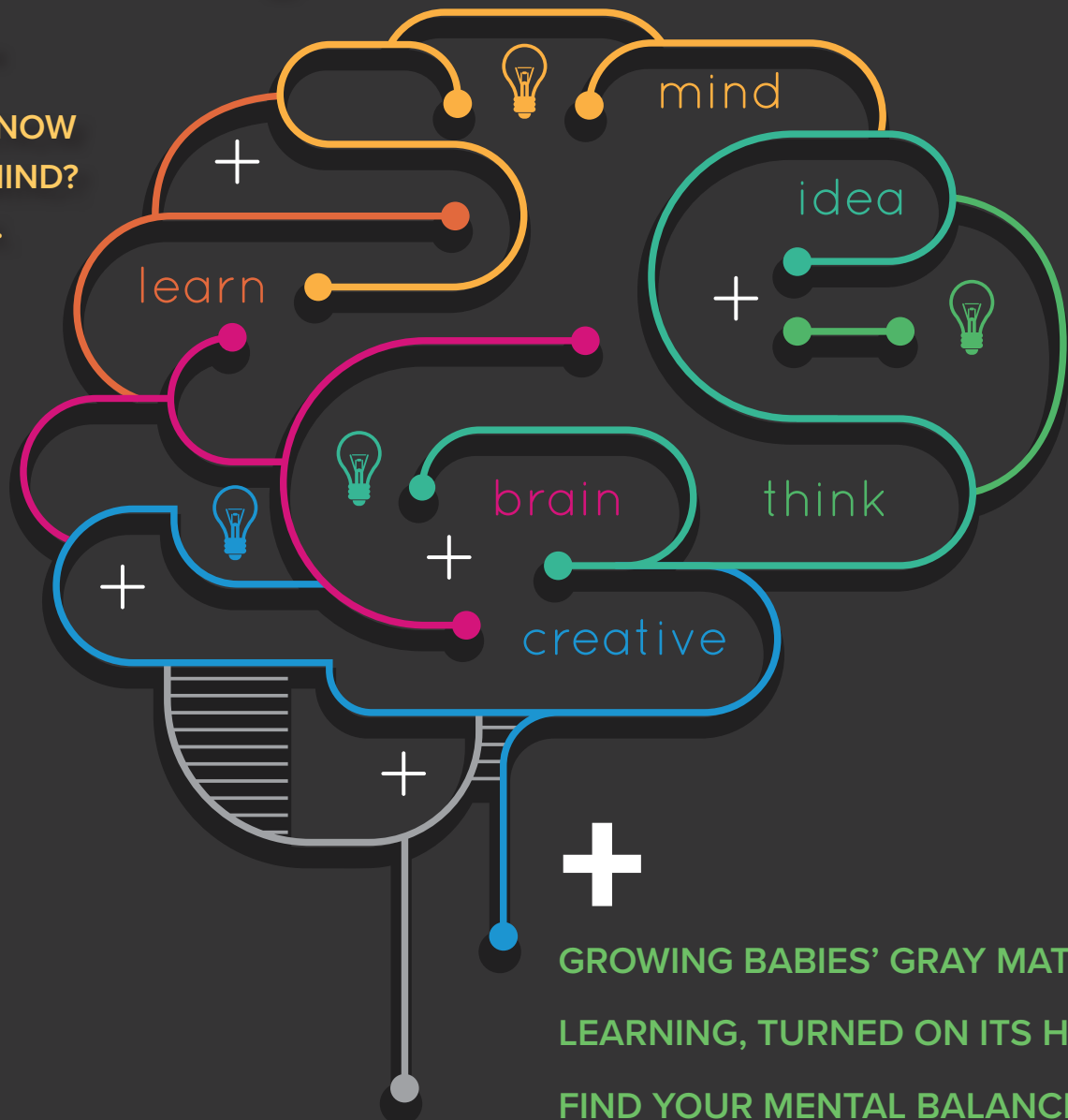


Your Mind-Blowing Brain.

THINK YOU KNOW
YOUR OWN MIND?
THINK AGAIN.



Find us online:
[geisinger.org/magazine](https://www.geisinger.org/magazine)

WELCOME

Have an amazing health story to share? We'd love to hear it. And maybe we'll feature it in an upcoming edition. Send us a note:

PAHealth@geisinger.edu



For many of us, fall means back to school. And whether you're a student, an educator or a parent, it's great to see learners headed back to the classroom again — either remotely or in person.

