READER'S DIGEST

Best Health

HOW TO STEAL A FEW GEN Z
BEAUTY TRICKS

WHY EVERY ORGASM IS
A GOOD ORGASM

THE FUTURE IS BRIGHT

GOOD NEWS FROM THE FRONT LINES OF GYNOCOLOGY, NEUROLOGY, IMMUNOLOGY, OBSTETRICS, ONCOLOGY, PAIN MANAGEMENT AND, YES, AI

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COVER PHOTOGRAPH BY KATE DOCKERAY; (THIS PAGE) PHOTOGRAPH BY SUECH AND BECK; STYLING BY FRANNY ALDER

1966

THE YEAR MASTERS AND JOHNSON PUBLISH THEIR FINDINGS, CONFIRMING THAT WOMEN CAN ACHIEVE MULTIPLE ORGASMS

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6.5 million

THE NUMBER OF CANADIANS WHO DON'T HAVE ACCESS TO A FAMILY DOCTOR OR NURSE PRACTITIONER

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"Visionary work is not just looking forward. It's also looking back to make sure no one is left behind."

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"The bladder is a muscle, which means it's capable of changing its size and capacity like any other muscle in the body based on how it's used."

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2008

2015

2021

FROM THE EDITOR

One of my very favourite things about working at a magazine is the permission it gives to ask super smart people a bunch of nosy questions. In this issue, *Best Health*'s last, we really took advantage of that. The result is "16 Reasons to Feel Good About the Future of Women's Health" (page 46), a guide to some of the visionary work being developed by researchers and clinicians who are up to all sorts of cool things to address gaps for women in our healthcare system. The future, they promise, is most definitely bright.

That's another beautiful thing about this magazine: optimism abounds. In fact, that's what *Best Health* has always been about—honouring the messy, funny, weird and unexpected ways we get to a place where we feel good. There's no one trick or formula, but I think it has a lot to do with sharing our stories. Let's all keep at it.—*Rebecca Philps*

PHOTOGRAPHS BY (CROSLEY) KRISTINA DITTMAR; (REZAYEE) TAYLOR ROADES

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Trend Report
HOW I CAME AROUND TO GEN Z BEAUTY

PHOTOGRAPH BY FLASHPOP/GETTY IMAGES

BY ANNE T. DONAHUE ● Last year I surrendered to my chronic fear of missing out on what the kids are talking about and traded the morning news for TikTok. I started my days with an iced coffee in one hand and my phone in the other, scrolling through the app and treating myself to celebrity gossip, mid-century house tours and Gen Z's takes on beauty trends. It was a match made in heaven: My limited attention span was appeased by the platform's short videos. I leaned into the algorithm's ability to spoon-feed me what I didn't know I wanted to see—today's youth teaching makeup tricks.

While my pivot to TikTok was seamless, my re-entry into the beauty world was not. After the pandemic lockdowns, I retreated from makeup. Multi-step skin care? I was too tired for it. Liquid eyeliner? No patience for that. The joy I once found in experimenting with bold colours was just gone. Being well into my thirties, I figured I was past trying new things (which we can chalk up to internalized ageism). Social media exacerbated the

quick speed of beauty trends, and my bandwidth for keeping up shrunk alongside my interest in staying up late. I was tired, mentally and emotionally, recovering from a tumultuous few years, and not really prioritizing having fun. Not to mention, the pandemic had whittled down my industry (I'm a writer, *hi!*), and I didn't care to justify buying new beauty products.

Instead, I pared back my routine and reserved makeup for spot treatments and camouflaging my under-eye circles instead of approaching it as an avenue for self-expression. I felt I'd outgrown the world of beauty, so I stuck to a hardly-existent makeup look that didn't bring me any joy.

Until TikTok, that is. While the algorithm initially entertained my quests for *Succession* spoofs and ghost stories, it also fed me the odd beauty video hosted by a Gen Zer, which I'd watch in full, so more appeared in my feed. Even better, the app managed to combine my niche interests by serving up creators who'd apply sparkle while simultaneously offering the lowdown on celebrity conspiracies or haunted Appalachia.

As my generational successors roasted millennials for their contouring, overly shaped brows and affinity for side parts, I found myself enthralled with the way they executed their own beauty trends. I learned about "Clean Girl Beauty," which touts the glory of minimalist makeup, built on a healthy glow (courtesy of dewy highlighter) and a relatively neutral palette—far from the more-is-more look we left behind in 2020. "Tomato Girl" and "Strawberry Girl" trends emphasize pink and red lip colours and rosy blush. And then there's "Quiet Luxury," inspired by the likes of nineties-era Gwyneth Paltrow and the late Carolyn Bessette-Kennedy, with swept-back hair, matte lipstick and a focus on enhancing your features.

Some of these looks I knew I'd never pull off (there's nothing quiet nor luxurious about me). But as someone who over-romanticizes the nineties, I jumped at the chance to relive the rosy cheeks and pink lip glosses of my 13-year-old heyday—that small window of time when makeup was exciting and glamorous and didn't feel like a necessity. And much like the tween I was in 1998, I could only swing beauty on a budget. Conveniently, "Strawberry" and "Clean Girl" looks meant I didn't have to buy anything else; I just had to learn new ways of applying products I already had—like dabbing lipstick on my cheeks for a dewy-pink finish.

Admittedly, not all Gen Z beauty trends appealed to me. As someone whose friends know her face well, I chose not to adopt fake freckles—especially since there's no chance I'd place them in the same spot every day.

But pink lipstick? Glittery eyes? These are trends that are easy to experiment with. I stopped accepting the myth that growing up means ditching playtime. I cut my shoulder-length hair—a safe, sensible choice—into a blunt chin-length bob. I dusted light shadow in the corners of my eyes after learning that was a go-to technique in *Barbie*. I applied berry-scented lipgloss with abandon. I began to remember the person I was when I used makeup to feel powerful, even artistic. I reconnected with my teen self who dove into glitter shadow to look like *Ever After*-era Drew Barrymore. I was a 38-year-old woman who'd re-embraced the confidence of an eighth grader in a dandelion flower crown she'd fashioned during recess.

Witnessing Gen Z's beauty playbook reminded me that it's possible to treat makeup not as something I need, but as something I do because it is *fun*. Makeup no longer seems too time-consuming or expensive, especially since many trends call for products I already have. Well, maybe I need one new lipstick—a splurge I can justify.

I owe thanks to Gen Z and their TikToks. They're a daily reminder that there's no age limit for self-expression. I may require a little more under-eye coverage than they do to pull off the Clean Girl aesthetic, but it's a joy to try on makeup-centric personas whenever the mood strikes.

Face Value

FIVE GEN Z–INSPIRED BEAUTY FINDS

[1]
Fenty Skin Pre-Show Glow
This twice-weekly serum brightens skin and buffs away dead skin cells, making your face a smooth, dewy canvas for whichever makeup look you choose. Budget-conscious? You'll be happy to know that a little goes a long way.
$57, sephora.com

[2]
Rhode Lip Tint
Hailey Bieber is the founder and creative director of Rhode—a beauty brand that's become a sort of religion for her generation. The peptide lip tints offer a glossy coating in rouge-y hues and, as a bonus, help give lips a plumping effect, perfect for the syringe-adverse.
$24, rhodeskin.com

[3]
Rare Beauty Brow Harmony Flexible Lifting and Laminating Eyebrow Gel
If you've watched a Gen Z beauty tutorial, you've probably asked: How do they get their brows so fluffy? Often, the answer is Brow Harmony, an eyebrow gel by Selena Gomez's line that shapes and tames brows without crunchiness.
$23, sephora.com

[4]
CoverGirl TruNaked Eyeshadow Palette
An eyeshadow palette featuring a range of '90s-nostalgic beige to brown shades in both matte and glittery finishes, this drugstore score can be your easy gateway into fun makeup looks like Clean Girl and Quiet Luxury.
$20, shoppersdrugmart.ca

[5]
Lip Smacker Party Pack Lip Balm
Few things can whisk us back to our eighth-grade-graduation days than a good old pack of Lip Smackers—particularly the ones that smell like our favourite fizzy drinks.
$14, walmart.ca

In Conversation

WRITER SLOANE CROSLEY ON THE COMPLEXITY OF GRIEF AND WHY NO ONE IS OBLIGED TO LEARN FROM IT

BY DANIELLE GROEN ● On June 27, 2019, a stranger crawled through the bedroom window of Sloane Crosley's New York apartment and made off with her grandmother's jewellery. One month later and one state away, her closest friend, Russell Perreault, took his own life. "It's hard to know the size of things," Crosley writes in *Grief Is for People*, and in their immediate aftermath, these two losses–both sudden, both mystifying, but very differently shaped–kept pulling together like magnets, "keeping each other company in the dark."

Crosley has written novels and essays, but this book is something altogether different: at times a wild caper (she goes to great lengths to retrieve a necklace), at times a black office comedy (both publicists, she and Perrault had a front-row seat to James Frey's *A Million Little Pieces* implosion) and, often, a warm portrait of the ways a good friendship can contour so much of our identity. Mostly, though, it is a patient investigation into the unruly, ongoing work of grief, especially when suicide is involved. "Suicide warps the mourning process," Crosley says. "You're stuck in the past longer–you're working the math backwards, trying to pin the loss down, as opposed to working forward through the process." Here, she discusses finding the permission to feel as wretched as you want to and why it's no good to pre-grieve.

You've said that one should approach new people as if they were grieving. How do you do that?
It's not necessarily about watching your language, or policing your humour. It's more about being gentle. I think there should be a baseline of ignorance–you have no idea what it took for people to get out of bed that morning.

I know you read a lot of grief books and listened to a lot of grief podcasts after Russell died. It sounds like, when it comes to loss, friendships rank pretty low in the relationship hierarchy.
Which is funny, because this is the relationship that we all have. We don't all have children or siblings. Most of us have parents, though that relationship varies in quality. But everybody has a friend. So it was surprising to see how neglected that relationship was. I am not implying any jealousy over friends or relatives who have lost their partner or son, but there's a bit more of a road map in our culture for that relationship, and for how terrible that loss is. Whereas, as much as I was supported by people who loved me, I felt on my own in terms of navigating the topography of my loss. What was my role? What was our relationship? Was I entitled to be as upset as I was? It felt really amorphous at a time when I could have used more of a foregone conclusion about my grief. I wish other people knew how it was going to affect me. And I wish I knew.

Why don't friendships get that standing?
Well, the assumption is, it's less biologically unmooring, right? You're not missing something you created or that created you. I do think, culturally, we've outgrown the assumption of what family looks like–it's not just *Leave It to Beaver*. But from a grief perspective, we maybe still think that the nuclear family reigns supreme, and we're not ready to have friendship fill in that gap.

But there's so much that *is* created inside a friendship—a whole language of references and jokes and intimacy.
And you have to work for it, right? It doesn't come for free. Sometimes I call Russell my best friend, but I'm more apt to call him my favourite person, and I feel like I always try to stress all the different connections that we had. If he was annoying me, it was like a brother. If he was hard on me, it was like a boss. If he was proud of me, it was like a parent. And all these things add up, but that relationship is greater than the sum of

PHOTOGRAPH BY KRISTINA DITTMAR

its parts, because it's just a very deep friendship. I'm still caught up short by the fact that he's not here.

You learned that, between the theft of your jewellery and Russell's death, you were experiencing something called "grief overload." That's such an interesting term, because it assumes there's a threshold after which grief's burden becomes too much.
I had a friend growing up whose family was Christian, and they had all sorts of decorative things on the walls. And there was a little sign in the bathroom that said, "God wouldn't give you more than you could handle." And I remember even as a kid thinking, that doesn't seem right. I'm not trying to fact check your bathroom, but that makes no sense. Grief overload was something I researched and found, and it did help to put a label on the strange sort of numbness and blur that I was feeling. And that label made me feel better, because I think I wanted permission to feel as god awful as I did.

***Succession* introduced us to the futile concept of pre-grieving. Fine, we can't game grief in advance, but are there ways we can brace for impact?**
I am not an expert on grief or psychology, but I do know a bit about storytelling, and the human aversion to grey areas and to not knowing things. Like, the first flirtation game we play is: Do you like me, check yes or no. So the idea that there will be this unknown in mourning is so scary. You have a sense of it—you've seen a movie, you've seen friends go through grief, you've had someone die before. But you want the full handle on it, and I just don't think that's possible or healthy. But it comes from a place where human beings really want to know what's around the corner.

There's a line early in the book that I found reassuring: "No one is obliged to learn anything from loss."
You mentioned the books I had read—I think that line is sort of a rejoinder to those books, because they did feel lesson-y to me. When you have a book about grief, or that is self-help, you get to the end and there's this tacit sign off: "I hope this has helped you on your grief journey." I found it almost offensive the way they wrapped up so neatly. I mean, Russell died in 2019. Do I still sometimes think he's just on a very long vacation and dropped his phone in the toilet? I do.

"THE LABEL 'GRIEF OVERLOAD' MADE ME FEEL BETTER. I WANTED PERMISSION TO FEEL AS GOD AWFUL AS I DID."

What do you want readers to take from your book instead?
There's this strange jockeying, etiquette-wise, that goes on after a death—like, who gets to ride shotgun—and also within ourselves about how long we're supposed to grieve. And so as this book runs the gamut through different kinds of loss—whether it's a burglary, a suicide, COVID, even the absence of a certain period of youth—I want people to feel permission to mourn the things that they mourn. The secondary thing is, it's meant to speak to people who share my aversion to self-help. It says that you can have this emotional, very true, very earnest experience, without having to read a book that has a butterfly on the cover.

PHOTOGRAPH BY KRISTINA DITTMAR

Eat More TINNED FISH

BY LAURA JEHA ● You might be one of those people who wouldn't touch an anchovy with a 10-foot pole—but if you've decided you're a total tinned fish hater, you probably just haven't tried the right one. Tinned fish goes well beyond cans of flaked tuna: You can find everything from jalapeño-infused mackerel to silky smoked mussels to lobster meat in lemony olive oil, all in display-worthy packaging. Better yet, these convenient protein sources pack plenty of heart-healthy nutrients into their shelf-stable vessels, proving that, sometimes, the best things really do come in small packages.

The first thing to know about tinned fish is that it's just as good for you as its fresh equivalent, providing identical omega-3 fatty acids. Tinned fish is also a source of vitamin B2 and vitamin D, which support strong bones and immune function.

Since our bodies can't actually produce essential omega-3 fatty acids, they are arguably the most important nutrients that tinned fish can provide. Two particularly valuable forms of omega-3s, DHA and EPA, are only present in fish and fish oil, so we need to consume them directly from foods or dietary supplements in order to increase their levels in our bodies. Research has shown that people who consume omega-3s regularly, by eating two or more servings of oily fish per week, reduce their risk for heart disease and stroke. DHA is also important for brain function, and regular intake is thought to help prevent cognitive decline like Alzheimer's disease or dementia.

SHELF-STABLE TINNED FISH IS JUST AS GOOD FOR YOU AS ITS FRESH EQUIVALENT, PROVIDING IDENTICAL OMEGA-3 FATTY ACIDS AND PLENTY OF VITAMINS TO SUPPORT STRONG BONES AND IMMUNE FUNCTION.

Another underrated benefit of tinned fish? Some varieties, like canned salmon and mackerel, are a good source of calcium, thanks to the presence of their tiny bones. (Don't worry: High-heat cooking during the canning process makes those bones soft, digestible and barely noticeable.) Half a cup of canned salmon contains around 25 to 30 percent of your daily calcium needs—roughly the same as a glass of milk—so it's a good option for those who don't eat dairy regularly.

In European countries where tinned fish is a staple, like Portugal and Spain, it can be the star of a dish as often as it can be a background player. But tinned fish newbies can try incorporating small amounts of fish with stronger flavours (like sardines or anchovies) into pasta sauces and salad dressings, or layering them on top of pizza—don't knock it till you try it! One of my favourite moves is to blend anchovies into softened butter, add in some minced garlic and spread it on a crusty loaf before baking for an umami-packed spin on garlic bread.

Milder, grocery-aisle standards, like smoked mackerel or salmon, can be added to grain bowls and salads for a quick no-cook lunch, or can be turned into easy fish cakes—I love including scallions and grated ginger and serving the cakes with a zippy chili aioli. Smoked mussels work well in a homemade chowder, or you can sauté tinned razor clams in butter, garlic and white wine before scooping onto toasted bread or tossing with pasta for an easy pantry dish. These types of fish do tend to be more pricey, so I find they're best reserved for appetizers, where their flavour won't be disguised, or served alongside bread, olives and pickles for a fancy tinned fish spread.

Because cost and proximity to a coastline can be barriers to fresh fish consumption, tinned varieties are an excellent and easy way to get in your protein and omega-3s with minimal effort. Work your way through the tinned fish aisle until you land on one that blows you out of the water.

Cook This SMOKED MACKEREL BOWL

TIP
Swap mackerel for another type of tinned fish, such as salmon or sardines, or switch up the vegetables with shredded carrots, cabbage and avocado.

½ 110-gram tin of smoked mackerel, oil drained
½ cup cooked whole grains, such as quinoa, brown rice or farro
1 cup snap peas, sliced
1 Persian cucumber, thinly sliced
2 cups chopped dark leafy greens, such as kale or spinach
1 soft-boiled egg, sliced in half lengthwise
1 green onion, thinly sliced

Dressing
1 tablespoon soy sauce
½ tablespoon rice vinegar
1 teaspoon sesame oil
1 teaspoon honey
1 teaspoon grated ginger
¼ teaspoon sriracha

Optional garnishes
sesame seeds, pickled onions, sauerkraut

Step 1
In a small bowl, whisk together soy sauce, rice vinegar, sesame oil, honey, ginger and sriracha until well combined. Set dressing aside.

Step 2
Assemble bowl with the cooked grains, greens, vegetables, mackerel and egg. Drizzle all over with dressing and garnish with sliced green onions.

