the written word. It's a practice as old as humanity itself.

Every culture throughout time has been built upon a framework of key stories that describe its origins, provide codes of conduct, and supply a sense of right and wrong.

Today, our appetite for stories is stronger than ever. We still tell ancient tales, and new narratives are constantly being spun for our enjoyment.

However, these days we consume most of our stories through a visual medium: videos, television, and movies. Sacre doesn't disparage these formats, but he says they lack something that only a story told with words can deliver.

For example, when kids hear about a ferocious lion running through the forest, they all see different scenes in their mind. One child might picture palm trees and a yellow lion with a brown mane. Another may see a tan lion with an orange mane charging through the evergreens.

Each child creates his or her own movie as they're listening to a tale, weaving their own sensibility in between the spaces of the words.

A movie, by contrast, provides a more homogenous and passive experience, and does much less to challenge our minds.

"The brain is super-active when you're listening to a story. But if we go see the *Lion King*, we're all

going to see the exact same lion," Sacre said. "We'll all see the same scenes, hear the same music and the same famous actors reading the parts. It makes us forget our own stories."

Sharing Your Stories

Sacre says older kids can take longer to get into the stories than younger ones, but they eventually make an impact. Many of us can recall a favorite teacher who told stories that stick with us long after the rest of our school experience has faded from memory.

But parents and teachers often shy away from any kind of storytelling today. They may be tight on time or feel that there are too many other choices competing for everyone's fractured attention.

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Stories allow people to connect, to understand each other, and to feel more deeply the origin of each person's unique character.

father cry. All of a sudden, everybody started sharing stories of their grandparents.

"Now, if he didn't do that, or if we were all looking at our phones and doing whatever, we would have missed this really wonderful opportunity," Sacre said. "Thousands of people and millions of dollars are spent on the latest *X-Men* or *Avengers* movie, but they can't compete with us. There's no way Marvel Studios is going to tell the story of that grandfather crying and make the five of us on the beach have this massive discussion."

Stories like this allow people to connect, to understand each other, and to feel more deeply the origin of each person's unique character.

We resonate with the stories of those closest to us in particularly profound ways. A 2015 study done at Chicago's Northwestern Hospital and published in the journal *Neurorehabilitation* examined the power of personal stories on two groups of coma patients. One group heard stories about their family members on headphones told by a recording of a close relative (actual stories—not idle chit-chat or reading the newspaper). The control group just received standard medical care.

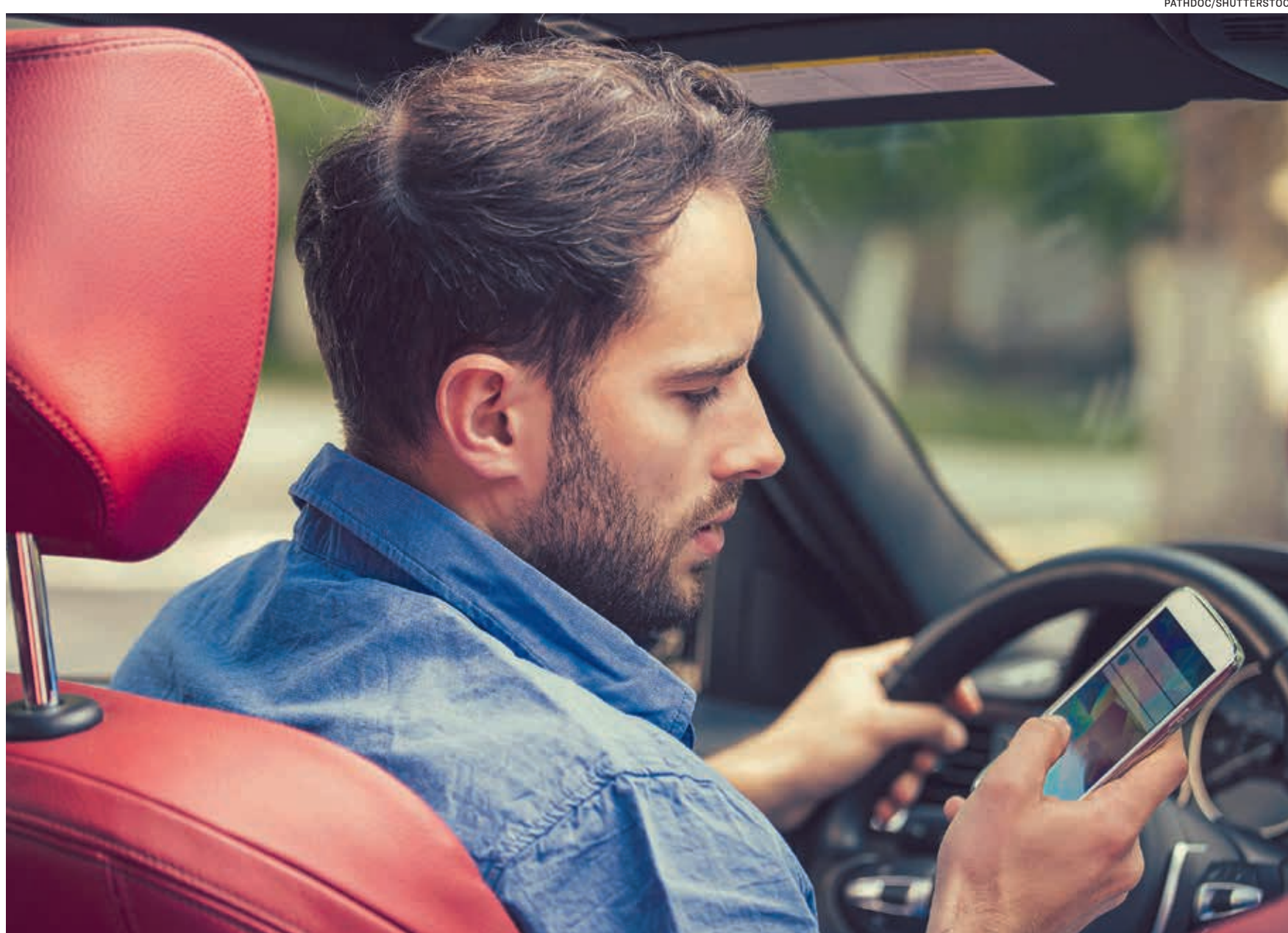
MRIs showed that the story group exhibited significantly more brain activity, compared to the non-story group. Patients also became noticeably more responsive following the story sessions. Researchers suggested that hearing family members' voices telling familiar stories allowed patients to exercise dormant brain circuitry responsible for long-term memories.

Of course, you don't need an MRI to realize the value of sharing stories with the people you're closest to. You just need to be willing to make a connection.

"Storytelling is considered a folk art, not a fine art. Everyone can do it," Sacre said. "If we can get over ourselves and just tell our story, most of the time, you're going to tell something that is meaningful to somebody else."

RIDO/SHUTTERSTOCK





We can all imagine that terrible moment when we look down at our phone and a kid runs into the street chasing a ball in front of us. Taking a moment to imagine what could happen can help us avoid it.

Using the Mind's Time Machine

Projecting the problems of a possible future can help you avoid them

HEIDI LE BRIS

Everyone has at least one dreadful experience in which a small bit of forethought could have staved off some minor or major disaster and, in some cases, saving us a lifetime of regret.

Our remorse is amplified with moans and groans about the action or inaction that led us to ruin, whether we chose our course consciously or fell into it for lack of attention.

Whether large or small, these calamities share an irrefutable fact: They are locked in the past and there is nothing we can do to reverse them.

But what if we did have a time machine? What if there was a way to undo these wretched regrets?

The truth is, if we had more closely examined the choices before the incident, we'd find many mistakes could have been avoided by using common sense and a bit of brainpower to turn forward the hands of time.

When a person buys a house or makes an investment, they attentively and conscientiously evaluate their exposure to any possible financial issues. They save money in the bank, hire a lawyer, and get a home inspection because they can foresee the potential of problems down the road.

All of these actions are based on calculating risks and taking actions to mitigate these risks. Who wants to lose their hard-earned cash by making a bad decision? The regret and devastation of such a mistake come without benefit. And yet, by calculating risks, ruin can be avoided. Simple common sense protects from harm.

But we don't apply this process as much as we could and often should. Such calculations needn't require any great volume of thought. And for this reason, we should apply this approach in our daily routine, perhaps most especially when driving.