But of course, learning happens everywhere. In this brain-focused edition of *PA Health*, we explore how it begins in the womb, continues through life and may be the key to preserving memory and cognition as we age.

Throughout this issue, you'll find tips on good nutrition for your gray matter and mind-stimulating activities — all balanced by meditation to help deal with stress.

Finally, you'll meet a retired postal worker who had brain surgery in the morning, was home the same evening and is back on the golf course today with very little scarring. Few things make me happier than a story like this one.

So settle in and learn a little more about your own astounding brain as it leads you through life. And have a safe and happy autumn.

Jaewon Ryu, MD, JD
President and CEO
Geisinger



Train your brain

Exercising regularly? You're not just getting fit — you're helping your brain grow new cells!



Chief Marketing Officer/ Executive Editor

DON STANZIANO

Vice President of System Marketing

JEFF BEAN

Contributing Writers

KAYLEIGH DEMACE

PAULA FRANKEN

BETH KASZUBA

JEANNE LAKTASH

Managing Editor

JESSICA MARTIN

Photography

VICTORIA TUREL-WIKTOR

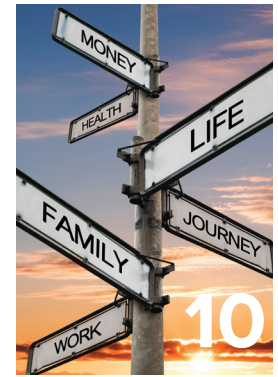
Designer

DAN STIGLER

Geisinger

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When eating well is also eating smart.



Caring for someone with dementia or have dementia yourself?

Be part of a national research study that compares 3 different models of dementia care over 18 months. Patients receive \$20 at the initial visit and \$15 at the 18-month visit (total of \$35). Caregivers receive \$20 at the initial and 18-month visits (total of \$40).

Interested in participating? **Call 570-808-7215** or visit **[geisinger.org/DCare](https://www.geisinger.org/DCare)**.

Together, we can find better ways of providing care.

This research is being conducted in collaboration with UCLA.



Local residents Susan and Dorrance Belin are DCARE participants.

They talk about their experience with the study: **[geisinger.org/DcareBelins](https://www.geisinger.org/DcareBelins)**





The infant brain

You're born with 100 billion neurons, or nerve cells, in your brain — about how many stars are in our galaxy!



Boosting brainpower — before birth.