Makes 1 bowl

Quick Question

AM I COMING RIGHT?

BY REBECCA GAO ● We've turned just about every facet of our health into data—our steps, our resting heart rate, the instant we ovulate—so it's no surprise we're starting to gamify our orgasms. A growing number of smart sex toys can chart the intensity of those orgasms and provide titillating data on how often and how well we come.

Take, for example, the Lioness. This vibrator has built-in sensors that measure tension (which reflects arousal), temperature (to track when it's inside you) and motion (to follow how you're moving the toy). The data captured is sent to an app that maps each session, showing vaginal contractions as a spike. The stronger the contraction (and thus the pleasure), the higher the spike. Newer models of the Lioness even let you see real-time data on your phone as you're self-pleasuring. With all that info, you can start to figure out what actions get you off the most. And while it can help people know what they like, turning self-pleasure into a numbers game—and trying to score new personal bests—might not be so great for our relationship with our orgasms.

These toys tap into one of the foundational myths of women's health: that our orgasms need to be better. That myth causes people to constantly search for ways to improve their orgasms, and women's media, in response, publishes all sorts of reassurances that good orgasms are possible. Some articles offer science-backed tips. Others recommend breathing tricks. Some tell you how to have multiple orgasms each time, or how to have a squirting orgasm (which, full disclosure, has been *Best Health*'s most-read article online for years).

But thanks to William Masters and Virginia Johnson, we've known since the 1960s that women are just as capable as men of reaching orgasm—if not more capable. Those researchers mapped out what happens to the body during sex, and, among their discoveries, they found that women don't experience a refractory period, which means they're capable of more orgasms—multiple, successive orgasms. Men, meanwhile, can't get aroused for anywhere from minutes to hours after ejaculation.

"Every study since Masters and Johnson has found that if there is any difference between male and female physiology, it's that females have a greater capacity for orgasms," says Tina Fetner, a professor of sociology at McMaster University and author of *Sex in Canada: The Who, Why, When, and How of Getting Down Up North*. Fetner's book breaks down the results of a comprehensive, first-of-its-kind study looking at the sexual activity of Canadians. Social differences, she found, affect sexual behaviour: Older women, for example, are less afraid to ask their partners for pleasure than their younger counterparts, while francophones have more sex altogether.

So how did we get here? In no small part, unsurprisingly, it's the patriarchy. The primacy of the male orgasm has led to an idea of sex that screws us all: Both partners in a heterosexual relationship work toward the male orgasm, so women's orgasms are seen as a "side effect of the kind of activity that brings men sexual pleasure," says Fetner. Penis-in-vagina sex is great at making men come, but most women need clitoral stimulation to get off. And when a woman can't come from male-focused sex, it's seen as a problem—if it's seen at all.

There's a lot of pressure, then, on women to achieve orgasm (even that turn of phrase, *achieve*). And there isn't a simple answer. Stimulating the clitoris generally helps, especially through oral sex and foreplay—though these acts can be seen as special, not routine, Fetner says. According to her findings, men who identify as feminist and prioritize their partner's pleasure are more likely to engage in clitoris-stimulating acts.

At the end of the day, a happy ending is whatever you want it to be. That might look like optimizing your orgasm: "If you want to gamify sex, or outscore yourself every time, well, who am I to deny anyone access to sexual pleasure?" Fetner says. It could mean moving oral sex from "extracurricular" to "must-do" or introducing a lubricant that ups the sensitivity of your clitoris. What it doesn't look like is disciplining your body to perform in a certain way. Says Fetner: "That just makes it more and more difficult to be in your body—and enjoy what you enjoy."

"EVERY STUDY SINCE MASTERS AND JOHNSON HAS FOUND THAT FEMALES HAVE A GREATER CAPACITY FOR ORGASM."

Quicker Question

IS THERE SUCH THING AS HEALTHY SUGAR?

There's a pretty good chance you eat too much sugar. Flavoured yogurt, granola, barbecue sauce, premade smoothies—it's in everything. And not to pile on, but added sugar has been linked to serious health problems like high blood pressure, inflammation, diabetes, obesity and fatty liver disease, all of which increase your risk for heart attack and stroke. To reduce their intake, many people have switched to sugar substitutes, which are plant-based or chemical substances that sweeten the flavour of foods and drinks without additional calories. But those substitutes also make headlines for various health risks. A 2023 study published in the journal *Nature Medicine* found that people who had a high concentration of erythritol (a common sugar substitute) in their blood were more likely to have a stroke or heart attack. Does this mean we're better off switching back to plain old table sugar, or even health-haloed variations like coconut sugar or manuka honey? Not so fast. "It doesn't matter if you eat white sugar, brown sugar, honey, fruits or syrups—they all break down in the body into simple sugars and increase your blood sugar in pretty much the exact same way," says Anisha Gupta, a registered dietitian in Mississauga. What's more, "the sweetness from artificial sweeteners can trick your body into thinking it's getting a blood sugar rise, but they don't actually raise your blood sugar," she explains. "For many people, that just means you end up with more sugar cravings later on, which means you may end up eating more sweets." Great. But as for that recent study on erythritol, Gupta isn't concerned. "The study shows a correlation, but not a causation, between erythritol and heart disease. The participants in the study were already at higher risk for heart disease, meaning that the results may not apply to everyone." Currently, there isn't enough research to suggest that this particular substitute should be eliminated from your diet, though Gupta cautions that there's room for more research on all sugary swaps. "My recommendation is always the same: Enjoy the sweetener you like, but be mindful of how much you're consuming, and look for ways to reduce, when it's convenient."

—Renée Reardin

Get Into It
HIKING FOR YOUR MENTAL HEALTH

Hiking is more fun with friends. Black Canadian Hikers, a Greater Toronto Area–based group, provides opportunites for Black people get out into nature by organizing low- and no-cost outings.

BY REBECCA GAO ● "On the trails, I slow down and de-stress," says Shyrai Sutherland, a personal support and hospice worker living in Waterloo, Ont. She gets mental clarity by going outdoors for a hike, and it's an important part of her overall wellness routine. As someone who juggles school (recreation and leisure studies at the University of Waterloo) and work, Sutherland says that hiking helps keep her physically fit and emotionally balanced.

Sutherland isn't the only one finding an eco-antidote to the stresses of modern life. Many therapists are recommending their clients get some "green exercise"—that is, a workout in the outdoors. Canadian doctors are also writing prescriptions: The PaRx program encourages people of all ages to head outside more often for increased energy, improved mood and reduced pain, stress and anxiety. Participants receive a nature "prescription" file and access to special offers from partners like Parks Canada and regional organizations like the Canadian Museum of Nature in Ontario.

Going outside can decrease your levels of cortisol, which lowers stress levels, says Sarah Kennell, the national director of public policy at the Canadian Mental Health Association. Kennell points to studies done on forest bathing (the practice of relaxing in a natural environment) that have found all sorts of benefits. "It's an old and well-studied concept of getting out in nature and being present, removing headsets and devices and notifications and really taking a step back from day-to-day stresses," she says. One recent study found that forest bathing reduces anxiety, depression, anger, mental fatigue and confusion while increasing vigour, which might indicate that it can help prevent depression. And the more time you spend outdoors, the greater the benefits. Kennell says that even 10 minutes hiking in nature would have "a significant positive impact on mental well-being, and extending the amount of time to 20 or 30 minutes would be an efficient stress reducer."

Even without exercise or movement, simply engaging with the great outdoors has benefits. One study in *Science* found that patients who looked out a window while recovering from gallbladder surgery had decreased recovery time and asked for less pain medication. Where the benefits really kick in, though, is when you combine nature with exercise. "Research shows that about six weeks of moderate-intensity aerobic activity led to a decrease in severity of symptoms related to depression, anxiety and psychological distress," says Kennell. "And if that exercise was taking place in nature, it could further boosts mental health impacts."

Hiking has also been shown to reduce the risk of heart disease (thanks to the cardio workout it provides), lower blood pressure, build strong muscles and bones, improve arthritis and improve sleep. Hiking in nature can also help improve your balance: Hills, roots, sticks, mud and rocks all create an uneven terrain that challenges you to be steady on your feet. These physical benefits mean reaping mental health benefits as well, says Kennell. "There are positive correlations between increased aerobic activity and decreased cortisol levels, the hormone associated with stress," she explains.

The nice thing about hiking is that it doesn't really feel like exercise. Link up with a friend, bring your dog, experience new sights, sounds and smells–the very same trail will change with the seasons. And the best part? All you need to get started is a bit of green space. Even parks within urban centres work great.

Get to Know
SHYRAI SUTHERLAND

"I love the tranquility of being outdoors," says hospice worker Shyrai Sutherland, "and just tuning into what I can hear, what I can see, what I can feel." Sutherland fell in love with hiking in 2015, when she lived for 10 months near the Rocky Mountains in Alberta. Upon her return to Toronto, she kept it up.

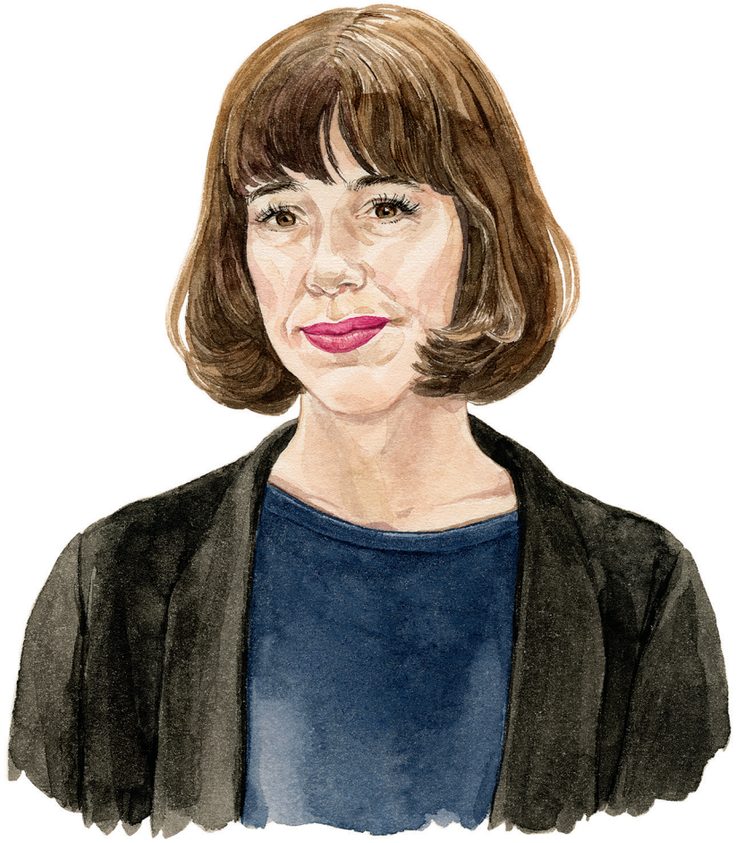
In 2020, when the Black Lives Matter movement sparked a racial reckoning—especially as Christian Cooper was threatened and reported for "birding while Black"—Sutherland knew she had to act. She had watched people suffer mentally, socially and financially while many parks and leisure centres closed during pandemic lockdowns. She wanted Black people in her community to be able to gather, heal and enjoy outdoor spaces without fear. So she started Black Canadian Hikers. It's a group dedicated to getting "other people who look like me out on the trails, taking up space and enjoying hiking and nature," says Sutherland.

In May 2020, the first eight participants laced up their boots and hit a trail through Mono Cliffs Provincial Park in southern Ontario. "It was just so empowering and liberating," says Sutherland. "I loved hearing feedback on how beautiful this experience was for people. How it opened up their worlds."

Black Canadian Hikers meets monthly for guided hikes within the Toronto area and Kitchener-Waterloo. Some hikes have special add-ons, like guided meditations, yoga or birding. One focused on healing in nature for men. But the ultimate goal is relaxation, says Sutherland. "People are there to unwind, so I just try to make it a positive experience."
—*Valerie Howes*

Life Lesson

I'VE TRIED MEDICINES, MASSAGES AND A FULL COMPLEMENT OF PHYSIOTHERAPISTS TO GET TO THE BOTTOM OF MY BACK PAIN



BY CAITLIN STALL-PAQUET ● The pain started in waves in my lower back and travelled down my left thigh as I worked bent over my laptop on my couch—the pandemic years had crystallized bad habits. The uncomfortable tightness turned searing over the coming days, building quickly, like I'd crossed an invisible damage threshold. The sciatic nerve is the largest in the human body, two inches thick at its widest. It stretches from the lower back, down past Achilles' weak spot to the bottom of the heel, creating problems for around 40 percent of us—and not just, as I'd always thought, for old people.

A year and a half in, my symptoms have varied as widely as the cures I've tried. I've experienced lower back soreness, tingling and numbness from my butt to my heel, all sorts of painful muscle tension and a sharp electric shock in the back of my leg. I've been X-rayed, then MRI-ed, which revealed that my three lower discs (the toothpaste-textured jelly between my vertebrae) bulge out, creating pressure on the nerve. I've seen physiotherapists, acupuncturists and a neurosurgeon, who counselled patience, which is not my strong suit.

I've used a standing desk, floated in a sensory deprivation chamber and had six massages, including one from a woman who stood on my back. I've applied hot magic bags, freezing ice packs and the pummelling force of an M3 Pro massager. I've ingested ibuprofen, Robaxacet, naproxen and amitriptyline—an antidepressant doctors prescribe for many ailments, including nerve issues—to keep pain from waking me up as I sleep with a pillow stuffed between my knees.

And, my god, I have walked, like I was trying to give my pain the slip at every corner. I imagine my pain like a baby, howling its needs at the crack of dawn. Walking was the only way I could start my summer days. I learned to document my nearby park's native plants and spot the cormorants who visit its water basin.

I gave up the gym, biking and yoga and, around the one-year anniversary of my sciatic woes, took up swimming a couple of blocks from my Montreal apartment. Though the bored-out-of-their-skull lifeguards seemed barely old enough to vote, they bopped their heads to hits from the 2000s—MGMT, Lady Gaga's "Poker Face," a Ja Rule and Ashanti duet. Maybe their boss was a millennial who'd given up new music in 2008 or maybe I'd become the target audience here. Maybe this was nostalgia-fuelled motivation for the newly broken. Among the many cruelties of the pandemic, a minor one was dealt when, as I doomscrolled from my couch with a curved lower spine, a meme informed me that 35 is middle-aged.

My third physiotherapist, who could have been my son if I'd made different contraceptive choices in high school, asked if I'd had any falls. I answered no, but later spliced a mental supercut of all the times my boots lost contact with icy sidewalks slicked by Quebec winters. I added genetic predisposition on my mother's side and incalculable hours spent working in a half-recline worthy of a seder table. My current physiotherapist and plain old therapist have said that trying to pinpoint a specific cause, or blaming myself, is not helpful. Neither suggested that the pain was all in my head.

But Tanner Murtagh, a registered social worker at the Pain Psychotherapy Canada clinic in Calgary, clarifies that, actually, pain *is* all in your head, because it is processed in the brain—though that doesn't mean the pain isn't very real. He explains that consistent experience of pain can often become neuroplastic, or what used to be called psychosomatic. "It's occurring due to the brain and nervous system being stuck in danger mode," he says. "This can come about after long bouts of pain. The brain has learned to fear it, interpreting non-painful stimulus as painful. It can also be tied to childhood trauma."

Examining fearful relationships to pain isn't just valuable in psychotherapy. Kalem Kachur, the founder of Physiothérapie Solution Active in Montreal, focuses on back and sciatica issues using the McKenzie method of treatment—a system that zeroes in on the problem, identifying what tissue needs to be stretched or strengthened, and addresses relationships to pain, too. "We end up having so much fear of moving, fear of the pain, that it can very often lead us to have pain for longer," he says. "We don't become desensitized but are actually hyper-sensitized to it." After identifying with that fear, I made an appointment at Kachur's clinic, where Duc Nguyen became my fourth (and hopefully last) physiotherapist.

Rather than starting me with a long sequence of stretches, Nguyen began with just one pose. He had me lie on my stomach and push myself up, fully extending my arms into a yoga-style cobra, which made my pain furious. The pose is the opposite of the forward flexion we do so often, and can help restore equilibrium to the joints. Repeating it up to 40 times during the session alleviated pressure on the nerve, leaving me more pain-free than I'd been in a year. I was also told to use a cylindrical lumbar pillow to correct my posture, since slouching overstretches and irritates the back's tissue, and better posture allows things to heal. "It's like leaving a scab alone and not picking at it," Kachur says.

One of the best strengthening exercises I now do is sitting up straight with my core and back engaged, shoulders down and chest out. Friends and family have poked fun at what has become my default posture—it's never too late to find your trademark look. Kachur highlights the need for regular movement during work hours, to step away from desks, sitting and standing alike. "If you're really bad at that, drink lots of water," he advises. "You'll get up."

After initial success for a few weeks, my progress plateaued, potentially because of my pain's inflammatory nature, which takes longer to heal. Nguyen had me change the angle of my cobra pose, then do spinal twists, attempting to home in on the right remedy. He had me put my left foot up on a chair, bend toward the floor to open my hip, and intensify the pose by pulling on the bottom of my foot.

This simple manoeuvre bumped the pain down a few notches, reigniting the embers of my faith that I can get better, slowly and steadily. Murtagh encourages keeping an eye on the big picture. "Anyone who comes to our clinic says, 'I want my pain gone.' We want to aim for it. But that can create a lot of pressure," he explains. "Collecting all the small wins, like, 'I'm actually a bit less fearful when the pain comes on now,' that's a huge piece." I learned that it's key to listen to my pain rather than fear it, trusting it will improve as it's increasingly understood.