While driving our car, often in a rush, we think about our loved ones, our jobs, our problems, or even what's for dinner.

By calculating risks, ruin can be avoided.

We are intent to get where we are going as quickly as we can and yet distracted as our minds churn on everything but the road.

Then there's the even worse example of texting while driving.

As drivers head to their destinations, heads full of ideas, plans, and other thoughts, they get the itch to check their phones. Or maybe a text comes in and they hear the siren song of the message alert "ding." They act on the immediate impulse to check the message and reply, an instinctual action known for wreaking havoc on roadways across the world.

Too many deaths and disfigurements come about in such a way, countless lives ruined by the havoc that can be avoided entirely.

The National Highway Traffic Safety Administration's Driver Distraction Program defines distraction as "a specific type of inattention that occurs when drivers divert their attention from the driving task to focus on some other activity instead."

According to NHTSA, in 2017, there were 34,247 fatal crashes in the United States involving 52,274 drivers. As a result of those fatal crashes, 37,133 people were killed because of 2,994 distracted drivers. Bodily injuries were not included as well as monetary damages. That number is much higher.

One incident I saw on the TV news described a 19-year-old woman who crashed into a man jogging while she was texting and driving. The horrific accident killed the jogger, leaving children without a father and a woman without her husband.

In court, the camera captured the young lady sobbing uncontrollably, her eyes swollen from crying for the lives she ruined, including her own. She had no words of comfort for the widowed wife and her two fatherless daughters as they sat listening to her trembling voice. She could only offer an apology filled with gut-wrenching regret.

Such a tragedy over so small and inconsequential a thing, she chose to text without thinking of the consequences. Her thoughtless need for an insignificant text prompted a choice she would never have made if common sense ruled her for that brief moment.

"If I could turn back time and undo what I did to this poor family," is what she'll say for the rest of her life.

I read in a newspaper of another car accident in Pennsylvania, in which a mature businessman thought he could text and drive without any problems. He thought he was a careful and experienced driver, but this was a delusion.

He lost control of his car on a highway and landed on top of an oncoming small truck driven by father with his son as a passenger. They had no time to react. They were both pinned in the cab of the truck. The rescue team needed hours to extract them. The son suffered multiple broken bones and his father almost died. Even after many surgeries, both have to deal with constant pain and enormous medical bills. Their lives will never be the same. This businessman chose not to consider

safety first. The emotional and physical pain inflicted on the father and son was caused by an almost subconscious decision that he was fine to text and take his eyes off the road. He will regret the horrific accident for the rest of his life and likewise lament, "If only I could turn back time."

What if these two people had gone into the future, before the crash, visualizing themselves in an accident. They would have determined the consequences were too severe and their behavior would have changed instantly.

This isn't theoretical. We all have a metaphorical time machine. I've used mine most of my life and still do to avoid many problems.

If I'm driving in a rush to get to my destination, my conscious mind says, "The road is wide open and easy. There are no police around and I can save time by speeding." Another part of my mind is thinking about what excuse I could give for being late, making me even more intent about getting there quickly.

My conscience knows it's wrong to speed at 55 in a 35-mile-per-hour zone and I direct my mind to imagine the situation 30 seconds into the future. I visualize the worse-case scenarios.

"If a deer jumped out of the woods into my lane, what would I do? I could hit a tree and die. What if I hit an oncoming car? The driver could die or become paralyzed. Will I survive? What if a child ran in front of my car?"

I imagine the pain and suffering I could cause to someone else and most likely to myself. Will I be able to handle the consequences and regret. Will I say those words, "If I could only turn back time?"

In the flash of this thought, I decide to slow down. I focus on driving.

I may not have had an accident, but now I've made it all the less likely I ever would.

I scanned the future, envisioning the horrific consequences and decided speeding wasn't worth the risk.

And, by the grace of God, I haven't said, "If I could turn back time..."

You can use this instant time machine to imagine the impact of hurtful words, or lying to a loved one, or an accidental death caused by texting and driving.

Why invite problems and despair? Who wants ruination? Visiting the potential horrors of the future can save us regret and despair. Common sense needs to be applied.

The mind has a powerful tool—a time machine. But rarely do people use it to go into their future. If they did, maybe they wouldn't wish they could go back to change the past.

Heidi Le Bris is a conversationalist with varied interests courtesy of the *savoir-vivre* gained from having owned a fine French restaurant. Aka "The French Chef's Wife," Le Bris also provided entertaining cooking lessons. Growing up as a "Jersey girl" to living the French culture gave her a spirited grasp of the various curiosities of life.

Memory and Attention Difficulties Are Often Part of Normal Life

Demanding lives, lack of real mental downtime can both lead to problems with concentration and memory

JACQUELINE ANDERSON

From young adults to people in their 60s, everyday functioning in today's world can place high demands on our attention and memory skills.

Memory lapses, such as forgetting an appointment, losing our keys, forgetting a distant relative's name or not remembering why you opened the fridge, can leave us believing our thinking skills are impaired.

But you might be too hard on yourself. Tiredness, stress and worry, and feeling down or depressed are all common reasons why adults experience attention and memory difficulties.

Attention and Memory Systems

Attention and memory skills are closely connected. Whether we can learn and remember something partly depends on our ability to concentrate on the information at the time.

It also depends on our ability to focus our attention on retrieving that information when it's being recalled at a later time.

This attention system, which is so important for successful memory function, has a limited capacity—we can only make sense of and learn a limited amount of information in any given moment.

Whether we can learn and remember something partly depends on our ability to concentrate on the information at the time.

In people who are aging normally, both attention and memory systems gradually decline.

Being able to learn and later successfully remember something also depends on our memory system, which stores the information.

Changes in Attention and Memory Skills In people who are aging normally, both attention and memory systems gradually decline. This decline starts in our early 20s and continues slowly until our 60s, when it tends to speed up.

During normal aging, the number of connections between brain cells slowly reduce and some areas of the brain progressively work less efficiently. These changes particularly occur in the areas of the brain that are important for memory and attention systems.

This normal aging decline is different from dementia and Alzheimer's disease, which cause progressive changes in thinking skills, emotions, and behavior that aren't typical of the normal aging process. Dementia comes from a group of diseases that affect brain tissue and cause abnormal changes in the way the brain works.

If you're concerned that your memory difficulties may be a symptom of dementia, talk to your GP, who can refer you to a specialist, if needed, to determine whether these changes are due to normal aging, dementia, or some other cause.

If you experience persistent changes in your thinking skills that are clearly greater than your friends and acquaintances of similar age and life circumstances, see your GP.

Normal Attention and Memory Difficulties

Broadly, there are two main reasons why healthy adults experience difficulties with their memory and/or attention: highly demanding lives and normal age-related changes.

A person can be consistently using their attention and memory skills at high levels but without a sufficient amount of mental relaxation time and/or sleep to keep their brain working at its best.

Young adults who are working and studying, who then consistently use attention-demanding devices as "relaxation" techniques, such as computer games and social media, fall into this group.

Adults juggling the demands of work or study, family, and social requirements also fall into this group.

Most adults need about seven to nine hours of sleep per night for their brain to work at its best, and older adults need seven to eight hours.

The second common reason is a combination of aging-related brain changes and highly demanding work requirements.

For people in jobs that place a high load on thinking skills, the thinking changes that occur with normal aging can become noticeable at some point around 55 to 70 years of age. It's about this time that age-related changes in the ability to carry out complex thinking tasks can become

noticeable. People who are retired or don't have the same mentally demanding jobs generally experience the same changes, but may not notice them as much.

This is also the age that many people become more aware of the potential risk of dementia. Consequently, these normal changes can result in high levels of stress and concern, which can result in a person experiencing even greater day-to-day difficulties.

Emotional Distress Can Take Its Toll

Feeling down and sad can affect memory and concentration. When a person is feeling worried and/or down regularly, they may become consumed by their thoughts.

It's important to recognize how you're feeling, to be able to make changes or seek help if needed. But thinking a lot about how you're feeling can also take a person's attention away from the task at hand and make it difficult to concentrate on what's happening or remember it clearly in the future.

So feeling worried or down can make it seem like there's something wrong with a person's memory and concentration.

Boosting Attention and Memory Skills

There are a number of things that can be done to help your day-to-day memory and attention skills.

First, it's important to properly rest your mind on a regular basis. This involves routinely doing something you enjoy that doesn't demand high levels of attention or memory, such as exercising, reading for pleasure, walking the dog, listening to music, relaxed socializing with friends, and so on.