By Jeanne Laktash

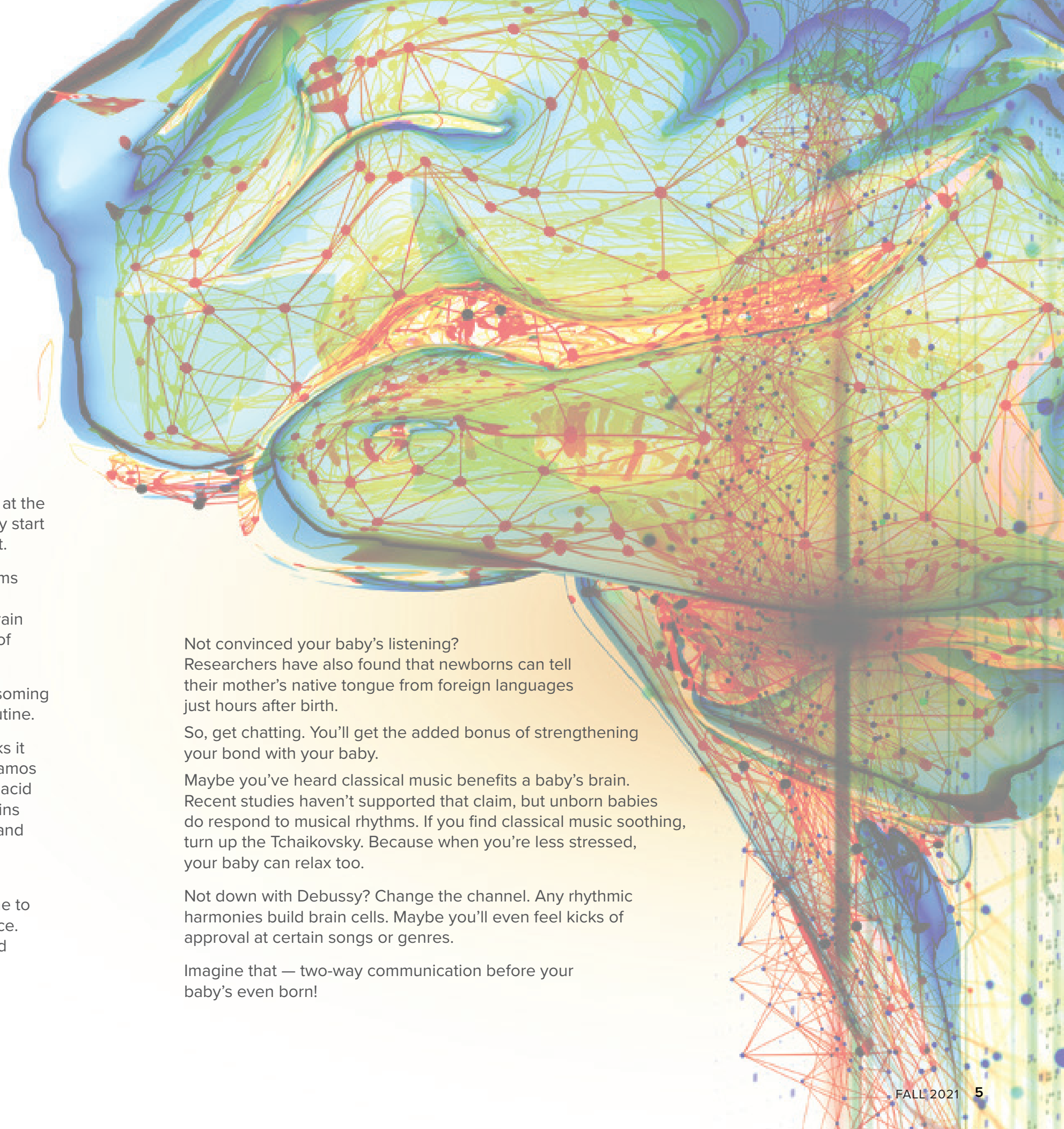
Our brains do some pretty amazing things — from simple tasks like remembering to pick up avocados at the grocery store to dreaming up string theory. And they start developing before most people even know we exist.

“Around week 5, your baby’s neural tube, which forms their spinal cord and brain, is in place,” says Keith Williams, MD, an OB-GYN at Geisinger. “And their brain development will continue throughout every stage of your pregnancy.”

If you’re expecting, you can foster your baby’s blossoming brain by making a few simple habits part of your routine.

Start by feeding your child’s brain the building blocks it needs to grow. Folic acid and iron are dietary dynamos — and both are found in prenatal vitamins. Folic acid helps prevent abnormalities in developing brains and spinal cords. And iron supports growth and development.

At around 24 weeks, your baby starts responding to sounds. This is a great time to introduce them to the sound of your voice. Research shows that talking to your child in utero can give them a head start with language development.



Not convinced your baby’s listening? Researchers have also found that newborns can tell their mother’s native tongue from foreign languages just hours after birth.

So, get chatting. You’ll get the added bonus of strengthening your bond with your baby.

Maybe you’ve heard classical music benefits a baby’s brain. Recent studies haven’t supported that claim, but unborn babies do respond to musical rhythms. If you find classical music soothing, turn up the Tchaikovsky. Because when you’re less stressed, your baby can relax too.

Not down with Debussy? Change the channel. Any rhythmic harmonies build brain cells. Maybe you’ll even feel kicks of approval at certain songs or genres.

Imagine that — two-way communication before your baby’s even born!

Outsmart the “summer slide”

Young minds can learn year-round

By Kayleigh DeMace

Splashing in the pool. The rush of a roller coaster. Savoring every sticky bite of s'mores. Summertime memories, for a kid, are priceless.

But finding the area of a triangle? Not one they hang onto. Without homework to hand in over the summer, kids forget some of what they learned. This “summer slide” is completely normal. And it's avoidable.

The secret to getting student brains school-ready? Starting these practices now — and keeping them up, especially during summer — so they'll stay sharp on the skills they hone during the school year.

More tips to keep your kid keen:
[geisinger.org/StopSummerSlide](https://www.geisinger.org/StopSummerSlide)



The child brain

In your first 10 years of life, trillions of synapses form pathways connecting all your neurons.

Keep their head in the game.

