

EXPERIENCE LIFE

Being Healthy Is a Revolutionary Act

DECEMBER 2017 / \$5.95

Change Makers

8 Visionaries Creating a Healthier World

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EXPERIENCE LIFE

DECEMBER 2017 Volume 19, Issue 10 GIVE & RECEIVE

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Change Makers

Of the numerous challenges facing us today, the future of our health is among the most worrisome. Thankfully, there are amazing individuals intent on improving the quality of our lives. Meet eight visionaries who are shifting the way we think about health, nutrition, and fitness — and changing countless lives along the way.

By Jon Spayde



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A professional massage can ease muscle tension and speed postworkout recovery, but few of us make time for regular spa appointments. Learn how to become your own bodyworker with these expert tips on trigger-point therapy and self-myofascial release, and discover tools you can use to find relief at home or the gym.

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By Jo Marchant, PhD

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Skip material gifts in favor of supporting organizations that are working to improve the lives of those less fortunate.

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COVER and "ON THE COVER" Photographer: Kwaku Alston/Stockland Martel; Hair: Carlos Ortiz/Cloutier Remix; Makeup: Barbara Farman/Cloutier Remix; Wardrobe styling: Suzie Grgurich/Aim Artists. Wardrobe (cover): dress by LoveShackFancy, pendant by J.Crew, earrings by Nordstrom; ("On the Cover"): top by J.Crew, earrings by Nordstrom.

Page 7: Chad Holder; **p. 28:** John Mowers; **p. 33** (bottom): Saman Abhiroop/Siddhayatan Tirth; **p. 44-48:** Russ Crandall; **p. 60-65** (products): John Mowers; **p. 84** (ARC): Christopher Michel, (Doctors Without Borders): Gonzalo Martínez, (Kiva): Juan Barbed; **p. 86** (fruit): John Mowers.

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EXPERIENCE LIFE Magazine (ISSN 1537-6656) is published monthly except for January/February and July/August by LIFE TIME, 2902 Corporate Place, Chanhassen, MN 55317. SUBSCRIPTION RATE: One year (10 issues) \$27.95; Two years (20 issues) \$44.95. LIFE TIME MEMBERS: For member questions, cancellations, or change of address call Member Relations at 888-430-6432 or email subs@experiencelife.com. NON-LIFE TIME MEMBERS: For non-member questions, cancellations, or change of address call 800.897.4056 or email ELFCustserv@cdsfulfillment.com. Periodicals postage paid at Chanhassen, MN 55317 and additional mailing offices. ISSUE DATE: December 2017. POSTMASTER: Send address changes to Carrie Stafford, EXPERIENCE LIFE Magazine, 2145 Ford Parkway, St. Paul, MN 55116.

LIFE TIME
HEALTHY WAY OF LIFE

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The Thought Counts

I love the holidays. I love reflecting on what the season is meant to be about, celebrating with family and friends, and evolving the traditions from my husband's and my own childhood for our family of four.

Decorating the tree and our home together, driving around to look at holiday lights in our pajamas with mugs of hot chocolate or coffee, being at home Christmas morning to experience the magic of Santa with our young daughters — these are the moments I keep in mind when the craziness of the season starts to kick in.

Like clockwork, I inevitably feel the pressure of the holidays begin to build with the flip of the calendar to December. And despite concerted efforts to simplify, I still get caught up in the mayhem to a certain degree.

Much of it is self-induced. Do I really need to bake four kinds of holiday treats? Nope. But I often do because it reminds me of baking with my grandmas. Are holiday cards necessary? Probably not, but I send them because I so enjoy receiving them in return.

But then there's the convention of gift giving — my least favorite part of the season. Other than for my kids, I'm pretty bad at shopping for other people. I don't shop ahead of time, and I don't see things and think, "My husband would love that," or "That's perfect for my mom." Too often, I put shopping off until the week or two before Christmas, and then I scramble.

In place of meaningful (yet desired), personal (yet practical) presents, I often end up with random selections that leave the recipients scratching their heads in wonder. Or with yet another pair of wool socks.

I've been thinking about my gift-giving dread a lot lately. I've realized that my issue likely stems from the fact that receiving gifts is not personally important to me.

It's not that I'm not grateful for the generosity of those who give thoughtful gifts to me; it's just not my primary love language, as therapist Gary

Chapman, PhD, would say.

In his book *The 5 Love Languages*, Chapman identifies the five most common ways we tend to give and receive love: words of affirmation (to be verbally acknowledged); quality time (to enjoy companionship); receiving gifts (to be given tokens of love); acts of service (to have others do tasks for us); and physical touch (to be in contact via the body).

When I retook the love-languages quiz recently, receiving gifts was last on my list, while quality time was at the top. So it makes sense that I have some resistance to this: I'd rather be connecting with others through shared experiences. Still, that doesn't excuse

It makes sense that I have some resistance to gift giving: I'd rather be connecting with others through shared experiences.

me from understanding how those on my list give and receive love best.

So this year, I'm going to try gift giving based on the love languages of my family and friends. It will take some work to figure out what each person's dominant one is, but my hope is it will create more meaning in whatever the presents — physical or conceptual — end up being. It might also brighten my spirits about this particular holiday tradition.

The season, after all, is about joy, and so much of that comes from how we give and receive with the most important people in our lives. (If you're interested in learning more about the love languages, check out ELmag.com/lovelanguages.)

Presents or not, the team at *Experience Life* wishes you and yours a healthy, happy holiday!

Jamie Martin is *Experience Life's* editor in chief. Follow her on Instagram @jamiemartinel.

Your Thoughts?



Email us at expericelife@expericelife.com.

The Life Time Healthy Holiday GIFT GUIDE

This year's holiday shopping just got a little easier! From fitness gear and apparel to recovery tools and nutrition support, this roundup can help you find something for all the health-lovers on your list.

1.



3.



5.



4.



2.



6.



7.

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\$50+ | Trunkclub.com/lifetime

13.



12.



11.



14.



Talk to Us

• Readers share their feedback.



On Trend

f Within a few sentences of “Bugged!” (October 2017), I knew it was the work of Dara Moskowitz Grumdahl. With her fingertips on the pulse of culture, she debunks myths and trashes trends, bringing us back to what we know, deep in our gut, is good, right and true.

Laura H.

Solid Support

✉ I am a veteran who finds a lot of beneficial articles in *Experience Life*. I often share specific articles with both my fellow veterans and the awesome nurses, doctors, and staff at the Center of Health and Wellness in East Orange, N.J. The September 2017 issue was packed with articles that piqued my interest.

For over a year, I have been learning meditation and mindfulness at the center. I was inspired by the interview with Susan Kaiser Greenland (“Mindful Fun”) and Sheila Mulrooney Eldred’s article on helping young minds calm down (“Learning Opportunities”). I’ve found maintaining a mindfulness practice to be very rewarding; many veterans are using it to find peace.

Many of my fellow veterans have TBIs, and the article by Michael Dregni (“Seeing Stars”) could not have been more informative. Thank you very much for this wonderful magazine.

Richard C.

✉ I am most grateful to see the extensive article on concussions (“Seeing Stars”). As a craniosacral therapist, I have seen the damaging and lasting effects that concussions can have on a person.

The article did an excellent job of describing these symptoms and those who might experience them. For those interested in the benefits of craniosacral therapy, I suggest looking into The Ricky Williams Foundation and the Upledger Institute, which studied the efficacy of craniosacral therapy for retired NFL players with chronic traumatic encephalopathy (CTE) and post-concussive syndrome.

It is my hope that someday regular craniosacral therapy, in conjunction with other healthcare, will continue to allow athletes to pursue their sports while maintaining optimal brain health. Thank you for your continued commitment to educating your readers on important health issues.

Susan W.

✉ I read *Experience Life* from cover to cover every month, and I always learn new concepts from each issue. I especially loved Jonny Kest’s article in the September 2017 issue (“Love Like a Yogi”). It really made me think about the self-acceptance process versus continual mind chatter on self-improvement. Thanks for the wonderful inspiration, Jonny!

Paula G.

Waste Awareness

✉ I realize that articles in any magazine may have conflicting ideas, but I was struck that you would follow the interesting piece on zero-waste advocacy (“Life Outside the Box,” October 2017) with “How to Make a Slosh Pipe.”

Your design requires PVC (plenty of chemicals and petroleum required), increases waste by leaving the unused cut portion at the store (where they will likely have to toss it), and requires highly toxic PVC primer and cement (which many users will throw away improperly in a few months when they realize they don’t need it for other projects). You could have at least suggested readers make both ends with the removable caps to avoid the toxic cement, and make one for a friend

“ Just because an item is on the supermarket shelf doesn’t mean it is nutrient dense or clean. When we know better, we do better.”

with the other half of the PVC pipe.

C. Brennan

Cast-Iron Etiquette

📷 I read “How to Care for a Cast-Iron Skillet” (September 2017) expecting to disagree, but this Southerner approves. The one addition I would add is a reminder to never try to clean another person’s cast-iron skillet. I’d rather someone try to brush my teeth for me than wash my skillet!

Lorie B.

Timely Reminders

📷 After reading “Family Classics” (September 2017), I’d like to remind people that the land featured in the South Dakota section is home to many Native American tribes, and it is under threat from the Dakota Access Pipeline. We are the beauty and the beast, and our country is one of the most beautiful places on earth.

Carol F.

✉ I am a subscriber to your magazine and enjoy the wonderful articles, but I’m offended by the fact that all of your photos are of slim, young athletes. You did a wonderful story of a 71-year-old man biking the Mickelson Trail (“Family Classics,” September 2017), but the photos are of a 30-year-old man on a bike! I’m 62 and hiked half of the Camino de Santiago last year. Most of the folks doing that trail are over 50, and many are over 80. Let’s not rule out those of us who are staying active as we age. Still love the magazine.

Franny S.

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Talk to Us

Archive Appreciation

f You guys have the *best* articles! I remember one a few years ago about different exercise options for introverts and extroverts. I still share that with people sometimes. You have content I've never seen anywhere else.
Jennie P.

Visit ELmag.com/fitpassion to read more about matching your fitness pursuits with your unique personality.

f This piece (“On Sex and Health,” June 2016) addresses topics I don’t often read about, such as “addressing shame” and asking what “authentic sexuality” looks like to the individual outside of what a “hypersexualized culture” dictates. Love it and want more of it.
Anaís D.

f Love these tips from *Experience Life* magazine (“6 Tips to Stay Mentally Fit,” May 3, 2017). “Stress bombards even the most ordinary lives. . . .” Be mentally fit, as well as physically fit. #stressreduction #mentallyfit #fitness #nutrition #motivation #wellness #redcross #doctorsorders #movement
Ken R.

f “The Power of Kindness” (May 2015) is an excellent article!
Gisela W.

f I loved “Thinking Outside the Lunchbox” (September 2014)! Parents and caregivers deserve to be better informed about food choices for themselves and the children in their lives. Just because an item is on the supermarket shelf doesn’t mean it is nutrient dense or clean. When we know better, we do better.
Kelly C.

f “Shutting Down Shame” (October 2013) provided so much clarity.
Daniel C.

f Weighing in on the “Paleo Vs. Vegan” (May 2012) debate: I’ve been

doing paleo for years and I love it. Vegan is not for me. #caveman
Keith B.

Story Suggestions

✉ I read your magazine and am impressed with some of the well-researched articles. However, you’ve neglected to address a large population of folks with a problem many people think they’d like to have — unless they do. I am an extremely active 67-year-old female who is desperate to gain weight. As we age, we need more reserves of energy than when younger. Our appearance is also enhanced if we have a bit more “meat on our bones.” Yet our health issues are either trivialized or dismissed. Please consider addressing our weight problems, too.
Lee H.

✉ Could you do an article or provide research on menopause — and the weight gain that is so hard to get rid of despite workouts and healthy eating? I know a lot of women who experience this despite hormone therapy and a regular fitness regimen.
Amy G.

We love hearing about what you want to read in Experience Life. We’ll keep your ideas in mind for future issues. Meanwhile, here’s an article we did on menopause in 2013: ELmag.com/menopause.

Experience Life welcomes your comments and suggestions. Please email experiencelife@experiencelife.com, or send to:

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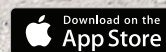


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Extreme Workouts and the Rhabdo Risk

Several recent studies

have raised concerns about a dramatic increase in cases of rhabdomyolysis (or rhabdo), a rare but life-threatening condition caused by severe muscle trauma. Researchers say rhabdo is on the rise due to the growing popularity of intense workout programs, including activities such as CrossFit and cycling classes — and it can affect first-timers and elite athletes alike.

A certain amount of muscle stress results from any exercise, stimulating muscles to grow and adapt. Rhabdo, however, “usually occurs due to extreme muscle strain in an athlete who is exposed to too

much too early,” explains David Freeman, NASM-PES, manager of Life Time’s Alpha Training.

Overworked muscles can die and leak their contents — including electrolytes and proteins such as myoglobin — into the bloodstream, according to Westchester Medical Center kidney researcher Maureen Brogan, MD, lead author of a recent rhabdo study.

Symptoms include fatigue, fever, nausea, vomiting, intense muscle soreness, and swelling. Often, urine turns dark from the myoglobin filtered from the blood. In the most serious cases, rhabdo can lead to kidney failure.

Before your next workout, consider these tips for preventing and spotting rhabdo:

• SELECT A WORKOUT

that fits your current fitness level. If you’re new to a program, start with a beginners’ class. “The level of intensity at which you work out should match your current level of fitness,” says Brogan.

• **HYDRATE.** “It is essential to drink before, during, and after any workout,” she advises.

• AVOID NSAIDs

before and after intense exercise. Nonsteroidal anti-inflammatory drugs, such as aspirin and ibuprofen, can increase the risk of kidney damage.

• **REFRAIN FROM TAKING ANOTHER CLASS** for several days to make sure you are fully recovered, says Freeman.

• **SEEK MEDICAL HELP** immediately if your symptoms include dark urine, strange swelling, or extreme thigh weakness. “And note that some symptoms can take up to a few days to develop,” Brogan says.

— Michael Dregni



Web Extra!

For more on rhabdo from Maureen Brogan, go to ELmag.com/rhabdo.

Giving Brings Happiness



Performing a small act of generosity

may earn you big dividends in happiness.

That’s what University of Zurich researchers discovered after examining the brains of 50 study participants.

Researchers gave subjects a weekly sum of money over a month: Half were instructed to spend it on themselves; the other half, to spend it on someone else. The participants were then asked to consider a separate act of generosity.

Those previously instructed to spend on others tended to be more generous when given the option of a second charitable act — and also reported feeling happier, which was

reflected in neural-image activity. Brain scans showed that the intention of generosity activates an altruistic area of the brain, intensifying the interaction between this area and the area affiliated with happiness.

Even tiny acts of generosity do the trick: “You don’t need to become a self-sacrificing martyr to feel happier. Just being a little more generous will suffice,” notes lead study author Philippe Tobler, PhD, a University of Zurich neuroeconomist.

Though the study, published in *Nature*, does not prove causation, it’s worth performing more acts of generosity to see for yourself.

— Serena Rutledge

Uncovering a Sulfite Sensitivity

Do you suffer from a baffling food reaction? One common, but often overlooked, sensitivity is triggered not by a particular food but by the preservatives containing sulfite, which are often used in wine, beer, meats, shrimp, processed foods, and even some medications.

There are no clear statistics on the percentage of people sensitive to sulfites (a.k.a. sulphites), but those with asthma can be particularly susceptible. Sulfite-bearing preservatives can cause allergic and asthmatic-type reactions as well as chronic fatigue, brain fog, vertigo, hives, and digestive distress. Because allergy tests will not reveal a sulfite sensitivity, healthcare providers must administer minute doses to determine a patient's risk.

The FDA banned sulfite use on fresh vegetables and fruits in 1986 following outbreaks of sulfite-related allergic attacks; the agency also mandated that all food labeling include sulfite preservatives. But just reading the labels may not protect you: Sometimes sulfites are not used directly in foods but show up in unlisted secondary ingredients.

Life Time nutritionist Samantha McKinney-Bielawski, RD, LD, offers these tips on dealing with a sulfite sensitivity:

- **Scan food and drink labels.** Look for sodium sulfite, bisulfite, and metabisulfite, as well as potassium bisulfite and metabisulfite, especially in processed and frozen foods, condiments, granola, and dried fruit. Sulfites are also used in wine and beer to maintain freshness; watch for "contains sulfites" on bottles or cans.

- **Be cautious** at restaurants when ordering "any food that has been frozen and preserved before being prepared," McKinney-Bielawski says.

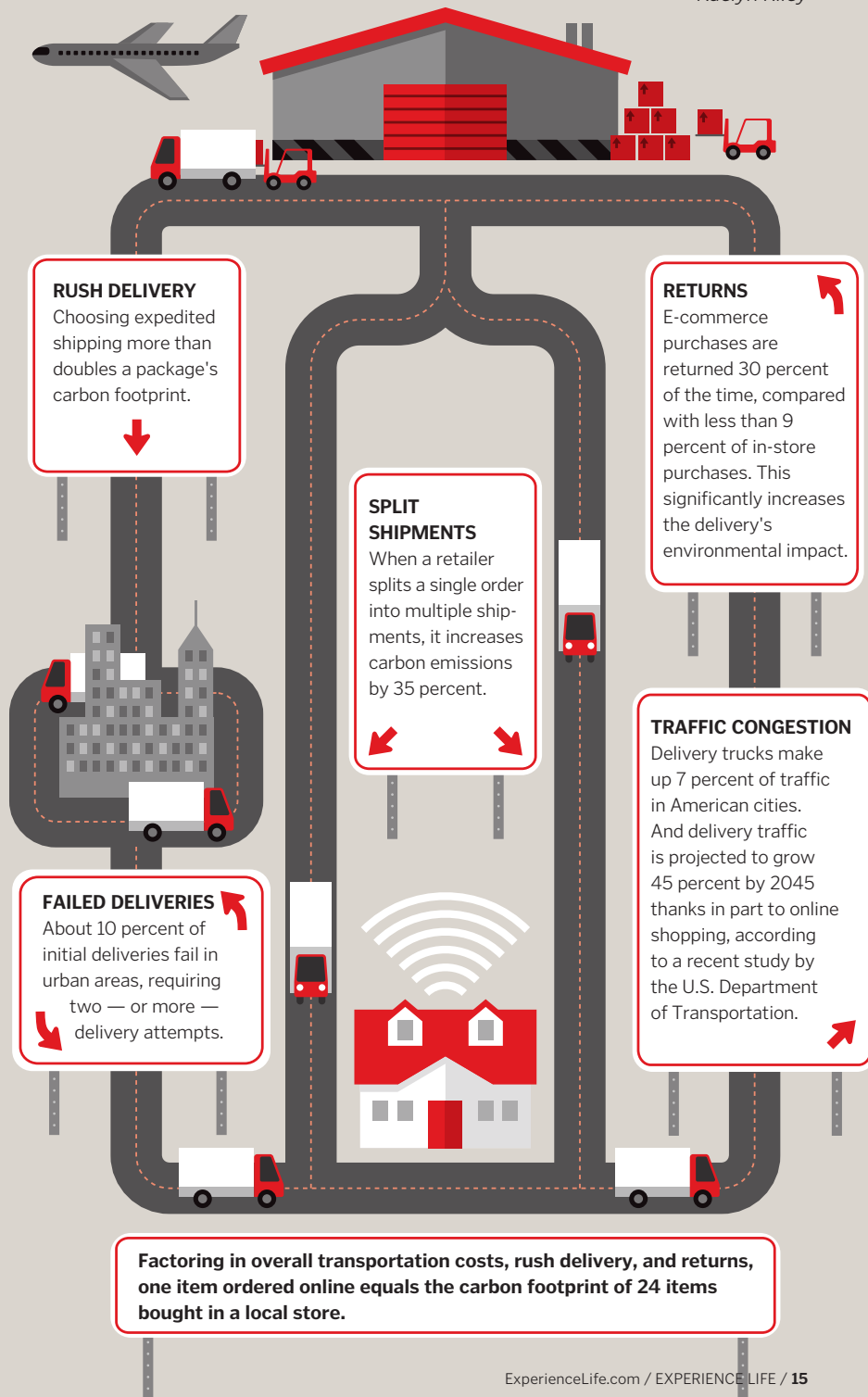
- **Ask your pharmacist** to verify that your prescription medications are sulfite-free, if the inactive ingredients are not listed.