Playing computer games or having a lengthy and focused session on social media requires high levels of attention and other thinking skills, so these aren't good mental relaxation techniques when you are already mentally tired.

It's also important to get enough sleep, so you aren't consistently tired. Exercising on a regular basis often helps with getting good quality sleep, as does keeping alcohol consumption within recommended limits.

Looking after your mental health is also important. Noticing how you're feeling and getting support (social and/or professional) during long periods of high stress or lowered mood will help ensure these things aren't affecting your memory or concentration.

Finally, be fair to yourself if you notice difficulties with your thinking. Are the changes you notice any different from those of other people your own age and in similar circumstances, or are you comparing yourself to someone younger or with fewer demands in their life?

If you have ongoing concerns about your attention and memory, speak with your GP, who can refer you to a specialist, such as a clinical neuropsychologist, if needed.

Jacqueline Anderson is a senior lecturer in clinical neuropsychology at the University of Melbourne in Australia. This article was originally published on *The Conversation*.



New Study Suggests Outlook May Play Major Role in Sleep Quality

MOHAN GARIKIPARITHI

A new study indicates that how you see the world may have a significant effect on how well you sleep. This is excellent news if you're a glass-half-full type of person.

In recent years, sleep deprivation has become a major public health concern. Moreover, it seems as if a growing number of people I talk to aren't getting the sleep they desire. Worries about bills, the economy, work, and more have them awake at night, and they aren't alone.

It's estimated that roughly 30 percent of adults in the United States aren't getting enough sleep for good health, and as many as 70 million people may have a sleeping disorder. Poor sleep can increase the risk of a cardiovascular event, weight gain, and several other health conditions.

The study, published in the journal *Behavioral Medicine*, found that optimists are less likely than pessimists to suffer from insomnia. They also enjoy longer, better quality sleep. The finding builds on a study noting that optimists also enjoy better heart health.

Examining 3,548 participants and using surveys to indicate outlook and sleep quality, researchers found that optimists are 74 percent less likely to experience insomnia than pessimists and more likely to get the recommended six to eight hours of uninterrupted sleep per night. Their chance of getting good, quality sleep was 78 percent better than among pessimists.

There are several tools that you can use to improve sleep. Getting exercise (which can also help with stress relief and anxiety), sleep hygiene, and limiting alcohol in the



Happy thoughts can lead to better sleep.

evening can all have a positive effect and are slightly more accessible than an outlook overhaul. That said, according to a specialist writing for *Psychology Today*, it's possible to change your overall outlook. It

does, however, take some time. They suggest:

- Identifying your negativity, so you're conscious of when you're being negative.

- Try to see the positive side—it may feel fake at first, but in time, it may become reflexive.
- Write down your negative thoughts and the evidence you have to support them. Then, in another column, write evidence that argues that point. It can help you identify both good and bad, and perhaps begin to improve overall outlook by considering multiple sides and scenarios.

Mohan Garikiparithi holds a degree in medicine from Osmania University (University of Health Sciences). He practiced clinical medicine for over a decade. During a three-year communications program in Germany, he developed an interest in German medicine (homeopathy) and other alternative systems of medicine. This article was originally published on *Bel Marra Health*.

How to Attain Outer Excellence and Inner Peace

Stop 'chasing the dragon' of praise and instead seek self-efficacy

DAN SANCHEZ

Why are so many adults, young adults especially, so anxiety-ridden and uncomfortable in their own skin? Could it be rooted in the way children are raised? What follows is my theory.

When we are young children, we're dependent on adult support for survival. We're also hardwired to crave and seek that support. When we don't have it, we feel an anxiety that is, at the bottom, an instinctive existential dread.

In a fully healthy development toward adulthood, our craving and need for parental support are gradually replaced by self-reliance. As we grow in our abilities to accomplish things for ourselves in the world, we develop what psychotherapist Nathaniel Branden called self-efficacy: confidence in our own capacity to fend for ourselves, to meet life's challenges with our own resources, and to survive and thrive in the world with ever-greater independence.

An Imposed Addiction

However, many parents use their children's physical and emotional reliance on adults as an emotional lever to manipulate them into desired behavior, using both praise (including rewards that signify approval) and rebukes (including punishments

that signify disapproval). Instead of growing in self-efficacy, the children become permanently addicted to praise as a source of existential emotional security and permanently phobic toward rebukes as a source of existential dread.

Like an addict chasing highs, the child chases adult praise. Each dose of praise momentarily allays the existential dread because it signals to the child that, at least for the moment, he has the adult's vital support. But the child of manipulative parents quickly comes to realize that such support is fickle: it may be withdrawn at any moment, as indicated by praise giving way to disapproval or indifference. So the effect of each dose of praise is fleeting and deeply unsatisfying. Before long, the existential dread creeps in again, and the child starts jonesing for his next fix.

In such a child, self-efficacy and growth toward independence are stunted, and emotional dependence on the judgment of others (especially authority figures) becomes overgrown and artificially prolonged. The child can't fully explore, revel, and rejoice in his own pursuits and newfound powers because of being neurotically preoccupied with being validated by others.

Chasing the Dragon

In this way, the natural, biologically



functional dependency of childhood is extended unnaturally and counterproductively into adulthood.

The adult with low self-efficacy continues the never-ending Sisyphusian quest for existential emotional security by compulsively chasing external validation and fleeing external invalidation: "chasing the dragon," as it's referred to with opiate addiction. He never feels truly secure because he bases his security on the shifting sands of the judgment of others, which are fickle and, unlike his own actions and powers, are fundamentally outside of his control.

This person's pursuits of mastery in facing the challenges of life are hamstrung because it's impossible to steadily advance toward mastery when one is neurotically preoccupied with such fleeting and superficial prizes as praise and the avoidance of censure. And growing mastery (especially in one's job) is an important, stable, and powerful source of self-efficacy and existential emotional security.

Such an adult will have an uneasy, needy, anxious, tortured soul.

Mastering a skill or profession is an important, stable, and powerful source of self-efficacy and existential emotional security.

Reclaiming Control

The challenge for such an adult is to break that dependency and to replace it with self-reliance and self-efficacy; to wean himself of his addiction to signs of extrinsic approval (eagerly seeking praise at work, likes on Facebook, etc.) and to face his fears of signs of extrinsic disapproval.

He must instead absorb himself in the intrinsic joys of developing his own abilities, in intrinsic fascination with his craft and his pursuits, and in the deeply satisfying pursuit of excellence and mastery (especially self-mastery) for the sake of his own long-term happiness and not for the sake of positively impressing others in the short term.

Praise and the absence of disapproval will very often be a natural side-effect of such a mindset. But it should not be the overriding goal.

This, I believe, is the path toward both outer excellence and inner peace.

Dan Sanchez is the director of content at the Foundation for Economic Education (FEE) and the editor of FEE.org, which first published this article.

Thinking About the Future Makes Life More Meaningful

Thinking about what the future likely holds helps us decide what course to take.



Research suggests that 'prospection' can help us lead more generous and fulfilled lives

SUMMER ALLEN

Mindfulness is all the rage these days, and for good reason. Focusing on the moment can improve our well-being, foster compassion, and help our relationships. What about going beyond the present moment? Yes, thinking about the future can trigger anxiety—but a growing body of research suggests that it can also make our lives more meaningful.

Humans aren't alone in having some ability to consider the future, a process that scientists call "prospection." After all, your dog gets excited when they see you holding a leash because they anticipate a walk is imminent; your cat may show similar excitement at the sound of a can being opened. There's even evidence that some animals—like bonobos and ravens—can choose and save tools that they plan to use in the future.

But prospection's unique benefits to humans extend beyond that of animals. Not only do we fantasize about our next vacation or decide whether it would be better to take the stairs or the elevator, but our prospection can cast far into the future: We might save for our children's education or plan for our retirement decades from now. We can make predictions about our own futures based on what we've learned about other people's experiences and even from characters in books and movies. And we can consider multiple

While optimism is important, it is also helpful to draw a contrast between our fantasies and our current reality.

directions our futures might take.

It is this remarkable ability to simulate our possible futures that makes prospection special. Just like gold prospecting may literally make you rich, studies suggest that prospecting about your future can enrich your life in at least four ways.