With the return to school, young athletes are running back onto the field. And sometimes into each other. **Ouch!**

Helmets are great — and necessary. They protect kids from serious brain injuries and skull fractures. But they can't prevent concussions, which happen when a blow causes the brain to hit the inside of the skull.

Suspect a concussion? Taking your child off the field or court is crucial. Their brain needs rest and relaxation to heal.

Know your post-collision concussion cues:
[geisinger.org/ProtectTheBrain](https://www.geisinger.org/ProtectTheBrain)

Reading

Set time aside each day for your child to read — and let them choose the book. “This not only helps vocabulary and literacy, but it boosts self-esteem, concentration and critical and analytical skills,” says Anne Marie Morse, DO, director of pediatric neurology at Geisinger.

Make it fun: Have a competition!

Who can read more pages (or more books) in a set amount of time?
You or your child?

Math

Look for math lessons in everyday activities. Show younger children there's always something to count: Swings at a playground. Scoops of ice cream in a sundae. Lightning bugs they've caught.

For older kids, have them tally up a guess of what the total might be when you go out to dinner. Then ask them to calculate the tip.

Writing

Give your kid a journal to jot down their thoughts or what they do every day. Misspelled words don't matter. What does: Keeping their mind active while they practice a valuable skill for school.

Make it fun: Settle in for a story.

Ask your child to write a story and then read it to you. They'll naturally practice and refine grammar and sentence structure, all while letting their creativity run wild.





Thinking *differently* – about education

By Beth Kaszuba

A medical school with no lectures?

It's the new norm at Geisinger Commonwealth School of Medicine, where the curriculum is rooted in an old proverb about the power of hands-on education.

I hear, I know.

I see, I remember.

I do, I understand.

Why teach this way? Because a patient won't walk into a doctor's office and say they have cancer. They'll describe how they feel, which stems from errant cell division. It makes sense to work backward from symptom to scientific cause.

The Scranton school also focuses on training primary care doctors — and teaching them to educate their patients about how to stay well.

Ultimately, the goal is to fill students' brains with the knowledge they need to excel as doctors, and their hearts with the empathy needed to be a truly great care provider.

“From the beginning of our first year, students are focused on community... I learned there is so much more to medicine than academics. Obviously, you must know the science, but engaging and interacting with people in a way that makes them feel cared for is equally important and you aren't born knowing how.”

– Stephanie Tilberry, MBS '17,
MD Class of 2022



The young adult brain

Your frontal lobe masters impulse control early in adulthood. Now you can choose what to do in a situation based on what will happen.