— MD

The True Costs of Online Shopping

Online shopping is big business: Americans spent \$395 billion at Web retailers in 2016, up from \$28 billion in 2000. Part of the increase may be due to a belief that e-commerce is a greener option than shopping at your local brick-and-mortar store. But according to various online-retailing industry studies, there are several environmental factors to consider.

— Kaelyn Riley





Owning Her

Author and lifestyle coach Latham Thomas is helping women find, embrace, and shine their inner light throughout their lives.

BY HEIDI WACHTER

PHOTOS BY KWAKU ALSTON

Glow

Latham Thomas is on a mission to help women reach their full potential. “I want to build a movement that empowers women to reclaim their bodies as sacred, to embrace self-care, and use their intuition as a source of power,” the 37-year-old wellness maven, best-selling author, and doula says. “I want to help women give birth to their dreams.”

The Columbia University and Institute for Integrative Nutrition graduate knows a thing or two about delivering on her goals. Along with being a birth and plant-based-nutrition coach, her accomplishments include founding a holistic lifestyle practice and authoring two books.

The most recent, *Own Your Glow*, was released in September. Thomas calls it a guide for helping women on the precipice of any change in their

lives to return home to themselves and the power that resides within.

Her degree and training in visual arts deeply inform Thomas’s experience and outlook. “Owning your glow is about bringing everything into the light, because the divine lives in dark places,” she explains. “It’s also about embracing the parts of yourself you were told weren’t beautiful or good enough, or were too harsh, and really loving who you are.”

The techniques and tips she shares are the same ones the practicing yogi uses herself to stay balanced. “It’s normal to have ruts and ride emotional waves,” says Thomas. “But practices like meditation and yoga help me slow down and figure out where I exist in every ecosystem. They allow me to parse what matters most so that I can put my energy there with as much intention and love as possible.”

Q & A

Experience Life | What does it mean to “own your glow”?

Latham Thomas | Glowing is about radiance, abundance, living in light, and being the best iteration of yourself.

In this book, I wanted to talk about how feminine luminosity can create a movement among women for reclaiming their bodies as sacred, embracing self-care, and using their intuition as a source of power to their dreams.

I wanted to share affirmations, rituals, and ancient practices, like meditation, that women can use to frame their lives in a way that makes every moment sanctified and holy. We can have that!

We don't have to feel rushed or live counter to what our spirit, the universe, or God wants. While not every moment is going to be easy, we can feel more at ease in every moment.

Even if you live in a fast-paced society, there are ways to calibrate and to learn to take deep breaths and make more-intentional movement.

EL | One way you say we can own our glow is by challenging the stories we create about who we are, what we can be, and what we can have. How do we do this?

LT | One exercise I offer to readers in the book is to look at their negative thought patterns and beliefs as weeds. They're like weeds because we allow them to become pervasive. I think it's good to set aside time regularly to pick the weeds by reflecting on what to keep, nurture, and grow, and what to pull out of the garden.

You can do this by questioning what lessons you've learned that are no longer of service to your mission. Or ask yourself whether a seed that may have been planted by someone else has been allowed to grow without you realizing it.

You can also look at thoughts and beliefs like traveling: When you pack for a trip, you don't take your entire house.

You take the things you know you need for where you're going. Life is like this. You don't want to show up to the airport of life, weigh your bag, and be told that you have too much to take where you're going. You also don't want to take more than you can carry — you can't fly if you're weighed down.

EL | You talk a lot about the importance of expanding our capacity to receive. What prevents us from receiving?

LT | Again, I think it's key to examine our thoughts — in this case, around what we believe is possible. Unfortunately, many of us have been told, “Oh, you can't have this career or life you want.” Or maybe you see someone on social media and think, *Wow, look at this amazing life they created for themselves. I can't have that.*

Expanding our capacity to receive is about questioning ourselves to find out when we are making a fist instead of holding out an open palm.

When I was younger, all of my romantic relationships lasted the exact same amount of time — three months would be the expiration date. As I was talking to a friend once about my relationships, and how I always found a way to sabotage them, my friend asked, “Latham, do you believe that you deserve to be loved? Like, deep down do you believe it?” And I sat with that. I started crying and said no.

It was then that I knew I had to interrogate all the reasons that made me think I was unlovable. I began to look at the patterns I fell back on and the behaviors I used as a crutch. It's OK to walk with crutches if you're injured, but if you're not, you need to prop yourself up.

Start by giving yourself what you need, and eliminate what you don't need. Once you do that, you can begin giving to others and they will give to you. We expand through love and kindness.

EL | What are other ways to break through our entrenched patterns?

LT | There are many healthy tools outside of ourselves — like therapy — that can be of assistance. It's always good to have a friend or family member you can turn

to when you are feeling small to help you find your way back into your greatness.

I also love doing sister circles. These groups meet regularly and create space for people to be vulnerable and share their deepest desires and challenges. These are places that allow people to be witnessed and supported in their vulnerability. Men can also benefit from participating in such circles with other men.

Being vulnerable is an opportunity to practice being soft and supple in consciousness, and the more you open your heart, the easier it gets. The more you open up, the more you inspire others to do so.

EL | How is being vulnerable important to giving and receiving?

LT | We're afraid to be vulnerable because we're afraid to allow people to see the truth of who we are. It's an opening that's scary. But they also see you at your strongest at the same time. For example, when you see a mother at the threshold of giving birth, she is at her most vulnerable and her most powerful.

Once people see that vulnerability is the most powerful and human place to operate from — because people relate to and believe in you when you're vulnerable — they can create better personal and work relationships as well as better communities and societies. Being vulnerable and witnessing it expands our capacity for love, empathy, compassion, and joy. It expands our ability to receive — and to give. 🌱

Heidi Wachter is an *Experience Life* staff writer.



To hear more from Latham Thomas, watch her video at ELmag.com/videos.

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How to Make a Reed Diffuser

A simple, DIY method to fill your home with healthier fragrances this holiday season.

BY KAELYN RILEY

Certain aromas have powerful associations with the holidays. But many of the sugar-plum-scented candles and gingerbread air fresheners we can buy contain endocrine-disrupting chemicals that can pose myriad health risks.

Swap the store-bought options for all-natural scents using this simple technique. It requires only a handful of materials, and no flame or electricity.

Reed diffusers make great gifts! Mix the oils and alcohol in a jar with a lid or cork, and present it with a handful of reeds.

Supplies:

- 1 8-oz. glass jar
- ¼ cup carrier oil (such as sweet-almond, olive, or fractionated coconut oil)
- 1 tbs. rubbing alcohol
- 20–30 drops essential oils (see Elmag.com/reeddiffuser for some of our favorite blends)
- 4–6 reed-diffuser sticks or bamboo skewers

1. Pour your carrier oil, rubbing alcohol, and essential oils into the glass jar. Stir or shake to combine.

2. If you're using bamboo skewers, trim the pointy end. Place the diffuser sticks in your jar.

3. Turn the sticks over every few days to expose the ends that have been in the liquid to air. This will help refresh the scent.

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Fit Body

Embrace the Season

For many of us, winter can be a bleak season. But it doesn't have to be: Some research suggests that we can beat the winter blues by adjusting our mindset.

A 2012 Norwegian study found that the farther north participants lived, the more positively they viewed winter. Those with a contented mindset also tended to be more satisfied with their lives and more likely to pursue new challenges that could lead to personal growth.

So, rather than simply enduring it, consider ways you can embrace the season. You just might finish the year with a sunnier disposition.

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Learn about three rejuvenating retreats that can help you make the most of the season.



Balance It Out

Even out your pushes and pulls with this fat-burning, muscle-building, full-body workout.

By LAUREN BEDOSKY

When you hit the gym, it's tempting to do only your favorite strength exercises — and often, “favorite” means moves that are fun and comfortable. But favoring only a few isolated, similar movements and neglecting opposing and complementary ones can create muscular imbalances.

If, for instance, you perform only pushes — pushups, squats, overhead presses, glute bridges, dips, and the like — you won't build fully functional overall strength, says Kansas City-based strength-and-conditioning coach Jay Ashman, developer of the Ashman Strength System. Over time, these muscular imbalances can lead to discomfort, pain, and even injury.

Ashman is a former Strongman competitor who also played baseball and football. He uses a combined push-pull approach in his own training and with clients because it's time efficient, well balanced, and effective.

Push exercises work the muscles you use to move weight away from your body, specifically the pectorals, triceps, fronts of the shoulders, and quadriceps.

Pull exercises target the lats, biceps, hamstrings, and other muscles that enable you to bring weight

toward your body. You'll feel these muscles kick in anytime you do pull-ups, bent-over rows, deadlifts, or biceps curls.

You can schedule your push and pull moves on separate training days, or tackle both types of movements in a single workout.

The following workout, designed by Ashman, pairs push and pull movements in a superset format. One superset couples a lower-body push with a lower-body pull; another pairs an upper-body push with an upper-body pull; and a third incorporates core stability and conditioning. Core and conditioning work will help integrate the upper- and lower-body moves; plus, it adds a fat-burning boost by ramping up your heart rate.

Once you can perform the workout as described, you can use the format as a template to build your own push-pull routines.



Web Extra!

To build your own push-pull workout, go to ELmag.com/pushpull.

The Workout

Perform this full-body push-pull workout in three supersets. Complete the two movements in each superset for the prescribed number of repetitions or time, and then rest once you've finished both exercises.

Select weights you can lift with good form for the noted number of sets and reps. "Focus on form over

speed by controlling the tempo," advises workout designer Jay Ashman. For example, count to two as you lower the weight and repeat that same count as you raise the weight.

The routine — which you can perform up to three times per week — will take approximately 45 minutes to complete.

Lower Body

Complete three or four rounds, resting 45 to 60 seconds between rounds.

SUPERSET
1



Push: Goblet Squat

This squat variation is gentle on the back while working the quads and glutes.

- Holding a kettlebell or dumbbell at your chest, stand with feet hip width apart.
- Push your butt back and bend your knees to lower yourself into a squat. Keep your torso upright and knees in line with your toes throughout the movement.
- Drive through your heels to push up as you rise to standing.
- Perform 12 to 15 reps.



Pull: Romanian Dumbbell Deadlift

Home in on your hamstrings and focus on proper hinge technique.

- Stand with feet hip width apart and hold a dumbbell in each hand, arms hanging straight in front of your body.
- Push your butt back to hinge at the hips, allowing the weights to lower as you keep them close to your body.
- Lower the weights until you feel a stretch in your hamstrings and your hips no longer move backward. Squeeze your glutes as you return to the starting position.
- Perform 12 to 15 reps.



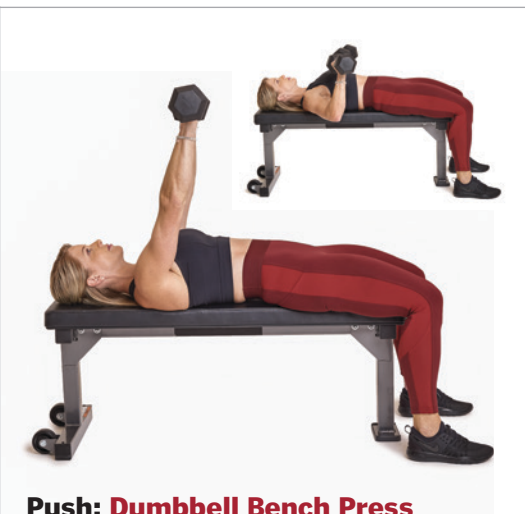
Video Extra!

See these moves in action at [ELmag.com/videos](https://www.ELmag.com/videos).

Upper Body

Complete three or four rounds, resting 45 to 60 seconds between rounds.

SUPERSET 2



Push: Dumbbell Bench Press

Target your chest, triceps, and shoulders with this classic upper-body strength builder.

- Lie face-up on a bench with a dumbbell in each hand, positioned at chest height.
- Press the dumbbells straight up toward the ceiling.
- Lower the weights with control until your elbows dip just below the height of the bench. Keep your arms close to your body and your feet planted throughout the movement.
- Perform 12 to 15 reps.



Pull: Dumbbell Bent-Over Row

Build upper-back strength and counteract the hours you spend slouching at your desk.

- With a dumbbell in each hand, hinge at the hips so your chest is about 45 degrees from the floor.
- Draw your shoulder blades together and bend your elbows toward your hips to pull the dumbbells toward your rib cage.
- Lower the weights with control until your arms are straight.
- Perform 12 to 15 reps.

Core and Conditioning

Complete three to five rounds, resting 30 to 45 seconds between rounds.

SUPERSET 3



Core: Wide Straight-Legged Sit-Ups

Build core strength across a full range of motion by straightening your legs.

- Lie flat on your back with legs extended in a wide V; reach your arms toward the ceiling.
- Engage your core as you sit up tall, keeping your legs on the floor and extending your arms straight ahead.
- Lower slowly back down to the floor.
- Perform as many good-form reps as possible in 60 seconds.



Conditioning: Dumbbell Thrusters

This move will get your heart pumping and work your upper and lower body.

- Hold two dumbbells at shoulder height, then squat down as low as you comfortably can.
- Use the power of your hips and glutes to explode back to standing, pressing the dumbbells overhead in one fluid motion.
- Lower the weights and repeat for as many good-form reps as possible in 60 seconds. ⌚

Lauren Bedosky is a Minnesota-based health and fitness writer.

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Your Q&A

BY ANDREW HEFFERNAN, CSCS

Q Does the advice to “optimize in 45” still hold true?

A The “optimize in 45” principle was popularized in the 2004 book *Nutrient Timing*. The theory asserts that your body is primed to turn protein into muscle in the 45 minutes following a hard workout, so you should take advantage of this anabolic window by eating protein soon after your session’s final rep.

Recent research challenges this notion. In 2013 a review study published in the *Journal of the International Society of Sports Nutrition* examined the results of some 1,000 subjects and found little support for the practice of nutrient timing. The authors concluded that “consuming adequate protein in combination with resistance exercise” — not

the timing of your meals — is the key factor to building muscular strength and size.

Nevertheless, says Life Time program manager Paul Kriegler, RD/LD, following the “optimize in 45” concept is still a worthwhile habit for people seeking general fitness. “For average gym-goers and active adults,” he says, “a postworkout protein focus is a good way to promote recovery and fitness improvements.”

The anabolic period probably isn’t as brief as 45 minutes — the study suggests it may be as long as six hours — but for most fitness enthusiasts, consuming 20 or so grams of protein shortly after a workout can support muscle growth and recovery. Try three whole eggs; a hand-size portion of cooked chicken, turkey, seafood, or red meat; or a large scoop of protein powder in a smoothie to hit the 20-gram goal.

Q How reliable is the data on gym machines?

A Many data readings on cardio machines aren’t precise, but there are ways to increase their reliability, says Nicole Pinto, a clinical exercise physiologist at the University of California, San Francisco’s Human Performance Center.

Steps, time, and distance are based on the movement of the machine’s gears. These can be accurate, provided the machine is well maintained and has a reliable power source. Data like caloric burn, heart rate, and power output are trickier to measure reliably without specialized equipment. Here’s why:

Calorie counts are generally based on a formula that does not take your unique physiology or metabolism into account; on most machines, the default setting is for a male weighing 150 pounds. As a result, the counts are estimates at best. Increase the odds of getting a somewhat accurate reading by entering your age, gender, and weight into the machine before your workout.

Heart-rate measurements are most accurate when you use a chest strap connected to an app or watch. Due to sweat and movement, handgrips (and even chest straps) can lose connectivity to a machine.

Power-output readings are fairly reliable, but performing something as common as a sprint interval can skew the accuracy dramatically.

All readings on cardio machines are based on the assumption that you’re using the equipment correctly. Leaning excessively on handrails, for example — common on stair climbers and inclined treadmills — causes the machine to overstate metrics like calorie burn and power output, sometimes by a wide margin.

Your best bet is an external monitor, such as a fitness or heart-rate tracker with a chest strap. Keeping the battery fresh will help you avoid accuracy issues of your own.



Q

What's the best warm-up for strength training?

A

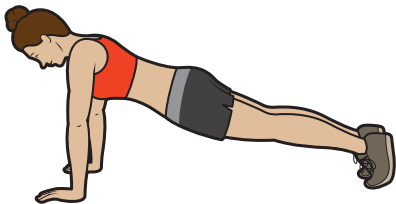
Warming up before a strength session lubricates your joints and increases your body temperature — important preparation for making the most of your workout. In the long term, a good warm-up, performed consistently, can improve your posture, enhance performance, and prevent injury.

While these may sound like lofty goals, warming up to lift weights does not have to be a long or laborious process, says strength coach Tony Gentilcore, CPT, CSCS.

“There’s a ton of value in targeting problem areas that pretty much every human has,” Gentilcore says. The hip flexors, glutes, hip joints, and midback are good areas to focus on, because they’re all prone to stiffness and can be difficult to activate in exercise.

To mobilize and warm up these key spots in one compound move, Gentilcore recommends this Yoga Push-Up Complex.

Yoga Push-Up Complex



- Begin in a high plank position, with hands on the floor and core engaged.
- Press your hips up and back to assume a down-dog posture. Your arms will be straight (but not locked out),



- weight evenly distributed in your hands.
- Pedal your feet to open up the hamstrings, and then settle into the down-dog position by dropping your heels toward the floor.



- Step your left foot to the outside of your left hand so you’re in a high lunge. Keep your right hand planted on the floor and rotate from the midback to reach your left hand toward the ceiling.

- Return your hand to the floor and step back to the plank position. Repeat the entire complex on the right side. Alternate sides for five or six sequences per side.

Following this full-body flow, perform an exercise-specific warm-up by doing a few light sets of your main strength move of the day, says Gentilcore. Focus on excellent form and a full range of motion to get the feel for the movement and mentally prepare for tougher sets. For instance, if your workout includes barbell squats, perform sets of five reps with progressively heavier loads leading up to your work sets.