Helps Us Make More Prudent Decisions

Perhaps one of the most fundamental and important functions of prospection is that it helps us decide how to act: Thinking about what the future likely holds helps us decide what course to take in the here-and-now. Several studies have examined how

1. thinking about the future shapes our decision-making. Researchers have been particularly interested in the psychology that drives our process of deciding between receiving something now versus receiving something of greater value later. In general, people tend to choose smaller but more immediate rewards over larger rewards that they have to wait for, a phenomenon known as "delay discounting."

But they don't always choose short-term rewards over long-run gains. For instance, studies have shown that present-day connection to a possible future event can counteract delay discounting. In one study from the United Kingdom, participants were told either to vividly imagine spending 35 pounds at a pub 180 days from now or to simply estimate what they thought could be purchased for 35 pounds. Participants

in the former condition showed an increased willingness to wait for a larger future reward than the participants in the latter condition. In other words, visualizing a specific possible future counteracted the effects of delay discounting.

Another study showed that participants who felt closer to their future selves were more willing to wait for a larger reward than those who anticipated changing; the same was true when they were asked to make decisions on behalf of a fictional character who they knew would go through a life-changing event (like a religious conversion or returning home from war).

While interesting in its own right, this research could have important personal ramifications. If people could be made to feel a more immediate connection to their eventual retirement (and a consequent drop in income), they may be more motivated to make prudent decisions.

In fact, one experiment found that manipulating how people think about the time until their retirement—in days rather than years—caused them to plan to start saving for retirement sooner because the shift in time perspective made the participants feel more connected to their future selves. A 2014 study found that viewing realistic computer-generated images of what they may look like in the future decreased their discounting of future rewards and led them to contribute more to a hypothetical retirement account.

Continued on Page 10

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Thinking About the Future Makes Life More Meaningful

Research suggests that ‘prospection’ can help us lead more generous and fulfilled lives

Continued from Page 9

2. Motivates Us to Achieve Our Goals

Prospection has another important application: It motivates us to achieve our goals. But the relationship here is not a simple one. Work by psychologist Gabriele Oettingen and colleagues shows that whether thinking about the future helps us actually reach our goals depends on how we think about the future.

In fact, research has found that positive thinking about our future can backfire. The more people positively fantasize about successfully reaching their goals, the less effort they actually put into realizing them. For example, in one study, the people who fantasized more about successfully losing weight actually lost less weight. Another study found that students who fantasized about their transition into a professional career were less successful in their job search and students who dreamed more about their crush were less likely to start a relationship with their crush.

Importantly, both of these studies found the opposite effect for having positive expectations, that is judging the desired future as likely. People who expected to lose weight were more likely to actually lose weight; students who expected they would find a job were more likely to actually land one, and students who expected to enter a relationship with their crush were more likely to actually do so.

It makes sense that having positive expectations—optimism, essentially—could increase our ability to achieve our goals, but why might fantasizing about the future actually decrease the chance of achieving what we want? Because, write Oettingen and Klaus Michel Reininger, positive fantasies “lead people to mentally enjoy the desired future in the here and now, and thus curb investment and future success.”

But often our goals come from our fantasies. We want to excel at work, find Mr. or Mrs. Right, or run a marathon. How do we turn these fantasies into behaviors that can help us reach our goals? Research suggests that while optimism is important, it is also helpful to draw a contrast between our fantasies and our current reality, which allows us to see barriers that must be overcome.

For example, one study asked students to mentally contrast their positive fantasies about benefiting from a vocational training program with aspects of the program that could impede their progress. This reflection caused students who expected to do well in the program to commit themselves more, and those who expected to do poorly to commit themselves less—again pointing to the importance of optimistic expectations to success. But the mental contrasting was also key: Positive expectations did not increase commitment in participants who were not assigned to compare their present situation with their future desires.

Results from a later study suggest that the effectiveness of mental contrasting is due to “energization”—meaning that, when people have high expectations for succeeding at something, considering what might impede their goals gives them energy to try to overcome those barriers. In other words, it helps to stress yourself out a little bit.

Mental contrasting, particularly when used in conjunction with “implementation intentions”—making plans to help move past potential barriers—has been shown to help people reach their goals. To describe this process, Oettingen and colleagues use the acronym WOOP: Wish, Outcome, Obstacle, Plan. In studies, WOOP-type interventions have helped people break a bad snacking habit, get more exercise, and improve academic performance.

Thus, research suggests that thinking about the future can motivate us to take

the steps necessary to reach our goals—but only if we take obstacles into account.

3. Improves Psychological Well-Being

Besides helping us make decisions and reach our goals, there is evidence that prospection may improve psychological health more generally. It might even help people who are struggling with depression and those recovering from trauma.

Indeed, some researchers pose a link between poor prospection and certain psychological disorders such as depression.

“We see faulty prospection as a core underlying process that drives depression,” write psychologists Martin Seligman and Anne Marie Roepke in the book “Homo Prospectus.” In particular, they note that people with depression imagine possible futures that are more negative than people without depression. Moreover, people with depression tend to overestimate risk and to have more pessimistic beliefs about the future.

That might be why research suggests that targeting negative beliefs about the future can be helpful. Some techniques used in cognitive behavioral therapy, for example, involve correcting how people think about the future, and some studies have shown that cognitive-behavioral therapy can improve prospection. There is a 10-week program called “Future Directed Therapy” that induces participants to spend less time dwelling on the past

or on current struggles. Instead, they are asked to spend more time thinking about what they want from the future, while developing skills to reach those future goals. A nonrandomized pilot study found that patients with major depressive disorder who completed this intervention showed significant improvements in depression, anxiety, and quality of life compared to patients who completed standard cognitive-behavioral therapy.

For people recovering from trauma, a 2018 study suggests that writing optimistically about the future—an intervention called prospective writing—might encourage post-traumatic growth (that is, positive psychological growth following a traumatic life event).

In this study, adults who had recently experienced trauma were randomly assigned to a prospective writing intervention group, a factual writing control group, or a no-writing control. Throughout the study, those in the prospective writing group showed greater improvement in surveys measuring aspects of post-traumatic growth, including relationship quality, meaning in life, life satisfaction, gratitude, and religiosity-spirituality. The other two groups did not show the same progress.

There’s another technique that may help anyone improve their psychological health: “anticipatory savoring.” Taking time to simulate and enjoy a positive experience in advance—whether it be an upcoming meal, visit with friends, or vacation—can allow you to derive benefits from the experience twice. One 2018 study found that taking the opportunity to savor an upcoming experience actually heightened people’s enjoyment both during the unfolding of the experience and when remembering it later.

One way to engage in anticipatory savoring, suggested by Roepke and Seligman in a recent review article, is to modify the “three good things” gratitude exercise. Instead of writing three good things that happened today, you can write three good things you anticipate happening tomorrow and what you can do to make it more likely that those things actually happen.

For people who are struggling, they suggest also writing down three methods that could be used to mitigate disappointment if good things do not actually happen. These could include coping strategies (exercise, reaching out to a friend, etc.) or alternative strategies to making the good thing happen (e.g., if a friend canceled lunch, you could suggest lunch next week).

4. Makes Us More Kind and Generous

How we think about the future doesn’t just influence our own lives. It can also influence how we treat other people.

In particular, picturing yourself help-

“We see faulty prospection as a core underlying process that drives depression.”

Martin Seligman and Anne Marie Roepke, psychologists, from the book ‘Homo Prospectus’

ing someone in the future may make you more likely to actually do so. A 2018 study found that participants reported being more willing to help other people who needed help (such as a person who was locked out of their house or who lost their dog) if they had previously been asked to imagine helping a person in a similar scenario. People who were asked to imagine the helping scenario more vividly—by picturing the event occurring in a familiar location—were even more willing to help. One experiment even found that people who imagined helping actually gave more money to people in need when given the opportunity.

Another study found that when people think more broadly about the future consequences that could come from helping others, they might feel inspired to behave in more prosocial ways. In one experiment, researchers asked people who had volunteered for Hurricane Katrina relief efforts to imagine the meaning and consequences of their trip—or to think concretely about how they would be helping. Those who imagined the consequences of helping predicted that they would have a more rewarding trip than those who thought concretely about their actions. A second experiment replicated this finding: People predicted that giving money to someone they had never met would be more rewarding when they were asked to think about the more abstract meaning and consequences of their actions (e.g., how this decision fit in with their life’s past and future experience) than when they were asked to consider a more concrete perspective.

