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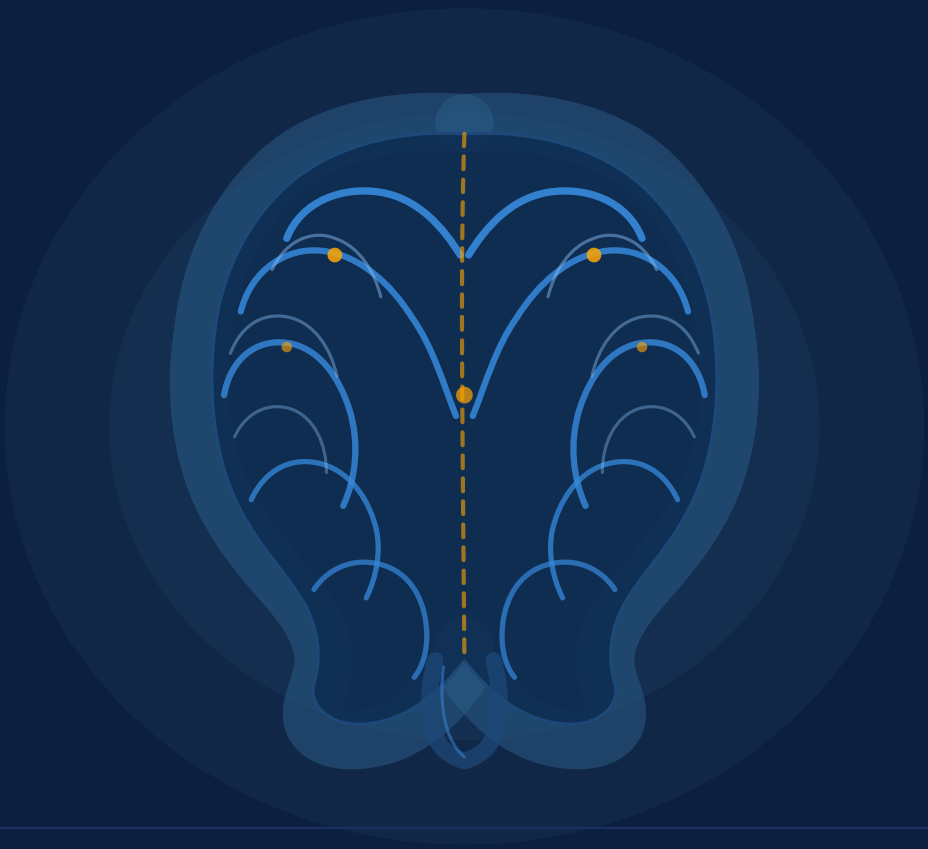

Brain Health Insights

Evidence-informed perspectives on brain health, blood pressure, and dementia prevention

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A Note From Dr. Kar

This collection includes a few of my weekly emails, written between 2025 and 2026. I have organized them according to my 8 Keys to Long-Term Brain Health framework, so that each piece sits within the broader picture of what we know about protecting the brain.

I write from the intersection of functional medicine, behaviour design, and a deep conviction that most chronic disease, including dementia, is not inevitable. Our midlife health decides our health long-term. It is never too late to start improving brain health. Blood pressure control, across the lifespan, is one of the most important ways to prevent dementia.

My hope is that this collection serves as a useful companion — something you return to, share with a family member, or bring to a conversation with your physician. The science is here. The practical steps are here. What happens next is always up to you.

Best regards,
Shabnam
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KEY 1

Mindset

How we thinkabout our health shapes whether change is possible at all. Neuroscience shows that the capacity for well-being is not fixed — it is trainable.

9 October 2025

Wellbeing Is a Skill — How We Can Learn to Flourish

Human flourishing or well-being is a skill, which means it can be learned. This is what neuroscientist Dr. Richard J. Davidson, PhD, founder of the Center for Healthy Minds at the University of Wisconsin–Madison, has shown through decades of research on the brain and contemplative practices.

Human flourishing is difficult to define because it is not a steady state and varies for each person. Based on his research, Dr. Davidson defines human flourishing as performing well in four domains of life — Awareness, Connection, Insight, and Purpose. Each of these is a trainable capacity, supported by brain circuits that can be strengthened through practice — neuroplasticity.