If you’re short on time, you can skip the full-body warm-up, he says, but don’t skimp on the exercise-specific warm-up. If you jump right into heavy working sets, you not only compromise your performance, but you also risk injury. Five minutes at the start of a workout will go a long way in keeping you safe and strong. 🏋️

Andrew Heffernan, CSCS, is an *Experience Life* contributing editor.

Growing Pains

How an elimination diet — and some tenacity — helped one young woman reverse her alopecia.

BY CLAIRE CAMERON

As a kid, I hated my naturally curly locks and hoped they would fall out. I wanted straight, shiny hair, because my older sister told me that was cooler than curls.

Now that I'm older and have endured the heartache of hair loss, I've learned to be more careful about what I wish for — and to appreciate what I have.

My hair started falling out when I was in the third grade. At first, my hairline receded an inch; then a sparse patch appeared over each of my ears. Alarmed, my parents took me to a doctor, who diagnosed me with alopecia, an autoimmune condition that causes hair loss.

Additional blood tests revealed I also had Hashimoto's and MTHFR, a gene mutation that I thought made me sound like a superhero. It was a lot for a 9-year-old to handle — and



Claire's senior photo in 2017, featuring her natural hair.

my doctors didn't offer much in terms of a treatment plan.

By sixth grade, I had also developed severe and persistent cystic acne, a common symptom of thyroid conditions like Hashimoto's.

Over the next year, I transitioned from styling my hair with strategically placed bobby pins to wearing a wig full-time; underneath, my scalp was completely bald. In a painfully ironic twist, people complimented my hair all the time: They didn't realize that I actually had none.

Sensitive and introverted by nature, I became reclusive. I left my public school and enrolled in Homebound, an alternative program for kids with extenuating health circumstances. I threw myself into my schoolwork and, while I maintained a close group of friends, I spent much of my adolescence alone in my room.

Searching for Answers

My most formative years were a perpetual struggle to keep my skin clear and my hair growing. I tried steroid

Success Summary

Meet: Claire Cameron, 18, a high school student in Franklin, Tenn.

Big Achievements: Sticking with a difficult elimination diet to manage her Hashimoto's and alopecia symptoms, and ultimately regrowing her hair.

Big Inspiration: "Sheer stubbornness is what really inspired me," Claire says. "It's just my personality. But when I started seeing results in hair, skin, mood, and overall well-being, that motivated me all the more."

What Worked: Eliminating inflammatory foods and embracing stress-management techniques, such as acupuncture and neurofeedback. Claire also cites certain supplements — iron, probiotics, and evening-primrose oil — that contributed to her progress.

creams and foams, dermatologist-prescribed facial treatments, supplements, and vitamins.

These remedies often produced adverse reactions. Doctors had no answers, just a lot of prescriptions that didn't work or caused new symptoms. I felt miserable and hopeless.

That's when my mom began searching for alternative solutions. Her research turned up functional-nutrition and hormone coach Jill Grunewald, HNC, who not only battled her own Hashimoto's into remission, but also overcame several bouts of alopecia, regrowing her hair on multiple occasions. If anyone could help me, we thought it would be her.

A New Way of Eating

I dreaded my first phone call with Jill in 2014, because I suspected she'd want me to overhaul my eating habits. Even though nothing had worked before, I still wanted a pill to fix everything.

Indeed, my diet was Jill's initial focal point, and our work together began with my cutting out gluten, dairy, nightshades, and eggs. I'd never been a big fan of vegetables, but suddenly they were at the center of my diet.

I also took a hydrochloric-acid test, which revealed that I wasn't absorbing enough nutrients from my food because I didn't have enough stomach acid for proper digestion. So Jill suggested extra measures to heal my gut. I took probiotics and glutamine, and

I sipped mugs of bone broth for its healing properties.

A total gut overhaul comes with a lot of challenges. I was already isolated; now I couldn't do a lot of the things my friends wanted to do. When we went out to eat, I couldn't order anything.

I'm pretty stubborn, though, and that worked in my favor. I refused to stray off course, and after about eight weeks, I began to see a difference: My acne had subsided, and a little peach fuzz was growing on my scalp.

After years of trying so many products and prescriptions that didn't help, I was shocked by how profoundly a healthier diet improved my condition. It was exhilarating to finally make progress. These small improvements boosted my mood and made it easier to stay on the protocol.

Under Jill's supervision, I stayed in the elimination phase for a year — much longer than the average patient because it was clear that I had a lot of food sensitivities. Then, I hit a plateau: I wasn't losing my new hair, but it wasn't growing much, either.

Jill suggested that the stress of maintaining a restrictive diet might be taking a toll on my immune system, and we needed to find other ways to support my thyroid health. Because of my combined Hashimoto's and MTHFR, she referred me to thyroid expert Amy Myers, MD, in Texas.

Amy prescribed iron supplements, CoQ10, and evening-primrose oil, as well as acupuncture treatment for stress relief. The acupuncture seemed to accelerate my progress, and I began supplementing that therapy by applying castor oil and essential oils to my scalp.

I also started a neurofeedback program with David Haase, MD, a func-

tional-medicine practitioner near my home in Tennessee. I watched movies with electrodes attached to my scalp, which stimulated the reward center of my brain every time it found a new pathway to process the information. After about 40 sessions, I noticed a drastic improvement in my mood — I became less gloomy and was hopeful I'd see even more positive results.

Finding a routine to manage my stress made all the difference for my health. I was finally able to relax, and my social anxiety began to dissipate. Best of all, my skin problems and alopecia continued to improve.

A Shift in Perspective

Before my mom found Jill, I tried everything, but no one was able to offer a clear treatment plan. Through this process, I've come to value holistic treatments, and I know there's no such thing as a quick fix.

I was lucky to find knowledgeable experts who were willing to offer me something real, and everyone we worked with was another step in the process. It takes a village, but it was Jill who really taught me what I needed to know to move forward.

These days I'm in a managing phase. I would love to have perfectly clear skin and all my hair back, but that isn't even my main goal anymore.

What I want more than anything is to manage my stress and keep my body and mind healthy. I've learned that health is about so much more than being physically sick or well — emotional health is also a big, important piece of the puzzle.

I'll always have to manage my health conditions, but I'm confident I now have the resources I need to stay on track. Right now, I'm happy to be wig-free and am embracing my curls. ☘



From left to right: In July 2013, May 2015, and June 2015, Claire wore a wig full-time.

What Didn't Work: Prescription treatments like skin foams and steroids didn't address the root cause of Claire's condition — and they often caused new or worsening symptoms.

Words of Wisdom: "A lot of people expect one thing to be the cure, like a prescription or cream or something. It's not that simple. You have to take care of your health and overall well-being from a lot of different angles — and there won't be one easy answer that fixes all the problems."



Tell Us Your Story!

Have a transformational healthy-living tale of your own? Share it with us at experiencelife@experiencelife.com.

Rest & Reflect

These three retreats are designed to help you celebrate the holiday season, reconnect with your partner, or rediscover yourself and your purpose.

BY REGINA WINKLE-BRYAN

I've visited Breitenbush Hot Springs during every season: the excitement of spring, when the river is at its highest; the conviviality of summer, when towels damp from soakers hang from the lodge's banisters like prayer flags; the vibrancy of fall, as the first frost arrives and the air carries a pungent spicy aroma. But it's quiet winter I love most, when snow covers the ground and snug cabins await deep in the woods.

Any time in winter is worth a visit, but Breitenbush is especially popular during the end of the year. That's when the center hosts a 12-day celebration observing the winter solstice and holidays, culminating with an adults-only retreat on New Year's Eve.

Some guests opt to stay for the entire stretch, but most choose one event and come for a multiday escape featuring daily well-being programs — including yoga, crystal divination, and meditation — as well as hearty vegetarian meals, massage, and refreshing soaks in the site's seven hot springs.

Bethany McCraw, 51, has been visiting the nondenominational retreat center since the '80s and has attended both events at one time or another.

"Winter Solstice was pretty special because it was all about bringing in the light, and there was a nice guided meditation before dinner," she says.

New Year's Eve is a more lively affair, but there are no champagne corks popping at this alcohol-free destination. Instead, guests enjoy a feast of international dishes followed by live music and dancing. A midnight peace vigil offers an opportunity for introspection. "New Year's was my favorite," recalls McCraw. "The closing of the old and looking forward to the new. I love the sense of hope it brings."

Margaret Duperly, who has lived and worked at Breitenbush for more than 20 years, explains that, while the

event is fun, it's more than an amusing soiree. "There's a thoughtful part to exploring our humanity together," she says.

The Winter Holidays celebration is filled with seasonal workshops and memorable meals, but Santa never stops by and there is no special emphasis on the 24th or 25th. It's also a popular event for parents with young children. "Christmas at Breitenbush is a chance for people to come away from the materialism of the mainstream and return to simplicity, nature, and relationships, and sharing together," says Duperly. (For more on Breitenbush, read ELmag.com/simplespas.)

What: Solstice and holiday retreats

Where: Breitenbush Hot Springs Retreat and Conference Center, Detroit, Ore.

For: Individuals and families looking to celebrate the holiday season in a less materialistic fashion

Cost: \$162-\$256/person

www.breitenbush.com





What: Stress-relief retreat
Where: Siddhayatan Spiritual Retreat Center, Windom, Texas
For: Those seeking a no-frills place to unwind and engage with their inner wisdom
Cost: \$450-\$590/person
www.siddhayatan.org

Inner Awakenings

In 2009, Carmen Nadler, 36, was searching online for a place to recover from a health issue and decompress from the stress of new motherhood.

YouTube led her to videos featuring the soft-spoken, kind-eyed guru Acharya Shree Yogeesh. A longtime spiritual leader and activist, Acharya Shree has founded spiritual retreat centers in the United States, Europe, and India. He also opened a secondary school in Haryana, India.

After watching all of Acharya Shree's videos, Nadler packed up her family and drove from Saskatchewan, Canada, to Siddhayatan — a ranch in Windom, Texas, that Acharya Shree converted into a spiritual retreat center.

Siddhayatan offers no massages or other spa-type wellness services. The digs — located on 260 Internet-free

acres of stunning rolling hills, grass fields, and pockets of forest — aren't fancy, but the private and shared rooms are clean and affordable.

The center has no religious affiliation and welcomes people of all faiths; it also adheres to principles of non-violence, transformation, compassion, and healthy living.

Retreats focus on a range of topics: meditation, juice fasting, or posttraumatic stress disorder. But Siddhayatan's monthly Stress Relief Retreat is one of its most popular options.

Acharya Shree leads the three-day escape, which features a blend of guided mantra chanting, small-group workshops (three to 10 participants), homemade vegetarian meals, and tea times.

During classes, students share their stories, develop concentration techniques, and do Purnam yoga, a detoxifying practice that involves 84 breathing combinations.

"During workshops, you get a lot of time with Acharya Shree," Nadler explains. "He really listens to you — he validates; he shares good wisdom. I've felt empowered and inspired by him."

For many visitors, Siddhayatan becomes like a second home. Since her first visit, Nadler has visited more than 10 times. "It's not about stress now. I go because I enjoy it and think people need to take time out in their lives and retreat from society and the busyness of work," she says.

"After a retreat, I feel like a bunch of weight has been lifted off my shoulders. In fact, I feel it the minute I get there."



Deepening Connections

Here's the thing about the Playa Viva couples' yoga retreat: Your partner must be willing to go with you. When I asked my husband if he'd consider it, he raised his eyebrows. "I'm as flexible as a dry stick," he said. Not a decisive no, but a far cry from an enthusiastic yes.

I should have started by telling him about the retreat's beautiful location, tucked into the western Mexican coastline, surrounded by the music of a lush tropical forest. Every private *casita* has a view of the shoreline — front-row seats to sunsets over the Pacific. And then there's the food: A farm-to-table kitchen turns out dark, leafy greens from the onsite garden, grilled fish from the ocean, heaps of jewel-toned fruit, and myriad salsas to go with the ubiquitous rice, beans, and hot-off-the-griddle corn tortillas. Eco-friendly Playa Viva is secluded, intimate, and deliciously romantic — the ideal setting to relax and reconnect with your partner.

Bay Area yogis Anjali Mahendra and Alok Rocheleau have been leading yoga escapes at Playa Viva for five years, including this one designed exclusively for couples. During the six-day workshop, they lead participants in partner poses aimed at creating meaningful connection. In butterfly pose (*baddha konasana*), for example, couples sit back to back feeling each others' breath rhythms,

attempting to inhale and exhale as one.

Rocheleau also teaches massage techniques. "Learning to give and receive with your partner can be very empowering," he says. "A lot of couples reach out to us because they are missing that intimate connection of touch."

"Couples sometimes conflate intercourse and touch, an understandable conclusion, but one that is limiting," explains Mahendra. "Couples really appreciate the opportunity to share touch that is not sexual. This has been a theme and an overarching part of our work — teaching people how to be in contact as a spiritual experience that can support all levels of communication."

Rocheleau and Mahendra also allocate time for group meditation as well as dyadic conversations in which one partner speaks while the other simply listens.

Nicole Shea, 35, attended last year's retreat with her partner, Michael Shea, 48, and says the dyadic aspect was a challenge at first, but then it became a rich healing experience. "We quickly saw how speaking to one another about our personal experiences, needs, and desires within our relationship was enlightening," Nicole recalls. "This served as a platform for us to have deeper conversations on our own later."

Much of the workshop focuses on spending quality time together. This was a big takeaway for Nicole. "There were many unscheduled times during the retreat when we just got to hang out as a couple instead of always doing something," she says. "This was invaluable because we don't often get a lot of time together during the day to just be with one another."

Playa Viva provides the opportunity to hear and touch each other as well as chill together with a good book and a fresh-basil margarita. There is plenty of free time to beachcomb, rock in a hammock, splash in the waves, or take part in organized activities such as permaculture hikes and a cacao ceremony. Nightly beach bonfires bring guests together for singing and storytelling under countless stars. 🌌

What: Couples yoga retreat

Where: Playa Viva, Mexico

For: Yogis of all levels looking for a place to get in touch with their partner

Cost: \$1,650–\$1,900/person includes lodging and three meals a day
www.contactyoga.org/mexico.html

Regina Winkle-Bryan is a freelance travel writer and photographer.

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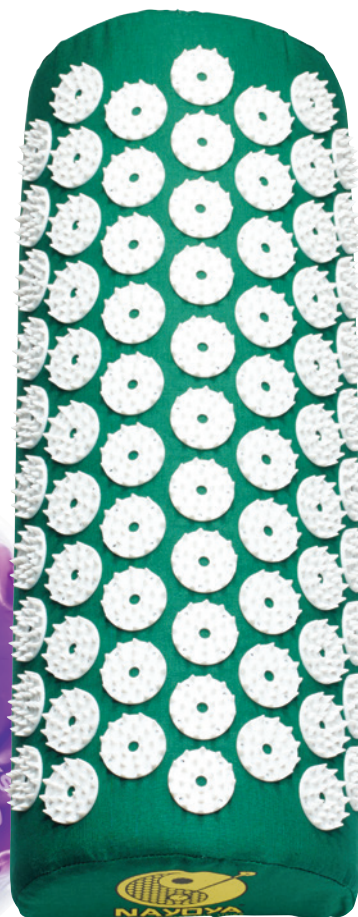
With Yolika's natural-bristle brush, you can dry brush before getting in the shower and then suds up for an exfoliating scrub. About \$17 from online retailers.

» Cool Down

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Self-Restoration

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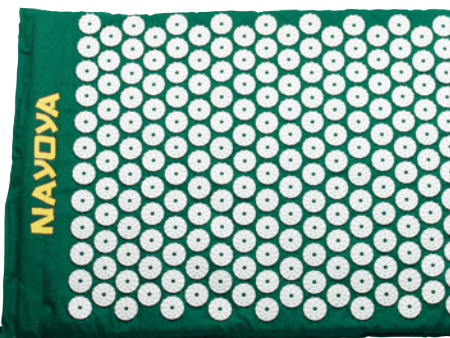
» Roll With It

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« Warm Up

This tingly, organic massage balm from Himalaya contains essential oils of peppermint, rosemary, eucalyptus, and lemon to help stimulate blood flow to stiff and sore areas. \$8. www.himalayausa.com



» Put On the Pressure

Acupressure mats are covered with tiny, sharp discs that press on points in the back to relieve pain and restore energy flow. Lying on one might seem like a counterintuitive way to relax, but it can work wonders. About \$60. www.nayoya.com

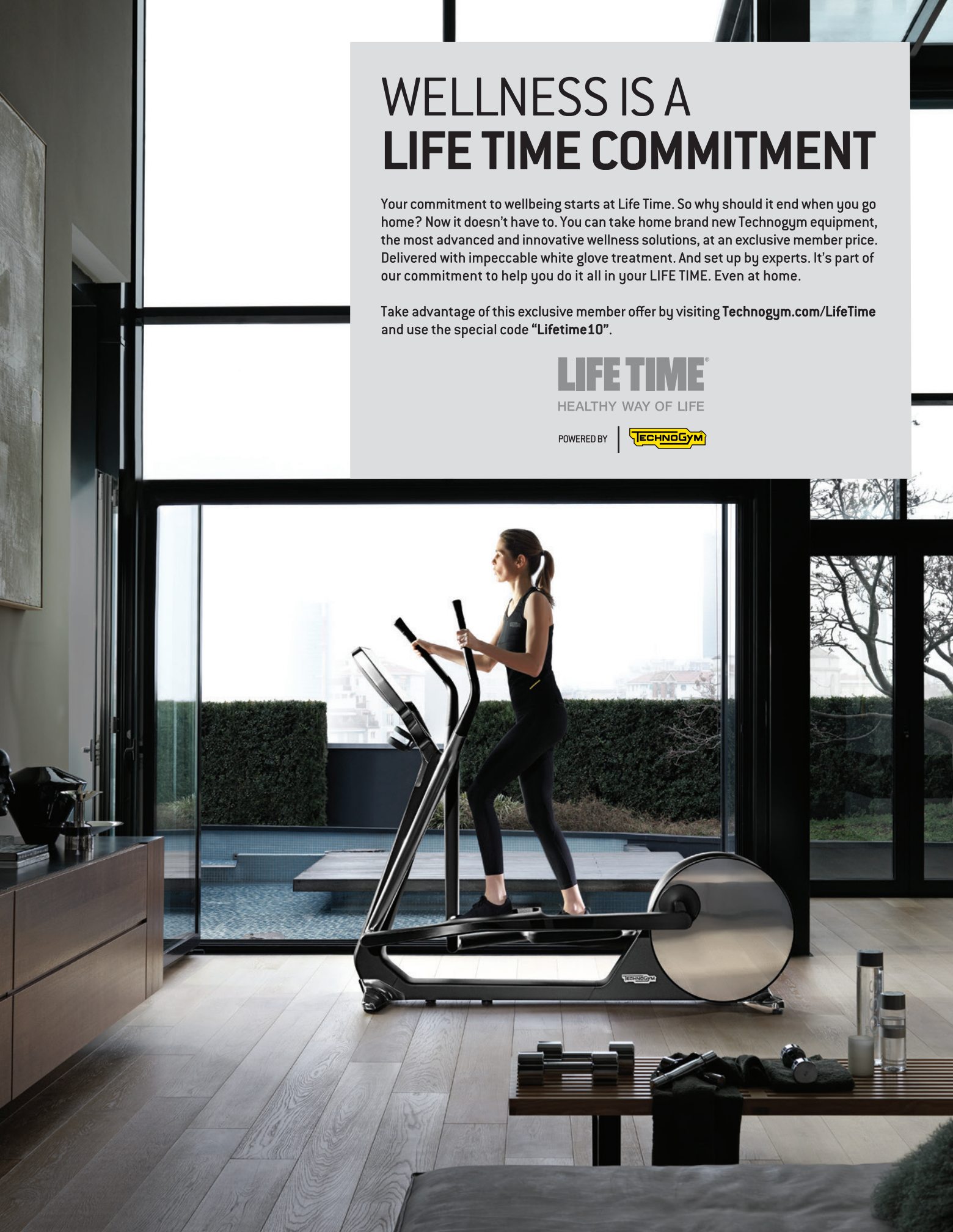
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Healthy Eating



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Russ Crandall's forthcoming cookbook is also a history lesson. Believing that too many Americans have lost touch with the traditions of their ancestors, Crandall was inspired to collect and develop recipes that celebrate heritage cooking, including this Austrian Potato Soup.