Could this abstract-versus-concrete effect have real-world consequences? The researchers, who published their article in *The Journal of Positive Psychology* in 2014 think so:

“We believe that our results suggest an intervention that could be used to prompt and sustain prosocial behavior. To the extent that people avoid or cease prosocial actions because of concrete costs, inviting people to construe those actions abstractly could help them persist at prosocial actions that have enduring personal and social benefits.”

While there’s a lot left for researchers to discover about prospection, you don’t need to wait for their published studies. You can try your own experiments right now, to see if prospection helps you to live a more generous, happier, and more meaningful life.

Summer Allen holds a bachelor’s in biology from Carleton College and a doctorate in neuroscience from Brown University. Allen writes for a variety of publications including weekly blog posts for the American Association for the Advancement of Science. This article was originally published in the *Greater Good* online magazine.

People with depression imagine possible futures that are more negative.

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The idea of individual purpose is so important that it's the basis for why the United States was founded.

MONKEY BUSINESS IMAGES/SHUTTERSTOCK

JEFF GARTON

I recently read an article about the surprising career moves of retired NBA stars. After spending their lives developing athletic skills, I was curious to learn what new jobs they chose and the purpose behind their decisions.

Some of the positions they chose were truly surprising: crossing guard, chef, truck driver, substitute teacher, livestock farmer, apple farmer, Starbuck's manager, clothing designer, spokesperson, ambassador, and so on.

The majority of these retirees didn't need to work another day in their lives. They chose jobs they believed were meaningful to their purpose in life. This included helping, serving, educating, feeding, clothing, and shaping other's opinions.

They weren't concerned about being made satisfied with good pay, a nice boss, competitive benefits, or convenient work hours. They were doing what they thought they were supposed to be doing. They have career contentment. Here are other examples:

Pat Tillman was so motivated to pursue his purpose that after the Sept. 11 attack, he turned down a contract with the Cardinals worth

Howard Hughes, the reclusive billionaire, used to fake his identity so he could apply for laborer jobs.

\$3.6 million over three years to enlist in the U.S. Army and become an Army Ranger. After several tours in Afghanistan, he lost his life to friendly fire in 2004. He was only 27.

Howard Hughes, the reclusive billionaire, used to fake his identity so he could apply for laborer jobs in his own companies. He missed using some of the tooling skills he developed at a younger age. It makes me wonder what he did with his paycheck.

As an HR person, I remember multiple times when employees were eager to leave highly paid marketing jobs to become school teachers, ranchers, police officers, and park rangers. Their income and benefits mattered less to them than being able to pursue their career contentment.

I also remember the disappointment caused by a brewmaster who resigned one year after we relocated him from Europe. He told us money was his purpose for working. We broke the bank by paying him more money than he expected. His purpose was being fulfilled so we couldn't understand why he was leaving so soon.

He said we never asked him what he wanted the money for. The purpose behind the purpose

was to buy a sailboat. Now that he could afford one, he was moving to California where he could sail year-round.

It's amazing how some people are willing to take risks, make sacrifices, and alter their lives in some way to pursue their purposes both on and off the job. Others, meanwhile, are perfectly content to stay in jobs that may be irrelevant to their purposes.

It is saddening when people are held back from living a purpose-filled life by fear of change, a lack of confidence, or because they are overly concerned about what others might think. They don't mind that one day they may look back on their career and regret that they didn't do what they were supposed to do. You only have one shot at this life.

In the now-classic Harvard Business Review article, "Management by Whose Objectives," the late psychologist Harry Levinson spoke about the importance of individual purposes. His research found that people are self-motivated and naturally engaged in jobs they believe fulfill their most meaningful purposes.

In jobs where people don't fulfill their own purposes, they become apathetic and lethargic. In such cases, their employers must

do what they can to make these workers temporarily motivated and artificially engaged. Even then, motivation sags unless employers find a way to integrate the individual worker's purpose with the business's purposes so both are fulfilled.

The idea of individual purpose is so important that it's the basis for why the United States was founded. The Declaration of Independence refers to this inalienable right as your life, liberty, and pursuit of happiness.

We've become brainwashed into believing we want job satisfaction in exchange for fulfilling someone else's purposes. Yet we're here in pursuit of career contentment associated with fulfilling our own purposes. Veterans like Pat Tillman sacrificed their lives so you can enjoy this inalienable right. Use it to your advantage.

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 an originator of the concept and instruction of career contentment.

Why 'Adult Recess' Is Becoming a Trend

Adults may be replacing the joys of marriage and parenthood with a return to childhood pleasures

ANNIE HOLMQUIST

You've heard of adulting school. It's where those who grew up in body, but not necessarily in responsibility, go to learn the ropes of changing tires, cooking, and doing laundry.

But there's a flip side to this phenomenon. Apparently, many adults have a craving to be a kid again.

Enter "adult recess."

"Adults are reliving their playground memories—the good ones and the bad ones—

at what's become known as "adult recess," or so says the front page of *The Wall Street Journal*.

Adult recess is not a one-off event. It resides in trendy cities like Seattle and in the midwestern towns of Indiana. It attracts large crowds and return attendees. Paying attendees. The journal recounts the popularity of one event in its article.

"In Seattle's Cal Anderson Park, about 1,000 men and women turned out for an adult recess one Saturday earlier this month that included kickball, hopscotch

and tetherball, along with chicken nuggets and grilled cheese sandwiches," reads the article.

"I thought back to the last time when I really had fun, and it was these games when I was a kid," Clay Lundquist, managing director of Center Stage Entertainment Marketing, which produced the recess, told the *Journal*.

But outdoor games aren't the only thing on the agenda for adult recess. Some recesses offer indoor play-time with toys like Lincoln Logs, Silly Putty, and Play Doh.

Which of us has not seen a young mother swinging on the playground with her child?

Let's step back and assess this trend for a moment.

On the one hand, I get it. Life is stressful. It's easy to daydream about a simpler time in life, when one could get outside, move around, throw one's cares to the wind, and have fun with friends. We all have fond memories of childhood and it's nice to indulge in these occasionally.

On the other hand, there's the issue of moving on and accepting adult responsibilities. Do we keep ourselves stuck in the past, unable to grow up and become the responsible leaders of the next generation because we crave an outlet for our inner child?

Fortunately, there is a solution to the dilemma of accepting responsibility but still allowing the inner child out occasionally.

Have kids. Once upon a time, the twenty-something adults who today enjoy adult recess—were busy starting careers, getting married, and having children. These milestones made young people embrace responsibility, but having children of their own also gave them an outlet for fun and play.

Which of us has not seen a young mother swinging

on the playground with her child?

Which of us has not seen a young father throwing a football to his son, or building Lincoln Log dollhouses with his daughter? Parents have tremendous responsibility. But they also have an automatic excuse and opportunity to have fun and enjoy the pleasures of childhood.

Today's single, childless adults don't have that. And so perhaps this is why we see them seeking to fill the void of marriage and family with the substitute of "adult recess."

Perhaps it is time our society grew up?

Annie Holmquist is the editor of Intellectual Takeout. In her role, she assists with website content production and social media messaging. Annie holds a bachelor's in Biblical studies from the University of Northwestern-St. Paul. In her research and writing, she also brings to the table 20 plus years of experience as a music educator and a volunteer teacher—particularly with inner-city children. This article was originally published on IntellectualTakeout.org



MARJAN APOSTOLVIC/SHUTTERSTOCK

Do we keep ourselves stuck in the past, unable to grow up?

ELEVATE AND INSPIRE

How a Positive Attitude Helped Ballerina Fight Cancer

Getting her dream job was quickly followed by a diagnosis that threatened her career—and her life



Chiara was diagnosed with Ewing sarcoma, a rare type of pediatric bone cancer when she was 19 years old.

SHIWEN RONG

NEW YORK—As a child, Chiara Valle would play in the mud with a white dress. She didn't act like a princess but she wanted to look like one.

She loved sports, and did gymnastics, figure skating, and ballet. Then at age 10, she had a moment in ballet when she knew she wanted to dedicate her life to the art.

Trained at the Jacqueline Kennedy Onassis School in New York City as a teenager, she was fortunate to be hand-picked to join The Washington Ballet as a trainee by its artistic director, Julie Kent, in an audition of 200-plus in 2016.

"Dancing was like a whole other world for me," Valle said in an interview with NTD. "My favorite part is being on stage, that's the best feeling for me."

