CURALINK

ISSUE 12
February 2023
thecurafoundation.org

Welcome to CuraLink—a newsletter for innovators building a healthier future for all.

Welcome back to CuraLink, a newsletter and interview series featuring the most pressing issues in human health, unmet medical needs and the emerging innovations and technologies directed to address them.

In January, we had the honor of interviewing Dr. David Dodick, a pioneer in preventive neurology. Dr. Dodick is leveraging breakthrough technology to eliminate some of the deadliest and most devastating health problems of our time: brain diseases. If you missed the conversation, read it here.

This month, we are thrilled to share an exclusive interview with physician and author, Dr. William Li. Dr. Li is the author of the best-selling book, *Eat to Beat Disease*, as well as his upcoming book, *Eat to Beat Your Diet* available for pre-order at drwilliamli.com/etb-diet-book.

Robin L. Smith, MD
Founder, President and Chairman, Cura Foundation

Dr. Li is on an anti-diet crusade—a large-scale information campaign to raise awareness of the new science of metabolism and body fat. He believes that scientific insights around food come with unique urgency and this knowledge should be practically accessible to the public, not buried in the pages of medical journals.

This interview will arm you with a fascinating new way to harness food for health.

To subscribe, click here

bit.ly/CuraLink-Subscribe

A conversation with Dr. William W. Li

As president and medical director of the Angiogenesis Foundation, physician and scientist Dr. William Li is pushing the modern scientific community to embrace a forgotten ancient wisdom: Food is medicine.

Drawing on decades of clinical research as well as a longstanding history in Mediterranean and Asian traditions, Dr. Li wants the public to replace the quick-fix mentality of dieting with the "MediterAsian" way—a sustainable, plant-based approach to well-being.

According to Dr. Li, most of what we commonly believe about metabolism is false. Rather than count calories to lose weight, Dr. Li says we should mindfully eat more metabolism-activating ingredients and choose a diversity of foods that help us enjoy life.

"We should not fear food but embrace it," Dr. Li tells *CuraLink*. For exactly how to put the new science of metabolism into practice and level up your health, continue reading below.

William W. Li, MD, President and Medical Director of the Angiogenesis Foundation

What inspired you to pursue medicine? Are there any lessons from your early career or life related to metabolism, body fat and nutrition that shape your perspective today?

My family culture gave me a right-brain, left-brain kind of mindset. I grew up in a family of both artists and scientists. My mother was a pianist and my father was a biomedical engineer. Blending my love of both creativity and the logic of science was challenging at first, but during college, I found a way to integrate them nicely. At Harvard, I majored in biochemistry, but I also loved studio arts, art history, and, in particular, the history of science. I realized that if you take the long view of how society advances, both creative and scientific endeavors have always blended together.

Dr. Li's time in the Mediterranean taught him valuable lessons about a sustainable, healthful approach to eating that does not sacrifice pleasure

My hometown of Pittsburgh, Pennsylvania, is a multicultural hub with ethnic communities that have proudly maintained their food traditions. This imprinted on me the powerful connections that individuals have with their food cultures. My own background connected me to the food of Asia.

Before I went to medical school, I took a gap year and went to Italy and Greece to study first-hand how food, culture and health are part of life in those Mediterranean countries. I saw how food was integral to the quality of people's everyday lives. It was not just eating to survive but eating to live. Fresh, local foods were prepared according to regional traditions and were part of their cultural identity.

Fast forward to the present, my early research about the benefits of the Mediterranean diet has become

substantiated by science. The eating patterns I observed years ago have become accepted as among the healthiest according to epidemiological studies. Decades ago, I had watched people eat in ways that we recognize now as healthy: freshly prepared, locally grown food, mostly plants, lots of legumes, healthy fats, less meat, an emphasis on seafood and an abundant use of herbs and spices, as well as drinking coffee and red wine in moderation.

I went to medical school driven by my belief that medical science allows us to help our fellow humans. But in medical school, the focus on pharmaceuticals in treatment made me realize that the medical establishment had somehow lost the legacy of food being integral to supporting health and assisting in healing. I knew I wanted to somehow bring back food as a tool in the toolbox of health care.

Scores of studies suggest that a plant-based diet rich with fish, olive oil and fruits and vegetables is key to longevity

Although I've spent decades in my career helping to develop novel therapeutics for cancer, diabetes, cardiovascular disease and vision preservation, I could not stop thinking about two outstanding questions. First: How do we define health? And second: What are the effects of foods when we introduce them into our bodies, and how do they affect health and disease at the cellular, molecular and genomic levels? The sophisticated methods to study these effects existed for drugs, but could we apply those same methods to studying food?