Find this recipe and others at ELmag.com/heartytraditions.



Vitamin D: What You Need to Know

The sunshine vitamin supports hundreds of processes in your body. Learn why you may need more of it than you think.

BY LAINE BERGESON, FMCHC

When vitamin D was discovered in the early 20th century, it was considered a breakthrough. Public-health officials — armed with the new knowledge that the vitamin helps the body absorb calcium — led the charge against rickets, a crippling bone disease that reached epidemic levels among infants and children in industrialized northern cities in the United States and Europe.

Based on the emerging research, doctors began recommending sunshine and cod-liver oil for bone health, while many food and drink manufacturers started fortifying their products — milk, hot dogs, even beer — with vitamin D.

Since then, the medical establishment has gone back and forth on its vitamin-D recommendations. In the 1950s, British health officials blamed an outbreak of hypercalcemia, or too much circulating calcium in the body, on diets overrich in D (though they never proved causality). Several

European countries subsequently banned vitamin D-fortified foods altogether. And since it takes relatively little D to keep rickets at bay, physicians largely stopped promoting it.

In the 2000s, the attitude toward vitamin D shifted again in light of the vast body of research demonstrating its vital role in overall health. Studies showed that the sunshine vitamin triggers the expression of more than 200 health-supporting genes. Additional studies suggested that D has a protective effect against chronic conditions such as cancer, osteoporosis, cardiovascular disease, diabetes, asthma, and neurodegenerative disease.

“Vitamin D’s role in calcium-level maintenance, or bone health, is the one we’ve known about the longest,” explains nutrition scientist Chris Masterjohn, PhD. “We now have increasing evidence that it regulates hundreds of other processes in the body.”

People flocked back to vitamin D,

and many doctors began recommending higher doses.

Then in 2010 the Food and Nutrition Board of the Institute of Medicine (IOM) — the nonprofit, nongovernmental organization now known as the National Academy of Medicine (NAM), which sets dietary guidelines — recommended vitamin-D levels far below those advised by researchers. Their suggestions considered serum blood levels above 20 ng/mL (nanograms per milliliter) to be adequate.

Many clinicians and health organizations, including the Endocrine Society, argued for recommendations of 30 ng/mL or more.

This left health-conscious consumers confused about which advice to trust — and how to ensure their own vitamin-D levels are high enough for optimal health.

To help clear up the confusion, we asked several leading experts to answer six common questions about this essential nutrient.

1. What is vitamin D and why is it important?

Vitamin D is a nutrient we ingest (from food or supplement) and our bodies synthesize (from sunlight; skin contains a “precursor” molecule that is transformed into vitamin D when exposed to UVB rays).

Once active in the body, vitamin D becomes raw material for making the hormone calcitriol, which supports calcium and phosphorous absorption

and bone health. In fact, virtually every cell and tissue in your body has D receptors, including cells in the immune system.

Research suggests that vitamin-D deficiency may be one reason people get more colds and flu in winter, when it’s difficult for the body to get enough sunshine to make sufficient D. The vitamin’s immune-boosting power may also

help explain the protective relationship between sufficient D levels and reduced risk of cancer — specifically colon cancer. (The colon contains abundant vitamin-D receptors.)

Inadequate vitamin D is also associated with an increased risk for autoimmune diseases and cardiovascular issues. D deficiency is associated with a 50 percent increased risk of myocardial infarction, as

well as a higher chance of hypertension, congestive heart failure, and peripheral vascular disease.

Healthy D levels may also tamp down systemic inflammation. Research published in the *Journal of Immunology* in 2012 found that vitamin D turns on a gene that interferes with the inflammatory response.

In addition, vitamin D has been associated with improved sleep and mood, as well as oral health and muscle maintenance.

Virtually every cell and tissue in your body has D receptors, including cells in the immune system.

2. Is vitamin-D deficiency really a problem these days?

The Endocrine Society recommends a minimum vitamin-D blood level of 30 ng/mL — and between 40 and 60 ng/mL for optimal health. The Institute for Functional Medicine (IFM), which promotes an integrative medical model, advises between 50 and 80 ng/mL.

Based on the Endocrine Society thresholds, an estimated 70 percent of the world’s population is D deficient. This includes people living where sunshine is plentiful year-round, says P. Michael Stone, MD, MS, a family physician in Ashland, Ore., and IFM faculty member.

Experts point to myriad factors that might help explain the widespread deficiency: the amount of time we spend indoors; liberal use of sunscreen, which hinders D synthesis; and rising rates

of obesity, which correlates with low D levels, though experts aren’t entirely clear why.

Compromised gut function may also play a role. Chronic conditions such as celiac disease, Crohn’s disease, and chronic pancreatitis affect digestion and reduce vitamin-D absorption from food. Certain medications, including laxatives and cholesterol-lowering medicines, may also contribute to a vitamin-D deficiency.

Ultimately, a combination of all these factors could reduce vitamin-D absorption — and it may involve unknown mechanisms and processes.

“I think we’ll know a lot more about vitamin-D metabolism and deficiency in the coming years,” says functional-medicine practitioner Frank Lipman, MD.



70%
of the world's population is D deficient. This includes people living where sunshine is plentiful year-round.

3. Should I have my vitamin-D level tested?

Yes. “You can’t look at a person and know his or her vitamin-D level,” explains internal-medicine practitioner and vitamin-D researcher Gregory Plotnikoff, MD. “Just like with cholesterol or thyroid assessments, actually getting a blood measurement is necessary.”

Vitamin D affects multiple systems in the body in some not-so-obvious ways. For instance, it plays an influential role in the tightly choreographed dance of your body’s master hormones, including thyroid hormones, cortisol, insulin, and calcitriol.

“You have to be careful,” says San Francisco-based functional-medicine practitioner Tiffany Lester, MD. “If vitamin D is too low, it can affect hormone levels, like cortisol and thyroid.” Too-high levels can also throw off all the others.

Insufficient or excessive levels of vitamin D can contribute to nonspecific symptoms that may be attributed to other health concerns. Symptoms of vitamin-D deficiency, for example, can include migraines, muscle pain, joint and back pain, depression, allergies, and inflammation.

“Low vitamin-D status is not 100 percent causal of these problems, but it can play a role,” notes Stone. “Anywhere there are inflammation control problems, consider D adequacy.”

Excessive levels of fat-soluble vitamin D, on the other hand, can bioaccumulate in your body (unlike water-soluble vitamin C), and in extreme cases may lead to hypercalcemia. Although rare, this can cause poor appetite, nausea, vomiting, frequent urination, and kidney problems.

4. How is vitamin D measured, and how often should I test?

The most common measure of active vitamin D in the bloodstream is called 25-hydroxyvitamin D, or 25(OH)D. Your doctor can order a lab (insurance often covers the cost during an annual physical) or you can purchase a test through a direct-to-consumer lab for around \$60.

Of course, any nutrient’s reference range — which healthcare practitioners use to compare and interpret nutrient levels — is based on averages. A more personalized way of learning whether you have sufficient circulating D is to measure your parathyroid hormone (PTH) levels, says Masterjohn.

Your parathyroid glands sit near the thyroid and release PTH, which helps

regulate calcium levels. If you’re deficient in vitamin D, your parathyroid will release more PTH to help increase blood levels of calcium and initiate the activation of D into



Get tested every year — ideally every six months, depending on where you live.”

calcitriol. If your PTH levels are high, you are likely not getting enough vitamin D; if PTH levels are low (or “maximally suppressed”), you likely have adequate D.

“When you get your 25(OH)D measured, the reference range you’re

measured against makes an inference about your PTH,” explains Masterjohn. “But since we know that different people have different needs, we want to look at whether your PTH is maximally suppressed, because you might be different from the average.”

Whichever test you choose, experts recommend monitoring vitamin D regularly, as levels fluctuate with nutrition and sunlight exposure. “Get tested every year — ideally every six months, depending on where you live,” says Cindi Lockhart, RDN, national nutrition program manager for Life Time Medical. She notes that people in northern latitudes might be at higher risk due to less year-round sunshine.



5. How can I boost my vitamin-D levels?

The easiest way is to get outside and let the sun do its work. Keep in mind that the amount of sun exposure it takes for your body to synthesize vitamin D depends on skin tone: Those with fair skin may need as little as 10 to 15 minutes of direct, unprotected sun exposure on a summer day to make several thousand international units (IUs are used to measure many nutrients). For those with darker skin tones, it can take up to two hours. (For information on safe sun exposure, see ELmag.com/sunbenefits.)

You can also get your vitamin D through food. Key whole-food sources include cod-liver oil (which delivers 1,360 IU per tablespoon); fatty fish like canned salmon, sardines, and mackerel (350–920 IU per serving); and eggs (48 IU per egg).

Michael Holick, MD, PhD, of Boston University School of

Medicine, offers this guideline: “When your status is above 20 ng/mL, every hundred units [IUs] you ingest raises your status 0.6 to 1 nanogram per milliliter. We did a study that showed that in healthy adults who had an average status of 18 ng/mL, 1,000 IUs per day raised their levels to 28 ng/mL for three months.”

Because food delivers relatively little D, and many people can’t get adequate levels from sunshine, supplementing is an important strategy.

“Whether you live in Saudi Arabia or Brazil or Sweden, you can’t make D before 8 a.m. and after 4 p.m.,” Holick says. (See “Supplement Wisely,” at right.)

Stone notes that vitamin D from the sun stays in the body for only 24 to 48 hours; D from food and supplements stays just 12 to 24 hours. So it’s important to get D every day.

6. Can I get too much vitamin D?

Yes, but it’s rare. “I’ve been in practice for 26 years,” says Lockhart, “and I could count on one hand the number of people who’ve had vitamin-D levels higher than the reference range.”

In the few situations in which Lockhart has found toxicity, it has been due to other medical issues. “In the cases I’ve seen, the individuals had deeper issues with the parathyroid or liver,” she says, noting that these patients were not oversupplementing.

While the IFM’s optimal range uses 80 ng/mL as the upper limit, some functional and integrative practitioners wave a cautionary

flag at 70 ng/mL. Levels over 90 ng/mL are considered toxic territory. But even regular high doses of D are unlikely to push most people into the danger zone.

“Most adults can take 5,000 to 10,000 IU per day for six months and not have adverse effects,” notes Stone.

Individuals with sarcoidosis, tuberculosis, Lyme disease, lymphoma, or kidney disease, however, should supplement carefully, test regularly, and consult with a clinician. Too much vitamin D can put them at increased risk for dangerously high blood-calcium levels. ☪

Supplement Wisely

If your vitamin-D levels are low and you can’t safely or sufficiently raise them with whole foods or sunshine, taking a supplement can help. “Vitamin-D replenishment represents the single most cost-effective thing we can do in medicine to boost baseline health,” argues Gregory Plotnikoff, MD. Here are a few guidelines:

- **Know your levels.** The Institute for Functional Medicine recommends the following supplement dose based on measured blood levels of vitamin D. Retest in three to six months. If your numbers have improved, lower your dose accordingly. If not, ask your doctor about testing for genetic polymorphisms that may slow or inhibit your body’s ability to convert vitamin D.

25(OH)D Level	Supplement Dose
Less than 10 ng/mL	10,000 IU/day
10–20 ng/mL	10,000 IU/day
20–30 ng/mL	8,000 IU/day
30–40 ng/mL	5,000 IU/day
40–50 ng/mL	2,000 IU/day

- **Choose vitamin D3.** “A lot of people are prescribed D2,” says Tiffany Lester, MD, referring to a synthetic version of the nutrient called ergocalciferol. “This is not the most bioavailable form. D3 (cholecalciferol) is 85 percent more effective in raising blood levels of vitamin D.”
- **Also take vitamin K2.** Vitamins D3 and K2 work together to strengthen bones, explains Lester, adding that high doses of D on its own can deplete vitamin K2 in the body. When taking D, it’s also important to get adequate amounts of magnesium to ensure you can absorb calcium effectively.
- **Try liquid forms.** If you don’t like swallowing pills, or you’re trying to get children to take vitamin D, try sublingual or liquid D. It’s just as effective, says P. Michael Stone, MD, MS.
- **Eat healthy fats.** Vitamin D is fat-soluble, which means it requires dietary fat to be absorbed by the body. A great source is fatty fish, which also delivers vitamin D.

Laine Bergeson, FMCHC, is a health journalist and a certified functional-medicine health coach.

Hearty Traditions

This winter, stay cozy and warm with these modern takes on heritage dishes.

BY RUSS CRANDALL

I travel a great deal as a Russian translator for the U.S. Navy, a career that has given me fantastic opportunities to research many cultural and linguistic traditions. As someone who also manages an autoimmune disease, I'm fascinated by the intersection of food, ancestry, and personal health — and I've come to believe there's no one-size-fits-all healthy diet.

My understanding is, in part, informed by the ancestry research and DNA testing I undertook for myself, which led me to the English villages where some of my distant relatives lived. After discovering my English heritage, I decided to start eating oats again — a food my ancestors would have eaten but which I avoided when I was following a strict paleo diet. In doing so, I feel I'm honoring not only my family heritage but my own health blueprint.

These days, I'm interested in recipes that have been passed down through generations within various cultural and ancestral traditions. Although many of my interpretations are paleo friendly, they also represent dishes that have withstood the test of time.

Russ Crandall is a U.S. Navy translator, food blogger, and nutrition enthusiast. He is the author of two cookbooks, *The Ancestral Table: Traditional Recipes for a Paleo Lifestyle* and *Paleo Takeout: Restaurant Favorites Without the Junk*. His third cookbook, due in spring 2018, will focus on heritage-inspired cooking.



Skillet-Roasted Winter Vegetables

Generations ago, people cooked meals on hearths and bread in ovens, and the two functions often happened in different parts of the house. Ovens and stoves eventually began to coexist in the kitchen, but roasting foods in an oven wasn't common practice until relatively recently. Though we've been eating root vegetables for centuries, you could say roasting them is a new tradition.



Feel free to swap out the carrots and parsnips for other root vegetables, like turnips or beets.

Makes four servings

Prep time: 20 minutes

Cook time: 20 minutes

-
- 6 ½ lb. carrots, peeled and cut into bite-sized chunks
 - ½ lb. parsnips, peeled and cut into bite-sized chunks
 - 3 tbs. duck fat, lard, or olive oil
 - 1 lb. Brussels sprouts, sliced in half lengthwise, bottoms removed
 - Zest of 1 lemon
 - 2 tbs. chopped fresh parsley
 - Salt and pepper to taste (about ¼ tsp. each)
-
- Preheat the oven to 500 degrees F. Place the carrots and parsnips in a pot of salted water; bring to a boil, reduce heat to medium-high, and boil until they start to turn tender, about three minutes. (This is called parboiling and will help ensure the root vegetables finish roasting at the same time as the Brussels sprouts.) Drain and set aside.
 - Place a seasoned cast-iron skillet in the oven until just smoking, about two minutes. (Heating the pan before adding the vegetables will speed up the cooking process.) Add the cooking fat, the Brussels sprouts, and the parboiled carrots and parsnips to the skillet; stir to combine.
 - Roast until the vegetables are tender and crisp, about 20 minutes, stirring every five minutes. Remove from the oven, add the lemon zest, parsley, and salt and pepper to taste, and serve.

Winter Slaw

Russians consume more cabbage than those in any other country that counts its intake: about 40 pounds per person per year. By comparison, the average American eats only about 9 pounds annually. This dish is a fresh take on a traditional cabbage slaw that Eastern Europeans have enjoyed for centuries.

Makes six servings

Prep time: 20 minutes

-
- 1½ heads green cabbage, shredded
 - ½ head red cabbage, shredded
 - ½ red onion, thinly sliced
 - 2 carrots, thinly sliced into short strips
 - 1 small handful fresh mint leaves, thinly sliced
 - 1 tbs. Dijon mustard
 - 1 tsp. apple-cider vinegar
 - 1 tsp. olive oil
 - Juice of ½ lemon (about 1 tbs.)
 - ½ tsp. honey or coconut palm sugar
 - ½ tsp. salt, or more to taste
 - ½ cup chopped walnuts, divided
 - 1 cup pomegranate seeds, divided
-
- In a large mixing bowl, add the cabbages, onion, carrots, and mint leaves. In a separate bowl, combine the mustard, vinegar, oil, lemon juice, honey, and salt.
 - Pour the liquid into the cabbage mixture, and combine with your hands. Taste and add salt if needed. Mix in two-thirds of the walnuts and pomegranate seeds with your hands, and then scatter the remaining walnuts and pomegranate seeds on top. For best results, cover and refrigerate for at least an hour before serving.



Cabbage delivers vitamins C and K, sulfur, and folate. And the purple hue of the red variety signals bonus levels of inflammation-busting phytonutrients.

Buckwheat Kasha

“Kasha” is a catch-all term meaning “porridge” in Russian, but the consistency of this dish is more like rice than oatmeal. If you can’t find roasted groats, roast them yourself in a dry pan over medium heat for five minutes, stirring occasionally.



Buckwheat is a gluten-free, whole-kernel grain that's high in antioxidants and fiber.

Makes four servings
Prep time: five to 10 minutes
Cook time: 20 minutes

- 2 cups chicken or beef broth, or water
 - 1 egg, lightly beaten
 - 1 cup roasted, cracked buckwheat groats
 - 2 tbs. butter
 - Salt to taste
-
- In a saucepan, bring broth to a simmer over high heat; then reduce heat to low to keep broth warm.
 - In a bowl, combine the beaten egg and roasted buckwheat; stir until buckwheat is evenly coated.
 - Warm the butter in a skillet over medium-high heat. Add the buckwheat-egg mixture and toss until the buckwheat kernels are evenly coated with the butter. Sauté until the egg has dried and the kernels are separated, stirring constantly, about two minutes.
 - Add broth to the skillet and bring to a simmer, stirring. Cover and reduce heat to medium-low; simmer until the liquid is absorbed, seven to 10 minutes. Salt to taste and serve immediately (try topping with butter or a fried egg). Refrigerate for up to three days.