Recently, I went back to my childhood pool with my mom, who goes there to exercise and help heal various injuries. I watched her swim back and forth, at her own pace, a few lanes over, before I pushed off into the crawl. As I moved through the water, I hoped that the pain would loosen its grip. Then I remembered I needed to loosen mine, too.

Fast Facts
LOW BACK PAIN

1. According to the WHO—which released its first-ever guidelines on chronic low back pain late last year—low back pain is the leading cause of disability worldwide, and the condition for which the greatest number of people can benefit from rehabilitation.

2. In 2020, low back pain affected 619 million folks around the world—that shakes out to roughly one in 13 people.

3. No surprise: Researchers found that the pandemic made both the prevalence and the intensity of low back pain worse.

4. Also unsurprising: More women than men experience low back pain, especially, studies have found, as they enter menopause. The peak in cases occurs between 50 and 55 years old.

5. But even fleeting back pain will come for most of us: StatCan estimates 80 percent of Canadians experience at least one episode of back pain in their lives.

ILLUSTRATION BY MELINDA JOSIE

Ask an Expert
WHAT'S THE DEAL WITH OVARIAN CYSTS?

BY RENÉE REARDIN ● "The ultrasound found ovarian cysts," I texted my friends in a WhatsApp group. It was 2014, I was in my mid-twenties and I had gone off the pill only to discover an irregular period. My friends wrote back instantly—one said she also had them and was diagnosed with polycystic ovarian syndrome. One said she was worried about whether hers would burst. Another said she had several, and asked if we, too, had been told they looked like raisins (we had not).

Over the next decade, after a few ultrasounds and in my current stint as a health editor, I've learned that ovarian cysts are not only incredibly common but also come in different forms. Some cysts are small and shrivelled; others can grow to the size of a baby. Some sit there politely and some aggressively rupture. Some are elegantly called "string of pearls," while others have hair and teeth. Here's what else I've learned: We're all incredibly confused about these different forms, why ovarian cysts are there in the first place and what we should do about them.

"Ovarian cyst is a really broad term used for anything that grows within the ovary or even next to it," says Michelle Jacobson, a gynecologist at Women's College Hospital in Toronto. "Traditionally, cysts have been defined as fluid-filled sacs, but now we know they could also be filled with tissue or septations, which are compartments of fluid." She explains that the most common cysts are benign ones called follicles that occur during ovulation. "In normal menstrual cycles, a follicle grows an egg each month, and when the egg matures, the follicle releases it," she says. The empty follicle sac then shrinks and produces hormones to prepare for the next egg. In this case, cysts are a good thing—they're essential for reproduction. But as my friends and I know, some cysts have to be monitored, some are painful and some muck up your menstrual cycle.

After my most recent ultrasound, I was told I don't have cysts anymore—just many follicles. What happened? And how many variations of cysts are there? How can they impact our health? Jacobson breaks it down for us.

How many types of cysts are there?
There are a lot. It's not even within somebody's scope to know all of the different kinds of ovarian cysts. They come from all sorts of different tissue origins, which is how we characterize them.

Where do they come from?
That's dependent on the kind of cyst. But in general, it has to do with fluid or material that gets trapped or extruded into another compartment. So in a follicular cyst, which is the most basic one that develops during ovulation, it contains the fluid that surrounds the egg.

Should we be concerned about any cyst beyond the ones during ovulation?
There are many types of benign cysts. You can have other variances that are not part of normal ovarian function, but are not necessarily cancerous. Those cysts can have blood in them, either because blood has ruptured into a cyst or filled with old blood, like if you've been diagnosed with endometriosis.

To name a few benign cysts: There are ones called fibromas that grow out of solid fibrous tissues, which look a lot like a solid tumour or a hard tissue. There are ones called dermoid cysts that are made up of different tissue lines and can have body parts like teeth and hair. And there are polycystic ovaries, in which ovaries have lots of little follicles—they're called "string of pearls"—that have never produced an egg but can grow into a full-sized egg within the ovary.

Wait—some cysts have teeth and hair?
Yes, but not everybody who has them knows that they do. They'd only know if they had an ultrasound so we could see the different types of tissue in them, or if we follow them to see if the cyst grows or changes in a concerning way. But rarely do they have to be removed.

And what about the string of pearls? Is that worrisome?
In a normal menstrual cycle, women will recruit many follicles, even though only one usually becomes the dominant—or lead—follicle that ovulates. So it's quite normal to have lots of little follicles at any given time in a normal menstrual cycle. But in polycystic ovarian syndrome (PCOS) or polycystic ovaries (PCO), you get lots of little cysts that might have immature eggs in them, but haven't had the signal to go on to ovulate and don't necessarily have a lead follicle. There's still a bit of a mystery around why some women get PCOS and others don't.

"THERE ARE MANY TYPES OF BENIGN CYSTS. RARELY DO THEY HAVE TO BE REMOVED. IF A PATIENT CARRIES A GENETIC MUTATION OR HAS A FAMILY HISTORY OF OVARIAN CANCER, THERE'S A HIGHER CHANCE THAT A SUSPICIOUS CYST IN CANCEROUS."

Why are some cysts bad?
Some people have a cyst that causes pain, which can be due to a number of reasons, like if the cyst is extremely large—it might be pressing on different anatomy. They can also twist and cause an ovarian torsion, which means the blood supply to the ovary has been cut off, and that's extremely painful and can lead to the loss of an ovary. Cysts can also cause pain by rupturing. They can leak fluid or blood into the peritoneal or abdominal cavity, which is irritating to the tissue. Some sizable cysts may need to be removed because they're impeding fertility.

If a patient carries a genetic mutation or has a family history of ovarian cancer, there's a higher chance that a suspicious cyst is cancerous. We don't know if it's cancer or pre-cancer until it's removed and sent to the pathologist. So a small, suspicious, asymptomatic cyst might be removed because we want to know what it is and if there's any additional treatment that needs to happen.

Do cysts ever go away on their own or are they with you for life?
That depends. Some of them will regress on their own, like a follicular cyst, which is an egg containing a sac. But both endometriomas, cysts made of old blood, and dermoids, made out of solid tissue, do not tend to go away on their own. If they're causing discomfort they can be removed.

What do we still not know about ovarian cysts?
There's a lot we don't know about how cysts become cancer, and specifically ovarian cancer. I could say that's because women have traditionally not been the focus of research, but also, it's hard to develop studies to understand this. It's hard to do research on tissue, and especially in reproductive-age women, where we're not taking ovaries out. You're not getting autopsy specimens to do research on young women. So there's just not a lot of opportunity. And ovaries are complicated.

If there was a way to know if a cyst was cancerous and to pick up ovarian cancer early, that would be a huge gamechanger for the world. We can't screen for it or pick it up early with an ultrasound, MRI or blood test—so it's usually not seen until it's too late.

VITALS

In *All In Her Head*, science writer Misty Pratt explores why women are twice as likely to be diagnosed with mood disorders than men. In this excerpt, she considers the modern workplace and the path that runs between depression, which she's lived with since she was a teen, and burnout.

THE 1950S IN SUBURBAN NORTH AMER-ica seem to be a bit of a blip in our historical understanding of women and work. The subsequent feminist revolution also painted a picture of choice, which has spilled over into our twenty-first-century conversations about "working moms" versus "stay-at-home moms," as though somehow everyone can freely choose which camp to join if they start a family. Dig a little deeper, and you'll find that some of the "choices" we make about work are a result of social pressures women face and the rigidity and inflexibility of the modern workplace. Often, it feels less like a choice and more like we're just getting pushed out.

This transitional postwar time also created a popular professional persona, what [Brigid] Schulte calls the "ideal worker"–the individual who puts in 80-hour workweeks and eats, sleeps and breathes work (likely they're not doing much actual sleeping and eating). Western capitalist culture continues to idolize this kind of dedication, and we champion it as if it's a model for success, especially for men and fathers. In the modern economy, the "ideal worker" and "ideal woman" have blended together, with specific gendered expectations for work and home life.

"When we imagine the 'ideal feminine woman,' she is a caregiver, she is strong, assertive, but also loving and warm, and is the person people can come to. She can juggle it all, in a way that men are never ever expected to do," says psychologist Taslim Alani-Verjee. "Even when we can recognize the impossibility of being that woman, it's still the version that comes

to our mind of success... We still try so hard to be a version of that." Because the ideal woman is the benchmark, it always seems like we're failing, says Alani-Verjee. "If you're a nurse, a teacher or a mother, particularly, we love to pay lip service to these people, but we don't give a shit what we pay them," says Bethany Johnson, coauthor of the book *You're Doing it Wrong!: Mothering, Media, and Medical Expertise*. "You're supposed to feel good about your job because it's a nice thing to do." She points out that once middle-class women were encouraged to work full-time after second-wave feminism, they weren't offered resources or help for dealing with the mental load. "A lot of people are also struggling because our expectations have gone up for what mothering looks like and what having a family looks like and what the family unit is responsible for doing," she says.

So, wealthier women invest in private tutoring, swimming and music lessons, purchase ecofriendly products and organic food and insist their children learn two languages, all in the name of providing them with a super-enriched childhood experience that mothers are usually tasked with managing and organizing. This has been dubbed "intensive mothering," which some researchers suggest could be something that perpetuates traditional gender roles. And while none of those activities are inherently "bad," intensive mothering on the whole benefits men by absolving them from doing a lot of the unpaid emotional work. There are also socioeconomic implications, as the bulk of this intensive mothering is carried out by wealthier women in opposite-sex relationships; women with less financial power may feel similar pressures but face greater barriers to achieving the idyllic family life that wealthier women present on social media and blogs.

What's more, increased pressure to maintain intensive mothering leaves many women exhausted and on the brink of burnout. It's a form of burnout that arises just as much in the home as it does in the workplace.

IN MUCH OF THE MEDICAL LITERATURE, burnout has been studied as it relates to our adult working roles; a clear line in the sand is drawn between who we are as employees, managers or entrepreneurs and who we are in the home. The latest revision of the International Classification of Diseases (ICD-11) states that burnout is a phenomenon with three defining characteristics: emotional exhaustion, a sense of detachment from one's role (or what is called "depersonalization") and reduced productivity in the workplace. This means that, at least within our medical understanding, we aren't meant to apply the concept of burnout to our lives outside an occupational context.

I would argue that this makes the concept of burnout–both our cultural understanding and treatment of it–a largely capitalist one. The notion that individuals can "heal" from burnout in order to jump right back into their jobs fails to address the root cause of the problem. There is a fundamental truth that burnout for women is about more than discovering "work-life balance" or tackling inequality in the workplace–it's also about the mental load (both cognitive and emotional) and how it spills over into our working lives.

In a large cross-sectional study of 2,026 workers from Canada, a deeper exploration of the gendered pathways that lead to burnout identified that women had lower levels of decision latitude, which means they have socially limited access to control and power within the workplace. Women also experienced higher work-to-family conflict, which could mean they struggled more with their recovery from burnout. Strategies to reduce burnout included women investing more time outside the workplace (perhaps through part-time work arrangements), working from home, and in non-work activities like childcare and household responsibilities.

The authors cautioned that while these strategies may help women to feel better, reducing time spent on work activities can lead to fewer career opportunities and likely exacerbates gender inequality in the workplace. This observation isn't intended to put more pressure on women to work harder. Instead, it highlights the reality of the modern workplace: less "face time" at the office often means fewer opportunities to get noticed, fewer promotions and weaker relationships with managers and coworkers.

A SET OF EXPERIMENTS CONDUCTED with undergraduate students at the University of Pittsburgh illustrated how women are expected to cater to others. A computer randomly created mixed-gender groups of three people who were tasked with getting one group member to volunteer to click a button, without using any form of communication. (Each student was seated at their own computer, and all decisions were anonymous.) If no one volunteered to click the button, everyone in the group received $1. If someone volunteered, the volunteer received $1.25 while the other two group members each received $2. This continued for 10 decision rounds.

Lo and behold, women were 48 percent more likely to volunteer compared to the men. The researchers hypothesized that women volunteered more because others expected them to. To test this, they reran the experiment with the groups made up of only men or only women. In this case, the all-men and all-women groups ended up having the same success rates in finding a volunteer to click the button and take the pay cut. The researchers concluded that it isn't that women like to take on extra tasks (often menial jobs that no one else wants to do!); it's that there's a social expectation that women will always step up.

Researchers are still trying to tease out the overlapping relationship between burnout and mental illness. There does seem to be a strong link between burnout, depression and anxiety, but no conclusive evidence that one causes the other. One study of nurses found that participants with significant levels of burnout were more likely to screen positive for any mental disorder, particularly major depressive disorder.

> WHAT IF THE REASON YOU CAN'T GET OUT OF BED IS MORE ABOUT THE WORLD YOU LIVE IN, THE JOB YOU HOLD (OR NO LONGER HOLD) AND THE POWER YOU LACK RATHER THAN ABOUT YOU AS A PERSON?

In a study of Finnish employees that measured biomarkers of physiological stress (called "allostatic load") and depression, the authors found that burnout was indeed putting strain on the body, but that depression explained 60 percent of this association–which means there was a lot of overlap. The study suggests that the association between burnout and depression is likely two-way: burned-out people may be more likely to become depressed, and depressed people are more vulnerable to burnout. However, the path from burnout to depression appears to be stronger.

When women are experiencing burnout in a more general "I'm so exhausted with everything" sense, it is sometimes diagnosed as anxiety or depression. The authors of a 2019 review caution that the similarities between burnout and depression or anxiety could lead to a false diagnosis and that burnout itself might be overlooked. When this happens, treatment solutions may prove ineffective, leading to worsening symptoms or an abandonment of treatment altogether. Treatment for mental illness generally centres on therapy and medication; treatment for burnout would likely encompass more holistic solutions, like time off work to rest, negotiating different working hours with an employer, and self-care strategies including sleep hygiene and exercise. Of course, treatments for these conditions overlap, but treating burnout as mental illness may mean that the underlying economic and social issues women face are not being addressed.

Though it's speculative, I would like readers to consider something: What if the high rates of anxiety and depression among women are, in large part, caused by burnout? What if the reason you can't get out of bed is more about the world you live in, the job you hold (or no longer hold) and the power you lack rather than about you as a person? Personally, this realization completely changed the way I relate to myself and my mental illness. I believe that misdiagnosing burnout feeds the illusion that mental illness is due to a personality flaw, negative mindset, my family's genes or an imbalance in my brain rather than an understanding that is closer to the truth: I'm facing a social problem that has real, lived emotional consequences. For some, this realization may be distressing: It means acknowledging that you don't have as much control over your well-being as you once thought. But I hope that some of you find this freeing, that it lifts the veil shrouding mental illness and sets you on a path to rediscover your own capacity, the ways in which you are limited and what tiny acts of resistance you can make.

After her mother's Alzheimer's diagnosis, Tarn Tayanunth wanted a therapeutic activity she and her mom could do together. Making dumplings was a natural choice, and it soon became a booming business.

BY REBECCA PHILPS ● Tarn Tayanunth can remember sitting around her grandmother's table as a child in Bangkok, listening to her mom, aunts and neighbours share news and gossip while they made dumplings together. It was exactly that warm memory Tayanunth wanted to conjure when she learned her mom, Toom, had early-onset Alzheimer's at age 53. The family doctor advised Tayanunth and her stepdad to keep Toom busy but stick to familiar routines that might stave off depression, which could exacerbate her symptoms. Tayanunth and her mom already had a standing Friday lunch date (they live near each other in Victoria, B.C.) meant for checking in and catching up–now, they'd make dumplings as well. All that folding and pinching is dexterous work, a redress to a disease that cuts away at fine-motor skills. Making dumplings was also muscle memory for Toom: "It was something she was really good at, which was important," Tayanunth says. "I wanted her to feel capable, to know there's something that she could do without making a misstep or mistake."

At first, Tayanunth would freeze the dumplings made during those afternoon sessions, and give most of them away. But the stockpile kept growing, and friends encouraged her to sell packs on Instagram. She was busy managing a restaurant, but she soon started a little delivery service, and it provided enough income that she could leave her regular gig and spend more time taking care of her mom. Then COVID hit and demand for the dumplings surged; she went from 25 deliveries per week to more than 250. Victoria residents couldn't get enough of her thin-skinned, Chinese-style dumplings filled with pork belly, lemongrass chicken or shrimp and chive. "My dumpling business became a bit of a restaurant-community effort. One friend made my logo, one took photos, someone built me a website, a few more helped us make dumplings." By November 2020, she'd opened a small downtown storefront for takeout orders.

Today, Dumpling Drop has 20 employees between two locations. Toom is less involved in the dumpling making (the production needs are far beyond what the duo can get done in an afternoon), but she still contributes by stamping and stickering the packages. "My main thing right now is to give her purpose," Tayanunth says. "I'll bring her into the shop to say hi to everyone, and of course she wants to get in there and help." It's second nature. Mom and daughter moved to Canada 30 years ago, when Tayanunth was 14, after Toom married a man from Victoria. Toom's first job in the city was at a Thai restaurant, the same one where Tayanunth worked alongside her for 16 years. "Mom was so good at her job. When she had to quit–she was missing orders and getting confused–it was a real blow."

Even if Toom can no longer follow the thread of how the business came together, she is continually delighted by her daughter's success. Tayanunth is involved in fundraising activities for the Alzheimer's Society, keen to raise awareness of all the resources and supports for both people who live with the disease and those who care for them. "Caregiving is hard; it's isolating. I want people to know that connecting with a community can really help," she says. "I'm so proud that I'm now able to take care of my mom financially because of Dumpling Drop. I'm proud of what we made together."