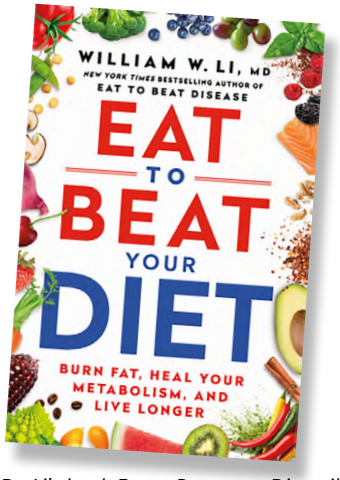
All of these influences have shaped the work I do today to deepen our understanding of how our body responds to the foods (and medicines) that we introduce inside ourselves. My journey has taken me from the lab to the clinic to the farmers market to bring these worlds together.

What inspired you to write Eat to Beat Your Diet? What do you hope your readers will learn from the book?

My background in academic medicine was based on the importance of publishing scientific research for scientists, but when it comes to food and health, there is an immediacy to the conclusions that needs to be heard by the general public.

"There is a certain urgency to nutritional information."

Discoveries on food can have significant impacts on people because everyone can take new insights about food and apply them to their lives immediately. So it became part of my mission to get this knowledge out as urgently as possible. That's why I gave my 2010 TED Talk "Can We Eat to Starve Cancer?" and why I took on the huge challenge and great opportunity to become an author of health books for the public. My first book *Eat to Beat Disease: The New Science of How Your Body Can Heal Itself* explored how food can combat illness. And my new book *Eat To Beat Your Diet: Burn Fat, Heal Your Metabolism, and Live Longer* is the direct sequel that shows how you can move your health to the next level—by improving your metabolism—regardless of where you are starting from healthwise.



Dr. Li's book Eat to Beat your Diet will hit shelves on March 21, 2023. Learn more and preorder the book here

How have research breakthroughs over the past few decades upended conventional wisdom about human metabolism?

We have all heard the term "metabolism" and most of us feel like we have a basic handle on the concept. But

there are many misconceptions that recent scientific research has upended. For example, we are not born with "fast" or "slow" metabolisms—we are all hardwired to have the same metabolism at birth. Nor is our metabolism programmed to automatically slow down when we reach middle age. In fact, our metabolism is designed to be rock stable from age 20 to 60. Only after 60 does it decline slightly, by about 17% by the time we reach our 90s. The fact that all humans are hardwired to undergo four patterns of metabolism over the course of their lifespan is an amazing discovery. This finding is based on a massive study published in 2021 in the journal *Science*, which analyzed the metabolisms of 6,000 people across 20 countries. What we eat, how we eat and when we eat can affect these patterns in ways that either optimize or suppress our metabolism.

In *Eat to Beat Your Diet* I talk about the new science of your metabolism and the foods that you can eat to improve it. This is not a diet book, it is an anti-diet book!

"Our metabolism is not our genetic destiny."

Most people think that if you eat more food, you will slow down your metabolism. But the latest research reveals some interesting surprises. The first is that certain foods activate, stimulate and increase metabolism. Not only can these foods increase metabolism, but they do this by fighting excess body fat.

Every year, fad diets and metabolism "hacks" spread like wildfire. Why are people attracted to these quick-fix solutions, and what does diet culture get wrong about achieving true health and well-being?

Society has conditioned people to want to fight fat to lose weight. Sometimes this is for vanity. Other times, doctors tell patients they need to shed some pounds. Our culture looks for the easy, quick fix. When it comes to dieting, the crash plans and fads are usually based on severe restriction, elimination and deprivation of food. These approaches are almost impossible to adhere to over the long haul, and most people give up after a while and rebound in their weight. Vanity is not health, and quick fixes do not lead to long-term health. The good news I share in *Eat to Beat Your Diet* is that it's possible to eat foods that are delicious, in reasonable amounts and in ways that allow you to sustainably fight excess body fat and improve your metabolism.