Grilled Argentine Steak With Chimichurri

Cooks in Argentina perfected grilled meats long before Europeans introduced cattle there. A more authentic heritage-focused recipe would call for guinea pig — but that's tough to find in a grocery store. This recipe uses cuts of grassfed beef such as tri-tip. The cilantro and rosemary give it a new twist.

Makes four to six servings

Prep time: 10 minutes, plus time to heat the grill

Cook time: 30 minutes, plus 10 minutes resting time

For the steak and marinade

- 1 tbs. kosher salt
- ½ tbs. black pepper
- ½ tbs. paprika
- 2 tbs. olive oil
- 2- to 4-lb. beef tri-tip or sirloin steak (look for 2- to 3-inch-thick cuts)

For the chimichurri

- 3 cloves garlic, minced
 - 1 cup chopped fresh cilantro (about ¾ bunch), stems included
 - 1 tbs. chopped fresh oregano or rosemary leaves (from about 2 sprigs)
 - 2 tbs. red-wine vinegar
 - ⅓ cup olive oil, or more to taste
 - Salt to taste
 - 2 pinches black pepper
 - 2 pinches crushed red-pepper flakes
-
- Lemon wedges

• Combine the marinade ingredients in a small bowl. Rub the marinade over the steak and set aside. Warm up the grill for indirect moderate heat: If using a charcoal grill, bank the coals to one side; if using a gas grill, ignite the burners on one side.

• Place the steak on the cool side of the grill and cook until it reaches an internal temperature of 110 degrees F, about 25 minutes. As the meat cooks, combine the chimichurri ingredients in a bowl.

• Move the steak to the hot side of the



Grassfed beef is higher in omega-3s, beta-carotene, vitamin E, and B vitamins than grain-fed options.

grill and cook on each side until lightly charred, about two minutes per side. (This technique of cooking first and searing second is called a reverse sear.)

• Remove steak from the grill and let it rest for 10 minutes before slicing against the grain. Serve with the chimichurri and lemon wedges. 🍴



Web Extra!

Find the recipe for Russ Crandall's Austrian Potato Soup at [ELmag.com/heartytraditions](https://www.ELmag.com/heartytraditions).

Why No Numbers?

Readers sometimes ask us why we don't publish nutrition information with our recipes. We believe that (barring specific medical advice to the contrary) if you're eating primarily whole, healthy foods — an array of sustainably raised vegetables, fruits, nuts, seeds, legumes, meats, fish, eggs, whole-kernel grains, and healthy fats and oils — you probably don't need to stress about the numbers. We prefer to focus on food quality and trust our bodies to tell us what we need. — *The Editors*

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Holiday Hazards

Enough already with the artificial substitutes in traditional dishes. Let's stick with the real stuff.

BY DARA MOSKOWITZ GRUMDAHL

What's the worst holiday recipe? This is a parlor game that's easy to manipulate — for instance, take 12 live alligators, add fresh thyme; serve right away. Insert freshly unwrapped Twinkie into T-shirt cannon, fire; add fresh garnish if desired. Freeze eggs in Popsicle molds; run.

I could do this all day!

I kid, but let's be honest: The holidays really are the time when the worst recipes of the year rear their terrible, no-good, very bad heads.

For instance, have you ever had tiramisu made with supermarket bagels and nondairy creamer? I hope not, because that is a horrible way to cap off a traditional Feast of the Seven Fishes Italian Christmas dinner. But it is a recipe I have seen with my own eyes — my forever frightened eyes.

I don't know why this was invented, but my best guess is that it was dreamed up to adhere to the long-held belief that dairy fat is bad for you. In fact, recent studies show that it's the trans fats in nondairy



creamer that pose the real danger to your health.

I've also seen recipes for Christmas Splenda gingerbread men, pans of holiday dressing lightened up with microwave popcorn that's been drenched in butter substitute, and a chocolate cake made with sugar-free pudding and Diet Coke.

A friend's grandma once welcomed her home from college for winter break by using fat-free cheese in her famous lasagna, assuming the advanced-tech substitute would behave like ordinary cheese. They had to order pizza after the lasagna came out of the oven all brown and leathery.

And one time I was given, by kind and generous people, a traditional *bûche de Noël* Christmas cake made with applesauce instead of butter. It had the texture of dry sand, and tasted of apples.

Holiday Performance Anxiety

What is it about the holidays that makes people go bananas for these awful updates?

I have a theory. I think it's mainly due to something I call Happy Holiday-Related Performance Anxiety. The holidays are the one time of year when we absolutely have to get it right — these are memories, folks! We want to create the best centerpieces, send the cutest cards, use the best wrapping paper, and offer only the most thoughtful gifts. You knew it was coming, so there are no excuses. Get your six-pack abs into your custom Santa suit and make with the Olympic-caliber happy.

Secondarily, I think Americans are uniquely vulnerable to that particular whispering shame that we're doing it all wrong — that the old ways, the

I don't know why a bagel-nondairy-creamer tiramisu was invented, but my best guess is that it was dreamed up to adhere to the long-held belief that dairy fat is bad for you.



old places are bad, and we have to get with the newfangled. After all, many of our ancestors ditched their Old World for this New World. They looked around wherever they were and said, “You know, let’s blow this Popsicle stand.”

Once you blow the whole Popsicle stand, why keep the traditional tiramisu?

Real-Food Traditions

If that’s the why, then the big question remaining is this: What are you to do when perfectly well-meaning people present you with Frankenfoods you’d normally never eat? How do you tell your Aunt Sue that you know she’s trying to both show you her love and take care of your health, but that the new wisdom actually suggests that real, whole foods in moderation top the fake stuff? That one whipped-cream-filled cream puff beats a whole tray of cream puffs filled with a nondairy, fluffy, spray-foam type of substance?

To minimize the run-ins, I recommend creating your own real-

food holiday traditions. Stovetop popcorn is an old-fashioned treat that deserves a comeback, with everyone gathered around a big pot in the kitchen, listening to the kernels pop. For a neutral flavor, use grapeseed oil to pop the corn. Or make like a hipster and use clarified butter or bacon fat.

Figgy pudding was a Christmas tradition for generations. It’s a dense sort of steamed fruitcake that can be easily updated. Keep it simple by standing a ripe fig on its base, slicing from the top to make an X, and filling the X with fresh ricotta. Finish it with a drizzle of honey and a few pistachios on top.

Pomegranates are also in season during the holidays, so drop a few jewel-like seeds into your champagne or lemonade with a splash of pomegranate juice for a drink as red and festive as Santa’s suit. Or make overnight oatmeal on Christmas Eve, with pie spices like cinnamon and nutmeg. The house will smell like heaven all day.

And if your well-meaning loved ones still insist on baking? Try telling

The holidays are the one time of year when we absolutely have to get it right — these are memories, folks!

them that it’s the gift of their time and presence that matters most — not what they’re serving on the holiday table: “Grandma, Aunt Sue, I love you just the way you are. And I love you just the way you were. Want to make gingerbread people together, the way we used to? I’ll bring the raisins to make the eyes; you bring all the things you’ve known so long you hardly know you know them, like what your own grandma made at the holidays. We’ll talk. And we’ll never speak of the bagel-nondairy-creamer tiramisu ever again — unless we need a laugh.”

Dara Moskowitz Grumdahl is a James Beard Award-winning food and wine writer.

Tasty Treats

Surprise your loved ones with delectable gifts this holiday season.

1. Seasonal Share

FruitShare puts together beautiful boxes of just-harvested organic fruit so your gift is always in season. \$49 for 6 to 8 pounds of fruit. www.fruitshare.com

2. Good as Gold

Fran's Almond Gold Bars are a Seattle-made treasure; fair-trade, organic dark chocolate is dense with almonds and caramel. \$28.50 for a box of six bars. www.frans.com

3. Healing Honey

Raw Manuka honey from New Zealand is renowned for its dark, earthy flavor as well as its gut-healing live enzymes and antibacterial properties. As health-supportive as it is tasty. About \$30. www.wedderspoon.com

4. Better With Age

This Giusti 12-year-old balsamic vinegar from Modena, Italy, follows the strictest traditional protocols. You can almost taste the commitment to history in its dense, plummy flavor. \$38 from www.deanandeluca.com.

5. From the Farm

Bariani olive oils come from a small California farm where every olive is treated like family. The white truffle-infused oil makes food sing. \$25. www.barianioliveoil.com

6. Sipping Ceremony

This ceremonial tea kit contains everything the Japanese ritual requires: matcha tea, ceramic bowl, bamboo whisk and scoop, and whisk stand. \$85. www.tealyra.com





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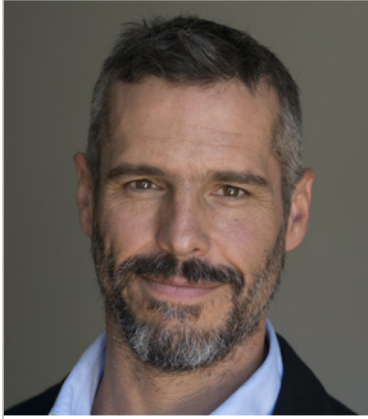
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of your nearest Life Time.**



Change Makers

These eight visionaries are changing the way we think about health, nutrition, and fitness — and improving our lives along the way.

BY JON SPAYDE

Of the many uncertainties Americans face today, the future of our health is among the most worrisome. With health-insurance coverage in flux, medical-research funding on the chopping block, and science itself under attack, it's only natural for us to be concerned about our collective health, which is already less robust than that of people in many other industrialized nations.

Yet there is still reason to believe better times are ahead. Plenty of people are devoting their lives to improving everyone's well-being, and most of them work outside of government and the insurance industry, where positive changes are often bungled or bogged down.

Meet some of the visionaries who are rethinking health, healthcare, and well-being from the ground up — and inspiring us to take our wellness into our own hands.



Food as Medicine

Jeanne Wallace, PhD, CNC, oncologist

Jeanne Wallace is committed to fighting cancer with food. In her practice, Nutritional Solutions, she teaches doctors and patients how to support standard cancer treatments with evidence-based nutritional strategies that focus on altering the body's environment, making it less friendly to tumors.

Her work is rooted in personal experience; several of her family members are cancer survivors. When her partner, Cheryl Clark, was diagnosed in 1997 with an aggressive brain cancer, Wallace did intensive research and developed a protocol to support Clark's treatment. Clark reduced her intake of sugar and carbohydrates and employed specific herbs and supplements, all of which boosted the effectiveness of her radiation treatment.

Today, Clark remains well, and Wallace is a sought-after speaker, as well as a respected authority in the burgeoning field of nutritional oncology.

Learn more about Wallace's work at www.nutritional-solutions.net.



PHOTO: JIM NEWBERRY

Feeding Justice

Ron Finley, founder of The Ron Finley Project

Before he became internationally known as a food activist, Ron Finley was a clothing designer. He had an eye for beauty — and for its absence. In 2010 he looked around his South Los Angeles neighborhood and saw only fast-food joints, liquor stores, and corner shops peddling processed snacks. He calls this “food injustice.”

“You can’t tell me that’s not by design,” Finley argues. “Some people say, ‘If these people wanted to eat healthy food, they could.’ But there’s no healthy food in their neighborhoods to eat, period.” His response? “If they’re not bringing it, let’s grow it!”

Finley started planting vegetables on the city-owned parkway — the strip between the sidewalk and the street in front of his house — offering them free to anyone willing to harvest them. The city ticketed him for “overgrown vegetation.” He refused to pay the fine until better grocery stores were recruited to the neighborhood, and an arrest warrant was issued. With the aid of other activists, Finley convinced the city council to amend the law.

That was the beginning. Finley then turned his emptied swimming pool and the rest of his yard into a colorful, edible garden. “Food is the

problem and food is the solution,” he declared in a 2013 TED Talk that went viral. Finley soon became known as the Gangsta Gardener to thousands of justice-seeking green thumbs worldwide.

He’s now working to change the meaning of OG from “original gangsta” to “organic gardener.”

“My thing on the gangsta is to flip that on its head [so] people don’t see it as a negative,” he explains. “Being educated is gangsta; being self-sustaining is gangsta. Being a nerd — that can be gangsta. Because what you’re doing is creating.”

His organization, The Ron Finley Project, continues to promote community self-sufficiency, celebrating the political power of gardening. Finley regularly hears from people in other cities who’ve launched garden projects inspired by his work, and he notes how these spaces can be ideal platforms for widespread change.

“You’ve got to change culture through soil, because the bottom line is, that’s what we all go back to,” he explains. “We turn to soil, and people seem to forget that. That’s not nature out there. We’re nature.”

Watch Finley’s popular 2013 TED Talk at bit.ly/1sVuD84.



Teaching Doctors to Heal

Victoria Maizes, MD, integrative physician

During her medical residency in 1989, Victoria Maizes fell in love — with her patients' stories.

"I became fascinated with how it was that Mr. X got diabetes, and Ms. Y had terrible health habits but was perfectly healthy," she says. "I was trying to understand the influences [of life experiences] on health."

This love affair has had a significant impact on Maizes — and on American medicine. The stories she loved helped her see her patients as whole people and not just their symptoms, which led her to employ a variety of treatment methods. If medication improved someone's condition, she prescribed it. If meditation would work, she recommended it. And she often counseled for both.

This approach, now known as integrative medicine, considers the environmental, psychological, social, and spiritual influences on illnesses, and it *integrates* a variety of healing modalities — from antibiotics to acupuncture.

It took some time for Maizes's broad-minded perspective to catch on in the medical community. She directed strategic education at Kaiser Permanente in Santa Rosa, Calif., during the early 1990s, and was eager to offer complementary support for

patient health. "There were mind-body programs designed after Jon Kabat-Zinn's work and parenting and anger-management programs," she recalls.

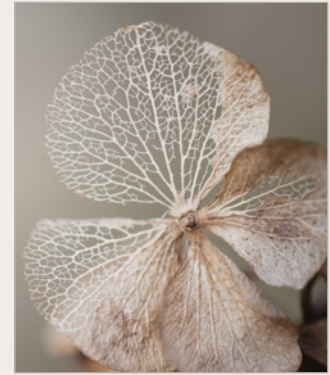
Yet she found that many of the patients knew more about these healing practices than their doctors did. So she began sharing her passion for integrative medicine with other physicians.

"Doctors haven't been trained" to know all the things that can support health, she explains. Without training, they can't help you. "If you ask your doctor what you should eat, he or she may say, 'Eat a healthy diet.' Well, what is a healthy diet?"

Many more physicians can now answer that and other holistic-health questions effectively, thanks to Maizes. When she began directing Dr. Andrew Weil's integrative-medicine program in Arizona in 2000, it included only four fellows in training. Today she supervises more than 150 fellows and 500 residents each year. Some 1,200 doctors have graduated from the program.

"This approach has [become] an established direction in medicine," Maizes says. "People can now access this kind of care more easily, and they're getting the relief they hope for."

Read Maizes's articles for patients at www.victoriamaizesmd.com.



Good to the End

BJ Miller, MD, palliative-care physician

BJ Miller rides a motorcycle around San Francisco and camps regularly with his dog. He's also a triple amputee who lost his left hand and both legs below the knee after an accident in college.

Rather than seeing his condition as a disability, Miller trained himself to view it as a new reality, a specific set of limitations that were nonetheless like the limitations all mortals face. This perspective is part of what makes him a leading palliative-care physician, who is helping to spread the word about the vital importance of quality of life at the end of life — and along the course of serious illness.

He spent five years as the executive director of the Zen Hospice Project in San Francisco, blending hard-won spiritual insight with skillful symptom and pain management, and he now lectures nationwide about the art of end-of-life care.

Watch Miller's TED Talk on end-of-life issues at [bit.ly/1KeX2J5](https://www.ted.com/talks/BJ_Miller_The_Art_of_End_of_Life_Care).





The Write Thing

Aseem Malhotra, cardiologist, columnist

When he's not practicing with the National Health Service in Britain, cardiologist Aseem Malhotra campaigns tirelessly against obesity and heart disease. He's no shill for the pharmaceutical industry, though. In his columns for the popular English newspaper *The Guardian*, he illustrates how socioeconomic conditions influence obesity, heart disease, and diet.

His educational campaigns about the risks of sugar and the value of healthy fats, the need for better-quality school food, and the importance of greater transparency and responsibility in healthcare have brought these issues to a mainstream audience.

He also writes about personalized medicine and improving communication between doctors and patients, so he's changing the message from the ground up.

Learn more at www.doctoraseem.com.



Taking the Next Steps

T. Morgan Dixon, cofounder of GirlTrek

"Black women are dying faster than any other group of people in America from preventable illnesses like heart disease, diabetes, stroke. Heart disease alone kills 137 black women every day. For us, that sounded an alarm."

T. Morgan Dixon is explaining why she cofounded GirlTrek, a Washington, D.C.-based nonprofit and nationwide public-health movement that promotes wellness through organized walking. The group's 100,000-plus members are African-American women and girls who've committed to regular 30-minute group hikes. (Research shows that daily walks can cut the risk of heart disease and type 2 diabetes by half.) The group issues monthly challenges to the walkers — to double their distance, for instance, or walk mindfully — and encourages them to establish new walking groups of their own.

Dixon worked as an educational consultant before founding GirlTrek in 2012 with a college friend, digital-media professional and social-justice activist Vanessa Garrison. "GirlTrek started with two friends," explains Dixon. "Now there are over 100,000."

The health issues they address are complex, Dixon notes. Obesity in the black community is connected to chronic poverty, lack of access to

healthy food, and the fact that many black women lack sufficient leisure time to work out at a gym. "And there's a history of zoning that's denied African Americans access to green space," she adds.

Dixon emphasizes that GirlTrek is not about vanity; its goal is wellness. "I think women of all shapes and sizes are incredibly beautiful," she says. "This is about living well and living for our kids."

Their focus on community health is also rooted in African-American history, Dixon says, when "women walked for change." GirlTrek's presiding spirit is Harriet Tubman: The abolitionist firebrand not only walked out of slavery herself, but returned multiple times to guide others to freedom on foot. Tubman lived vigorously into her 90s.

"We're concerned with reclaiming the streets of our neighborhoods," Dixon continues. "A walking group becomes kind of a neighborhood watch in sneakers, right? Then you want to tackle a community garden. Then you want to tackle a dangerous intersection. Then you want to tackle other things in your neighborhood to make it safer and better."

Watch Dixon and Garrison's TED Talk at bit.ly/2qFr62x.



Leading the Way

Abdul El-Sayed, PhD, public-health advocate



PHOTO: "ABDUL FOR MICHIGAN" CAMPAIGN

At 33, epidemiologist Abdul El-Sayed has earned a doctorate from Oxford, taught public health at Columbia University, and served Detroit as the youngest health commissioner of any major U.S. city. He's largely credited with rebuilding a department shuttered during the city's 2013 bankruptcy.

"After medical school, I was a lot more interested in health policy, and the reasons why people get sick in the first place, than what I could do for them after they got sick," El-Sayed says. He wanted to address the "pretty drastic health disparity" he saw in our society.

As Detroit's health commissioner, he witnessed stark evidence of this disparity: The average life expectancy of a Detroit citizen was 10 years less than a suburban resident living 30 minutes away. Detroit children are four times more likely than other U.S. kids to be exposed to lead.