After making her professional debut on the grand stage of The Kennedy Center in ballets such as "Les Sylphides" and "The Nutcracker," Valle's career was on a strong, promising trajectory—until everything changed.

Upside Down

In the winter of 2017, Valle began to experience debilitating pain in the femur of her left leg.

The doctor initially thought it was a type of benign tumor, and Valle was recommended to go through non-invasive surgery. However, after one procedure, the pain came back. After a second surgery, the pain came back.

The family would go from doctor to doctor to get answers. After a year of this ordeal, Valle finally received the correct diagnosis—Ewing sarcoma, a rare type of pediatric bone cancer. She was just 19 years old.

"It was a very difficult thing to hear, but at the same time I know in the back of mind that there was always this possibility," said Valle's father, Giovanni Valle. "We both knew, at that moment, that the most important thing was just being supportive, and helping her get through it in whatever way we could."

It wasn't easy for Valle to go from the active life of a dancer to the bed-bound days of a cancer patient, but she knew she had to keep a positive attitude throughout treatment.

"My nurses would always come in, and they would always say, 'that smile is going to get you through treatment,'" Valle said.

Her doctor was confident in Chiara's recovery as well.

"[The doctor] made me really happy because he said, 'I think the radiation approach is best for you. And I'm very, very confident in it,'" Valle said.

She would be able to keep her dream. Valle received 14 rounds of chemotherapy every two weeks for 2-5 days continuously, over 10 months, for a total of 63 days. She also underwent 7 weeks, or 32 rounds, of radiation treatment for local control.

The effects of the aggressive treatments led to dangerously low blood counts for Valle, who received more than 50 blood and platelet transfusions. She was hospitalized as an inpatient for more than 80 days in 2018, often in isolation due to being immunocompromised.

Even though it got difficult, she kept reminding herself, "Cancer doesn't define me."

Sandra Valle, Chiara's mother, remembered her daughter's heart rate dropping to as low as 35 bpm. A doctor said one would have been lying out on the floor at that point, but Valle was still sitting in bed talking to them.

"So she obviously was able to handle it," said Sandra Valle.

Birthday Gift

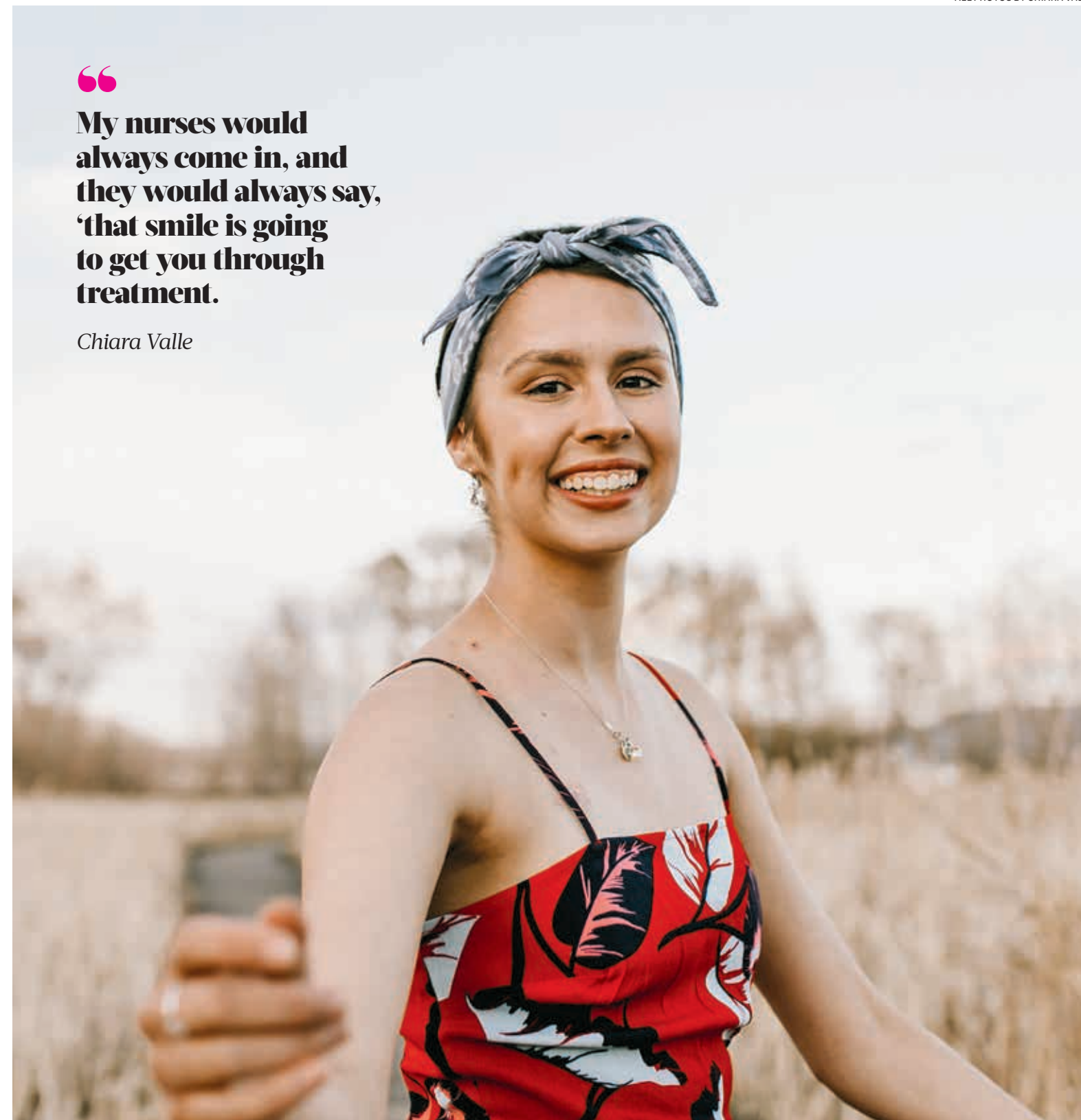
Sandra said the doctors have described her daughter as a bit of a rebellious patient because she would do things she technically wasn't supposed to but in an affectionate manner.

Valle had to spend her 20th birthday hospitalized, but her parents took the spirited girl out for a short jet-skiing trip.

"[It] wasn't the best idea because I had really low blood, but I had a lot of fun and

“My nurses would always come in, and they would always say, 'that smile is going to get you through treatment.'”

Chiara Valle



ALL PHOTOS BY CHIARA VALLE

Chiara Valle after the 10 months of treatment that left her with no evidence of disease.

it all worked out," Chiara said.

But things like this are what helped Valle get through the long hospitalization period.

As chemotherapy went on, nausea became worse. "I was throwing up constantly, I was losing weight from no appetite, and my heart rate and pulse would drop down to concerning numbers," Valle said. "I had no blood counts at times, my immune system was shot, and somehow, I stayed motivated."

Her father said it was hard "seeing her deteriorate, physically losing her hair, her eyebrows getting very thin."

The physical aspect wasn't the worst thing for Valle. As the treatment went on, it became more of a mental game.

Towards the end of a chemotherapy session, Valle had told her parents she didn't know how much longer she could do this.

But then she would remind herself: "Look at where I came from, and look how far I'm coming. I have to use the experience in a positive way."

Valle credits her positive outlook to her family and ballet.

"Knowing that [ballet] was something that I was able to look forward to in the future and knowing that this is a temporary bump in my road ... I will get through this," Valle said. "And in the end, I want to be a big comeback story and get back to ballet and be stronger."

A Big Comeback

In November 2018, she received her last chemo and was told there was no evidence of the disease one month later.

"Cancer is one journey—after cancer is also a whole other journey," she said.

Since February 2019, Chiara has been working hard every day in ballet classes, physical therapy, and Pilates strengthening.

"When I first got back to the ballet stu-



dio I wasn't able to make it past the bar," she said.

But seeing her journey as something empowering and in setting little goals, she is now back on pointe. The amazing progress has motivated her even more.

Chiara recently started her own non-profit organization to help find funding for curing Ewing sarcoma, as well as letting other cancer patients enjoy the trips that helped her going through her own treatment.

"I really wanted to use my voice. And my main goal is to make everyone a survivor," Valle said. "And that's what I hope to do with Wings for Ewing sarcoma."

And guess what: this September she will join her classmates again, back at The Washington Ballet.

After a year's ordeal, Chiara Valle received the correct diagnosis of Ewing sarcoma, a rare type of pediatric bone cancer when she was 19 years old.