People who score high in these four domains tend to be aware of their surroundings, their actions, and their internal experiences. Those who score lower are more prone to distraction and often find themselves functioning on autopilot.

• Awareness is the ability to be present and attentive to our thoughts, feelings, and experiences.
• Connection is a sense of care, empathy, and benevolence toward others that fosters positive relationships.
• Insight is understanding how our thoughts and emotions shape our perceptions.
• Purpose is having clarity about our values and what gives our lives meaning and direction.

What this research tells us is that flourishing is not reserved for people with perfect lives or no stressors. It is about building resilience — the ability to recover from adversities, or the ability to get back to a baseline positive state after adversity.

Research has shown that even brief practices of as little as 5 to 6 minutes a day can create measurable changes in how we feel and function. There are many ways to cultivate awareness, connection, insight, and purpose — and each of us can find our own route to well-being.

Flourishing is not about eliminating difficulty; it is about building resilience.

REFERENCES

Dahl, Cortland J., Christine D. Wilson-Mendenhall, and Richard J. Davidson. "The plasticity of well-being: A training-based framework for the cultivation of human flourishing." Proceedings of the National Academy of Sciences 117.51 (2020): 32197-32206.

Kral, Tammi RA, et al. "Healthy Minds Index: A brief measure of the core dimensions of well-being." PLOS ONE 19.5 (2024): e0299352.

KEY 2

Restful Sleep

Sleep is not a luxury.It is a time when the brain consolidates memory, clears metabolic waste, and regulates the hormonal systems that govern blood pressure, blood glucose, and mood.

12 February 2026

Daylight: A Simple Lever for Better Sleep

This email is about a simple, often overlooked lever to improve your sleep: daylight exposure.

Why Daylight Matters

This morning, a friend who is trying to build a consistent morning exercise habit shared that when she sleeps well, she feels motivated to do higher-intensity workouts. I feel the same. We talked about step count, protein intake, late-night eating, and alcohol. Then we came to daylight exposure. She paused and said, "That is the one thing I do not get enough of."

Morning light is the strongest signal for anchoring your circadian rhythm. Light entering the eyes sends a message to the brain's master clock, which coordinates clocks in nearly every organ. This rhythm affects sleep timing, mood, metabolism, hormone secretion, and immune function.

Morning Light Is Not Always Practical

You may have read that thirty minutes of morning light is ideal. Drink your coffee outside. Step onto your deck within an hour of waking. That may work beautifully in some climates. In Alberta's cold, dark winter mornings, it is not so easy.

My friend realized that early morning light was not practical. Her mornings are full of exercise, dog care, and preparing lunch. She found a solution: a short walk during her lunch break, but she needs to ensure the time is scheduled and protected in her calendar.

Experiment With What Works

Daylight exposure and step count overlap but are not identical. You can walk indoors and miss natural light. You can sit outdoors and stay sedentary. Ideally, combine both.

Try this self-experiment: notice whether you get daylight exposure, choose a realistic time to get it consistently for three days, and observe any changes in mood, energy, or sleep. In areas with very late winter sunrises, a medically approved light box may help.

It is important to rule out sleep disorders and chronic insomnia first.

KEY 3

Right Food

Foodchoices affect blood glucose, insulin, inflammation, and ultimately brain function. The question is not just what we eat, but how often and in what pattern.

9 April 2026

Should We Snack Between Meals?

Last week, I shared that I had reduced my eating to one meal a day (OMAD). Some of you wrote in to ask about your own routines. But I realized I left something important out of that email. I forgot to mention snacks.

A reader shared that when she fasts, she has one meal and several small snacks in between, including dry fruits, fruit, and porridge.

Should We Snack Between Meals?

Each time we eat, our blood glucose and insulin levels rise. Dry fruits, fruit, and porridge may raise glucose and insulin levels considerably more than eggs, tofu, paneer (cottage cheese), or vegetables.

To maintain brain and heart health and manage weight, it is extremely important to keep insulin and blood glucose levels within an optimal range, even if you do not have diabetes.