As commissioner, El-Sayed focused on seven critical outcomes: infant mortality, teen pregnancy, lead poisoning, asthma, poor vision, "misnutrition" (malnutrition and obesity), and elderly isolation. He saw that physical health couldn't be treated as separate from social and economic conditions.

"Public health has a lot more to do with all of the things that allow people

the best opportunities in their lives," he explains. "Access to a high-quality education and then a good, stable job that pays a living wage, that puts healthy food on the table, and [that] allows people to live in a walkable neighborhood and put a roof over their heads. These are what shape health and disease."

Despite broader challenges in his community, El-Sayed can point to some significant public-health victories. He led a successful fight to reduce sulfur dioxide emissions, instituted lead testing of Detroit's water (to avoid another Flint), and created a program to provide free eyeglasses to schoolkids.

More recently, he's taken his experiences in public service into the political arena, running for governor of Michigan in November. That campaign illustrated his ongoing commitment to the work of healing and uniting communities in a time of rigid political polarization.

"The thing about this moment is that we have to recognize that we're all in this together," he says. "If we fail to do that, our challenges will persist. There's real courage being demanded of us." 🗳️

Jon Spayde is an *Experience Life* contributing editor.



Groundswell

Betti Wiggins, school nutrition director

In 2012 Detroit was teeming with urban farmers growing food in their yards. This inspired Betti Wiggins when she took over as executive nutrition director of the city's public schools' child nutrition program.

So Wiggins created the Detroit School Garden Collaborative, a network of some 80 gardens on the grounds of closed (and open) schools. In place of lunches built around deep-fried corn dogs and the like, students began eating zucchini, spinach, and tomatoes from the district's own gardens. Wiggins instituted free breakfast and low-cost dinner programs while extending the free-lunch program to all students, regardless of income, so poor kids wouldn't feel stigmatized.

"How do you build communities back up?" she asks. "Well, you can do something sustainable, like start gardens."

Read more about Wiggins's work, now with the Houston Independent School District, at ELmag.com/changemakers.

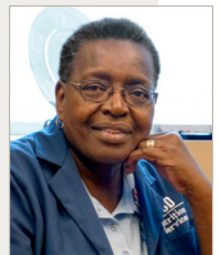


PHOTO: ALECEA RUSH

BE
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Massage



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Discover techniques and tools to care for your body through self-massage and myofascial release. **They can help you move better and recover faster.**

BY NICOLE RADZISZEWSKI

Stiff shoulders. Niggling neck and back pain. Sore feet. From head to toe, our bodies are bastions of tension and tightness that accumulate from activities as mundane as sitting and as strenuous as exercising.

Massage is a reliable tool for easing this musculoskeletal tension, but not everyone has regular access to the practice. Time and money are limiting factors for many people, though the rewards — relief from muscle pain and headaches, reduced anxiety, improved sleep, and bolstered circulation — often justify the costs.

While the occasional professional massage can work

wonders, there are things any of us can do in between sessions to ease daily aches, pain, and tension. This, in turn, can help make expert massages more effective when you do get them.

You can reap many of massage's benefits through the power of your own hands. And self-massage techniques — including trigger-point therapy (TPT) and self-myofascial release (SMR) using foam rollers, massage balls, sticks, and canes — can give your muscles and fascia the immediate TLC they need, from the comfort of your home or at the gym.



Benefits Abound

Self-massage isn't a wholesale replacement for professional bodywork. But manipulating your own tissues, for even a few minutes a day with or without equipment, can help offset the chronic physical, hormonal, biochemical, and neurological problems tied to persistent, unchecked tension.

One of the primary benefits of self-guided bodywork for fitness enthusiasts is its role in supporting recovery, which can boost exercise performance. This, says physical therapist John Rusin, DPT, CSCS, ART, is the "holy grail to becoming stronger and leaner."

Massage has been shown to stave off the delayed-onset muscle soreness (DOMS) that often occurs after working out. Plus, it sets tissues up to regenerate more efficiently by creating a healing environment. Research suggests that massage encourages increased circulation in the vascular and lymph systems; better circulation

more efficiently transports blood and lymph fluid to remove toxins that accumulate in sore, strained areas.

"Massage flushes large amounts of blood through the tissue and assists in preserving the quality of the tissue," says Trisha Haws, LMT, a Scottsdale, Ariz.-based massage therapist and cofounder of Movement Restoration, a program that stresses the use of soft-tissue massage to support recovery and muscular regeneration. "If you're able to work on the tissue before the onset of DOMS and flush these chemicals back into the bloodstream, you can reduce soreness."

Rusin says self-massage can be effective when done both in postworkout hours and on recovery days, using foam rollers, various types of balls, and other tools.

With regular self-massage, the body is often able to move with greater ease over time. This alone can improve performance. (Learn more at

ELmag.com/recoveryzone.)

Moreover, a regular self-massage practice can help you tune in to your anatomy and physiology, says fitness therapist Jill Miller, author of *The Roll Model Method*. "When you're conscious of unraveling the ties that overbind you, you're more likely to sustain that release." This results from a combination of consistency and improved self-awareness of your physical being.

Ready to give it a try? Read on as our experts explain two techniques for becoming your own bodyworker.



Web Extra!

To learn more about the benefits of massage — and for tips on choosing a bodyworker — check out **ELmag.com/massage**.

TRIGGER-POINT THERAPY (TPT)

This technique focuses on the body's trigger points, those pesky tight spots that often feel like knots or lumps under the skin. Trigger points are areas of heightened, spontaneous electrical activity that are more constantly contracted, preventing the muscle from fully engaging, says Rusin. TPT, also known as neuromuscular therapy, involves applying pressure to the knots so they relax and dissolve.

It's important to note that muscle fibers are not literally "knotting" or "dissolving." These terms commonly describe the mechanisms by which our muscles respond and adapt to stressors. Muscle fibers are layered on top of each other and run in all directions throughout the body. Spending a lot of time in one position (sitting at a

desk, for instance), sustaining an injury, or being dehydrated can cause muscles to lose mobility. When this happens, the fibers begin to congeal into nodules; it can also result in a tightening up and drying out of fascia, which creates further stress and "knottiness" in the muscle tissue.

TPT helps relax those lumps, improving blood and lymph flow to return hydration and mobility to the muscles.

"If you're able to loosen up postural muscles that are short — such as the hip flexors, pecs, and anterior shoulders — it helps get the body in a more neutral position before movement," says Haws. "Your brain can then feel what it's like to be in this more neutral place, and ideally try to keep you here as you move."

How to Do It

"Go hunting" for your trigger points by focusing on sore regions, says Rusin. Within a general area (hip flexors, chest, back, etc.), find where your muscles hurt the most and apply pressure there using a tool of your choice (see "Tools of the Trade," page 64) for one to two minutes at an intensity of about 6 to 7 on a scale of 1 to 10. You'll soon be able to find those knots — and you'll notice when they release.

It's important to ease your way into a trigger point, says Miller. "Our bodies are very good at shielding — the nervous system is designed to protect us, so if you roll aggressively into tissues, the muscle spindles tell the muscle to stay taut. You can work your way around this by creating a sense of safety."

Pay attention to your sensations, she adds. If your breath seizes up as you work a trigger point, that's an indication that you need to reduce the pressure or alter your position on the point.



SELF-MYOFASCIAL RELEASE (SMR)

While TPT homes in on trigger points, SMR applies pressure to larger swaths of the body to lubricate and mobilize fascial tissue.

Fascia is the fibrous connective tissue beneath the skin that encloses muscles and organs, connecting them to one another and holding the body together. Composed mostly of collagen, it is everywhere. “You can’t put a hand on your body without touching fascia,” says integrative manual therapist Thomas Myers, author of *Anatomy Trains*.

Rich in sensory receptors, fascia also identifies and gathers information about the body’s location in space and how much load any given part is bearing.

“Because it forms a continuous network of communication, fascia doesn’t just affect the specific muscles a person thinks they are targeting,” says corrective-exercise therapist Anthony Carey, MA, CSCS. “Fascia surrounding one muscle can have a noticeable influence over neighboring muscles.”

Chronic joint or muscle stiffness, intermittent tingling or numbness in your fingers or toes, or feeling clumsy or weak are common signs of restricted fascia. SMR can help by rehydrating dry fascial tissue, allowing it to glide more smoothly and function more effectively, explains Myers.

Research has yet to prove that myofascial work has a direct effect on muscle function or energy level, and some claims have been debunked. For instance, you can’t easily or quickly stretch fascia — it’s too tough.

The term “myofascial release” itself has come under fire by some experts who say it doesn’t actually release anything.

Still, doing the work to keep these gooey sheets of tissue from getting stuck to one another is worth the time — even if just to remind you that everything is connected.

“Fascia is no more or less important than any other body tissue,” Myers says. “It’s just that we haven’t paid much attention to it. We’ll do better in rehab, training, and physical education if we understand how it affects us.”



Self-massage can be effective when done both in postworkout hours and on recovery days, using foam rollers, various types of balls, and other tools.

How to Do It

SMR can be performed on any part of the body, particularly across large, muscly areas like the upper back and quads. Simply follow the contours of your body with your tool of choice, taking your time and moving slowly. Experts advise adding SMR after your warm-up or at the end of a workout, for 15 minutes or so.

Keep in mind that you can use SMR and TPT together. For example, you can use a foam roller to apply SMR across your upper back and shoulders. If you encounter tender spots — trigger points — you can hang out and apply additional pressure.

Moreover, you can use SMR to increase your awareness in movement, which can boost overall performance and ensures safer, more effective exercise.

You can expect a little tenderness during self-massage, because you are stimulating restricted tissues and nerve endings, but it shouldn’t be painful. Aim for no more than 5 or 6 on a pain scale of 1 to 10.

With both TPT and SMR, says Carey, “you’re creating an environment where you can further improve function afterward, where good things will happen if you start to integrate it with movement.”

Self-Massage DOS AND DON'TS

This expert advice can help you get the most out of self-massage.

DO stay away from intense pain. “Massage doesn’t have to hurt in order for it to work. Less can actually be a lot more,” says fitness therapist Jill Miller.

DO mix it up. Vary your tools and technique, advises corrective-exercise therapist Anthony Carey. Try moving up and down, and side to side; alternate broad and short strokes, with sustained pressure. When working with fascia, “speed is the enemy of depth,” says integrative manual therapist Thomas Myers, so move slowly and deliberately for best results.

DO match your tool to your target area, suggests physical therapist John Rusin. Use smaller tools to home in on smaller muscles (a lacrosse ball for the calves, for instance) and reserve large implements like a full-size foam roller for larger areas (like the upper back).

DO keep moving. “Move your body while you apply pressure to areas with tension,” says massage therapist Trisha Haws. “For example, if you’re working on your feet, rotate, flex, and extend your ankle as you address trigger points.”

DON'T massage the site of an acute injury, such as a sprain or strain. Also, avoid rolling directly where you feel pain, as this may increase inflammation.

DON'T spend a long time working on the same spot, because you could cause damage to tissue or nerves.

DON'T shrug off the power of professional bodywork. Receiving physical care from a trained expert who has an in-depth understanding of anatomy and technique can be extremely beneficial, so don’t be afraid to seek out the extra help.



Foam Roller

A cylindrical piece of polyethylene foam or EVA foam, typically about 6 inches in diameter and 18 to 36 inches in length. The density of foam rollers is indicated by color: White is typically the softest and black the firmest. There are also variations that have a PVC-pipe core, ridges or other textures, and even vibrating capabilities.

Best for: Addressing trigger points and fascia in large, easy-to-access areas of the body, such as the calves, quads, back, and glutes. Aids in postworkout recovery by helping to improve circulation.

Worst for: Small, complex areas, such as the hands, feet, and neck. Less sensitive areas, such as the hamstrings, may require a firmer tool.

When to use it: Prior to exercising, work areas with trigger points. Postworkout, target areas with large muscles.

How to use it: Position the foam roller beneath the area you want to target and apply pressure using your body weight. As the muscles loosen up, roll over the foam.

SUGGESTED MESSAGE:

Upper-Back Mobilization

Practice this basic thoracic-spine mobilization exercise, recommended by John Rusin, at any point during the day. It's especially helpful for breaking up long bouts of forward-flexed postures, such as sitting.

- Lie on your back with your knees bent and feet flat on the floor, with a foam roller positioned under an area of your thoracic spine, or upper back. Support your head and neck with your hands.
- Lift your hips slightly off the ground and begin rolling up and down on the foam roller, in a range of no more than a few inches.
- Allow yourself to relax gently into slight extensions of the spine as you roll, making sure to maintain neutral alignment without flaring your ribs.
- Target this specific segment of the thoracic spine for 30 to 60 seconds.

Stick Roller

A hard plastic stick with knobs or wheels that spin.

Best for: Areas of the lower body rich in connective tissue that can sustain greater pressure than what a foam roller provides.

Worst for: Arms, back, feet, and anywhere you have a hard time reaching with your hands.

When to use it: Prior to exercise that involves the lower extremities, especially lower-body muscles that are noticeably tight or stiff; on recovery days after activities such as running, jumping, or cycling.

How to use it: Position the stick roller against the area you want to target, and use your hands to apply pressure on the handles while rolling the stick up, down, and across.

SUGGESTED MESSAGE:

Lower-Leg Release

This technique will soften trigger points and stimulate receptors in the lower leg, which can have a positive, excitatory effect on your nervous system.

- Bring the stick to the outside of your lower leg, just above your ankle, holding it horizontally against the space between the fibula and Achilles tendon.
- Gently roll the stick up and down, moving about an inch at a time and working your way up your leg. Spend more time on areas that are tender.
- Work your way around the diameter of your calf, rolling from bottom to top and making sure to avoid direct contact with your bones.





Massage Ball

Balls of various firmness, density, and texture specifically designed for massage, often with a surface that allows them to create traction and a squishy texture for easing into tissues and rolling around bony areas. You can use sports balls, such as tennis and lacrosse balls.

Best for: Massaging smaller areas with trigger points and working layers of fascia.

Worst for: Because they're available in many sizes and levels of squishiness, you can use massage balls virtually anywhere on the body.

When to use it: Prior to exercise, use them to relax trigger points in areas you plan to train. On recovery days, use them on tight areas to promote healthy fascia.

How to use it: Position the ball against the area you want to target and apply pressure using your body weight.

SUGGESTED MESSAGE:

Neck Release

Practice this release, recommended by Jill Miller, prior to exercising your upper body, or after you've been in a hunched-forward posture.

- Find a wall with a corner or edge and stand with your left shoulder next to the wall. Place a massage ball (ideally 2 to 3 inches in diameter) just behind your collarbone, sandwiching it between your body and the wall.
- Rest your head against the wall; then pivot from side to side, allowing the ball to traverse the muscles of the neck, shoulders, and upper back.
- After one minute, place your right hand on the ball. Keep your body still while you spin the ball in its place with your hand, until you feel a gentle pinch.
- Continue holding the ball in place as you move your arm and neck in various directions.
- Finish by taking three deep breaths, inhaling and feeling your rib cage expand, and then exhaling and noticing it contract.



Thera Cane

A cane-shaped tool made of hard plastic and featuring protruding knobs.

Best for: Targeting trigger points in your back that are difficult to reach with your hands.

Worst for: Your neck and other sensitive areas that don't respond well to pressure.

When to use it: Prior to working out to address trigger points, and on rest days.

How to use it: Position the knob at the curved end of the cane against the hard-to-reach area you want to target. Use your hands to apply pressure against the cane to relieve tight or sore areas.

SUGGESTED MESSAGE:

Back Massage

Practice this massage, recommended by Thomas Myers, when you need a convenient way to relieve tension in your back.

- Hold the straight end of the Thera Cane and move the rounded end around your back, feeling for areas that are tight or sore.
- When you find a tender area, press into it with the knob for about 30 seconds. Move your body to aid mobilization: Twist your torso; swing your free arm in various directions; press yourself into the Thera Cane, and then turn away from it.



Hands

Your best (and least expensive) tool, including your palms, digits, fists, and knuckles.

Best for: Targeting trigger points in areas where more precision is necessary; practicing when tools are unavailable.

Worst for: Hard-to-reach areas.

When to use them: When you're sitting at your desk, waiting in lines, watching TV, or times when you don't have access to tools but have noticeable areas of tension you can easily reach.

How to use them: Use your fingers to seek out tight, tender, and sore spots, and apply pressure using a combination of fingertips, knuckles, palms, and fists.

SUGGESTED MESSAGE:

Forearm Massage

Practice this massage, designed by Trisha Haws, after bouts of sitting at your computer or doing other work with your hands.

- Turn your left arm so that your palm is facing up.
- Starting at the pinky side of your forearm near your wrist, gently press into your forearm with your right thumb, moving up the arm until you reach your elbow.
- Repeat for two additional passes, wrist to elbow, down the middle of your arm, and on the thumb side.
- Flip your forearm over so your palm faces down. Use your index finger to make your way up your arm five times, each time moving from wrist to elbow in line with one of the digits. In tender areas, pause while pressing against your flesh and move your wrist in different directions. 🔄

Nicole Radziszewski is a writer and personal trainer in River Forest, Ill.





THE PLACEBO EFFECT

DISCOVER THE POWERFUL WAYS
THE MIND CAN INFLUENCE HEALING.

By Jo MARCHANT, PhD

Bonnie Anderson lives with her partner, Don, in a small, white bungalow in Austin, Minn. For 40 years she worked as a telephone operator for the town's main employer, Hormel Foods, and has stayed active into her retirement. She loves nothing more than playing an 18-hole round of golf.

But in 2005 she slipped on wet tiles in her kitchen, landed on the floor, and fractured her spine. The accident left her in constant pain, unable to stand long enough to do the dishes.

"I couldn't sleep at night," she says. "I couldn't play the golf I wanted to play. I'd go sit in the den with a heating pad."

A few months after her accident, Anderson went to the Mayo Clinic in Rochester, Minn., to take part in a trial for an outpatient procedure called vertebroplasty, which involves injecting medical cement into fractured bone to strengthen it. She walked out of the hospital after the procedure and felt better immediately.

"It really took care of the pain. I was able to go back to golfing and [to doing] everything I wanted to do."

Almost a decade later, Anderson says she is still delighted with the outcome. "It was a miracle how well it turned out," she says. At 84, she is looking forward to playing more golf.

The vertebroplasty seemed to heal the effects of Anderson's fractured spine. Except there was something Anderson didn't know when she took part in the trial: She wasn't in the vertebroplasty group. The procedure she received was fake.

The phenomenon in which people experience relief from symptoms after a fake treatment is called the placebo effect, and it is well known in the medical world. Clinical trials have consistently shown a strong placebo effect across a wide range of conditions, including asthma, high blood pressure, gut disorders, morning sickness, and erectile dysfunction. Medical professionals generally view these recoveries as statistical anomalies, arguing that the patients would have improved whether they'd received the treatment or not. According to the rules of evidence-based medicine, these improvements are worthless.

But by dismissing the experiences of patients like Anderson, for whom the absence of pain is worth a great deal, I can't help but wonder, as a science journalist, whether we are throwing out something that could be of real help. Might the placebo effect have real clinical value? Can a simple belief — that we are about to get better — have the power to heal?