BY THE NUMBERS ▸ More than 25 diseases and conditions can cause dementia, but Alzheimer's is the most common. ❋ By 2030, almost 1 million Canadians will live with dementia. ❋ Studies show that stress from racism can affect brain health and the onset of dementia. ❋ Women are doubly affected (they're twice as likely to have dementia and make up the majority of caregivers), and by 2050, 1 in 4 people with dementia will be of Asian descent. *From the Alzheimer's Society of Canada 2024 Landmark Study Report.*

PHOTOGRAPH BY TAYLOR ROADES

A Field Guide to Your Liver

By Danielle Groen

Illustrations by Audrey Malo

LIVER—YES, EVEN WHEN IT'S CHOPPED—DESERVES far more respect than our culture doles out. The human liver performs upward of 500 functions: It filters our blood and regulates clotting, it's the first line of defence against infection, it controls the balance of hormones and fats and it transforms our food into energy, and that's just for starters. But its chief marvel lies in its power to regenerate—lop off a giant chunk of a healthy liver and the damn thing will grow back. Not part of the way. Not eventually. You can lose a whopping 70 percent

of your liver and, only 12 weeks later, possess a full-sized replacement that behaves like brand new. No other organ in our body can do this. "That rapid regeneration is phenomenal, and the question is: How does it know when to stop?" says Sonya MacParland, the Canada research chair in liver immunobiology and a senior scientist at the Toronto General Hospital Research Institute. "If the liver constantly had this function, then you would be all liver. But somehow you don't just blow up like a balloon."

There's plenty we don't know about this organ. Why does scarring of the liver wreak havoc on our memory? Why does it secrete a hormone that might determine whether we have a sweet tooth? Why do female livers metabolize drugs more quickly, making women far more likely, regardless of age, weight or the amount of anesthesia given, to wake up during surgery? Here's what we do know: The liver is roughly the size and shape of a slightly deflated football and sits in the upper right quadrant of our abdomen, just below the diaphragm. It weighs around three pounds, with a deep reddish-brown colour that comes from being positively saturated with blood–at any given moment, about 13 percent of our body's supply.

Most of the liver's 500-plus functions are performed by cells called hepatocytes. "They make up 80 percent of the cells in the liver," MacParland says, "and they're really the body's workhorses." Hepatocytes help the liver store iron, generate cholesterol and make the proteins that transport vitamins, enzymes and hormones throughout our bodies. They help produce the bile that whisks away waste and breaks down fats. They play a pivotal role in our immune system, helping to seek out and destroy invading bacteria and viruses. And they help store or release glucose, depending on the up-to-the-moment energy needs of our bodies and minds. "What's unique about hepatocytes is their ability to perform many more functions than other cells in the body," says Mamatha Bhat, a hepatologist and clinician scientist at the University Health Network's Ajmera Transplant Centre.

But they are not, crucially, the only cells lurking in the liver. For decades, scientists studied the organ as a soup of cells, rather than as individual components–with predictably hepatocyte-heavy results. "Imagine a smoothie that is 80 percent banana," MacParland says. "I can sneak in some avocado, maybe a bit of blueberry, and my kids will say it's a lovely banana smoothie. That's great for feeding my children, but not so great when we're trying to figure out an organ." And it's those very small populations of less-detectable cells that, once dysregulated, can really drive disease.

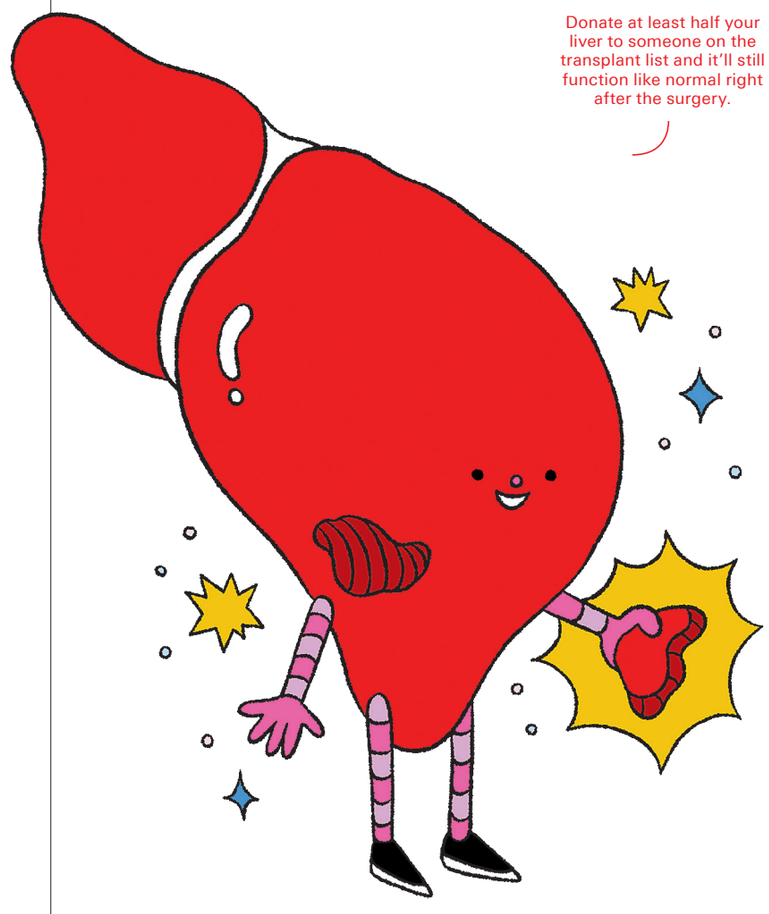
So in 2018, MacParland and her colleagues created the first-ever map of the human liver, all the way down to the single-cell level. Using that detailed information, researchers can finally understand the different cell populations that make up a healthy liver, along with the ones that act out when things go wrong. And lots can go wrong in such a multitasking organ: There are more than 100 types of liver disease that together may affect 1 in 4 Canadian men, women and children. Non-alcoholic fatty liver disease is especially prominent, affecting 7 million people in Canada alone. Most experience no symptoms–you don't tend to feel the damage to your liver until its functioning drops below 20 percent–but, left untreated, it can lead to cirrhosis and even cancer.

Still, there are reasons to be optimistic. Right now, transplantation may be the only option for patients with end-stage liver disease. But MacParland's map can help inform more precise therapies, as researchers better understand how to reprogram the liver so patients don't necessarily need a new organ. "The cool thing about certain subpopulations of cells is they're actually very, very reprogrammable," she says. "When we know how the cells are misbehaving, we can target therapies that reprogram those cells and get them to promote regeneration." Bhat, meanwhile, works closely with computer scientists on algorithms to improve the trajectories of patients who do have transplants. AI tools can predict the individual risk of infection and disease for each patient, and personalize treatment and care to boost their long-term outcomes.

It's a rare chance for tech to help a liver out. Mechanical ventilators can breathe for our lungs. Dialysis machines do the work of kidneys. Ventricular assist devices will pump for weakened hearts. "But it's not actually possible to replace the liver with any machine," Bhat says. "Its functions are just too complex." So put some respect on the liver, chopped or otherwise–this organ is no superfluous side dish. It has main character energy that can't be denied.

You can lose a whopping 70 percent of your liver and the damn thing will grow back. Not part of the way. Not eventually. Within 12 weeks, you'll have a full-sized replacement. No other organ in our body can do this.

Growth Opportunity



DURING HER RESIDENCY IN INTERNAL medicine, Mamatha Bhat, a scientist at the University Health Network's Ajmera Transplant Centre and Toronto General Hospital Research Institute, sat in on a transplant for a patient with end-stage liver disease. Once the healthy organ was attached, the transformation was dramatic—and exceptionally fast. "I saw jaundice fully resolved within hours," Bhat says. "The liver function just picked right up; it was quite amazing."

At any given moment, hundreds of people are waiting on Canadian liver transplant lists: In 2022, according to data from the Canadian Blood Services, there were 520 people across British Columbia, Alberta, Ontario, Quebec and the Atlantic provinces. At least a quarter of them will die before they make it off the list. "Unfortunately, there remains an imbalance between the supply of organs and the need for them," Bhat says. But remember that whole business about the liver's remarkable power to regenerate—growing from 30 percent of its size back to normal volume in just 12 weeks. "We leverage that rapid liver regeneration in our program, which is the largest living donor liver transplant program in Canada, to save the lives of people on that list," she says.

If you're between the ages of 16 and 60 and in good health, you could help with this life-saving work. Living donation is not minor surgery: The operation lasts about six to eight hours, removes at least half of your liver (usually the entire right lobe) and requires a five- to 10-day stint in the hospital. Full recovery will take another six to eight weeks, though your organ will function like normal right after the surgery. As for that donated liver, it'll be matched with a patient on the transplant list based on compatible size and blood type. But here's a wild fact: You can put a liver that's a little too large into someone who's a bit smaller, and the liver will actually shrink to fit.

"Out of the more than 200 liver transplants we perform in our program each year, 70 to 80 percent are from living donors, and there's even a certain percentage that are from anonymous living donors," Bhat says. "It's beyond being a good samaritan. It's just a completely selfless act."

The Sweet Spot

WHEN YOU LAST WENT TO THE movies, did you settle in with a bucket of popcorn? Or did you chase gummy bears with M&Ms instead? After running the bloodwork on more than 6,500 Danish participants, researchers at the University of Copenhagen found a link between a liver-secreted hormone called fibroblast growth factor 21 (FGF21) and people's appetite for sugary treats.

FGF21 seems to act like a candy-coloured stop sign. When researchers measured its levels in study participants who'd fasted for 12 hours, they discovered that sweets-scorning Danes had 50 percent more FGF21 in their systems than those who confessed to a serious sweet tooth. And the composition of the gene matters, too. Some participants had particular–and apparently weakened–variations of FGF21. Those folks were much more likely to eat larger amounts of gummies and sweets.

What does it mean? Like much that has to do with the liver, it's an ongoing question. But the results suggest that our livers do send out signals about the foods and nutrients that we need. And now, when you find yourself forgoing the chips for a Hershey bar, you know which organ to blame.

Snooze Patrol

A liver grows 40 percent in size over the course of a day, but once it's bedtime, the organ contracts to conserve energy.

THE BRAIN GETS ALL THE CREDIT for serving as our master biological clock: It's the circuitry that governs our circadian rhythms, the 24-hour cycle dictating everything from our appetite and body temperature to our sleepiness, immune system and mental health. But what if—you guessed it—the liver had something to do with these rhythms as well? European researchers set out to see if they could make the connection.

Back in 2017, working with mice—which also run on a 24-hour clock—the researchers were amazed to find that livers grow and contract by more than 40 percent over the course of the day. Because mice are nocturnal, eating by night and dozing during the day, the size of their livers nearly doubles after dark. It makes sense: Liver cells need to work hard to convert food into fuel, so they swell to ensure peak production. But once it's bedtime, there isn't the same need for that effort, so the liver powers down to conserve energy.

Here's the catch. When researchers messed with the mice's circadian rhythms, forcing them to stay awake and feed during the day instead of at night, their livers didn't undergo the same growth and contraction, even if the mice were eating the same amount. It suggests that the cues that spur our livers into action don't come from our food—they come from the biorhythm that's evolved in us over hundreds of millions of years.

So what happens when mice are wound up using a different clock altogether? Last year, some of the same European researchers returned for another experiment. This time, they switched out the liver cells in the mice with human liver cells, and, all of a sudden, the mice started to look a lot less nocturnal. Their daily cycle moved forward, and they began to eat and be active a full two hours before nightfall.

These twin studies underscore the intimate relationship between our liver and our biological clock. And that's important, because all sorts of modern interventions, including night-shift work, jet lag and the blue light of our laptops and phones, conspire to throw that innate sense of time out of whack. It's clear already that night-shift work, for example, carries the risk of all sorts of adverse health effects, including cardiovascular disease, diabetes and cancer. The researchers suspect that deregulation of our biological rhythms also has significant consequences for the functions of our liver—and, as we know, the liver controls an awful lot.

Researchers switched out the liver cells in mice with human liver cells, and, all of a sudden, those mice started to look a lot less nocturnal.

A Brief Cultural History of the Liver

[1618]
PROMETHEUS BOUND
Give the Greeks credit: They were way ahead on their understanding of liver regeneration. And give Rubens credit: He really conveys the unpleasantness of having your liver eaten every day.

[1623]
MACBETH
Renaissance-era physicians were pretty certain that too little yellow bile—then considered the source of courage—would result in a white liver, hence Shakespeare's use of "lily-livered" to mean cowardly.

[1788]
LOBE-FOR-LAND GRAB
This story is probably apocryphal, but we love it all the same: Louis XVI trades some land in northern France for an especially tasty piece of foie gras.

[1812]
SNOW WHITE
In the original Brothers Grimm fairy tale, the evil queen insists the huntsman bring Snow White's lung and liver, not her heart, to prove that he killed her.

[1991]
THE SILENCE OF THE LAMBS
One of filmdom's greatest villains—and its greatest liver connoisseur?—Hannibal Lecter prefers his dish with some fava beans and a nice Chianti.

Dietitian Desiree Neilsen wants you to eat more plants, and her latest cookbook, *Plant Magic*, offers more than 100 convincingly delicious ways. Here are our favourite springtime recipes.

Chickpea Frittata with Herby Salad

SERVES 4 For years before I went plant-based, a frittata was a weekly staple because it was a quick way to get dinner on the table, no matter what I had lurking in the fridge. After experimenting with a bunch of variations, this simple chickpea flour–based version has come out the clear winner. Long used in South Asian cuisine, chickpea flour makes a beautiful replacement for eggs because it is packed with filling protein, fibre and important minerals. Deeply savoury, with a creamy texture, this not-a-frittata will lend itself easily to as many variations as you can dream up.

CHICKPEA FRITTATA

- **2 cups (500 mL) chickpea flour**
- **1½ cups (375 mL) water**
- **3 tablespoons (45 mL) avocado oil, divided**
- **1½ teaspoons (7 mL) salt**
- **½ teaspoon (2 mL) garlic powder**
- **¼ teaspoon (1 mL) ground turmeric**
- **¼ teaspoon (1 mL) ground coriander**
- **¼ teaspoon (1 mL) baking powder**
- **2 cups (500 mL) bite-size broccoli florets**
- **1 small shallot, finely chopped**
- **1 cup (250 mL) frozen peas**
- **½ teaspoon (2 mL) sweet paprika**
- **¼ teaspoon (1 mL) ground coriander**
- **⅛ teaspoon (0.5 mL) salt**
- **Freshly cracked black pepper**
- **¼ cup (60 mL) vegan feta or Parmesan cheese (optional)**

HERBY SALAD

- **4 cups (1 L) lightly packed arugula**
- **1 cup (250 mL) mixed fresh herbs (basil, mint, dill, parsley), thinly sliced**
- **1 teaspoon (5 mL) freshly squeezed lemon juice**
- **1 teaspoon (5 mL) avocado or extra-virgin olive oil**
- **Flaky sea salt**

1. Make the chickpea frittata: Preheat the oven to 350°F (180°C).

2. In a large bowl, whisk together the chickpea flour, water, 1 tablespoon (15 mL) of the avocado oil, salt, garlic powder, turmeric, coriander and baking powder. Set aside to let the flour hydrate while you cook the veggies.

3. Heat 1 tablespoon (15 mL) of the avocado oil in a heat-resistant medium nonstick skillet over medium heat. Add the broccoli, shallot and peas and cook, stirring occasionally, until the broccoli is bright green and the shallot is soft and translucent, 5 to 7 minutes. Add the sweet paprika, coriander, salt and pepper to taste, and stir. Remove from the heat and let cool for 1 minute. Add the vegetable mixture to the chickpea batter. Sprinkle in the cheese (if using) and stir to combine, ensuring that the vegetables are evenly coated with batter. Wipe the pan.

4. In the same pan, heat the remaining 1 tablespoon (15 mL) avocado oil over medium heat. Pour in the frittata mixture and tilt or swirl the pan to evenly distribute the vegetables. Transfer to the oven and bake until the frittata is dry to the touch on top and starting to crack around the edges, 25 to 30 minutes. The frittata won't brown. Remove from the oven and let sit for 10 minutes.

5. Meanwhile, make the herby salad: In a medium bowl, toss together the arugula and fresh herbs with the lemon juice and avocado oil. Season with flaky sea salt to taste.

6. To serve, cut the frittata into wedges and transfer to plates. Top the frittata with some herby salad. Store the frittata, without the salad, in an airtight container in the fridge for up to 3 days. It makes an excellent sandwich filling.

Soba with Miso Pecan Butter

SERVES 4 Soba noodles have been enjoyed in Japan for thousands of years. Made from buckwheat flour, soba noodles have such a wonderful flavour that they are commonly eaten on their own as zaru soba with just a bit of dipping sauce as an accompaniment. Since my time in Japan, I have used soba as a base for so many meals, some more traditional and others not so much, like this soba dressed with my savoury Miso Pecan Butter (page 35). Enjoy this dish as a light and simple meal or serve with some steamed edamame sprinkled with shichimi togarashi as a Japan-inspired meal with friends.

- **1 package (8 ounces/225 g) soba noodles, gluten-free if required**
- **½ batch Miso Pecan Butter**

Soba with Miso Pecan Butter
PAGE 32

Sumac-Roasted Eggplant with Maple Tahini Drizzle
PAGE 35

(recipe follows)
Soy sauce or gluten-free tamari
2 green onions, thinly sliced on the diagonal
1 (6-inch/15 cm) piece English cucumber, diced
Shichimi togarashi or red chili flakes, for sprinkling

1. Cook the noodles according to package directions. Reserve ½ cup (125 mL) of the cooking liquid. Drain in a colander, then give the noodles a quick rinse under cool running water. Set aside.

2. In a medium bowl, mix the miso pecan butter with 2 tablespoons (30 mL) of the reserved cooking liquid until smooth. Toss with the noodles to coat. If the soba looks dry, add more cooking liquid, 2 tablespoons (30 mL) at a time, until the sauce looks glossy. Taste and adjust the seasoning with a bit of soy sauce, if needed. Top with the green onions, cucumber and a sprinkle of shichimi togarashi or chili flakes. Store leftovers in an air-tight container in the fridge for up to 3 days. Re-heat with a splash of water to rehydrate the sauce.