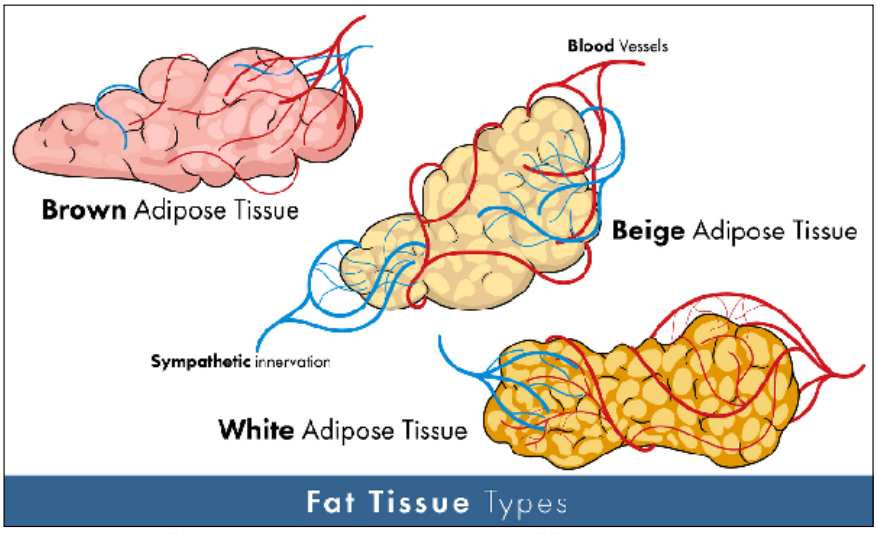
We should think about taming our body fat for the right reasons—and that is to harness our hardwired metabolism.

Can you walk us through the latest science of body fat and disease?

Body fat is healthy tissue. We need it for life itself. We now know that body fat is an organ, just like your heart, brain and kidney. And it's not just any organ, it's an endocrine organ that releases hormones that influence our brain, metabolism and circulation. Fat is not our foe—until there is too much of it. Everyone needs to be concerned about this because even people who are slender can have too much body fat packed inside their slender frame.

Too much fat is harmful because it causes inflammation, disrupts immunity, interferes with our circulation, derails our sleep and poisons our liver, among other damaging effects. Excess body fat also suppresses our hardwired metabolism, slowing it down. Taken together, abundant body fat sets us up for cardiovascular disease, diabetes and even cancer. So, we want to tame our body fat by keeping it in check. This goes a long way to preventing the chronic diseases that we fear the most.

What is really interesting about the new science of body fat is that we now know there are three types of fat. One is



The new science of metabolism reveals that not all types of fat are created equal, healthwise

subcutaneous fat. It's right under the skin. This is the jiggly stuff under your arms and chin and on your thighs and buttocks. It needs to be kept in check for health, but it's not the most harmful fat. Two, there is visceral fat. This fat is packed inside your belly, like packing peanuts in a shipping box. You can have a slim box that is overpacked with peanuts. Similarly, you can have too much visceral fat regardless of your body size. A small amount of visceral fat is needed for health, but too much is a setup for a derailed metabolism and metabolic diseases like diabetes. Three, there is a surprisingly useful fat called brown fat. This is not jiggly, but rather paper thin. It is not close to the skin, but rather close to the bone. And brown fat has a unique function. It serves as a space heater in the body and can burn down excess energy by drawing it from the harmful stores of fat. In other words, brown fat is a good kind of fat that can fight harmful fat.

There are some foods that can trigger brown fat to start burning away harmful fat, which increases your metabolism. Other foods have been discovered to prevent fat cells from forming or even keep them from getting larger. The surprising truth is that you can eat food to fight fat.

Can you share five potent foods or ingredients people should focus on adding to their diet?

Apples: They contain an ingredient called chlorogenic acid, a natural chemical that lights up your brown fat to burn harmful white body fat.

Navy beans: The dietary fiber in beans builds gut health, improves your metabolism and can help to shrink your waistline by burning harmful body fat too.

Tea: It contains polyphenols that are beneficial to your metabolism. Not just green tea but also oolong tea, and a smoky, dark tea called Pu'erh tea is also beneficial.

Cinnamon: This spice contains bioactives that control fat cell growth and triggers the brown fat to start burning away excess harmful fat.

Seafood: Not only salmon and oily fish like mackerel, but also cod, hake, and even shellfish like mussels, clams, oysters, and even shrimp, lobster and squid all contain beneficial omega-3 fatty acids that streamline your metabolism.

You can choose delicious meals with these ingredients making the process of improving your metabolism and eating to beat your diet a pleasure, not a chore.

What are the lasting benefits that can stem from the lifestyle changes you describe in Eat to Beat Your Diet? What's at stake if people do not change their diet and lifestyle?

We all want to live as long as possible, with the best quality of life possible. Our metabolism is responsible for our health and energy levels, which are connected to how we feel. With a healthy metabolism, we have energy, better blood flow and the ability to enjoy our lives.

"If we want to live long and prosper, we need to tend the garden of our metabolism."

The great news is that there are many foods that can benefit our metabolism. I write about 150 of them in *Eat to Beat Your Diet*. They are all used in the healthiest food cultures. You can really love your food to love your health.