THE BODY'S PHARMACY

Fabrizio Benedetti, MD, a professor of neuroscience and physiology at the

University of Turin in Italy, studies the placebo effect and sees it in every aspect of life. He says if he gives me a glass of wine and tells me how good it is, that will affect how it tastes to me. "We are symbolic animals," he explains. "The psychological component [of experience] is important."

His interest in the placebo effect began in the 1970s when scientists had just discovered endorphins, the class of molecules produced in the brain that act as natural painkillers. Endorphins are opiates, like morphine and heroin, except that the brain produces them itself.

In one early experiment, a researcher at the University of California, San Francisco, tested whether a placebo could trigger the

by endorphins and can't be blocked by naloxone. Benedetti emphasizes that the placebo effect isn't a single phenomenon but a "melting pot" of bodily responses, each using ingredients from the brain's natural pharmacy, as well as from other sources we're still learning about.

HONEST PLACEBOS

The central dogma running through all discussions of the placebo effect is that, for it to work, you have to believe you are receiving a real treatment. But placebos can work even when patients know they're taking them.

The foremost researcher of the placebo effect is Ted Kaptchuk, a professor of medicine at Harvard Medical School, who wanted to see

CAN A SIMPLE BELIEF

that we are about to get better
have the power to heal?

release of these endorphins. A third of the patients in the study, who were recovering from oral surgery, reported significant pain relief after receiving a placebo through an IV. Then, without their knowledge, they received a dose of naloxone, a drug that blocks the effects of endorphins, also through the IV.

Their pain returned.

It was at this moment, Benedetti says, that "the biology of placebo was born." It was the first evidence of pain-relieving biochemical pathways behind the placebo effect.

In his own trials, Benedetti identified more natural brain chemicals that, triggered by our beliefs, can turn our response to pain up or down. He found that when placebo painkillers replace opiate drugs, they don't just relieve pain; they also slow breathing and heart rate, just as opiates do.

He also found pain-relieving placebo effects that are not mediated

what would happen when study participants understood clearly that they were taking a placebo. He conducted a three-week trial on 80 patients with irritable bowel syndrome (IBS). Half the group knowingly received a placebo pill and were told that although the capsules contained no active ingredient, they might work through mind-body, self-healing processes.

"Everyone thought it was crazy," Kaptchuk says, but results of the trial, published in 2010, show that patients who were consciously taking placebos did significantly better than those who received no treatment. (I spoke to one study participant, a medical assistant named Linda, whose chronic IBS symptoms disappeared for the duration of the three-week trial, but then returned at its conclusion.) It appeared that the act of taking a pill was enough to trigger the body's own healing response.

Kapchuk's more recent pilot studies of patients with depression and migraines have produced similar results. When migraine patients knowingly took a placebo during an attack — known as an honest placebo — they felt a 30 percent reduction in pain compared with having no treatment. “My team was totally taken aback,” he says.

One of the barriers to using placebos in medicine is the concern that it's unethical to deceive patients. Yet Kapchuk's studies suggest that honest placebos can work as well — even though there's no expectation that the drug is going to work in the conventional sense, and there's no reason for the body's natural painkillers to kick in. Yet, somehow, they do.


STATES OF MIND

It's becoming more acceptable in the medical community to acknowledge that mental states can influence our physical health in measurable ways. The body of research on stress and health makes this especially clear.

Acute stress boosts the immune system in anticipation of danger or an injury, but when it stays activated for too long, it begins to rage out of control, leaving us vulnerable to chronic inflammation. Too much inflammation leads to slower wound healing and can exacerbate autoimmune diseases, such as eczema and multiple sclerosis. It can also be a precursor for many serious conditions, including cancer. Chronic stress, meanwhile, can raise blood pressure and damage blood-vessel walls, leading to clogged arteries and heart disease.



So it follows that when we're receiving medical care, our mental state matters. Those who feel alone and afraid do not do as well as those who feel supported, safe, and in control. It matters when we feel cared for. It makes a difference in how well we heal.

This may be why forms of treatment that don't involve drugs at all, but focus instead on relieving stress and providing emotional support, can have such powerful pain-relieving effects.



Those who feel alone and afraid do not do as well as those who feel supported, safe, and in control. It matters when we feel cared for.

IT MAKES A DIFFERENCE IN HOW WELL WE HEAL.



Interventional radiologist Elvira Lang developed an approach called Comfort Talk while working at Harvard Medical School in Boston. Instead of dishing out drugs to nervous patients before a procedure (she typically performed “keyhole surgeries,” operations during which the patient remains conscious), she opted to mobilize her patients’ psychological resources. She used a blend of empathic communication skills, positive suggestion, and visual imagery to help patients relax and ease their pain.

In every research trial, patients who received Comfort Talk reported far less pain and anxiety than those who’d received only standard care.

The trials revealed practical physical benefits, too: Patients required much lower levels of sedative drugs and suffered far fewer complications. In one trial of renal- and vascular-surgery patients, for example, the dosage for those in the intervention group was half that of patients in the group that didn’t receive the treatment. Surgeons also completed the procedures 17 minutes faster, on average, saving hospitals an average of \$338 per patient.

Lang also worked with placebo researcher Kaptchuk to study the “nocebo” effect, or how the expectation of pain affects patients’ actual pain. They found that when patients received warnings like “this may hurt” before potentially painful events such as an injection, their pain and anxiety scores soared.

When Lang conducted Comfort Talk training for a medical team that performed MRI scans, she emphasized the importance of eliminating any negative or potentially frightening language during the procedure. (Patients were told ahead of time about any potential discomfort, but that was it.) She also instructed the providers to help patients visualize positive images. They encouraged children to think of the MRI scanner as a rocket ship and adults to imagine it as a massage table — even offering a choice of aromatherapy to supplement the illusion of a spa visit.

These adjustments may seem modest, but in a study of 14,000 MRI procedures in clinics that used Comfort Talk, the “claustro” rate — when a scan is aborted because the patient panics in the machine — was reduced by 40 percent, saving hospitals between \$750 and \$5,000 for each scan.

If a drug showed that kind of result in clinical trials, it would be front-page news.

BEYOND SEPARATION

Bonnie Anderson’s fake vertebroplasty banished her pain and disability, but it probably didn’t mend her spine. Placebos don’t create an all-powerful,

are considering their patients’ mental states. Instead of employing ever-greater doses of drugs and interventions, these medical professionals are harnessing their patients’ psychological resources as a critical component of their care. The symptom relief that patients experience is undeniably real.

This is what seems to make the difference.

We can’t rely solely on the mind to heal us, but denying its role in medicine isn’t the answer either. My hope is that this research helps us overcome some of the prejudice against mind-body approaches to healing, and to recognize that taking account of the mind in health is actually a

INSTEAD OF EMPLOYING EVER-GREATER DOSES OF DRUGS AND INTERVENTIONS, medical professionals are harnessing their patients’ psychological resources as a critical component of their care.

protective magic that can keep us well in every circumstance. And they have two important limitations.

The first is that any effects caused by a belief in a treatment are limited by the body’s available natural tools. A placebo might help a patient with cystic fibrosis breathe a little more easily, but it won’t create the missing protein the lungs need. For someone with type 1 diabetes, a placebo can’t replace their dose of insulin.

Second, a variety of placebo studies have shown that our expectations about outcome tend to affect only our symptoms — things we are consciously aware of, such as pain, itching, rashes, or diarrhea, as well as cognitive function and sleep. Placebo effects also seem to be particularly strong for psychiatric disorders such as depression, anxiety, and addiction.

But what is common to all these approaches, whether placebo pills or encouraging talk, is that more doctors

more scientific and evidence-based approach than relying more heavily on physical interventions and drugs.

Nearly 400 years after the philosopher Descartes declared a fundamental separation between mind and body, we still tend to think of ourselves as rational beings with highly developed minds that allow us to transcend our biological animal nature.

Yet the evidence shows something very different: Our bodies and minds have evolved in exquisite harmony, so perfectly integrated that it is impossible to consider one without the other. By understanding how our minds influence and reflect our physiology, perhaps we can finally live in tune with our bodies and care for them in a way that is based in evidence, and not delusion. 🧠

Jo Marchant, PhD, is a U.K.-based science journalist. This article is adapted from her book, *Cure: A Journey Into the Science of Mind Over Body*.



HEAL YOUR MIND

Understanding that the mind plays a role in mediating pain, inflammation, and other physical states can be intimidating if we believe we don't know how to manage our stress. Research has shown that these stress-reduction techniques can improve physical health:

MEDITATION

Italian researchers scanned the brains of meditators and found that the subjects were better able than nonmeditators to down-regulate activity in the default-mode network — the ruminating, worrying part of the brain. Mindfulness meditation involves observing the mind thinking without becoming attached to its thoughts, which can show that we don't have to be ruled by them. (For more on the rewards of meditation, see ELmag.com/brainbodymeditation.)

REFRAMING STRESS

How you perceive a stressful event makes a big difference in how your body reacts. Psychologist Wendy Mendes, PhD, a researcher at the University of California, San Francisco, suggests imagining a skier who faces a steep, icy trail that's her only way down a mountain. Depending on how experienced she is, her dominant response will be either fear or exhilaration — and these have very different effects in the body.

Both trigger the sympathetic nervous system, but exhilaration affects it to a greater extent. Peripheral

blood vessels dilate and the heart works more efficiently, pumping oxygenated blood to the limbs and brain. People experiencing this response perform better physically as well as mentally.


Fear, on the other hand, causes the body to go into damage-control mode. Blood vessels constrict and the heart beats less efficiently, so less blood is pumped around the body. (This would minimize blood loss if you were caught and injured by a predator.)

Psychologists' terms for these contrasting responses are "challenge" and "threat." Mendes has found that people who experience a challenge response bounce back to normal fairly quickly, while people in a threat state take longer to recover, both mentally and physically.

She's also found that simply changing how you think about your physical response to stress can have a dramatic effect. In studies, participants who learned to positively interpret signs of stress, such as an elevated heart rate, performed better on tests and recovered more quickly.



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Life Wisdom

“

This trip was not about closure. It was about opening. A homecoming.”

— Rebecca Rusch

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Learn more about adventure racer Rebecca Rusch's eye-opening journey along the 1,200-mile Ho Chi Minh Trail.





If you're craving more authentic connection with others, these five conversation strategies can help.

By BEN CONNELLY

In some ways, it's never been easier to connect with the people in our lives; we're all just a text message or social-media post away. Yet, while these tools enable us to stay in touch with each other — liking vacation photos or exchanging casual banter — truly meaningful interactions can sometimes feel scarce.

We can, of course, feel closely connected to others without having deep conversations all the time. We might bond over baseball statistics. We might joke around. We might enjoy each other's silence.

But there are times when we want to be able to say what's in our hearts, and it can be difficult to know how to cultivate deeper conversations. It might be

scary to open up about things that really matter to us — and some people prefer not to engage on such an intimate level. Or maybe there's conflict in a relationship, or certain topics have been swept under the rug, exactly where others want to keep them.

I often think of the dramatic scenes in movies and books when the protagonists, often on their deathbeds or hanging off the side of a cliff, finally reveal their truest feelings. We don't have to wait until the end of our lives or some other critical moment to speak up about what is important to us, or to reach out to others in emotionally honest ways.

These five tips can help each of us enrich our relationships by having conversations from the heart.

1. Create the space.

Few emotionally rewarding conversations start with “We need to talk.” If you want to relate more deeply with another person, or share your own thoughts and feelings, think in terms of creating space — both physical and emotional — where real discussions can transpire naturally.

People feel comfortable in different settings, so consider where this person will be most at ease. Reflect on what feels good to you, too — the kinds of places and situations where you've felt safe sharing emotions or exploring ideas with someone else. Maybe a walk in nature lends itself to a deeper discussion. Perhaps the neighborhood coffee shop or your own living room feels more inviting.

You don't necessarily need an environment devoid of distraction. While a blaring TV or pinging smartphone will certainly interfere with an intimate discussion, sometimes it's nice to have little “escape hatches” for people who find face-to-face conversations a bit too intense: Shooting baskets with your teenager might allow him to relax and share what's on his mind better than inquiring at the dinner table about his day. Preparing a meal alongside your new sister-in-law may ease any sense of formality that could get in the way of a good talk.

2. **Talk *with*, not *about*.**

Sometimes we need to talk about other people. It's good to catch up on family news, and it can be important to relay the details of a mutual friend's illness or a spouse's new job. But one of the easiest ways to avoid discussing our lives, our hearts, and our values is to focus on people who are not present.

In these cases, as long as you're discussing someone who's not there, you're essentially looking past the person who's right in front of you. Or maybe you're hiding and don't even realize it.

So how do you shift from sharing the news (or gossip) about other people to actually talking *with* your conversation partner? You could start by asking how he feels about his spouse's job change, for example. Or you could explore your own emotions and thoughts about your mutual friend's illness. Redirect your attention to the experiences and emotions of those who are present.

3. **Speak from your heart.**

We can talk about our favorite subjects all day: gardening or football, theology or furniture making, politics or rodeos. We can conceal ourselves behind our pet topics, too, never delving deeper into why and how such things might touch our lives in meaningful ways.

Determining when it's safe to introduce your real feelings or concerns into a conversation takes sensitivity, bravery, and a willingness to experiment. Let's say you're chatting about spring planting with a fellow gardener and sense that she may be open to a more personal connection. Here's one way you might initiate a conversation about something that's important to you:

You (testing the waters): "I'm really looking forward to my garden this spring. Especially now that I'm taking care of my aging dad, I'll need a little garden therapy!"

Fellow gardener (picking up on your cue): "I didn't realize you were a caregiver for your dad. How are you doing with that?"

If your conversation partner expresses interest in your personal feelings and experiences, you can feel confident sharing more. On the other hand, you'll know pretty quickly if she isn't willing or able to go deeper. ("Yeah, I can't wait for spring, either.") If that's the case, set aside your concern for now, and keep your eyes open for other opportunities to connect with someone else.

That said, it's vital to find people with whom you can share how you really feel. If there is no one in your life you can really open up to, consider reaching out to a therapist or minister.

4. **Listen from your heart.**

Conversation is a two-way street, and just as you must be bold enough to tell your own stories and express your own concerns, you must also be receptive enough to listen to another person's stories and concerns.

Deep listening isn't easy. It requires concentration, compassion, and self-awareness. You know how good it feels when you realize someone truly hears what you have to say — and how lousy it feels when the other person seems distracted, more interested in sharing his perspective, or intent on "fixing" you.

So when your conversation partner says something that triggers a strong emotion, whether that be sadness, envy, boredom, or excitement, challenge yourself to stay present rather than insert yourself into the narrative. When that person is struggling with a challenge that seems to have an obvious solution, resist the impulse to advise. Try to recognize your own motivations or expectations so you can instead focus on the other person. (For more on how to be a compassionate listener, go to ELmag.com/betterlistener.)



5. **Let go of outcomes.**

Even if the only thing you want from a conversation with another person is a deeper connection, you may not get it. Insisting on such an outcome when the person is not interested or emotionally ready isn't just ineffective; it's unkind. (And if your goal is to convince or influence in any way, you're trying to control the relationship, not deepen it.)

It takes courage to initiate authentic conversations, to essentially say to someone: "This is how I feel; this is what I need. Would you be willing to go there with me?" Similarly, it takes bravery to let go of what you've hoped for in a conversation or relationship.

It also takes practice. The more you seek to connect with others in an authentic way, the more you will hone your skills of giving and receiving, inviting and releasing. You will learn to approach your conversation partners — and yourself — with greater patience and compassion. Over time, these relationships will feel less like a series of casual touch points and more like the authentic connections you desire. ☺

Ben Connelly is a Soto Zen teacher and secular-mindfulness instructor based in Minneapolis.



The Gift Machine

For many of us, receiving presents can be stressful. Learn how to respond gratefully — while still communicating your limits.

BY JON SPAYDE

Getting gifts isn't always fun. You or your kids might find yourselves so deluged by presents on a birthday or holiday that you feel overwhelmed. Or you may get a gift you don't want or that feels inappropriate. Even an expensive present can be embarrassing — especially if your own offering to the giver seems cheap by comparison.

These situations can put you in an uncomfortable bind as you try to appear grateful while feeling genuinely conflicted. You might grit your teeth and do your best ("I've always wanted a Barry Manilow box set!"), but the counterfeit gratitude can make you feel inauthentic — and others can likely sense it, too.

Still, we're not condemned to the discomfort of polite dishonesty, says Jennifer Weinberg, MD, MPH, MBE, a physician who specializes in lifestyle medicine. A few simple measures can transform awkward gift-giving situations into opportunities to exchange heartfelt sentiments. And it doesn't matter what's in the box.

Expert Source

Jennifer Weinberg, MD, MPH, MBE, author of *The Whole Cure: 52 Essential Prescriptions to Overcome Overwhelm, Reclaim Balance, and Reconnect With a Life You Love!*

Challenges to Overcome

- **Concealed feelings.** “There are many unwritten rules about gift giving that we may never have really considered,” Weinberg offers. We’re taught as children to be tactful when receiving a gift we don’t need or want, for instance. While this politeness is positive, she says, an ongoing focus on “suppressing negative emotions” can create stress.

- **Uncertainty.** Gift anxiety can be heightened by the fact that presents are usually wrapped, she says. For people who don’t like surprises, the trouble starts right there.

- **Rules of reciprocation.** Stress over exchanging gifts can develop “in part because of the relationship implications of gift giving. We may feel guilty if our

gift doesn’t seem as big or expensive as what we received.”

- **Different giving styles.** The social-justice activist whose gift of a charitable donation in the receiver’s name may seem stingy to a recipient who feels that only luxurious objects can convey how much he or she is loved and valued.

- **Strings-attached giving.** Some people feel a deep need to be recognized and thanked immediately for their gifts. This expectation can be a burden on the receiver — and a threat to the relationship if the giver quickly becomes offended.

- **The audience.** We’re often in a group of relatives or friends when we receive

a gift, and having all those eyes on our reactions can increase the feeling that we need to play up our gratitude and cover up any other feelings.

- **Clutter.** Too many gifts can create clutter, which “can make you feel anxious, helpless, and overwhelmed,” explains Weinberg. “If you feel pressure to keep each gift you receive, it can lead to feelings of guilt, anger, and stress every time you look at them.”

- **The myth of spontaneity.** We’re conditioned to believe real gifts are spontaneous expressions on the part of the giver. Asking for things ruins the magic, so we may never tell loved ones what we would really appreciate receiving.

Strategies for Success

- **Ask for what you want.** “Be upfront,” Weinberg stresses. “Have an open conversation well before the gift-giving occasion. Highlight your gratitude in a gracious way, and clearly communicate the kinds of gifts that are meaningful to you.”

- **Emphasize relationship.** “Explain that the relationship is what you value most and want to focus on — not the gifts,” she says. While you can’t forbid someone from giving you a present, she adds, you can communicate why you might prefer not to give or receive one.

- **Ask for presence, instead of presents.** Request the gift of time: a conversation, a walk, an afternoon at the museum. “By asking for time together as a gift, you show how much you value the giver as a person,” Weinberg explains.

- **Request a nonmaterial gift you truly need.** If the giver has a talent or skill that you value, says Weinberg, “let him or her know you would love a cooking lesson, a chance to practice yoga together, some help with organizing your house.”