• Eating 2 to 3 meals plus 3 to 4 snacks a day raises blood glucose and insulin levels far more than eating only 1 to 2 meals a day.

• Insulin is not simply a blood sugar regulator. Think of it as a "fat fertiliser": it actively encourages fat storage.

• Insulin also impairs brain metabolism. This is why some researchers refer to Alzheimer's disease as type 3 diabetes, or diabetes of the brain.

• Chronically elevated insulin and glucose are linked to metabolic dysfunction, weight gain, elevated blood pressure, and increased risk of heart disease and

stroke.

This is why snacking several times a day is not the best approach for brain and heart health.

Why Do We Snack?

I have put together a short quiz to help identify why we snack and what to do about it. It covers the most common reasons — from hunger and habit to emotions and environment — and includes interpretations and practical next steps based on your answers.

With one meal a day, I do not generally feel hungry and have little desire to snack. Last week, I managed to extend my fast to 22 hours. But I know my challenges. My husband gets home late in the evening and has his meal then. He often says, "This is so tasty, just have a little taste." And most of the time, I do. That small taste interrupts my fast.

I know I am not hungry at that point. I know snacking does not serve me. And yet I find it difficult to say no. I have realized I need to be stricter about this. The two options are either to stay in another room while he eats or to refuse politely. The problem is that willpower is unreliable when I have not slept well. Something to work on.

KEY 4

Moving More and Sitting Less

Physical activity protects thebrain and heart. Butresearch now shows that how often we break up sitting matters just as much as how much we exercise.

16 October 2025

How Often Should You Interrupt Sitting? It's Simpler Than You Think

Let me ask you a simple question: How long have you been sitting right now?

We know that physical activity is good for the heart, brain, and mood — but did you know that sitting continuously for several hours a day can actually undo some of the benefits of that morning walk or gym session?

Multiple studies have shown that long, unbroken sitting stretches can:

- Raise blood glucose levels
- Impair insulin sensitivity and metabolism
- Increase inflammation

So How Often Should You Interrupt Sitting?

Studies have suggested that interrupting sitting every 30 minutes is better than every 2 hours — at least in controlled settings. But what happens when real life kicks in? You have set up your wearable or phone to remind you to stand up every 30 minutes. But you are stuck in traffic. Or in a long meeting. Or just absorbed in deep work. How practical is that?

What Works Better in Real Life

As a Tiny Habits coach, I never recommend relying on disruptive alarms or willpower. Instead, we use anchor moments — existing routines to attach new, helpful behaviours.

Tiny Habit Recipe: After the first episode ends (or when an ad starts), I will stand up and stretch my legs. It is tiny. It works. And it helps reduce the risks of prolonged sitting.

Two Smarter Ways to Interrupt Sitting

- Exercise Microbreaks — short, easy movement bursts you can anchor to routines (e.g., shoulder rolls after every email, pacing during phone calls).
- VILPA — Vigorous Intermittent Lifestyle Physical Activity, like climbing stairs briskly, walking fast during errands, or 10 squats while the kettle boils. Short, intense, and woven into everyday life.

These strategies do not require you to set aside time — they just require building around what you already do.

REFERENCE

Yin, Mingyue, et al. "Optimal Frequency of Interrupting Prolonged Sitting for Cardiometabolic Health: A Systematic Review and Meta-Analysis of Randomized Crossover Trials." Scandinavian Journal of Medicine and Science in Sports 34.12 (2024): e14769.

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KEY 5

Building Stress Resilience

Chronicstressraises blood pressure, impairs sleep, and accelerates cognitive ageing. Resilience is not the absence of stress — it is the capacity to recover from it.

27 March 2026

Rethinking Stress in a Difficult World

It has been about four weeks since my last email. I was travelling to Mumbai and, more importantly, finishing my book on women's health. The manuscript went to my publisher two days ago. I do not yet have a publication date, but I will keep you updated.

The second reason I have been quiet is harder to put into words. Like many of you, I have been watching the conflict in the Middle East with a heavy heart. The constant stream of suffering and uncertainty can make it feel as though stress is swallowing us. Billions of dollars are spent on war and destruction, while millions of people go without healthcare.