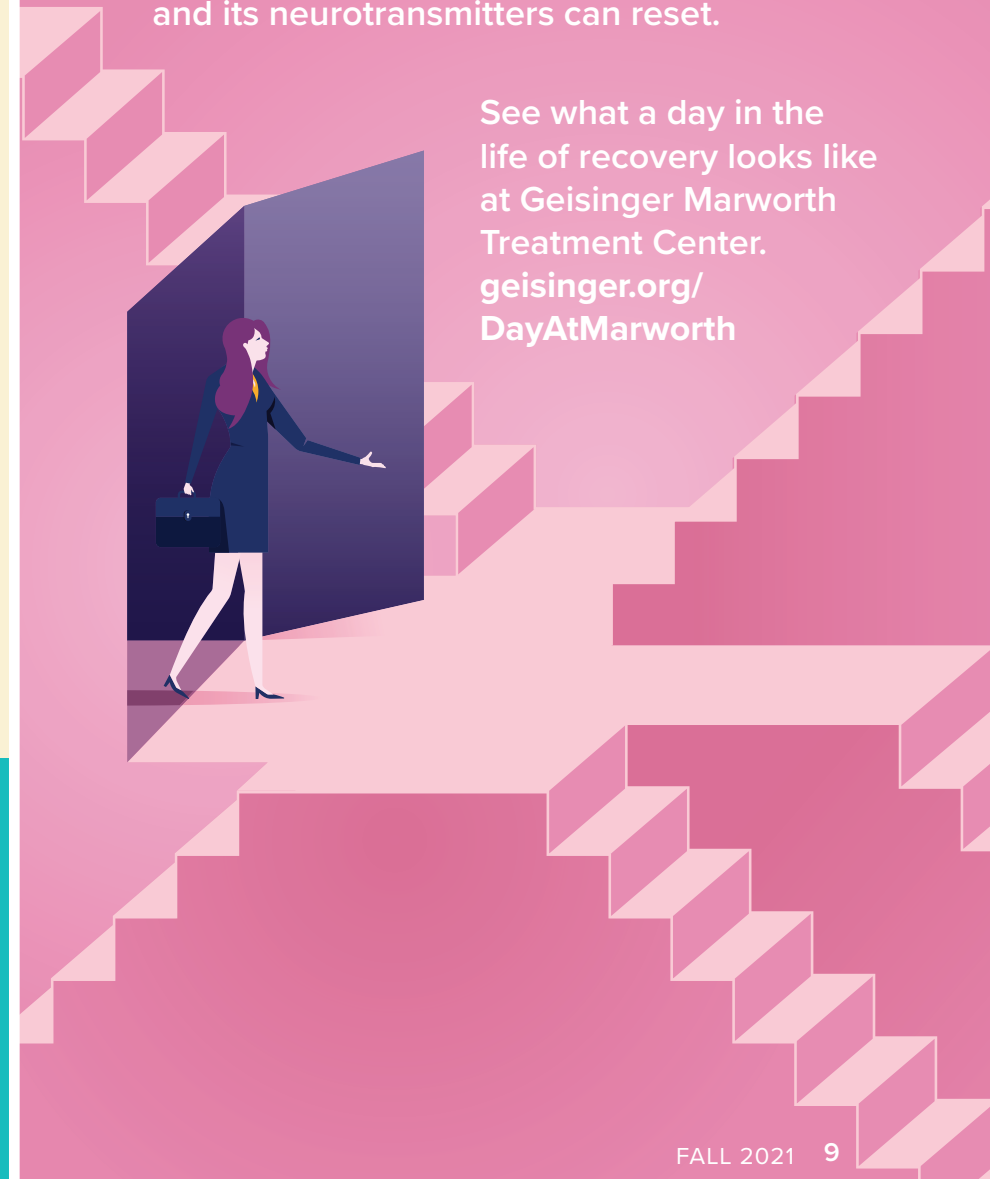
Make the right choices for your adult brain

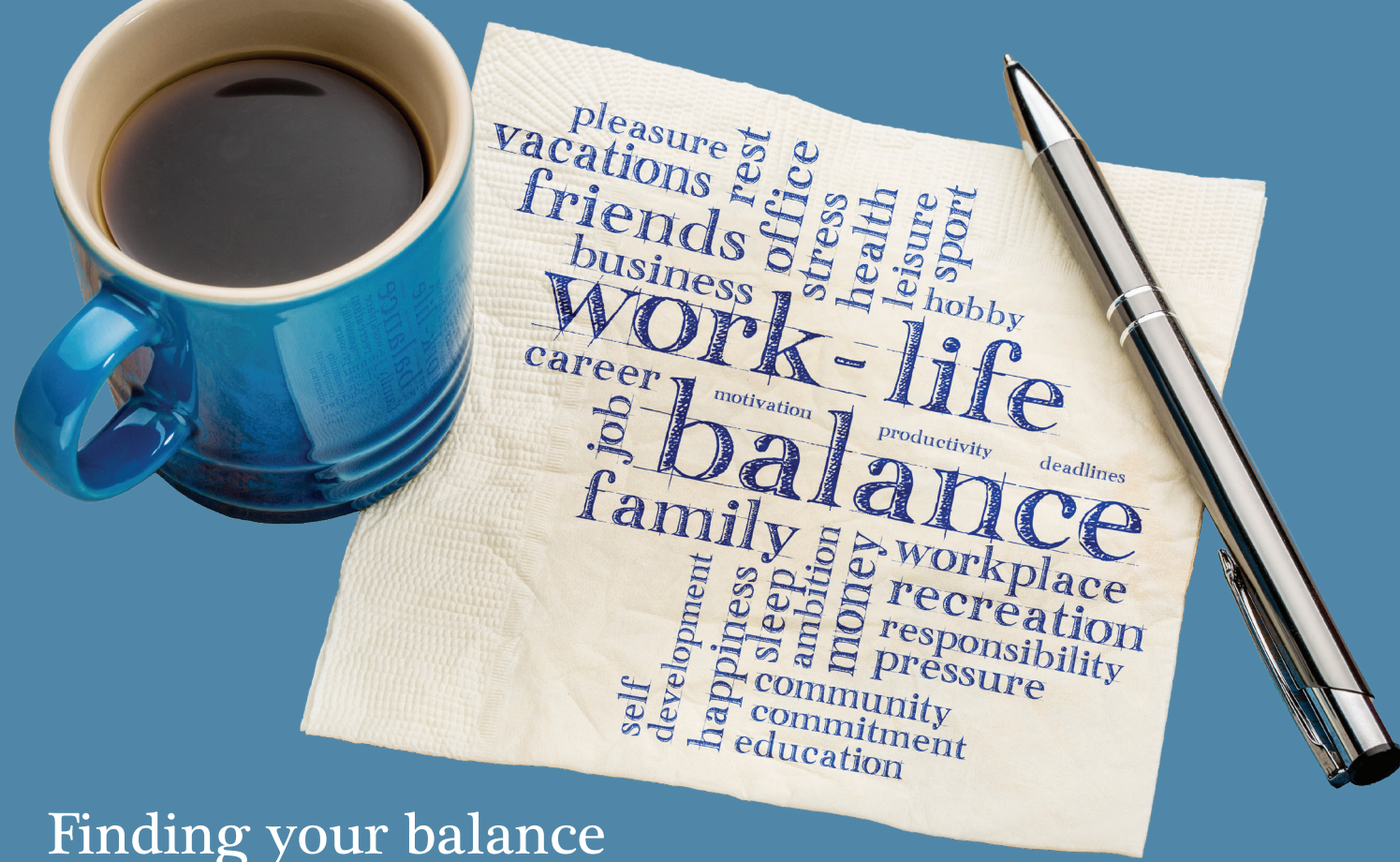
Parents often remind their kids that alcohol and drugs can hurt developing brains.