Miso Pecan Butter

MAKES ABOUT 1 CUP (250 ML)
Rich red miso adds an enormous depth of flavour to fresh pecan butter, which is surprisingly simple to make! You can also use this butter spread on sandwiches or thin it out to drizzle over roasted vegetables or tofu.

2 cups (500 mL) raw pecans
3 tablespoons (45 mL) red miso
1 tablespoon (15 mL) pure maple syrup
3 tablespoons (45 mL) hot water

1. Preheat the oven to 300°F (150°C). Line a baking sheet with parchment paper.

2. Scatter the pecans on the prepared baking sheet and toast until fragrant, about 8 to 10 minutes. Remove from the oven and let the pecans cool on the baking sheet for 5 minutes. Toss the pecans into a food processor and blend until a smooth butter forms, 7 to 8 minutes. Stop and scrape down the sides of the bowl once or twice.

3. In a small bowl, whisk together the miso, maple syrup and hot water. Add a dollop of pecan butter and whisk thoroughly. Add another dollop of pecan butter and whisk again. Add the remaining pecan butter and whisk until smooth and creamy. (If the mixture seizes and becomes too thick to mix, you can drizzle in a bit of avocado oil to fix it.) Use immediately or transfer to an airtight container and store in the fridge for up to 1 week. The texture will change when stored. Revive the sauce by warming it in a small saucepan over medium-low heat until it looks creamy again.

Sumac-Roasted Eggplant with Maple Tahini Drizzle

SERVES 4 Every recipe I create for my books reflects a facet of how I like to eat in real life. I cannot write a cookbook without an eggplant recipe (or two!) because I love this vegetable so much. I will happily gobble up all four servings of this eggplant—roasted until its flesh is creamy, sprinkled with citrusy sumac and fresh mint and drizzled with

maple syrup–spiked tahini—with zero complaints.

SUMAC-ROASTED EGGPLANT
- **4 Chinese eggplants**
- **2 tablespoons (30 mL) avocado oil**
- **1¼ teaspoons (6 mL) ground sumac, plus more for serving**
- **½ teaspoon (2 mL) salt**
- **Freshly cracked black pepper**

MAPLE TAHINI DRIZZLE
- **2 tablespoons (30 mL) tahini**
- **1 tablespoon (15 mL) pure maple syrup**
- **1 tablespoon (15 mL) water**
- **⅛ teaspoon (0.5 mL) salt**

FOR SERVING
- **Flaky sea salt**
- **⅓ cup (75 mL) packed fresh mint leaves, thinly sliced**

1. Roast the eggplant: Preheat the oven to 400°F (200°C). Line a baking sheet with parchment paper.

2. Cut the eggplants in half lengthwise. Using a paring knife, score the halves diagonally, spaced ½ inch (1 cm) apart. Place the eggplant cut side up on the prepared baking sheet.

3. Brush the eggplant with the avocado oil. Sprinkle with the sumac, salt and lots of pepper. Turn the eggplant halves over so they are cut side down on the baking sheet. Transfer to the oven and roast until soft and golden brown on the cut side, about 45 minutes.

4. Meanwhile, make the maple tahini drizzle: In a small bowl, whisk together the tahini, maple syrup, water and salt.

5. To serve, pile the eggplant on a serving platter. Spoon the maple tahini drizzle over the eggplant. Sprinkle with a bit more sumac, flaky sea salt and mint. Store leftovers in an airtight container in the fridge for up to 2 days. (I like to chop and fry the leftover eggplant, then add a bit of water and any leftover maple tahini drizzle until warmed through.)

Carrot Cake with Cashew Frosting

MAKES ONE 2-LAYER ROUND CAKE Before there was tiramisu, carrot cake occupied the top spot in my dessert hall of fame. And, of course, I have opinions about it. The cake should be moist, with a very tender crumb, and packed with carrots. I don't love nuts and raisins, but I can respect them, so you've got the option to add them here. And always cream cheese icing. Since the flavour of store-bought vegan cream cheese varies widely, I have created a cream cheese–inspired cashew frosting.

CASHEW FROSTING
- **1 cup (250 mL) cashews, soaked in boiling water for 30 minutes and drained**
- **½ cup (125 mL) canned full-fat coconut milk**
- **3 tablespoons (45 mL) pure maple syrup**
- **2 tablespoons (30 mL) freshly squeezed lemon juice**
- **2 tablespoons (30 mL) coconut oil**
- **1 teaspoon (5 mL) pure vanilla extract**
- **⅛ teaspoon (0.5 mL) salt**

CARROT CAKE
- **1½ cups (375 mL) almond flour**
- **1½ cups (375 mL) gluten-free flour blend**
- **2 teaspoons (10 mL) baking powder**
- **2 teaspoons (10 mL) cinnamon**
- **1 teaspoon (5 mL) baking soda**
- **½ teaspoon (2 mL) salt**
- **2 cups (500 mL) firmly packed grated carrots (about 2 large carrots)**
- **1 cup (250 mL) unsweetened applesauce**
- **½ cup (125 mL) extra-virgin olive or avocado oil**
- **¾ cup (175 mL) cane sugar**
- **½ cup (125 mL) unsweetened oat milk**
- **¼ cup (60 mL) ground flaxseed**
- **1 tablespoon (15 mL) apple cider vinegar**
- **1 teaspoon (5 mL) pure vanilla extract**
- **1 teaspoon (5 mL) grated peeled fresh ginger**
- **½ cup (125 mL) raw pecans or walnuts, chopped (optional)**
- **½ cup (125 mL) raisins (any type; optional)**

1. Make the cashew frosting: In a high-speed blender, combine the drained cashews, coconut milk, maple syrup, lemon juice, coconut oil, vanilla and salt. Blend on low speed, then slowly increase to medium-high until smooth, 1 minute. Scrape the frosting into an airtight container and transfer to the fridge to firm up for at least 1 hour before using. The frosting can be stored in the fridge for up to 4 days.

2. Meanwhile, make the carrot cake: Preheat the oven to 350°F (180°C). Lightly grease two 8-inch (1.2 L) round cake pans with butter or coconut oil and line with rounds of parchment paper to fit the bottom of the pans for easier removal.

3. In a large bowl, stir together the almond flour, gluten-free flour blend, baking powder, cinnamon, baking soda and salt.

4. In a medium bowl, mix together the carrots, applesauce, olive oil, sugar, oat milk, flaxseed, apple cider vinegar, vanilla and ginger. Add the wet ingredients to the dry ingredients and stir to combine. Fold in the nuts and raisins, if using.

5. Scrape the batter into the prepared cake pans. Bake until the tops are firm and dry to the touch, the cakes are golden brown around the edges and a skewer inserted into the centre of the cakes comes out clean, 33 to 37 minutes. Remove from the oven and let cool in the pans for 10 minutes, then carefully (the cakes will be soft) invert the cakes onto a rack and cool completely. Unfrosted cake layers can be stored, tightly wrapped, on the counter for up to 2 days.

6. Assemble the cake: Remove the cashew frosting from the fridge.

7. Place 1 cake layer top-side up on a cake plate. Using an offset spatula, spread one third of the frosting over the cake layer to the edge.

8. Carefully set the second cake layer bottom-side up on top of the frosted layer and spread one third of the frosting over it. Use the remaining frosting to frost the sides. Store the frosted cake, covered, in the fridge for up to 4 days. (Once the cake is iced, it must be kept refrigerated until ready to serve or the frosting will melt.)

PHOTOGRAPH BY GABRIEL CABRERA

Goods

30+ Picks for the Skeptical Camper

Photographs by SUECH *and* BECK
Styling by FRANNY ALDER

This pop-up tent is quick to assemble and comes with a built-in mattress. But best of all, it sits 17 inches above the ground to guard against dewy dampness.

Costway 1-Person Portable Pop-Up Tent, $442, thebay.com

ILLUSTRATION BY LEEANDRA CIANCI

Burn local—firewood brought in from further afield risks introducing invasive bugs or disease. Also, you can cook a staggering number of foods in heavy-duty aluminum foil packets.

Eat wildly well

1. A picnic set that belongs by the Seine. *Deluxe Picnic Backpack, $90, leevalley.com*

2. Caffeine conduits so you never have to settle for instant. *World Famous Aluminum Percolator, $67, thebay.com*

3. *Wacaco Nanopresso Portable Espresso Machine, $120, mec.ca*

4. *Grosche Dublin Stainless Steel French Press Coffee Maker, $85, thebay.com*

5. Three blades and a bamboo board for easy meal prep. *GSI Rakau Knife Set, $105, mec.ca*

6. A thermos that shows your true colours *HBC Stripes Multistripe Thermos, $50, thebay.com*

7. A durable, rollable cooler. *48 Wheeled Cooler, $550, yeti.com*

8. All the essentials for patriotic smores. *Telescoping Campfire Fork, $13, leevalley.com*

9. *President's Choice Maple Flavour Marshmallows, $4, realcanadiansuperstore.ca*

10. A travel-friendly stovetop for perfect eggs and crispy bacon. (And check out *Cook it Wild* by Chris Nuttall-Smith for ingenious prep-ahead recipes.) *Hike Crew Gas Camping Stove, $112, thebay.com*

Bring the fun fireside

1. A game for when you (really) need a laugh... *Monikers: Serious Nonsense, $54, amazon.ca*

2. ...and a game you can play with a bevvy in hand. *Costway Foldable Bean Bag Toss Cornhole Game, $250, thebay.com*

3. The very best book light for a late-night binge read. *Glocusent USB Rechargeable Book Light, $17, amazon.ca*

4. *Various vacation books, $18-25, indigo.ca*

ILLUSTRATIONS BY LEEANDRA CIANCI

Be prepared for anything

1. *No mess, biodegradable soap sheets, $8, leevalley.com*

2. *Simple, reliable LED flashlights, $8, leevalley.com*

3. *20-in-1 multitool (with bottle opener), $29, amazon.ca*

4. *Sturdy engineer's compass, $18, leevalley.com*

5. *Set of 3 Tick Key Tick Removers, $22, leevalley.com*

6. *After Bite treatment, $8, amazon.ca*

Get rid of the gunk

1. A hydrating moisturizer. *The base face milk, $78, iliabeauty.com*

2. A gentle face wash. *The Cleanse Soft Foaming Cleanser, $44, iliabeauty.com*

3 A pampering mask. *Reusable silicone sheet mask set for face + eyes, $38, provinceapothecary.com*

4. A sun-smart serum. *C Beyond Triple Serum SPF 40, $83, iliabeauty.com*

5. A hydrating lip balm. *Balmy tint balm, $38, iliabeauty.com*

If it's chillier than anticipated, fill a small bottle with hot water and chuck it into the bottom of your sleeping bag before you hit the sack. The bag will trap that heat and you'll stay cozy.

Sleep easy

1. A collapsible lantern for a cozy glow. *Goal Zero Crush Light Chroma Lantern, $35, mec.ca*

2. A plush sleeping pad. *MEC Reactor 10 Double Sleeping Pad, $400, mec.ca*

3. A quick-dry sleeping cocoon. *MEC Centaurus -9C Sleeping Bag, $270, mec.ca.*

4. A puffy blanket for lounging on. *HBC Stripes Multistripe Packable Quilted Camp Blanket, $49, thebay.com*

ILLUSTRATION BY LEEANDRA CIANCI

16 REASONS TO FEEL GOOD ABOUT THE FUTURE OF WOMEN'S HEALTH

By Rebecca Gao, Danielle Groen, Rebecca Philps *and* Renée Reardin

Photographs by Kate Dockeray

Glaucoma is a leading cause of irreversible blindness—but Tahani Baakdhah is figuring out how to help people see again.

№ 1

Stem cells could give us back our sight

The eye is a finicky organ, and once our retinal cells are damaged from diseases like glaucoma, those cells are gone for good. At UHN's Donald K. Johnson Eye Institute, postdoctoral researcher Tahani Baakdhah takes pluripotent stem cells—which can be nudged to form any sort of cell in the body—and encourages them to transform into retinal ganglion cells, the neurons that connect our eyes to our brains. "We're moving toward transplanting these cells into animal models and seeing if they can make that connection," Baakdhah says. The work isn't easy; it's going to take some time. "But I'm having good vibes about this," she says. "I'm optimistic I will help people see this beautiful, colourful world."

№ 2

Your pelvic floor deserves a custom fit, and that's very much not the case for women who may experience prolapse (up to 50 percent of us!). Right now, treatment comes down to surgery or an off-the-shelf pessary, but Toronto-based Cosm uses AI and 3D printing for a personalized pessary, a big improvement on a design that hasn't budged in 50 years.

№ 3

THERE'S A WHOLE LOT MORE MRNA CAN DO

Messenger RNA, or mRNA, are like microscopic blueprints for the body. They show our cells how to assemble an important protein–like, for example, COVID's infamous spike–so our body recognizes that protein as something foreign and dangerous, and mounts an immune response. mRNA vaccines are safe, effective and lightning-fast to produce: "As long as we know the protein to encode, we can do it in the lab in about two weeks," says Anna Blakney, an assistant professor at the School of Biomedical Engineering and the Michael Smith Laboratories at UBC. "Now that we have these mRNA vaccines for COVID, we're thinking about where to go next."

The mRNA platform has massive potential for cancer treatment. Cancer is a far more complex disease than COVID; there's no single target, like the spike, to protect the whole population against. But the speed and precision of mRNA sequencing opens up the possibility of personalized medicine: You take a biopsy from a patient's tumour, see what proteins are specific to that tumour and design a purpose-built vaccine. "That's huge, because it means we may not have to use chemotherapy and drugs that are very non-specific and have really high side effects," Blakney says.

In her lab, Blakney and her team are working on a vaccine for chlamydia, a disease that can cause pelvic inflammatory disorder and lead to infertility in women. "We really need a vaccine to prevent it, similar to the HPV vaccine," she says. Their ovarian cancer project is trying to encode an antibody called a bispecific T-cell engager–or BiTE–that helps T cells kill cancer cells. And their work with Toronto's Sunnybrook Hospital will see if RNA can reprogram cells into neurons to change the progression of neurodegenerative disorders like Alzheimer's. "This was not something I was thinking about even five years ago," Blakney says. "The breadth of the applications is what's so exciting."

№ 4

Bioprinted mini brains will map dementia

For decades, scientists have been on the lookout for effective treatments for neurodegenerative disease, to no avail. So researchers at the University of British Columbia decided to take matters into their own hands, combining stem cells from the blood of Alzheimer's patients with a state-of-the-art 3D bioprinter in order to grow pint-sized tissue models of the patients' very own brains. With these mini models, researchers are able to study the disease's progression, see how the brain tissue reacts to treatments and, ultimately, discover new drugs that could slow or even halt the march of dementia.

Nº 5

WE'RE FINALLY COLLECTING BETTER DATA…

Until just a few years ago, we knew way more about the rat brain than the female human brain. "It's a very humbling starting point," says Esther Bui, a neurologist and epilepsy specialist at UHN's Krembil Brain Institute. "There's so much work to be done."

Before 2021—when it became required, where appropriate, to include sex and gender in research projects—80 percent of human neuroscience research did not consider sex as a biological variable. Bui breaks it down: "Women were systematically excluded from clinical trials because it was 'too complicated' to track periods, or it was too worrisome to include women who may become pregnant. And yet it's not too complicated to map out the whole genome sequence?" We should all feel so incredulous. Women's symptoms of diseases, common or life-threatening, are often called atypical—but atypical only because most diseases have been heavily studied in men. It means women have a higher chance of being misdiagnosed or dismissed by their health-care provider.

Happily, Bui says this is a "supernova" time for women's neurology, where research and education are finally catching up—in 2019, she developed Canada's first accredited Women's Neurology Fellowship training—and we can better define precision medicine for women. "Everyone tells me what I'm not doing is not visionary work," Bui says. "But visionary work is not just looking forward. It's also looking back to make sure no one is left behind."

Nº 6

…AND THAT DATA WILL BE INCLUSIVE

Janet Tootoosis is trying to understand what health progress looks like from an Indigenous perspective. As the vice dean of the Division of Indigenous Health at the University of Saskatchewan's College of Medicine, she is committed to a strength-based approach, which empowers both patients and practitioners by moving the focus away from health deficits and toward Indigenous people's capacities and capabilities. The new department–the first of its kind in Canada–aims to integrate Indigenous teachings with western medicine, give physicians opportunities to enhance their skills in Indigenous health and provide Indigenous med students the option of having specialized credentials. Tootoosis insists that the people who've been failed by our current health-care system–and by academia–must form the inner workings of the new department. And she'll measure success by the impact she makes at the community level. "I want Indigenous people to say: I like what you're doing at the College of Medicine."

Nº 7

The smallest molecules will have a big impact on diagnosis

Over the course of our lifetimes, we're exposed to all manner of tiny molecules. Some of them come from our world, in foods or shampoo. Some of them are in our bodies, like sugars and fats. Together, they give researchers a picture of how our genes interact with the environment, especially when it comes to what might trigger disease.

That's handy, because many diseases rely on clinical diagnosis, which determines a disorder based on a patient's symptoms. "But something like pain is quite subjective," says Nikita Looby, PhD, a scientific associate at UHN's Schroeder Arthritis Institute. The goal of metabolomics–the study of these molecules, called metabolites–is to move to objective measures in order to diagnose diseases, monitor their progression and evaluate the response to treatment.

Looby's work focuses on psoriatic arthritis, which can lead to irreversible damage and disability. "There are so many ways in which this disease can manifest that make it difficult to nail down," Looby says. "It drives me insane, to be honest." She wants to take all those patient symptoms and correlate them with the presence and concentration of different metabolites. "Then we can run a rapid test on someone's blood sample and, based on the metabolites, know what the diagnosis is and figure out the treatment."