KMNPHOTO/SHUTTERSTOCK

FOOD IS MEDICINE

A phytonutrient in green tea extract is among the naturally occurring substances able to combat cancer without hurting the body.

The Best Cancer Killing Phytonutrients to Eat

Nature provides some amazing substances that can attack cancer stem cells

SAYER JI

Thirty years of research reveals 10 of the best food phytonutrients to ingest to protect against and even treat the root cause of most cancers.

A new medical model is fast emerging in line with ancient wisdom: one that aims to strike to the root cause of disease and resolve it permanently. Some call it “functional medicine,” a medical practice that focuses on supporting the optimal functioning of the body and its organs.

In cancer treatment, this highly ra-

tional approach involves targeting the cancer stem cells (CSCs) at the root of cancer malignancy. We now know that CSCs can be resistant to chemotherapy and radiation treatment, and some research suggests these cancer stem cells may even increase in number and invasiveness when exposed to these therapies. A superior cancer treatment should be capable of selectively killing and/or inducing suicide programs (apoptosis) within cancer cells without harming non-cancerous cells.

A review published in the International Journal of Molecular Sciences titled, “Phytochemicals as Innovative Therapeutic Tools against Cancer Stem Cells,” evaluated the possibility of just that. It found evidence that natural compounds within various foods and spices can provide treatments capable of targeting CSCs.

According to the review of 30 years worth of literature on the topic, the following 10 natural substances have been demonstrated to be the most effective chemopreventive dietary agents against CSCs:

1. Epigallocatechin-3-gallate (EGCG): A green tea extract
2. Curcumin: The primary polyphenol in turmeric root
3. Resveratrol: A phytochemical found in grapes, peanuts, Japanese knotweed
4. Lycopene: A red carotenoid found in watermelon, pink grapefruit, and tomatoes
5. Pomegranate extracts
6. Luteolin: A flavonoid found in peppers and various green vegetables
7. Genistein: A phytochemical found in soy, red clover, and coffee
8. Piperine: A phytochemicals found in black pepper
9. β -carotene: An orange carotenoid found in various vegetables
10. Sulforaphane: A sulfurous phytochemical found in Cruciferous vegetables

The researchers described the discovery that phytochemicals can selectively target CSCs as “a milestone in the improvement of cancer treatment because the synthetic anticancer drugs that are currently used are often highly toxic for healthy organs and weakens the patient’s immune system.”

They also pointed out that the phytochemicals or extracts identified above, due to their “low levels of toxicity for normal cells,” can be used in combination with other phytochemicals, “yielding powerful synergistic effects.”

They identified several key areas of focus for the future:

- Finding a way to combine these compounds into “very active cocktails of phytochemicals” to address the multiple areas of treatment resistance often found in CSCs.
- Comparing the effects of natural phytochemicals with synthetic drugs, the latter of which they anticipate will be found to be less efficient.
- Further researching the signaling pathways that govern the self-renewal and survival function of cancer stem cells.

The authors concluded, “[T]he use of phytochemicals may be a true therapeutic strategy for eradicating cancer through the elimination of CSCs.”

The discovery that natural substances may be superior to chemotherapy and radiation in selectively killing the root cause of cancer is could usher in a new era of cancer prevention and treatment that looks at our dietary decisions as the most important factor in our health destiny.

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 Systeme Biomed, vice chairman of the board of the National Health Federation, and steering committee member of the Global Non-GMO Foundation. This article was first published on GreenMedInfo.com

Superior cancer treatment should be capable of selectively killing and/or inducing suicide programs (apoptosis) within cancer cells without harming non-cancerous cells.

Rethinking the Approach to Fighting Alzheimer’s Disease

ETIENNE AUMONT

The idea of seeing a loved one decline and lose their ability to recall their most treasured memories is devastating. However, it is a fact of life for an increasing number of people. A third of Americans die with Alzheimer’s or another dementia and the disease kills more than breast cancer and prostate cancer combined, according to the Alzheimer’s Association.

The drugs help compensate for the loss of these neurons, but they have little impact on disease progression.

Alzheimer’s is the most common form of dementia and no treatment has yet been found, despite the best efforts of researchers. This is what drives the massive funding

of clinical trials searching for a way to stop the disease. Despite hundreds of drug trials, however, there have been no new treatments approved by the U.S. Food and Drug Administration since 2003. It’s clear that a better understanding of the disease is needed, as well as a re-evaluation of how the treatment is developed.

So, what makes the search for treatment so difficult?

As a first-year doctoral student in psychology at the Université du Québec à Montréal (UQAM) in Marc-André Bédard’s laboratory, I use nuclear imaging to investigate Alzheimer’s disease. My research aims to better understand changes in a neurotransmitter called acetylcholine in people with early Alzheimer’s disease. Acetylcholine is a chemical that allows neurons to communicate with other neurons, muscles, glands and so on.

The main drugs prescribed for Alzheimer’s disease respond to the degeneration of neurons responsible for the transmission of acetylcholine through the brain. The neurons

Electrolytes, What Do You Need to Know?

LISA ROTH COLLINS

Are you getting enough electrolytes? How do you replace your electrolytes? What’s the best way to get electrolytes? It seems like a lot of people throw around the word “electrolytes,” but do we actually know what they are and why so many people talk about them?

I did a little experiment and asked a half dozen people if they could name the six types of electrolytes and what they each do. No one named all them, although one person did name five. Everyone thought you can get them from certain electrolyte drinks and that it isn’t good to allow your levels to go too low. Not a terrible start, but let’s go a lot deeper!

What Are Electrolytes?

Electrolytes are electrically charged minerals or compounds that are found in your blood, tissues, urine, and other bodily fluids. There are six electrolytes: calcium, chloride, magnesium, phosphate, potassium, and sodium.

Levels of electrolytes fluctuate as the amount of water in your body changes. Ideally, the amount of water you consume should equal the amount you lose or eliminate. You can upset this balance by, say, sweating excessively and not drinking enough water. Other things that can cause your water balance to change are the use of some medications (e.g., steroids, laxatives, diuretics), vomiting, malabsorption due to digestive or intestinal issues, chemotherapy treatments, chronic respiratory problems, elevated blood pH, and kidney or liver problems.

Why Are Electrolytes Important?

Electrolytes are important because they are involved in several life-supporting activities, including:

- Regulating the fluid levels in your blood plasma and body
- Moving nutrients into your cells
- Transporting waste materials out of your cells
- Keeping your body’s acid/base (pH) level in the normal range (7.35-7.45)
- Enabling your muscle contractions, including your heartbeat
- Transmitting nerve signals from your muscles, heart, and nerve cells to other cells
- Helping your blood to clot
- Assisting in the formation of new tissue

Now you know why people are so adamant about getting enough electrolytes.



One of the best beverages to replace electrolytes is coconut water, which contains five of the six minerals.

Electrolytes are electrically charged minerals or compounds that are found in your blood, tissues, urine, and other bodily fluids.

Symptoms of Low Electrolytes

The symptoms of low electrolytes may depend on which mineral is in short supply.

- Calcium: Low calcium may not cause symptoms, but if it is chronically low, you may see changes in your hair, skin, and nails. You also may experience yeast infections, leg and back cramps, and muscle irritability.
- Chloride: Low chloride can occur if you’ve experienced excessive vomiting or are taking loop diuretics.
- Magnesium: Low magnesium may cause abnormal heart rhythms and muscle cramps or spasms.
- Phosphorus/phosphate: Low phosphate may cause respiratory failure, heart failure, muscle weakness, seizures, and coma. Poor nutrition, use of certain diuretics, and alcoholism can cause low phosphate levels.
- Potassium: Low potassium may cause abnormal heart rhythms and how your body stores glucogen (a source of energy for your muscles). Very low potassium can cause cramps, spasms, muscle weakness, and respiratory problems.
- Sodium: Low sodium causes water to move into your cells. It is usually marked by thirst, but also can be accompanied by confusion, headache, lethargy, and personality changes.

Where Do You Get Electrolytes?

You can get electrolytes from foods, beverages, and supplements. Water infused with electrolytes is one choice, and one of the best beverages to replace electrolytes is coconut water, which contains five of the six minerals (sans chloride).

Be especially mindful if choosing a bev-

verage that advertises itself as an electrolyte or sports drink. Many of the popular products on the supermarket shelves have a high sugar content as well as artificial colors and flavors. Read labels carefully before making your purchase.