But what about *adult* brains?

Research shows substance abuse can still impact memory, mood and cognitive ability. Fortunately, if you stop, your brain can heal and its neurotransmitters can reset.

See what a day in the life of recovery looks like at Geisinger Marworth Treatment Center.
[geisinger.org/DayAtMarworth](https://www.geisinger.org/DayAtMarworth)





Finding your balance

By Jeanne Laktash

Which is more important: what you like to do or what you have to do? The middle-aged brain knows this is a trick question. They're equally important (but in different ways).

Work-life balance is trying to give equal time to work versus the rest of your life. And as we juggle more responsibilities outside of the office, like caring for children or aging parents, it matters.

"People with a healthy work-life balance tend to have better mental and physical well-being," says Lynne Ann Gallagher, behavioral health case manager at Geisinger Health Plan.



So tip the scales a little more in your favor:

- **Plan ahead.** Stay on top of your workload by taking a peek at the next day's schedule. Which meetings and projects are highest priority? Focus on them. The budget report can't wait, but you can have that planning meeting next week. Future you will thank past you.
- **Unplug.** Set boundaries by responding to emails only during set hours or not working on weekends. Gallagher suggests leaving work at work: "Find a separate space to work in, preferably with a door. When you log off for the day, close the door and don't open it until it's time to log on again."
- **Go on vacation.** You might embark on a lavish getaway to some exotic locale. Or maybe binge-watching your favorite shows and eating takeout in your cat pajamas is more your speed. Either way, several days away from the grind will do wonders to rest and recharge your brain.

Balance even better with more tips: [geisinger.org/WorkLifeBalance](https://www.geisinger.org/WorkLifeBalance)

Take a break. Meditate.

By Paula Franken

Ever feel like your brain is on overdrive? Always working. Always thinking. Try meditation. It calms the mind, relaxes the body, releases feel-good endorphins and creates physical changes in the brain.

Your brain reacts to stimulation and creates new neural pathways through a process called neuroplasticity. Focusing on positive thoughts has positive effects.

So does relaxation.

Meditating for just 5 minutes can make a big difference. And you may return to a challenging task with a new perspective — and even some creative inspiration — to help get the job done. Efficiently. Effectively.

And with a deep sense of calm.



The middle-aged brain

Your deep brain tissue connections strengthen during middle age, so you can do more complex mental tasks.



Did you know there are five main types of brain waves? Find out more: [geisinger.org/StrongMind](https://www.geisinger.org/StrongMind)



The older adult brain

As you age, your brain gets a little smaller (along with the rest of your body). But it can still learn new skills and improve old ones.

A lifetime of learning

By Paula Franken

Keeping your brain active and engaged is important at any age — and as we get older, it might become even more important.