I am aware that for some of you, this is not a distant news story. You may be carrying personal grief right now — a family member, a friend, someone whose loss has left a painful absence. I am deeply sorry.

I kept asking myself: in the middle of all this, what is worth saying? I came back to one answer — rethinking stress.

What Is Stress Resilience?

Stress resilience is not the absence of stress. It is the ability to return to your baseline — physically, behaviourally, and emotionally — without lasting damage, and to do so sooner rather than later. It is less about how hard you are hit and more about how well you recover.

What the Research Shows

Stanford researchers tested a programme called Rethink Stress across three real-world workplace trials. Employees who completed this brief training:

• Shifted their mindset from "stress is purely harmful" toward "stress can be enhancing."

• Reported fewer physical and emotional stress symptoms several weeks later.

• Showed improvements in creativity, focus, engagement, and collaboration.

Rather than claiming stress is always bad or always good, the programme offered a balanced picture. Participants learned that their mindset about stress shapes how it affects their brain, body, and behaviour, and that this mindset can be consciously shifted.

They were taught a simple three-step practice:

• Acknowledge stress instead of denying it.

• Welcome it as a signal that something you care about is at stake.

• Use the energy of stress to take meaningful action aligned with your values.

None of this erases war, injustice, or personal hardship. Stressful events remain. But this research suggests that even amid global turmoil, we retain a profound inner freedom: the freedom to choose how we relate to the stress we feel.

Stanford has made their Rethinking Stress Toolkit freely available online.

REFERENCE

Crum, Alia J., et al. "Rethinking stress: The role of mindsets in determining the stress response." Journal of Personality and Social Psychology 104.4 (2013): 716-733.

KEY 6

Taking Appropriate Medications

Medications save lives, but they also need periodic review. The right medication at the right dose, taken correctly, is a cornerstone of long-term brain and heart health.

16 April 2026

Can You Stop Your Thyroid Medication?

We often think of long-term medications as something we simply continue year after year. But it is worth asking — does this still serve us in the same way?

If you are over 60 and taking a thyroid pill every morning, new research suggests that some older adults may not need the same dose or may be able to stop their medication altogether.

Thyroid Function Changes After 60

The thyroid gland regulates metabolism, energy, body temperature, and mood. The TSH level considered normal gradually increases in older adults. For example, many guidelines suggest the following TSH levels:

- Younger adults: approximately 0.4 to 4.0 mIU/L
- Adults over 70: approximately 4 to 6 mIU/L
- Adults over 80: up to approximately 7 to 10 mIU/L may be observed and often do not require treatment in the absence of symptoms.

The change in TSH levels means that older adults often require lower doses of levothyroxine (T4). Yet many people remain on the same prescription they received years or even decades ago, without re-evaluation.

What the Research Shows

A study published in JAMA followed 370 adults aged 60 and older who had been taking a stable dose of levothyroxine for at least 1 year. Using a careful, stepwise reduction approach with thyroid testing every six weeks:

- 25.7% of participants were able to stop levothyroxine completely and maintain normal thyroid function at one year.
- Among those taking lower doses (50 mcg or less per day), over 63% stopped their medication successfully.
- Quality of life remained stable, whether or not the medication was stopped.

Why This Matters

Too much thyroid hormone in older adults is not harmless. Overtreatment is associated with:

- Atrial fibrillation (an irregular heart rhythm)
- Bone loss and increased fracture risk
- Symptoms such as palpitations, poor sleep, and anxiety

What You Can Do

Talk to your doctor. Ask whether your thyroid prescription needs to be reviewed, especially if you are over 60 and have been on the same dose for several years. Test regularly if your dose is being reduced — thyroid function should be checked every 6 weeks during any dose reduction to ensure safety.

This email is for informational purposes only. Please speak with your doctor before making any changes to your medication.

REFERENCE

Ravensberg, Janneke, et al. "Discontinuation of levothyroxine in adults aged 60 years or older." JAMA (2026).

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KEY 7

Blood Pressure

Blood pressure control is the single most important modifiable risk factor for dementia, stroke, and heart disease. Yet most people do not know their target, and fewer still monitor it correctly.