Foods that are a rich source of electrolytes include avocado, bananas, bell peppers, carrots, celery, citrus fruits, cucumbers, cultured dairy, kiwi, pineapple, coconut water and watermelon. Make these a part of your diet as much as possible.

You can also replace electrolytes by taking supplements. You can make your own electrolyte replacement that’s a refreshing dessert at the same time. Here’s the recipe for Cherry Limeade Fizz Pops.

Place the following ingredients in a blender:

- 1 cup water
- 1/3 cup fresh lime juice
- 2 tablespoons honey
- 2 cups cherries (pitted)
- 2 scoops Pure Essence Ionic Fizz Magnesium Plus

Blend until cherries are pulverized. Pour the mixture into popsicle containers and freeze for at least six hours.

Bottom Line

Now you have a better idea about what electrolytes are, how important they are to your health, and where to get them. Be sure you and your family keep your balance.

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

Alzheimers is impossible to cure, but there is solid research into ways to prevent the disease.



ARTFULLY PHOTOGRAPHER/SHUTTERSTOCK

This allows researchers to measure the impact of the treatment on the odds of developing Alzheimer’s symptoms over the years. Such trials follow at least 1,000 participants over about two years in the hopes of detecting even small changes. These trials require enormous investments.

Prevention: The Best Cure

Given these challenges, preventative methods are gaining interest. Among these, physical activity such as exercise could help to slow or even prevent the onset of the disease through its antioxidant effects.

Intense physical activity may be daunting and in some cases impossible for some seniors. Dr. Nicole L. Spartano and her colleagues at Boston University have found that each hour of light physical activity, such as walking, would improve brain health and potentially reduce the risk of developing Alzheimer’s disease.

So far, the search for a miracle cure for Alzheimer’s has failed, despite enormous efforts by scientists and researchers. To overcome this challenge, researchers must rethink their approach to developing and testing drugs. Until then, prevention with diet, social interaction, physical activity and staying cognitively active are the best-known ways of fighting this terrible disease.

Étienne Aumont is a student of neurosciences at l’Université du Québec à Montréal. This article was first published on The Conversation.

that transmit it are found in the Meynert basal nucleus, a small area located at the front of the brain. The death of these neurons is believed to be the cause of the attention and memory disorders found in Alzheimer’s disease. The drugs help compensate for the loss of these neurons by increasing acetylcholine transmission, but they have little impact on disease progression.

A Hypothesis Under Fire

Currently, the search for treatments that can slow or stop the progression of Alzheimer’s disease is mainly based on the amyloid cascade hypothesis. According to this theory, the disease begins when the body does not clean amyloid proteins properly, leading to a build-up of microscopic plaques in the brain.

These plaques accumulate for decades, even before the first symptoms of Alzheimer’s disease appear. They then cause the dysfunction of tau, another protein found in neurons, producing neurofibrillary tangles inside the neurons resulting in their death.

However, more and more researchers are critical of this hypothesis.

About one in five seniors has a significant accumulation of plaques and yet will never develop Alzheimer’s. There are even cases where tau tangles have been found in the absence of plaques, which calls into question the sequence of events predicted by the hypothesis. In addition, treatments that have been developed to cleanse or prevent amyloid production have either had no effect on the progression of

Alzheimer’s disease or have accelerated the cognitive decline.

Alzheimer’s may be more complex than originally thought, and plaques might be a consequence of earlier changes rather than the driving force of the disease.

Reproducing Alzheimer’s in Rodents

Before a new drug is used on humans, it must first be tested on animals to see if it is effective and safe. The animals used, usually, rats or mice must develop a pathology that resembles Alzheimer’s in humans.

Prevention with diet, social interaction, physical activity and staying cognitively active are the best-known ways of fighting this terrible disease.

In the case of Alzheimer’s, the disease is caused in the test subject by genetic manipulation. For example, researchers have created rodents that carry a gene that causes the accumulation of plaques similar to those seen in humans. This causes the rodents to have memory and attention problems similar to patients with Alzheimer’s.

Animal experiments are based on the premise that the effects of treatments on artificially diseased animals are similar to those on humans. However, many animal models of Al-

zheimer’s disease recreate the amyloid cascade hypothesis, which is imperfect.

Since the causes and symptoms are not perfectly recreated, a treatment that works in rodents may not work in humans. It also means that drugs that may be effective in humans may not be effective in animals.

To improve research, it is necessary to find better animal models to better represent the mechanisms of Alzheimer’s disease in humans without relying on genetic mutation. This would make them more similar to Alzheimer’s progression in humans since 95 percent of human cases are not purely caused by genes. Such models could help develop treatments that would be effective in both animals and humans.

The Challenges of Clinical Research

The choice of patients in clinical trials can also pose serious challenges. One option is using people with mild Alzheimer’s. However, these patients have already lost most neurons in the basal forebrain, leaving no chance of recovering mental functions without using drugs such as the ones currently employed.

It is also thought that the mechanisms behind Alzheimer’s could be more difficult to halt since the cascade of events—plaques and tangles—might be too developed to be stopped.

That is why recent trials have been conducted in patients with pre-symptomatic Alzheimer’s disease. These people are very likely to develop the disease and have signs such as plaques, even if no symptoms can be detected.

How Does Our Longevity Compare With MLB Players?

Different sports come with different life expectancies, and baseball has one of the highest

W. GIFFORD-JONES

Today, what's the best message that parents can give their children about sports? I'd be particularly concerned if a child wanted to get involved in football or hockey. I'd try to convince him or her it's safer to play baseball. Now, a report in Men's Health Resources, reveals this is prudent advice.

Marc Weisskopf is a professor of environmental epidemiology and physiology at the Harvard T.H. Chan School of Public Health in Boston. His 10-year study compares mortality rates and health of 10,500 major league baseball (MLB) players with those involved in other major league sports.

First, Weisskopf has bad news for the rest of us mortals. His research reveals that MLB players tend to live 24 percent longer than the average American male. This figure should make us take a good look at what we're doing wrong.

His study also shows that MLB players have a lower death rate than those playing in the National Football League. Football players are three times more likely to die of neurodegenerative diseases and twice as likely to die of heart problems as baseball players are.

This part of Weisskopf's study isn't shocking. Rather it further confirms other studies on brain trauma. I've never seen MLB players butt heads like mountain rams and, unlike hockey players, baseball players never try to decapitate their opponent or hurl them into the boards of an arena.

Weisskopf's research verifies that parental common sense about brain injury in football and hockey is valid. After all, why would anyone believe it makes sense to repeatedly traumatize the head, whatever way it's done?

More interesting, however, are the report's

other medical discoveries. For example, how do you explain that, compared to U.S. males, MLB players show significantly lower death rates from common diseases: 20 percent lower for cancer, 19 percent lower for heart diseases and stroke, 33 percent lower from respiratory disease, 46 percent lower from diabetes, and 59 percent from suicide.

So what can the rest of us learn from this study? According to a report by Dr. David E. Conroy, published in Obesity Research and Clinical Medicine, the average weight of an MLB player has gradually increased over the last 145 years. This rise coincides with the use of steroids and increased muscle mass, which makes it easier to hit the ball farther.

But their increase in weight has

MLB players tend to live 24 percent longer than the average American male.

not been as great as that of the general population. This helps to explain why MLB players live 24 percent longer and have less chance of Type 2 diabetes and cardiovascular disease.

Weisskopf adds that athletes live longer because becoming a professional MLB player demands good health from the start. And, unless they keep in top shape, they won't remain long in the league. This means watching their diet and weight, and maintaining physical fitness.

Their lower death rate from cancer is harder to explain, though an increase in exercise has been linked to a decrease in some malignancy.

But why is the rate of suicide so low in MLB players? Maybe this answer is a no-brainer. MLB players are well paid, enjoy traveling together, and from my experience with them, they enjoy plenty of laughter, which is good medicine.

Yogi Berra, the philosopher king of the New York Yankees, kept the team laughing with his bizarre remarks, such as "If you come to a fork in the road, take it." Or, "If you don't know where you're going, you'll end up someplace else."

I'd prefer my child laughing with a baseball team than playing contact sports. Laughing has never caused a brain concussion.

Dr. Ken Walker (who writes under the pseudonym of Dr. W. Gifford-Jones, MD) is a graduate of Harvard Medical School who has written a weekly medical column since 1975. He is the author of nine books. For more information, visit www.docgiff.com



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