But metabolomics could allow researchers to be proactive, as well. When we know what molecular markers are associated with arthritis–or any sort of disease–we can develop drugs to intervene before the damage is done. "The entire idea behind metabolomics," Looby says, "is that one size doesn't fit all, and one drug doesn't solve all."

Nº 8

There's new hope for preemies, for whom incubators can only do so much. At Toronto's SickKids hospital, researchers are investigating artificial placentas that could deliver essential oxygen and nutrients to preemies and let doctors more safely perform life-saving surgeries.

By studying our body's tiniest molecules, Nikita Looby is hoping to find a better path to disease diagnosis and treatment.

Nº 9

We can wrangle syphilis back into submission

Syphilis rates have skyrocketed in recent years, especially among women of child-bearing age: Between 2016 and 2020, cases went up a whopping 775 percent, according to the Public Health Agency of Canada. But diagnosis and treatment can be a challenge—people might be reluctant to access health care services, or they don't return once their blood has been taken. That's why University of Alberta infectious disease expert Ameeta Singh helped research a rapid test that identifies syphilis and HIV in a flash, so people can be tested and treated in a single visit. "It also works really well in a variety of settings, whether that's on the street, in a van or in community health centres," she says.

Nº 10

Breast milk has major benefits for immunocompromised folks, so biotech company Lactiga is making it into medicine. Taken via pills or an inhaler, it gives immunocompromised people a boost in their fight against COVID, mucosal diseases and gastrointestinal infections.

Nº 11

DRONES WILL DROP MEDICINE WHERE IT'S NEEDED MOST

Rural, remote and Indigenous communities often struggle to provide health care to the people who need it—medical supplies take too long to get there, if they can get there at all. When resources can't get to patients, patients have to be brought to resources, which costs precious time. So family doctor John Pawlovich is working with the University of British Columbia to see how drones can help out. Over the course of a year, one small drone, packing prescriptions and other medicines, carried out 1,200 flights in all weather conditions between Stellat'en First Nation and the Village of Fraser Lake. Next up: testing bigger drones that can travel longer distances (and even up over mountains) to make remote health care more accessible—and more equitable.

Nº 12

A trusty home blood-pressure monitor adds years to our lives

Let's start with some uncomfortable facts. More than 108,000 Canadians experience a stroke each year, a statistic that has nearly doubled over the past two decades. Stroke kills twice as many women annually as breast cancer, and among people under 55, rates are on the rise, due in part to lifestyle-related risk factors like sedentary behaviour, substance use and stress. Still, studies show that 70 percent of women don't know about any of the stroke risk factors. It's a statistic that worries neurologist Aleksandra Pikula, research director of UHN's Stroke Program, and one she's hoping to change in her capacity as the inaugural Jay and Sari Sonshine Chair in Stroke Prevention and Cerebrovascular Brain Health at UHN's Krembil Brain Institute.

The biggest culprit for stroke is high blood pressure, which often ticks up during perimenopause. "I have a truly powerful message for all women approaching midlife," Pikula says. "Know your numbers." Normal blood pressure is below 120 over 80. Anything higher and you should be checked by your primary care provider—and you must start working on lifestyle changes. With just a five-point decrease in blood pressure, our risk of stroke can drop by up to 20 percent, so start small: Cut back a little on salt or ultraprocessed foods. Maybe walk 10 or 15 minutes a day. Eighty to 90 percent of strokes are linked to modifiable risk factors, says Pikula, and when she says modifiable, she means we can work on them.

High blood pressure is a silent killer. It doesn't hurt and there are no symptoms until it is severely high, but it can wreak havoc on your cardiovascular and brain health. A home blood pressure monitor is a basic tool that delivers vital information, and any adjustments you make to your lifestyle—in terms of nutrition, physical activity, sleep, stress, social connections and substance use—will pay big dividends in your overall health. As Pikula points out, "what works for the prevention of diabetes works for the prevention of cardiovascular conditions works for prevention of stroke."

Aleksandra Pikula wants us to know that small lifestyle changes can make a world of difference to our risk of stroke.

Sara Vasconcelos makes blood vessels from scratch to help our failing organs and tissues get back on track.

№ 13

We can make a better blood vessel

When you get sick, or are diagnosed with a chronic condition, it's often because cells in your body aren't performing as they should. To restore function, doctors can transplant new cells to compensate for failing ones–but the trick is getting those cells to survive once they're in your body.

New cells die for all sorts of reasons, but a main one is the lack of blood vessels bringing life-sustaining oxygen and nutrients to the transplanted cell. Sara Vasconcelos, a researcher at UHN's Toronto General Hospital Research Institute and the John Kitson McIvor Endowed Chair in Diabetes Research, thinks artificial blood vessels could be the solution. By growing those vessels in a lab, doctors will be able to transplant them together with the new cells to ensure better compatibility.

Right now, Vasconcelos and her team are working on a few approaches. One involves a form of what Vasconcelos calls "recycling blood vessels," taking those vessels from parts of the body that can spare them (like fat) and transplanting them into new cells. But sometimes, recycled vessels are also affected by diseases like diabetes, so Vasconcelos is making new small blood vessels from scratch using stem cells. The hope, says Vasconcelos, is to be able to replenish cells wherever they're failing due to chronic conditions: "This work could be applied to many places throughout the body."

№ 14

A breath test could detect lung cancer—the deadliest form of cancer, with rates that are only going up in non-smoking women. At the BC Cancer Research Institute's Breathomics Lab, researchers catalogue thousands of biomarkers in hundreds of breath samples to build a non-invasive breathalyzer test that can catch lung cancer early.

№ 15

WE'RE TRYING TO GET TO THE BOTTOM OF PAIN

The medical community is fuzzy on pain. It can be hard to establish severity—everyone's "five" on a pain scale is different—and in the absence of an objective test to determine treatment, discrimination creeps in. Although roughly half of all chronic pain conditions are more common for women, doctors are more likely to dismiss their pain. Here's just one example: Middle aged women with symptoms for heart disease (like chest pain) are twice as likely to be told the cause is mental illness than men with the same symptoms, whose conditions are taken more seriously.

Mojgan Hodaie, a neurosurgeon at Toronto Western Hospital, is on a quest to better understand where in the brain pain comes from, what consequences it has, and how to make sure it's given its due. "Doctors have all sorts of unconscious biases," Hodaie says. "How can we take pain from being a purely subjective phenomenon to one with a greater objective understanding?"

By coupling machine learning with brain images, her team created a brain-age calculator that looks at the gap between how old a person's brain appears and their actual age. Women, they found, are most at risk for accelerated brain aging across more types of chronic pain. Why does this happen? That's also what Hodaie is trying to find out, in order to unlock more targeted treatments—ones that really consider the snowball effects of chronic pain, rather than just bandage over them.

№ 16

More doctors will diagnose endometriosis on the spot

At least one in 10 women suffer from endometriosis, but there's plenty we don't know about this disease: what causes it, what could prevent it and what a cure might look like. Even diagnosis can be a bit of a crapshoot, based on a set of symptoms or through laparoscopy, a surgical procedure that might take years to get on the books.

At McMaster University in Hamilton, Ont., gynecologic surgeon and sonologist Mathew Leonardi has uncovered a far more efficient approach. Trans-vaginal ultrasounds can identify endometriosis–it's right there in the imaging, if you know where to look. He's now teaching that skill to practitioners, so more patients can access this minimally invasive diagnostic tool.

"Endometriosis is an invisible disease," he says, but an imaging test reveals what exactly is happening in our bodies. "It gives us so much more information to guide patients to the right treatment strategies." **BH**

Body of Evidence

Whole-body MRI scans promise to reveal what's really going on inside—for a price. Medical societies and most physicians urge you to save your money.

BY CHRISTINA FRANGOU
ILLUSTRATIONS BY NIKKI ERNST

Milan Frydrysek never worried much about his health. His wife worried enough for both of them. Her brother was diagnosed with pancreatic cancer at age 62 and died a little more than a year later. After that, she wanted to do everything possible to stop cancer from grabbing hold of anybody else she loved.

The Frydryseks heard about Prenuvo, a company that offered diagnostic body scans using magnetic resonance imaging (MRI). For $2,500 per person, they could get a head-to-ankle scan that would pick up solid tumours and 400 other medical conditions, according to the company. Their family physician didn't love the idea, telling them the scan would likely find things that didn't matter to their physical health but would make them anxious. The Frydryseks thought the scan might give them peace of mind. In February 2021, they each underwent a one-hour MRI at Prenuvo's clinic in Vancouver's South Granville neighbourhood.

Within the week, a 35-page report summarizing the results arrived in their inbox. It broke down the findings by body system and into colours: green meant good, yellow was something to watch and red was urgent. In Milan's report, under the urinary system section, red letters jumped off the screen. The MRI had picked up a 6.6-by-6.5-centimetre mass on his lower left kidney, "which is suspicious for renal cell carcinoma."

Frydrysek, who was 69 at the time, contacted his family doctor, who'd also received a copy of the report. The doctor quickly connected him with a urologist. Ten weeks after his scan, Frydrysek underwent surgery to remove his kidney. Pathology confirmed the mass was cancer, but there was no evidence of disease remaining in his body after the operation. "Maybe the tumour was growing my whole life," he says. "Maybe it would have grown for another 30 years without doing anything. Maybe I would have been gone already. All I can say is, thanks Prenuvo."

Whole-body MRIs, like those offered by Prenuvo, are now growing in popularity, urged along by a swell of marketing from influencers and celebrities and stories like Milan Frydrysek's. But this boom in the body-scanning industry is taking place over widespread criticism from many doctors and medical organizations. In the United States, the American College of Radiology issued a statement in April 2023 saying there is no evidence that whole-body screening is beneficial. Health Canada says that "whole-body screening poses a number of health risks and offers no proven health benefits."

Unlike the targeted MRIs ordered by physicians to investigate a specific health concern, whole-body MRIs are designed to satisfy a person's curiosity about what's inside their bodies. There is no physician referral required; just an ability to pay the $2,000-and-up fee. These scans pick up lumps and bumps hidden under the skin—things that might be cancer, but might also be entirely innocuous and would never affect a person's health. The catch: An MRI cannot distinguish with 100-percent confidence whether a finding is harmless or not. A person who receives an unusual finding gets directed back to their regular health team—now, with questions and fears about things that need more investigation in a health system that is already beyond capacity.

A PERSON WHO RECEIVED AN UNUSUAL FINDING GETS DIRECTED BACK TO THEIR REGULAR HEALTH CARE TEAM—NOW WITH QUESTIONS AND FEARS ABOUT THINGS THAT NEED MORE INVESTIGATION IN A HEALTH SYSTEM ALREADY BEYOND CAPACITY.

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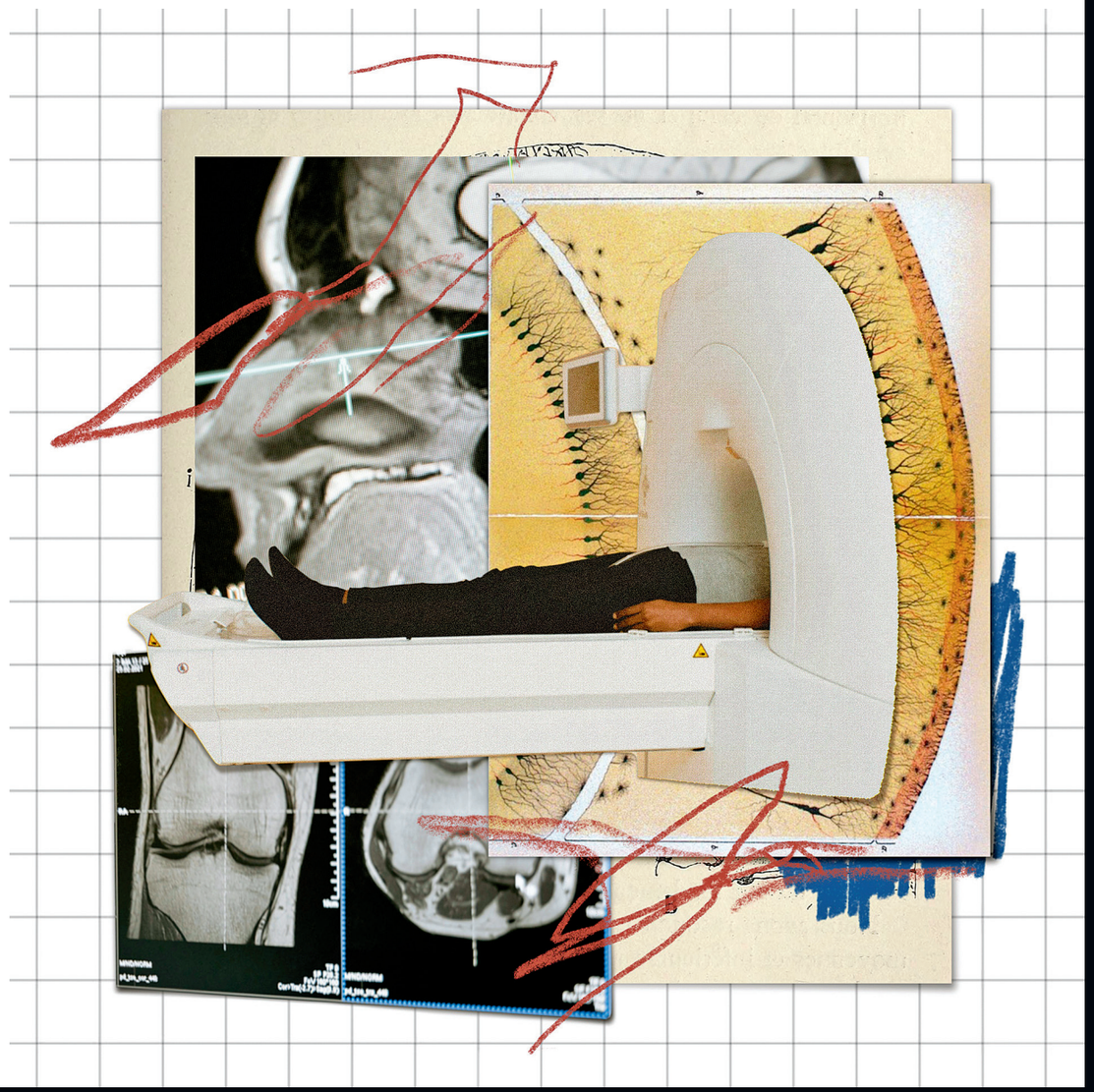
worry that, when something is wrong, they will struggle to access appropriate care quickly in the public health system. More than one in five people in this country do not have access to primary care—that's six and a half million without a regular doctor or nurse practitioner to turn to when they need help. They face long waits to access potentially life-saving diagnostic imaging. Before the pandemic, Canadians waited an average of 50 to 82 days for CT scans and up to 89 days for MRI imaging, even though the recommendation is 30 days. Against this backdrop, more Canadians are turning to private MRI clinics for medically indicated scans. Private MRIs, first offered in Alberta in 1993, are now available in most Canadians provinces.

Where private whole-body MRIs differ is that they're sold to people without a clear medical indication—the latest trend in a new era of personal empowerment in health, one where tech sells the promise of optimized wellness through devices like fitness trackers, heart rate monitors and continuous glucose monitoring. In 2010, Rajpaul Attariwala, a radiologist and biomedical engineer in Vancouver, developed a new MRI machine that could enable privately paid full-body screening. Slowly, his business grew, finding fertile territory in a country where people worried about wait lists for medically necessary MRIs. Now, people were coming to Vancouver from across Canada and even abroad for whole-body imaging.

Eight years after Attariwala started scanning clients with his new MRI, he met Andrew Lacy, an Australian-born, California-based serial entrepreneur. Lacy was looking for his next venture and was interested in investing in the technology. He flew to Canada to undergo an MRI. The scan "told me more about my health than the health system had told me my entire life," says Lacy. He was sold.

The pair went into partnership. Prenuvo moved its headquarters to California and focused on expanding south of the Canadian border, where markets are bigger and restrictions on private health facilities less complicated to navigate. The technology has improved since its first iterations two decades earlier, with higher image quality and speedier scans. Since then, more companies—including Ezra, Neko Health and simonONE—have joined the whole-body scanning market.

In 2022, Prenuvo opened its first clinic in Los Angeles. With it, the demographics of Prenuvo's clientele suddenly changed. In Vancouver, the clients had an average age in the early 50s. Now, the clients were younger and into things like biohacking, an obsessive focus on making small changes to



diet and lifestyle in order to improve health. Many L.A. clients also came with a sizable media presence. In 2022, American actress and television host Maria Menounos got a Prenuvo scan after months of undiagnosed pain, and it detected a mass on her pancreas, later diagnosed as a stage 2 pancreatic neuroendocrine tumour. In August 2023, Kim Kardashian posted on Instagram that she'd had a scan and wanted to tell her followers "all about this life saving machine." Her post was not an ad, she wrote.

Lacy says the company did not plan to have an influencer-driven marketing strategy, but welcomed the online recommendations. Whole-body scans are a "completely new category of health care," he says. "People aren't googling for preventive health exams. Spreading word of mouth is the most important sort of activity we can do right now." Prenuvo has offered complimentary scans to certain influencers in exchange for a review. The language used by social media celebrities as they talk about this technology often follows a pattern: They're getting peace of mind. They're taking preventative action. They'll be coming back in future. They usually offer a code in their name for a US$300 discount.

More and more companies in the United States are now selling whole-body MRI scanning, although there are comparatively few in Canada. Prenuvo is the best known among the big players in the industry, with eight locations in the United States and another nine in the works. Currently, the company is working on adding a second scanner to its Vancouver clinic, doubling its Canadian capacity, and Prenuvo has plans to expand into Toronto, the U.K. and Australia in the future.