22 May 2026

One Blood Pressure Reading Is Not Enough — Here Is Why

Most of us think about blood pressure as a single number. Normal reading today? Good. High reading today? Concerning. That is the way most of us have been taught to think about it.

But research points us toward a much more important question: how consistently does your blood pressure remain within a healthy range over time?
This concept is called Blood Pressure Time in Target Range, and it changes the way we should approach blood pressure monitoring entirely.

Why Two People Can Share the Same Average and Have Very Different Risk

In the article on my website, I explain why two people can share the same average blood pressure reading but have very different levels of risk, what the research says about time in target range and outcomes for heart disease, stroke, and dementia, and what this means practically, including which monitoring tools can capture this information.

Blood pressure time in target range is now recognised in hypertension research as a more sensitive predictor of cardiovascular and cognitive outcomes than average blood pressure alone. Studies have linked lower time in target range to greater white matter lesion burden, accelerated cognitive decline, and higher rates of dementia.

What This Means In Practical Terms

A single clinic reading, or even a single home reading, tells you your blood pressure at one moment. It cannot tell you how stable your control is over days and weeks. To capture that pattern, you need either a validated home monitor used consistently over time, or an ambulatory blood pressure monitor that records readings automatically over 24 hours.

If you are managing high blood pressure, ask your physician not just what your last reading was, but how stable your control has been over time. That is the question that matters most for your long-term brain and heart health.

KEY 8

Behaviour Change

Knowledge alone doesnot changebehaviour. Understanding how to make change small, sustainable, and anchored to existing routines is the difference between intention and outcome.

14 November 2025

How Preventable Is Dementia?

Many headlines say "40% of dementia is preventable." In this episode of The Brain Podcast, we unpack what that means for you.

The often-quoted "40 to 45% preventable" figure comes from something called population-attributable risk. In simple terms, it is a method for estimating the number of dementia cases that might be prevented if certain risks were reduced across an entire population. It is not a promise or prediction for any one person.
It is not your personal failure if something labelled "preventable" still happens. None of us can control every factor that affects our brains over a lifetime. Our focus is on what you can do next, with less struggle and more chance of success.

The 14 Risk Factors

We walk through the 14 risk areas highlighted in the 2024 Lancet Commission report across early, mid, and later life. In early life, less education shows up as a risk — but building cognitive reserve helps at any age. Cognitive reserve is your brain's backup pathways: learning, curiosity, and mentally engaging activities can strengthen these routes.

Midlife risks you can act on include hearing loss, physical inactivity, diabetes, hypertension (high blood pressure), smoking, and alcohol use. These are connected to blood vessels, blood sugar, inflammation, and everyday brain function — not just distant future risk.

Later-life contributors include social isolation, air pollution, and vision loss (a new addition in the 2024 report).

Start With the Easiest

Instead of trying to address all 14 factors, we suggest a different approach: pick one, make it small, and tie it to something you already do. That is the Tiny Habits method.

- Hearing check: Book a hearing test this week. Treating hearing loss can support social connection and may lower the risk of dementia.
- Walk-and-talk calls: Turn one phone call into a walking call. When your phone rings and you choose to answer, stand up and start pacing instead of staying seated.
- Vision care: Schedule an eye exam, especially if you have hypertension or diabetes.
- Small alcohol shift: If you drink, reduce by one drink on one day this week. Change your environment — do not keep alcohol at home or buy less often.

A Myth Worth Retiring

Myth: "If dementia is preventable, people who get it did something wrong." Reality: No. Population numbers are not personal guarantees. They are averages across millions of people living in very different circumstances. Our goal is to minimise risk where possible, offer support rather than blame, and focus on next steps.

As we say in the episode: Don't start by stopping. Start with something you can get yourself to do.

"It is not about willpower. Pair new actions with things you already do."

"Cognitive reserve is like having another route home when one road is blocked."

"Everything counts. A short walk during a call still helps."

REFERENCE

Livingston, Gill, et al. "Dementia prevention, intervention, and care: 2024 report of the Lancet standing Commission." The Lancet 404.10452 (2024): 572-628