- **Create new traditions.** Framing time as a gift can also help you create new, less materialistic rituals with your family or friends. You might emphasize



celebrations that focus on shared activities, like cooking a meal or taking a hike. “This allows you to still have the sort of connection that your previous gift-giving ritual provided, but in a more peaceful, mindful way,” she says.

- **Be thankful for the intention.** The thought really is what counts with an unwelcome gift, Weinberg says. “Even if you feel stressed by a gift, you can be thankful for the fact the person thought of you and cared enough to give you something. This is what you’re expressing when you say thank you.”

- **Practice mindfulness.** To stay attuned to the intentions behind gift giving and to reduce the anxiety, Weinberg recommends practicing mindfulness. “Being mindful means paying attention to the present moment

Framing time as a gift can also help you create new, less materialistic rituals with your family or friends.

without judgment,” she says. “This will allow you to connect more deeply with your true values.” Practicing being less judgmental can also help you cope with the discomfort of feeling that your own gift was too small.

- **Let it go.** No matter how expensive a gift might be, if you know you won’t use it or if it feels like clutter, donate it to an organization that will offer it to someone who needs it. If the giver asks about the gift later, tell her how much you appreciated her generosity, and explain that you decided to pass it along to someone who could use it or enjoy it more than you could. Such moments of honesty can deepen your connection more than any object ever could. 🧡

Jon Spayde is an *Experience Life* contributing editor.



Revolutionary Act

#37: IGNORE LABELS

Most front-of-package marketing claims are meaningless or misleading, and a lot of nutrition-label data is confusing. Some of the best foods (whole foods) have precisely one ingredient and often no labels at all.

BY PILAR GERASIMO

Regular readers of this column might recall that last month I was encouraging you to read labels. Now I'm telling you to ignore them.

So what gives? What's a person to do with this contradictory counsel? Which is the right advice to follow?

The correct answer, I'm sorry to say, is "both," "neither," and "it depends." And that, my friends, is a pretty good metaphor for the maddening, confusing, label-reading conundrum most food consumers face on a daily basis.

You probably know by now that you can't rely on front-of-package headlines like "heart healthy" or "contains whole grains," "cholesterol-free," or "zero trans fats" as waypoints to healthy choices. And as I explained last month, sometimes even the fine print on the back can steer you surprisingly wrong.

But if you aren't looking at packaged food labels at all, or if you don't

know how to weigh and decode their messages, you are pretty much in the dark about what you are putting in your body, and that can be dangerous indeed.

Most whole-food products, including unprocessed meats, vegetables, fruits, nuts, and seeds, require no nutrition labeling, and are among the most nutritionally rich and beneficial foods you can eat. Sadly, such foods now represent a relatively small percentage of what we consume.

Studies suggest that in the United States, between 70 and 80 percent of our calories now come from highly processed packaged and prepared foods. So, practically speaking, even if you make an effort to buy and prepare mostly whole foods most of time, you'll still want to develop some label-reading savvy.

Part of that involves knowing what to look for — namely, the presence of high-quality, whole-food ingredients combined in ways that work for your biochemistry. And part of it involves

knowing what to ignore, or at least what to be skeptical about.

Whole books have been written about the deceptive industry practices that make that latter skill so important. One I recommend is Michele Simon's *Appetite for Profit: How the Food Industry Undermines Our Health and How to Fight Back*.

In the interim, here's some basic counsel you can start applying now:

1. Don't be fooled by marketing hype. No matter how wholesome-looking the packaging, and no matter how enthusiastic the blurbs on the front of the package, statements like "mom-approved," "50% less fat," "contains calcium," "paleo-friendly," or "part of a healthy diet" do not necessarily mean that a product is good for you.

Nor does the use of one or more health claims on a product mean that it's any better for you than a comparable one that happens to lack such claims.

Unfortunately, most consumers don't know that, and this unknowingly creates an opportunity that food marketers are only too happy to exploit.

Research shows that health-motivated eaters are far more likely to choose foods emblazoned with front-of-package health claims, regardless of what the more detailed information on the Nutrition Facts label reveals, or what the eaters' own common sense might suggest.

So manufacturers have every motivation to just keep on plastering

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their products with as many claims as the FDA will allow. Because, really, who *doesn't* want some heart-healthy, fat-free, high-fiber, low-sodium, zero-cholesterol, gluten-free doughnuts?

2. Don't rely on seals and stamps. For consumers too busy or weary to read words, there's now a huge array of "at a glance" graphic emblems designed to signal a product's adherence to various standards. But for these symbols to be helpful, you have to know and trust the specific standards they represent.

You also have to know to what extent you want to prioritize those characteristics in your own eating choices, and how you want to balance them against other selection criteria.

The labels for USDA Organic and the Non-GMO Project, for example, are meaningful to consumers seeking products whose ingredients meet some basic agricultural, animal-welfare, and environmental standards. But it's important to recognize that a product can be organic and non-GMO while still being filled with sugar, salt, flour, and industrial vegetable oils, and largely devoid of nutrition.

The American Heart Association's Heart-Check mark indicates that a product adheres to certain aspects of both the AHA's own guidelines and the U.S. Dietary Guidelines, including minimum thresholds and upper limits for a variety of nutrients.

But some of those guidelines (especially those concerning saturated fats and dietary cholesterol) are based on questionable or outdated science. And again, the mere fact that a product is low in sodium, or high in fiber, or made with whole grains, doesn't really offer much indication

of its overall healthfulness — or, conversely, its potential to inflict inflammatory damage over time.

The AHA's Heart-Check mark has infamously graced unhealthy products like Froot Loops cereal and Pop-Tarts. The food industry's now-defunct Smart Choices label originally appeared on Cracker Jack packages.

Such labeling schemes have been widely accused of catering more to the interests of food-industry funders than to the consumers they were supposedly meant to serve. And this brings me to my final tip.

3. Think for yourself. In a food world as complicated as ours, it's tempting to depend on shorthand indicators about what is or is not a wise thing to eat. And research suggests that "restrained eaters" (people who are restricting calories, carbs, or fats, or trying to follow some other dietary plan) may be at a special disadvantage in this regard.

According to a 2014 paper published in the journal *Health Communication*: "Restrained eaters exhibit significant differences versus unrestrained eaters in the performance of cognitive tasks, with restrained eaters exhibiting lower levels of sustained attention, recall, and working memory compared to unrestrained eaters."

The authors posit that trying to maintain a high level of dietary self-control depletes not only one's willpower but also one's mental capacity. Being worn out from all that dietary hypervigilance, they suggest, leaves us more inclined to rely on simplistic claims, seals, and graphic cues — and thus more vulnerable to being misled.

One of the central messages of 101 Ways to Be Healthy (and this "Revolutionary Acts" column) is that, as a health-seeking person in a health-sapping world, you cannot afford to become passive and complacent.

On the contrary, you must stay aware, alert, and resilient. Because unless you actively cultivate your resistance to the Unhealthy Default Reality in which we live, you risk being sucked into it.

With that in mind, after three years and 37 columns, "Revolutionary Acts" will soon be replaced with a new column: "The Living Experiment." It debuts in January 2018.

An extension of the top-rated podcast my friend Dallas Hartwig and I cohost each week, this new column will continue to explore the revolutionary challenges of being healthy in an unhealthy world, but from an even broader perspective. Our hope is that it will offer you some energizing, rewarding new ways to keep going with that experimental endeavor, even when the going gets tough. 🌱



Revolutionary Resources

Grab links to this month's recommended content at ELmag.com/revact37.

"Sweet News About Food Labels" —

Why the new Nutrition Facts label will focus less on fats and more on sugars.

"Learning to Read Labels" — Advice to help your kids cut through confusion.

"Revolutionary Act No. 30: Approach AND Guidelines With a Healthy Dose of Doubt"

"Revolutionary Act No. 36: Read Labels" — The nutrition facts that do and do not deserve your attention.



Pilar Gerasimo is an internationally recognized healthy-living advocate, author of *A Manifesto for Thriving in a Mixed-Up World*, and the creative force behind *Experience Life's* popular mobile app "101 Revolutionary Ways to Be Healthy." She is currently working on a book about what she calls healthy deviance, and cohosting a weekly podcast called *The Living Experiment*. Learn more about Pilar's latest projects and connect with her at PilarGerasimo.com.



The Ride of Her Life



Ultra-endurance athlete Rebecca Rusch set out to find the spot where her father's plane crashed after being shot down during the Vietnam War. In the process, she found a new purpose in life.

By HEIDI WACHTER

Adventure racer, author, and volunteer firefighter Rebecca Rusch is used to facing trials and coming out on top. The seven-time world champion has won the Leadville 100 Mountain Bike Race four times, cycled Africa's Mount Kilimanjaro, river boarded down the Grand Canyon, and was the first woman to climb Bermuda Dunes on the southwest face of El Capitan in Yosemite National Park.

Rusch's mental toughness and grit have earned her the nickname the "Queen of Pain." Always ready to expand her horizons, she wanted to become the first person to bicycle along the entire length of the 1,200-mile Ho Chi Minh Trail. But this trek wouldn't be about winning a trophy or setting a record; it would be about connecting with her father, whose plane was shot down in 1972 during the Vietnam War, when Rusch was a child.

It took time for the pieces of the journey to come together. Her father's remains were found in 2007. "That's when we knew he died in a crash and wasn't a prisoner of war," Rusch says. "He wasn't suffering."

Almost a decade later, in 2015, she and her Vietnamese riding partner, Huyen Nguyen, set out across Laos, Cambodia, and Vietnam to find the place where the plane crashed.



Their amazing journey followed the former North Vietnamese military supply line, weaving through jungles and landscapes pockmarked by bombs.

The trip was chronicled in the 2017 documentary *Blood Road*, which nabbed the Audience Award at the Sun Valley Film Festival and “Best of Fest” at the Bentonville Film Festival. (It’s now streaming on Red Bull TV for free.)

Rusch says the journey was physically demanding, but her years of training and racing proved to be solid preparation. The biggest challenge, she says, was “logistically trying to map a historically accurate route. The Ho Chi Minh Trail is not established like the Appalachian Trail.”

Border crossings were also difficult. “The areas we were in don’t see a lot of tourists, and what we were doing was unusual,” she says. “We were definitely welcomed, but it took a lot longer sometimes to do something as simple as pass through a village. As guests, we’d have to find the village chief and ask permission, for example, to go through their land. Sometimes we would sit around a slaughtered pig, give thanks, and drink some mystery alcohol, because that’s the custom. While those moments were challenging, it allowed us time to get to know the villagers, too.”

Ultimately, the biggest tests for Rusch were more personal than physical. “I went there thinking it would be

“ I went there thinking it would be an amazing journey and I’d find out more about my dad. But I didn’t really expect to find out so much about myself.”

an amazing journey and I’d find out more about my dad,” she says. “But I didn’t really expect to find out so much about myself. I kind of thought I had that figured out and, at 48, I found that I still didn’t.”

The biggest surprises? “I didn’t plan to be so moved by the people I met,” Rusch explains. “I’m an American, and my dad dropped bombs on these villages, so I wondered how we’d be received. There was nothing but open arms and welcoming from the friendliest people I have ever met in my life. That was a good lesson for me in forgiveness.”

The physical remnants of war were also unexpected. “The war ended nearly 45 years ago, and it’s still killing people today with bombs that didn’t explode,” Rusch says.

Seeing the unexploded bombs and plane wreckage inspired Rusch to work with the Mines Advisory Group (MAG), a nonprofit organization that cleans up leftover war material in Laos. “I left feeling like I needed to use my bike and my reach as an athlete to expedite the cleanup and finally get rid of the bombs,” she explains.

Since then, Rusch has taken a group mountain biking on the Ho Chi

Minh Trail to raise money for cleanup efforts; select stops on the *Blood Road* film tour were used as a fundraising tool for MAG. She has also worked with Article22, an organization that works with Lao artisans who repurpose metal from unexploded weapons for jewelry.

For the trailblazing Idaho resident, her trip ultimately wasn’t about finding closure but about opening herself up.

“This adventure allowed me to look outside myself,” Rusch says. “Being a professional athlete is somewhat a selfish career. You really are thinking about yourself, your training, and winning the next race. It’s not to say I’m done racing, but I’m looking at the world with different eyes. I found a purpose. I’m going to clean up these bombs that my dad was dropping. That’s why he brought me there — to continue with the healing.”

Heidi Wachter is an *Experience Life* staff writer.

Audio Extra!



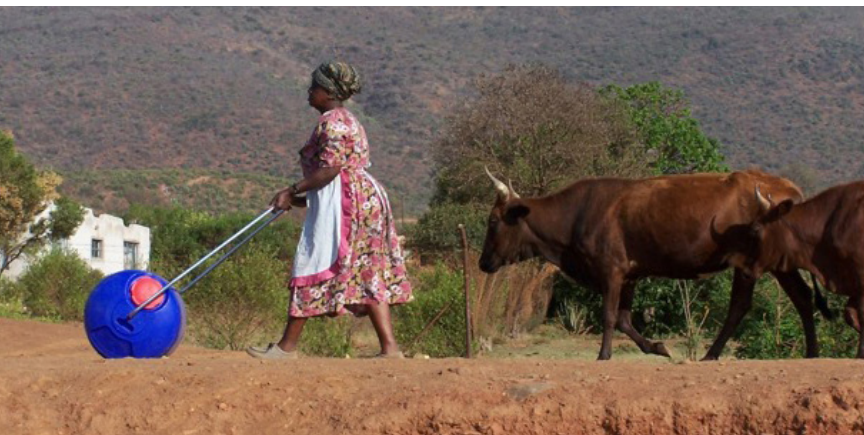
To hear more from Rebecca Rusch, tune in to [ELmag.com/audio](https://www.experiencelife.com/audio).

Keep On Giving

Instead of material gifts, consider donations to these hard-working organizations in the name of your family and friends.

» American Refugee Committee (ARC)

More than 65 million people are displaced from their homes worldwide. ARC is dedicated to helping them find some normalcy, with programs that are often designed in cooperation with refugees themselves. www.arcrelief.org



» Hippo Roller

For about 750 million people, having clean water involves carrying it home in buckets on their heads. Hippo Roller makes crossing long distances easier by providing sturdy vessels that can roll 90 liters of water along the ground. A donation to this organization provides more of this revolutionary technology where it's needed most. www.hipporoller.org



» Doctors Without Borders

A small donation to Doctors Without Borders goes a long way toward providing healthcare around the world: \$10 can buy 54 emergency food rations; \$50 can buy enough chlorination equipment to provide water to 690 people for one week during an emergency; \$75 can buy four sets of surgical instruments. www.doctorswithoutborders.com



» Heifer International

Ending poverty and hunger is Heifer International's mission. It provides small-scale farmers with the resources they need to keep their families fed: animals, seeds, and tools. It's possible, for instance, to gift an actual goat or purchase shares toward one in \$10 increments. www.heifer.org



» Kiva

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Find Phoebe Lapine's top-10 tips for living life as a healthy hedonist during the holiday season — plus a bonus recipe — at ELmag.com/lapine.

MEET: Phoebe Lapine, gluten-free chef, author, and award-winning blogger at *Feed Me Phoebe*

ABOUT: Phoebe Lapine was diagnosed with Hashimoto's thyroiditis, an autoimmune disease, in her 20s. But rather than wallowing in her diagnosis, she used her condition to embrace healthier habits, making one lifestyle change each month. A culinary instructor, Lapine is also the author of *The Wellness Project* and *In the Small Kitchen*. She deconstructs wellness into simple healthy acts at www.phoebelapine.com; you can also find her on Facebook @[feedmephoebe](https://www.facebook.com/feedmephoebe) and Instagram @[phoebelapine](https://www.instagram.com/phoebelapine).

Stay Sane During the Holidays

This bustling season can be stressful, but these seven tips can help you relax and stay present: ELmag.com/holidayhelp.

ILLUSTRATION: DAN SIPPLE





Let It Flow

How a river can show us what it truly means to give and receive.

IN THE FIELD OF ENGINEERING, one of the methodologies often used is biomimicry, or the practice of looking to nature for inspiration. After all, many of the processes and structures in the environment have withstood the test of time, prevailing over thousands, if not hundreds of thousands, of years.

This approach has been the basis for many modern innovations, from common household materials to towering buildings. Velcro, for instance, was inspired by the burrs that a Swiss engineer removed from his dog; Olympic swimmers wear swimsuits that imitate sharkskin; in Zimbabwe, a certain office building has an HVAC system modified after the cooling chimneys and tunnels of termite dens, with the goal of being more energy efficient.

But nature's lessons extend far beyond the physical. In fact, I believe its most important guidance falls in the social and emotional realms. Unlike tangible objects, these are not always easy to see — we have to be willing to slow down and take notice.

Consider an unobstructed river. At its headwaters, a tiny stream flows downhill, gradually building momentum as it gathers water from rain, snow, ice, and other streams and rivers. As it moves over rocks and land, the growing river collects sediment and plant materials that either get carried along with the current or settle to the bottom.

As it winds along its path, the river provides nourishment to its inhabitants and everything on its bed and banks. It gives and receives with the current, holding on to only what's necessary and taking only what's

free to go to the next place. It moves fluidly until it reaches the mouth, where it ultimately gives itself over to a larger body of water.

Beginning to end, the river's process of giving and receiving is peaceful, beautiful, and healthy. It is abundant with what it needs. Nothing more, nothing less.

Beginning to end, the river's process of giving and receiving is peaceful, beautiful, and healthy. It is abundant with what it needs. Nothing more, nothing less.

But rarely is a river or its tributaries unobstructed. Streams dry up when rain is scarce or water is diverted, lowering water levels and creating problems downriver. Dams limit the natural flow, and when they're damaged, the sudden flood of water can result in life-changing destruction. Pollution — from trash and runoff — compromises the water's health. You get the idea.

I see similarities between an obstructed river and the ways many people live their lives, and I believe there are clear opportunities for embracing the lessons of a free-flowing river. It has a lot to teach us about generosity and acceptance, and about giving and receiving more openly.

In its natural state, a river doesn't restrict what can enter or leave, or

where it can or can't go. It adapts to the surroundings and seasons, finding the right flow for the given circumstance. In some places, it's quick; in others, it's slow. Sometimes it stops altogether. When the flow resumes, it may find new places to branch off and go in different directions. It doesn't resist change.

What if we, like the river, embraced our natural flow? What if, instead of setting boundaries around our abilities and resources, we adopted mindsets that would allow us to find that just-right rhythm so we could reach our full potential and give our best gifts?

What if we stopped underestimating our abilities and discounting what we deserve, and instead focused on what we can do and what is possible with the available resources? What if we stopped pushing where there's no give and looked for spaces that are ready for new growth and change? What if we stopped letting others' judgments prevent us from pursuing our goals and passions?

Imagine how freeing this way of living could be — how balancing the give with the get could open us up to better opportunities and stronger relationships. Imagine the sense of abundance, peace, and well-being that natural state could offer.

That's the form of biomimicry I'm trying to integrate more of in my own life. Nature is awe-inspiring, and it has plenty of guidance worth following.

Bahram Akradi is the founder, chairman, and CEO of Life Time — Healthy Way of Life.



Giving without expectation leads to
receiving without limitation.

— Charles F. Glassman





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