In Ontario, radiologists Nirav Patel and Keyur Shah opened Whole Body MRI in the fall of 2022. They now have locations in Mississauga and Ajax. They offer a 45-minute full-body MRI at $3,250, followed by an optional phone consultation with a radiologist. The pair would not say how many people have signed up for their MRIs, but say that the company is busy without having done much marketing. "We let it speak for itself, honestly. Doctors started coming in first, and then word of mouth. And it's been growing and growing on its own," says Patel. The demand is so high that some clinics have wait lists months long. When I checked at Prenuvo's Vancouver clinic, the next available appointment was more than seven months away.

"I'd rather be safe than sorry," explains Sarah Astles, 41, who is waiting to undergo her third scan in six years with Prenuvo. Astles used to work as an MRI tech and says she likes to be well-informed about her health; she notes that the scans reduce her anxiety. Her first scan results suggested she had "some kind of a bulge in my lower spine that [Prenuvo] said could be really debilitating." She says the company encouraged her to return for a follow-up test. When she went back two years later, the bulge was gone. She says she was glad for the information even if the scan was costly and the results ambiguous.

"It was nice to know that, again, if I had major back pain, that's probably what it was. And I could come back and check it in a year if need be. But if I went to the doctor with that kind of back pain without any other history, I'd probably be waiting a year for an MRI."

She's since recommended the screens to her mom and friends. She'd like to send her two children for scans when they're older. The imaging allows her to feel like she's not dependent on an overburdened Canadian health system, she says. "I just feel like in Alberta, in Canada in general, you really have to be your own advocate for anything."

WHOLE-BODY

MRIs performed on asymptomatic adults tend to pick up large numbers of incidentalomas, the term given to abnormalities detected unexpectedly on an imaging exam. Prenuvo says nearly all of us will have some imaging abnormalities. Some are life-changing, like a cancer diagnosis, and some are subtle things that might not ever make a difference to our health. Others are things to watch. Lacy argues that these findings inspire people to take better care of their health.

Prenuvo and other whole-body imaging companies do not provide the follow-up work to investigate what these abnormalities might be. That task falls primarily to family doctors and other health-care workers. That's a problem, points out Braden Manns, a kidney doctor and health economist at the University of Calgary. He argues that improvements in modern imaging, along with more imaging being done, have driven up rates of overdiagnoses and incidentalomas. As a result, people are getting further testing, including invasive, potentially harmful procedures like biopsies that could lead to internal bleeding, and treatment for asymptomatic issues that previously would have gone unnoticed and may not have ever required treatment–some gallstones, damaged knees, bulging discs and blood clots, for example.

"It's actually kind of scary for patients because if you're well, they're still going to find two to three abnormalities on the whole-body scans," he says. "And then, of course, that leads to you going to see your doctor and that causes more stress." Manns maintains that it's more valuable for people to get regular recommended evidence-based cancer screening like mammograms and colon cancer checks.

The follow-up investigations after a whole-body MRI also put patients at unnecessary risk for harm, adds David Urbach, a professor of surgery and faculty member of the Institute of Health Policy, Management and Evaluation at the University of Toronto. Whole-body MRIs can lead to more imaging, biopsies and surgery–which can cause pain, infection and even death. "In aggregate, [whole-body scanning] will harm your health," he says.

It also hurts the Canadian health-care system. Canada's hospitals and medical clinics are already functioning beyond capacity. So are the people who work in them. The Canadian health system will struggle to manage the increased demand that arises from a growing industry of private-pay whole-body imaging, says Ania Kielar, president of the Canadian Association of Radiologists.

"When people have these types of tests that are done privately, and something is found, they often end up being further investigated within the public health-care system," she says, "which adds increasing wait times for everybody else, costs to the system, and most of them are found to be benign."

The current gush on social media for whole-body imaging rarely delves into the downside. It's easier to convince someone of the potential benefits of screening than to educate them about the limitations, but this information should be presented to potential customers, says John Lysack, a professor of radiology at the University of Calgary. "As the saying goes, a half-truth is a whole lie. To have any chance of making proactive, informed decisions about their health, consumers would also need to understand the potential risks of whole-body MRI," he says. "In a population of asymptomatic, otherwise-healthy individuals, findings on whole-body MRIs are much more likely to be benign incidentalomas than anything of clinical significance. The catch–and there's always a catch–is that there's no way on MRI, or on any other medical test, for that matter, to know with 100-percent confidence that any finding is entirely benign."

PROPONENTS

and critics of whole-body MRI screening agree on one thing: Modern health-care systems are designed to react to illness, not prevent it. There are limited supports available to help people keep disease at bay.

Lacy, at Prenuvo, says that when people see pictures of their insides, showing them bulging discs or inflammation in the liver, they'll take preventive action. Manns, the health economist, urges people to do the same thing, but without the accompanying pictures: Take care of your health, he says. Eat properly, get regular recommended screening, exercise, practice good mental health care.

But as anyone who has lost someone to cancer knows, a healthy lifestyle isn't always protective. For some people, the chance to know that something might be lurking underneath is worth the expense and the risk of potential harms. Milan Frydrysek puts himself in that group.

He hasn't had an easy time since his diagnosis. After his surgery, he signed up for a medical study that put him on two medications that, it was hoped, would keep him cancer free. He suffered adverse side effects from the drugs, which severely damaged his thyroid and adrenal glands. Then, a regular follow-up scan in the public health system showed his cancer had returned. He now has stage 4 kidney cancer. He's taking a new medication that has helped reduce the size of his tumours. He hasn't gone back for a follow-up whole-body MRI; he gets regular scans as part of his cancer care now.

But he'd like his kids to have one. So far, they've said no. **BH**

A brief history of the body scan business

1977 American physician Raymond Damadian used a combination of a powerful magnet and radio waves for the first time to scan the inside of a human body. Unlike X-rays and CT scans, MRI, as the technology is known, does not expose patients to radiation.

1985 Regulators worried that people would want to use this expensive technology to look at their insides out of curiosity, rather than need, and that costs would skyrocket. "The real risk is that MRI can become almost a fad—the new Star Trek instrument," said a U.S. commissioner for health planning.

LATE '80S Within a decade of its invention, MRI machines were being installed in hospitals with the promise that they could dramatically improve the detection of certain cancers and neurological diseases.

EARLY '90S Hundreds of scanning centres opened to sell MRI scans at $1,000 or more. But insurers refused to cover the tests and medical societies warned against them.

2005 Prices plummeted but potential customers still stayed away. The business model collapsed. But it didn't stay down for long.

HUNGER GAMES

Flicking through your social feeds, it can be hard to distinguish the solid, science-backed nutritional advice from the prettily packaged yet damaging diet content. Three registered dietitians help cut through the noise.

BY ANDREA YU
PHOTOGRAPHS BY VICKY LAM
STYLED BY CHRISTINA YAN

Scroll through social media and you're bound to come across a handful of "what I ate this week" reels, showcasing absurdly neat, insanely colourful plates of food. I'm sure I'm not the only one to scoff at these posts, and wonder who subsists only on smoothies for lunch or whips up grain-free pancakes every morning. We all know, on some level, that these representations aren't a true reflection of how most people eat. What's more, many posts focus less on health and more on weight loss as their primary goal.

Melissa Fernandez, an assistant professor at the University of Ottawa's School of Nutrition Sciences, says that nutrition influencers in particular play a big role in popularizing fad diets. "It's because of how easy it is on social media platforms to visually communicate these plans, foods, trends and ideologies," she explains. Compared to a cookbook or a daytime TV segment, which is how diets were often pushed in the past, content on social media appears so much more immediate–and visceral. Social media algorithms create an echo chamber of diet trends; click on one and you'll be continuously fed new but similar posts. "That reinforces the value of these diets," says Fernandez, "because you keep on seeing the same messages portrayed in similar ways."

Fernandez points out that anecdotal evidence–sharing personal experiences with diets–is also a powerful tactic harnessed by influencers because it makes them more relatable to their followers. The diets they push are often conveyed as simple solutions with quick results. "They bring in words like well-being and mental health to make it sound more holistic," she says. "But at their core, these eating plans are still either low-calorie, low-carb or low-fat."

Nutrition influencers aren't necessarily medical professionals. "Consumers need to be very critical about what comes up first on their feeds," Fernandez says. "The large majority of nutrition influencers don't have any actual expertise in nutrition." And their credentials can be misleading. "Consumers assume that a holistic nutritionist is a legitimate title, but anyone could take an online course and become a holistic nutritionist," she explains. "They are not licensed health-care professionals." As a first line of defence against nutrition misinformation, look to medical doctors, registered dieticians, pharmacists and nurse practitioners for advice on health and healthy eating.

Nutrition influencers are entrepreneurs, so they're going to promote ideologies around food that will help build their audience. Fernandez says this often leads to catchy, clickbait-y and sometimes controversial or misleading messages appearing front and centre because it means more clicks and more followers. They may also promote products and services as part of a paid partnership, which isn't always obvious.

It can be hard to discern who to trust and follow in the online food space, especially when not everyone with a large platform is credible. But you can look for red flags. We asked Fernandez and two registered dietitians, Acacia Puddester from Mount Saint Vincent University in Halifax and Erin O'Flaherty from St. Joseph's Healthcare Hamilton, to explain social media's most popular diet trends, and why you should be skeptical of anyone who promotes these eating plans.

FOOD TO COMBAT A "LEAKY GUT"

Gut health has been a buzzy subject lately, for good reason. New research and data show a strong connection between our gut and our mental health, skin health, immune system and more. But "leaky gut syndrome" in particular is an invented condition that claims symptoms like diarrhea, bloating and fatigue are caused by bacteria and toxins "leaking out" of the intestinal lining. It's something that Puddester is desperate to debunk. "Leaky gut syndrome is not a medical term," she says. "It's not a medical diagnosis. It is made up."

Puddester says the term has been promoted by alternative health professionals without nutritional or medical backgrounds. It has caught on partly

NUTRITION INFLUENCERS ARE ENTREPRENEURS, SO THEY'RE GOING TO PROMOTE IDEOLOGIES AROUND FOOD THAT WILL HELP BUILD THEIR AUDIENCE. THIS OFTEN LEADS TO CATCHY, CLICKBAIT-Y AND SOMETIMES CONTROVERSIAL OR MISLEADING MESSAGES.

due to self-transformation content on TikTok and Instagram, and the popularity of "before and after" posts populated with bloated belly images. Fear-mongering plays a role, too. "'Leaky' sounds like something that shouldn't happen," Puddester says. But, in fact, that's how a healthy digestive system works–it's completely normal for your body to absorb nutrients like proteins, fats, vitamins, minerals and water through the small intestine.

The symptoms of so-called leaky gut syndrome are pretty common, which is also what drives its online popularity. "When people experience these gastro symptoms, and they google them, they see this leaky gut 'diagnosis,'" Puddester explains. However, gastrointestinal issues should always be discussed with a dietician or medical professional. "It could be the result of celiac disease, irritable bowel syndrome, an e.coli infection or many other factors," she says. Some women experience gastro discomfort during the luteal phase of menstruation, while others are particularly sensitive to certain foods, like cruciferous veggies (think broccoli, Brussels sprouts and cauliflower) or beans and lentils.

INTERMITTENT FASTING

Intermittent fasting involves eating during a designated period and abstaining from any food or drink for the rest of the day. For example, someone might consume all their meals during a six-hour window, and fast for the remaining 18 hours. What makes this diet appealing is that it restricts the period of time that food can be consumed, not the quantity or type of food. But O'Flaherty says that there's a gender difference in how we respond to intermittent fasting. Women's bodies respond more quickly to food deprivation, releasing more of the hunger hormone ghrelin and decreasing levels of our satiety hormone leptin, all of which can make it harder to stick to a strict eating schedule, compared to men. In addition to those two hormonal changes, the body will release a neuropeptide Y that stimulates the want for food intake, specifically carbs–your body thinks you're starving and goes in search of quick energy.

Fasting also affects women's hormones differently. "When women are intermittent fasting, our metabolism slows down and the stress in our bodies increases, which affects our hormonal health negatively," O'Flaherty explains. "We're slowing down to conserve energy." She says that this, in turn, may affect fertility: "We're telling our bodies that this is not a good time to make children." Being hungry keeps us in a heightened state–our body is urging us to find food right away.

Equally detrimental, according to O'Flaherty, are the mental health impacts of intermittent fasting. "It can increase the risk of disordered eating because we're relying on external cues to tell us when to eat instead of checking in and being intuitive about our hunger or fullness, how much we need to eat and when we need to eat," she says. "We're breaking down that trust between our body and ourselves."

THE WHOLE30 APPROACH

This 30-day diet cuts out added sugar, alcohol, dairy, dairy, grains, legumes and additives like sulfites (a preservative) and carrageenan (which is used to thicken food). Fernandez agrees that reducing the consumption of sugar and alcohol has health benefits. But eliminating entire food groups, like legumes and dairy, is a red flag. "It has the potential to create nutritional deficiencies," she says. "Legumes are a healthy food!"

Following a Whole30 eating plan might result in weight loss after a month, but Fernandez cautions that the results are short-term. "There's a lot of weight regain after the diet is over," she says. "To avoid that, you have to maintain the diet, which is hard to keep up long-term." Fernandez advises following a healthy, flexible and balanced meal pattern instead, like the Canadian or American food guide, or the Mediterranean diet, which encourages eating fruits, vegetables, whole grains, fish, poultry, beans, nuts and vegetable oils while limiting (but not eliminating) high saturated-fat foods like fatty meats, full-fat dairy, sugary drinks and sweets.

DETOXES, CLEANSES AND RESETS

These diets, which replace meals with vegetable and fruit juices and sometimes proprietary supplements, are marketed as helping your digestive tract absorb nutrients. They might make people feel better in the short term, since they cut out refined sugar and the processed foods that can make us feel bloated. But Fernandez warns that juice cleanses, for example, are really just low-calorie diets in disguise. "They might give you 600 calories a day, as opposed to the typical 2,000, for example," she says. "So if you're doing that for a week, you're going to lose weight because you're simply not getting enough calories."

Fernandez encourages us to be critical of any messaging around cleansing toxins from our bodies. "The word 'toxin' is used to scare people," she says. "It attracts viewers and followers, but it doesn't really mean a lot. There are toxins all around us. There are toxins that are natural in the foods that we eat." And, in fact, our livers, kidneys, bladders and skin already do an excellent job at removing them.

Laxative-based cleanses are also a red flag for Fernandez. "If you're not suffering from constipation, there's no reason to take a laxative," she says. "You're likely dehydrating yourself, and it can have negative impacts on bone health." While some cleanses may claim to be beneficial for gut health, Fernandez says that the opposite is true. "It can really disrupt your gut microbiota," she says. "If you're eliminating bacteria from your gut, you're eliminating the good and the bad."

"THE WORD 'TOXIN' IS USED TO SCARE PEOPLE. IT ATTRACTS VIEWERS AND FOLLOWERS BUT IT DOESN'T REALLY MEAN A LOT. THERE ARE TOXINS ALL AROUND US. THERE ARE TOXINS THAT ARE NATURAL IN THE FOODS THAT WE EAT."

ANYTHING KETO

The goal of this high-fat, low-carb, moderate-protein diet is to put your body into a state of ketosis, where you break down fat instead of carbs for energy. "Our bodies use carbohydrates for energy, so if we don't have carbohydrates coming in, then our body has to break down something else," explains O'Flaherty. The idea of forcing your body to burn fat makes the keto diet sound alluring. "The problem is that ketosis is actually a starvation response," she says. "It can be dangerous because it changes the acidity of our blood." Another issue is the keto diet's high-fat requirement. "Not all fats are created equal," O'Flaherty says. "I've seen a lot of people increase their cholesterol

levels and worsen their heart health following keto eating plans." The diet was originally developed in the 1920s as a treatment for refractory epilepsy (fasting appeared to reduce the incidence of seizures). But it has become so popular in the last decade that keto-specific restaurants have popped up in Toronto, Calgary and Vancouver, and grocery stores stock keto-friendly versions of foods like pizza crusts and burger buns.

A CHOOSE YOUR OWN FODMAP ADVENTURE

Fernandez says that the FODMAP diet, which reduces or limits foods that are high in fermentable carbohydrates such as honey, mango, garlic, beans and dairy, does serve a medical purpose. "It's a therapeutic diet for people who have [diagnosed] irritable bowel syndrome," she says. "It's quite effective to reduce some symptoms related to IBS and improve patients' quality of life." However, Fernandez says, the diet is individualized for each person who goes on it: "It's usually something that's done under the care of a health-care provider like a dietitian or a doctor." Going rogue and doing a FODMAP diet on your own to cure gastrointestinal issues can exacerbate the underlying problem. "Eliminating foods can result in nutritional deficiencies," Fernandez says. Plus, it's highly personal as to which items actually trigger your IBS. First step: Talk to your doctor.

THE SUGAR HATERS

Like Fernandez, Puddester cautions against any diet or ideology that eliminates an entire food group or ingredient. "Sugar is not bad," she says. "It's essential to give us the glucose that our bodies, and especially our brains, need." While reducing excessive amounts of sugar can be beneficial for your health, there's no need to banish it. "Fruits are quite high in sugar, but they're also high in a lot of other nutrients, like vitamins, minerals and fibre," she says. "And we certainly don't want to cut those out if they can offer us good health benefits, which they do."

A common refrain of no-sugar dieters is talk of being "addicted to sugar." But Puddester is quick to dispel this myth. "There's no scientific evidence to show that any food is addictive," she says. The feeling of craving something sweet isn't the same as being addicted to a drug. Really, eliminating any food can result in cravings, according to Puddester. "Our bodies will crave because there's a psychological impact: We all want what we can't have." Often, she says, our cravings tell us what we're missing. "I think it's those cravings that make people think, 'I'm addicted,'" Puddester says. "But it's not an addiction. It's your body asking you to not be so restrictive."