Read a book, play a game, learn a new skill, find a new hobby, take a class, work or volunteer. When you stimulate and challenge your brain, you're making it healthier. In fact, observational studies suggest that activities like these may lower the risk of Alzheimer's-related cognitive impairment and dementia.

Plus, they're a lot of fun!

At Geisinger 65 Forward health centers, program coordinators create activities that are good for the body and the brain — including game days and arts and crafts classes that also offer plenty of opportunities to make new friends.

So find a 65 Forward location near you and see what's on the docket: [geisinger.org/65Fclasses](https://www.geisinger.org/65Fclasses)

Brain surgery in the morning. Home by evening.

By Paula Franken



Can you see the scar in the crease over Mr. Gaughan's right eye? (Neither can we.)

Brain surgery is famously complex, so same-day brain surgery might seem impossible. In fact, the out-of-state surgeon Harry Gaughan went to for a second opinion estimated he'd need to be in the hospital for 3 to 4 days. But Geisinger neurosurgeon Clemens Schirmer, MD, PhD, said it was possible he'd go home the day his arteriovenous malformation was corrected.

That tangle of abnormal blood vessels in Mr. Gaughan's brain was something Dr. Schirmer planned to treat using a minimally invasive procedure. "He said he'd go in through my forehead," the 74-year-old Ashley native explains, adding that the other surgeon planned a much larger incision "clear around my head."

Mr. Gaughan chose to go with Dr. Schirmer. "I felt comfortable with him right from the beginning and really liked what he was suggesting," he says. "Plus, he's right here in Wilkes-Barre."

The surgery was a success. Mr. Gaughan headed home that evening, recovered well and was back on the golf course in no time. Best of all, the incision Dr. Schirmer made is nearly undetectable. "He just followed one of my many forehead wrinkles," Mr. Gaughan laughs. "It blends right in."

Want to watch a brain surgery?
[geisinger.org/BrainSurgeryVideo](https://www.geisinger.org/BrainSurgeryVideo)



Mind-full eating.

Is it just a coincidence that the brain-healthy walnut actually looks like a brain?

(Yes, almost certainly.)

Regardless, these little powerhouses are packed full of protein, healthy fats — and may even improve memory, according to a 2015 UCLA study. The alpha-linolenic acid in walnuts, which is linked to lower blood pressure and cleaner arteries, is one of their secret ingredients.

Pairing walnuts with another brain-friendly food — spinach, which is full of brain-supporting vitamin K, lutein, folate and beta carotene?

It's a tasty no-brainer.

Walnut and spinach pesto

Ingredients

- 2 cups fresh baby spinach
- 1 cup basil
- 1 cup walnuts
- 1 cup Parmesan cheese
- 2 cloves garlic
- ¼ cup olive oil

Place ingredients in blender and whirl until it reaches desired consistency — slightly chunky to smooth — adding more olive oil as needed.

Want an even bigger brain boost? Serve over oven-roasted salmon, which also has brain-supporting omega-3 fatty acids.



Eat smart

As you age, a diet of plant-based foods — like kale, spinach and broccoli — could help keep your brain sharper longer.

Ready for dessert?

Your brain (and the rest of you) deserves a sweet treat, too. Check out our recipe for a simple, rustic pie that's brimming with brain-boosting berries. [geisinger.org/EatSmart](https://www.geisinger.org/EatSmart)



Because stroke care can't wait.



When strokes happen, every minute counts. So it's good to know there's top-notch care close by. Which is closest to you?

Comprehensive Stroke Centers: Certified to handle the most complex types of strokes

- Geisinger Medical Center
- Geisinger Wyoming Valley Medical Center

Primary Stroke Centers: Certified to meet high standards in stroke care

- Geisinger Community Medical Center
- Geisinger Lewistown Hospital
- Geisinger Jersey Shore Hospital

Telestroke technology connects all our specialists. That means even if you're in a remote location, they can communicate in real time.

And if you need advanced care, Geisinger Life Flight[®] air ambulances are standing by to get you where you need to go.

Find out more: [geisinger.org/TreatingStroke](https://www.geisinger.org/TreatingStroke)

We accept most major health insurance plans.

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Would you recognize the signs of a stroke? Get your free magnet telling you what to watch for: [geisinger.org/stroke](https://www.geisinger.org/stroke)



A mask is still required when you come to Geisinger. Thanks for protecting our patients. Learn more: [geisinger.org/safe](https://www.geisinger.org/safe)

Safety