Fernandez acknowledges that part of what makes any of these diets enticing is that they offer a framework for meal plans, which helps with the burden of meal prep: deciding what to buy, shopping, storing ingredients and cooking. "That's often the hardest part about eating healthy," she says. Having a community support group can help sustain your motivation to choose those whole grains, healthy fats, fruits and veg–but that community doesn't have to be centred on a restrictive diet. Instead, try to connect and share inspiration with friends who enjoy food, and trust your body's cues. **BH**

FIVE NO-NONSENSE, MYTH-BUSTING DIETITIANS TO FOLLOW

A Canadian dietitian and the author of *Good Food, Bad Diet*, **Abby Langer** routinely takes to her social media accounts to debunk online "healthy" food trends and misinformation, like an influencer's crusade against toxins, the claim that Cheerios are "circles of death" and the popularity of alkaline diets. **@langernutrition**

Shana Minei Spence is a Brooklyn-based RD whose mission is to expose diet fads (like the mind-boggling ancestral diet) and help people unlearn diet culture. She posts helpful, judgement-free advice (and the occasional meme) to break through the noise of the online wellness industry. **@thenutritiontea**

Ontario-based RD **Michelle Jaelin** highlights the health benefits of culturally specific foods. She's debunked the myths around MSG, explained why kimchi is such a powerhouse and shares healthy recipes for snacks that can be nutritionally side-eyed, like instant ramen and French toast. **@michellejaelin**

Alongside her day job as a professor of sports nutrition at Purdue University, **Lauren Link** is an RD whose online "marketing madness" series disproves the health claims that supplements employ. She calls out red-flag words in influencer marketing to inform people about what's being hawked online. **@linktonutrition**

A specialist in treating those with disordered eating, **Marilee Pumple** is an RD who breaks down diet culture. Pumple's videos focus on subjects like intuitive eating, all the damaging ideas we have surrounding food and how parents can stop offloading diet culture onto their kids. **@marilee_dietitan**

TIGHT SPOT

Pelvic floor disorders affect one-quarter of women–including those who've never given birth. But breathing exercises, some stretches and a bit of retraining can all help your bladder get a grip.

By Andrea Karr • *Illustration by* Heidi Berton

PVF

watched many of my friends make the journey into motherhood, so I've heard a lot about the pelvic floor. For our millennial generation, it's common knowledge that urinary incontinence can be a side effect of pregnancy and labour—almost one-third of women will have bladder leaks after the birth of their first child—and all my friends have prioritized pre- and/or postpartum pelvic-floor physiotherapy as prevention or treatment. Since I've never been pregnant, I thought I was off the hook.

Imagine my surprise when, the year I turned 35, I started waking up to pee multiple times in the night while also experiencing urgency during the day and the occasional itty-bitty leak. At first, I figured the disruption was temporary. But after about a year, I realized the problem wasn't going away. At the time, I was busy working at a celebrity news magazine, plus I was emotionally exhausted from dealing with an early-stage cervical cancer diagnosis that required two minor surgical procedures. I was told that the urinary frequency wasn't related to the cancer, so I put it on the back burner, even as it continued to disrupt my sleep and daily life. (My boyfriend once joked that going out with me for the day was an opportunity to tour Toronto's many bathrooms.)

So it felt fortuitous when a press email about Urospot, a rapidly expanding chain of Canadian pelvic health clinics, popped into my inbox. If I hadn't responded, and subsequently booked a consultation at one of the Toronto locations, I might never have learned about my body's reaction to stress, as well as the bathroom habits that were impacting my wellness.

Urospot is a franchise that was started by entrepreneur Erin Craven in 2019. "I was in my early forties and I was struggling with bladder leaks, urgency and waking up at night to go to the washroom," she told me. A mother of four with a busy career in the health-care industry, she believed she was too young for bladder troubles to be impacting her life. So she started researching her condition and was appalled by the lack of education and treatment—the available physio, medication and surgery options seemed disjointed, insufficient and hard to navigate, despite the fact that pelvic floor disorders like urinary incontinence, fecal incontinence and pelvic organ prolapse affect one-quarter of all women and more than a third of older women. "One of the saddest stats is that 45 percent of women [dealing with incontinence] give up intimacy entirely because they're afraid they'll leak during intercourse," she says. "And 46 percent of women give up exercise." So Craven created Urospot to change the conversation around pelvic floor dysfunction and bring more treatment options to the masses.

The clinic's buzziest attraction is its "Kegel Throne" (a.k.a. Emsella chair), which uses high-intensity focused electromagnetic stimulation (HIFEM) to strengthen the muscles of the pelvic floor. One 28-minute seating contracts the muscles the equivalent of 11,000 kegels. The difference from other places, like med-spas, that bring in Emsella technology is that Urospot also uses education and physiotherapy to create a well-rounded treatment plan—so if other issues are present, they can be addressed.

That's what I discovered during my first in-person meeting, when a nurse took me through a series of questionnaires commonly used by health professionals, like the Female Sexual Function Index, the Pelvic Floor Disability Index and the Pelvic Floor Impact Questionnaire. I ended up scoring high on a short-form version of the Central Sensitization Inventory, which measures a nervous system response that can cause women to hold tension in their pelvic floors. If you sit on the Kegel Throne while your pelvic floor is in a "protective" state, it might not be beneficial. It's like trying to do a bicep curl without fully extending your arm; you won't be able to properly strengthen that muscle.

So, instead of having me jump straight onto the Throne, the nurse at Urospot referred me to registered physiotherapist Nicole Guitar—and our first virtual consultation changed my life. I learned that pregnancy and childbirth are far from the only cause of pelvic floor dysfunction. It can also be hereditary or provoked by a chronic bad cough, surgery or weight gain. Losing estrogen during peri- and postmenopause has an impact, too. A report from the Menopause Foundation of Canada states that 23 percent of postmenopausal women struggle with incontinence. After 65, almost 24 percent of adults wake up two or more times per night to pee.

In my case, central sensitization was at least partially at play, and Guitar told me it's a common issue for women seeking pelvic floor physiotherapy. Central sensitization occurs when the nervous system's fight-or-flight response becomes unbalanced with the rest-and-digest response. "It often happens due to chronic stress, prolonged periods of poor sleep or as a result of an injury," she told me. "The brain perceives there could be a threat, so it starts sending more messages along the nerves in the body involved in fight or flight—called sympathetic nerves—as opposed to the nerves involved in rest and digest, called parasympathetic nerves. These activations keep the body on high alert." You then live in a constant state of hypersensitivity and high tension, which can lead to grinding or clenching of the teeth, tightness in the neck or shoulders and pain with tampon use, pelvic exams or intercourse, along with feeling like you need to pee all the time.

The version of the Central Sensitization Inventory the clinic had me complete is a nine-point questionnaire where each response scores a number of points (between 0 and 4). The highest score is 36, while a score of 20 or more indicates that the body is likely in a state of central sensitization. I scored 23. Since my body was experiencing central sensitization—possibly due to my cervical cancer diagnosis and treatment, though I find I'm almost always in an anxious, high-stress state—Guitar said it was important to practice diaphragmatic breathing to stimulate my rest-and-digest response. "The diaphragm works closely with the pelvic floor," Guitar says. "When we take a deep, diaphragmatic inhale, that helps to relax our pelvic floor muscles. It also stimulates the vagus nerve, which tells the brain that we're safe."

To do a proper diaphragmatic breath, lay down and place an item like your cellphone on your lower rib cage. When you breathe in, the phone should move upward, not your upper chest.

Over the course of three weeks, I spent several minutes each day doing diaphragmatic breathing while sitting, resting in a supported child's pose and rotating through "cat-cow" stretches. During these sessions, I focused on the sensation in my pelvic floor and what it felt like to release. "Creating that body awareness is really important," says Guitar. Now, when I take some time to focus on diaphragmatic breathing and the feeling of release in my pelvis, my entire body starts to uncoil.

Guitar also told me that sleep is another part of the puzzle for regulating the nervous system. "If you have a poor night of sleep and stub your toe, you're going to get warning messages that it hurts more than you would have yesterday," she says. That's because your nerve responses will be out of balance. Practicing mindfulness and taking part in restorative movement like stretching instead of cortisol-spiking workouts like HIIT can also be key.

But steps for reducing central sensitization aren't all that I took away from my time with Guitar. She also gave me crucial information about how my lifestyle and habits have impacted my bladder. The first knowledge bomb she dropped: Restricting your water intake can make you pee more often. Without really noticing, I'd stopped drinking water because I didn't want to add even more trips to the bathroom. That's a no-no because water acts to dilute our urine. Since I wasn't hydrating properly, other items I consumed—like caffeine—were irritating my bladder, prompting the urge to void.

To figure out your ideal water intake, Guitar recommends drinking, in ounces, half your body weight in pounds. So, if you weigh 150 pounds, you should drink 75 ounces (around 9.5 cups) of water each day.

Once I was consistently drinking enough water, Guitar asked me to track how often I was urinating and how long my stream lasted. She helped me realize that one of the reasons I pee every 60 to 75 minutes is because I can; I've worked from home for years and if I have a tiny urge, there's nothing to keep me from relieving myself. That's a problem. "A good, healthy pee happens every two to four hours and the stream should last about eight to 10 Mississippi seconds," Guitar told me. That's a long time. If you're frequently peeing for only three seconds, which I was, that means you're either emptying your bladder before it's full or your bladder has shrunk. "The bladder is a muscle, which means it's capable of changing its size and capacity like any other muscle in the body based on how it's used," says Guitar. "If I'm peeing all the time, my bladder is going to get smaller because it's going to say, 'I don't need to hold more than this. You pee every hour anyway.'"

To retrain the bladder, Guitar recommends tracking your bathroom breaks for a couple of days and figuring out how often you typically go. Then, over a series of weeks, increase the amount of time between pees—try adding five minutes every three days. After three weeks, your bladder capacity should have grown so you can hold your pee for an average of 95 minutes instead of just 60, for example.

There's one more tip Guitar gave me that changed the way I go to the bathroom, and it's to buy a Squatty Potty or any stool that brings your feet up seven to nine inches when you sit on the toilet. The reason? To reduce straining during urination and bowel movements. "In North America, we've designed our toilets to be at 90-degree angles where it's like we're sitting in a chair, feet flat on the ground," she says. "That's not the ideal physiological position to empty our bowel or bladder." Instead, sitting with the knees higher than the hips (a sort of modified squat) allows the pelvic floor to relax, which makes peeing and pooping easier. "Having a bowel movement or going pee should be a completely passive process."

After gaining all this knowledge from Guitar, then adding positive behaviours into my life and altering some of my habits, I decided not to complete any Kegel Throne sessions at Urospot. Though HIFEM stimulation can help to strengthen the pelvic floor once someone experiencing central sensitization has learned to fully relax, my doctor told me that the treatment has a few contraindications, including those who have or recently had cancer, as the treatment increases blood flow. I was told that the Kegel Throne is safe for me because my cervical cancer was found at a very early stage and has been treated, but I still have a lot of anxiety about it and would prefer to get a few years past my diagnosis before I reconsider. That said, I did sit on the chair for five minutes just to try it. For me, it felt like mildly uncomfortable tapping right in the centre of my crotch.

Here I am, a few months on, and I haven't experienced any leaks lately. At my last appointment, my central sensitization score moved down more than 10 percent (a win!), and I continue to practice diaphragmatic breathing whenever I feel stressed. I've also been drinking more water and touting the benefits of the Squatty Potty to anyone who will listen. I still pee a bit more frequently than I'd like, so I'm working on adding time between bathroom breaks and trying to avoid peeing "just in case." I feel like I'm on the right track and am grateful for what I learned from Craven and Guitar. This type of therapy can be expensive ($2,400), especially if you don't have insurance. But every woman deserves to prioritize her pelvic health and there are many ways to improve the situation and protect yourself. Start by talking to your doctor—and maybe give diaphragm breathing a try. **BH**

PREGNANCY AND CHILDBIRTH ARE FAR FROM THE ONLY CAUSES OF PELVIC FLOOR DYSFUNCTION. IT CAN COME FROM YOUR GENES, SURGERY, WEIGHT GAIN OR A CHRONIC BAD COUGH.

POINT OF CONTACT

Former Olympian Friba Rezayee teaches judo to women and children in Vancouver. She's also a relentless advocate for gender equity in Afghanistan, where she was born and raised.

Text by Paloma Pacheco
Photographs by Taylor Roades

"In Japanese, it's called 'ukemi,' which means 'break fall,'" says Friba Rezayee, a judo athlete and former Olympian. She's referring to the practice of learning how to use your arms and upper body strength to protect the rest of your body from impact with the ground. "Judo is a sport where you have to learn how to fall safely–so you fall but don't get hurt."

Ukemi might also be the perfect metaphor for Rezayee's life and work with Afghan refugee women and girls. The 38-year-old gender equity leader and advocate is no stranger to setbacks. She was born and raised in Afghanistan, but when the Taliban came to power in 1996, she and her family were forced to flee to neighbouring Pakistan. When they returned in 2001, her political consciousness had been sparked. She enrolled at an all-girls high school and began learning judo at age 15, choosing the sport because of its combat nature and because martial arts were practiced indoors and in modest clothing.

"I've always believed, even as a child, that if you are born, you have the right to exist, to learn, to play sports," she says. "I believe that human rights and women's rights are innate, and we should have the right to practice and enjoy them." In 2004, when Afghanistan was welcomed to the Summer Olympic Games in Athens after being blacklisted during the Taliban regime, Rezayee made history at 18 as one of the first two female Olympic athletes from her home country. "My participation brought Afghanistan back into the world sports arena," she says. "It was as if a door had been opened for the next generation of women and girls to play sports and participate."

In 2011, Rezayee immigrated to Canada as a refugee, and a few years later she graduated with a bachelor's degree in political science from the University of British Columbia. Her eyes and heart remained focused on Afghanistan, though, and in 2021 she incorporated her nonprofit, Women Leaders of Tomorrow, an organization dedicated to securing educational and sports opportunities for Afghan women and girls. "We advocate and work tirelessly," she says of WLOT's board, staff and volunteers. Since its inception, the organization has secured 20 scholarships for Afghan women and girls to come to Canada to study and has helped Afghan athletes further their education at home and abroad. Rezayee leads a busy life between her commitments to WLOT, her advocacy work and teaching judo to the next generation, but she's driven by conviction: "Gender equity matters and that's what leads me every day."

BIG SHOTS Many of the women who come to Rezayee's classes are interested in judo's reputation as a combat and self-defence martial art. "Judo is a sport where you can learn how to lift someone up and throw them, even if they're bigger and heavier than you," she says. "Women really like that."

GO STEADY Cross training for judo often means strength exercises, and Rezayee will head to the YMCA most days to weight-train at the gym or take a power yoga class. "I like the breathing style and stretches of power yoga. It helps me with balancing my body, and in judo you have to be able to balance well," she explains.

KIDS STUFF Sundays are dedicated to sharing her knowledge of judo with the next generation. On Sunday mornings, she teaches two children's classes at a local dojo, a highlight of her week: "It's absolutely a joy and so fun to teach kids. We focus on techniques to help them move their bodies and minds together."

TRUST THE PROCESS Rezayee demonstrates the bow, which begins and ends each judo exercise and is a symbol of respect. The objective of competitive judo is to throw an opponent, immobilize them or force them to submit using contact and impact. Partners are responsible for each other's safety as they learn and progress.

TRICKS OF THE TRADE Alongside her teaching partner, Yuki Yokosawa—another former Olympian—Rezayee leads a drop-in judo class for women. Many of the attendees are beginners, but sometimes yellow-belt or even black-belt students join the class, and often Vancouver Police Department and RCMP members will attend.

WORK FOR HOME At some point during her day, Rezayee will hunker down on a judo mat for emails and phone calls. Since the Taliban's return to power in August 2021, she's fielded international media requests for comments on the situation in Afghanistan and her work with WLOT. "I try to make time for it all," she says.

HEAVY MEDALS "Going to the Olympics was the best and worst thing that's happened to me," says Rezayee. "It was an honour and a privilege, but it came with its own risks and dangers. To be a pioneer of something is difficult. When you're the first one, there is a lot of pressure on you. There are many barriers to overcome."

Sniff Your Way To Better Mental Health

One whiff of a piña colada can whisk you back to the vacation you took ages ago. Scents are detected by the olfactory bulb, a neural structure that connects to the amygdala (which processes emotion) and the hippocampus (which plays a big role in memory). Researchers at the University of Pittsburgh wondered if depressed people—who sometimes struggle with recall—could use smells to better access their memories. Subjects inhaled a bunch of classic scents, including ground coffee and Vicks VapoRub, and, lo and behold: They not only conjured up vivid, specific memories, but those memories were also more positive. The hope is to use these odour cues in a clinical setting to help depressed folks break out of negative thought cycles.

President's Choice Plain Skyr Yogurt, $7, loblaws.ca

IN OTHER HEALTH NEWS

Animal Instinct
It might get you some odd looks at the gym, but quadrupedal movement training, or "animal flow"—where you crawl like a bear or scuttle like a crab—can help with shoulder and hip flexibility, according to a small study from researchers in Pennsylvania.

Mind the Gap
You don't even have to bear-crawl for long: A new study in the *Journal of the American College of Cardiology* revealed that women can exercise less often than men (140 minutes a week, versus their 300) and reap greater cardiovascular benefits.

Power Up
If you have a long to-do list to tackle, maybe start your day with some thick, Icelandic-style yogurt: Danish researchers found that having skyr (along with oats) for breakfast gave the women in their study a concentration boost.

Dressed for Success
Researchers at Cornell University have built a better bandage. Coating cotton in lawsone—the orange-red antibacterial dye in henna leaves—helped fight infection and heal wounds more quickly than your run-of-the-mill gauze.

Deep State
In "uhh… yeah" news: After canvassing thousands of people across 22 countries, Penn State anthropologists confirm that both men and women are more drawn to lower-pitched voices.