Healthy aging is more important than ever before. Healthcare systems around the world are buckling under the weight of chronic diseases that arise from unhealthy metabolisms. If we can lower the burden of disease by taking care of our metabolisms, we can make our health systems more sustainable and efficient. We can also become better stewards of our planet by eating the very same metabolism-bettering, mostly plant-based foods because doing so is healthier for the environment.

In the book, you describe applying the legendary Bruce Lee's philosophies to health. Can you outline the principles involved in his approach and why they may be helpful for mental and physical well-being?

Bruce Lee was a childhood hero of mine. He was a legendary martial artist, pioneer in fitness and philosopher. When I reflected back on his life philosophy, I realized his practical, flexible and integrative approach to martial arts is exactly how I approach my own dietary choices and eating patterns. Bruce Lee said: "Absorb what is useful. Discard what is not. Add what is uniquely your own."

Dr. Li uses the latest clinical research to demonstrate food as medicine

This approach emphasizes self-knowledge, so you get to know yourself really well, and fit your food to who you are, rather than blindly following a strict set approach designed to make everyone act in the same way. Each and every day, we find ourselves in different circumstances. Bruce Lee emphasized the value of adapting to whatever situation you find yourself in and using available tools to succeed.

"You can respect tradition, without being a slave to it."

When it comes to food, we all have our own personal and family traditions. You can take the best of what traditions have to offer, but feel comfortable discarding the rest.

Ultimately, I hope people realize that food is core to our humanity. We should not fear food but embrace it. By embracing it, we can use the wisdom that modern science is providing us and apply it in ways that give us delight.

To learn more about the new science of metabolism and how to fight harmful body fat, visit www.drwilliamli.com and follow Dr. Li on social @drwilliamli.

This interview has been edited for length and clarity.

Insights, Perspectives & Ideas

Wegovy Works. But Here's What Happens If You Can't Afford to Keep Taking the Drug

NPR, January 2023

As celebrities, tech moguls and TikTok influencers' reports of dramatic weight loss circulated over recent months, demand for semaglutide medications has soared and resulted in widespread shortages—particularly for Ozempic® (approved for Type 2 diabetes) and Wegovy® (approved for weight loss for obesity). Beyond helping non-overweight people slim down, some physicians say these medications could help tackle obesity, a pressing public health problem. Hear from frustrated physicians and patients struggling with these shortages, as well as the experts arguing the need to use semaglutide medications more aggressively.

Scientists Are Finding Increasing Evidence for a Link Between Air Pollution and Neurodegenerative Diseases Like Alzheimer's

STAT News, January 2023

Scientists have known for decades that air pollution has effects far beyond blurred skylines and burning lungs, Lauren Gravitz writes. The fine particles and gases in polluted air have been connected to asthma, heart disease, inflammation and a variety of other health impacts. But demonstrating that polluted air can have neurodegenerative effects has proved trickier. New research suggests air pollution not only harms the heart and lungs but also the brain.

Finding Awe Amid Everyday Splendor

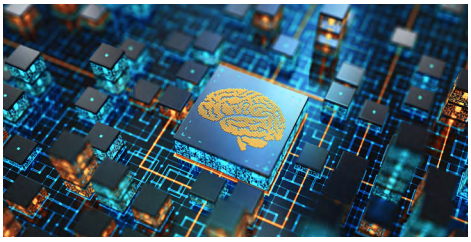
NOEMA, January 2023

A new field of psychology has begun to quantify an age-old intuition: Feeling awe is good for us. For *NOEMA*, Henry Wismayer profiles Dr. Dacher Keltner, a professor of psychology at UC Berkeley, who has led the scientific inquiry to examine one of the least-understood emotional states: awe. Dr. Keltner's latest book on the topic describes two decades of research and suggests that awe may be a panacea for the mental health consequences of modern living.

Global Push to Treat HIV Leaves Children Behind

The New York Times, January 2023

Sub-Saharan Africa has made steady progress in preventing HIV transmission and delivering life-saving medication to adults over the past two decades. Yet some 130,000 babies are still becoming infected each year because of logistical problems, such as drug shortages, and more pernicious ones, such as the stigma that makes mothers afraid to seek tests or treatment, Stephanie Nolan reports. While the effort to put adults on HIV treatment has been a major success across the region, about half of children's infections go undetected and untreated—resulting in over 100,000 children dying of AIDS annually. To close this treatment gap, experts say countries need to redouble their commitment to children—financially, politically and socially.



How AI That Powers Chatbots and Search Queries Could Discover New Drugs

The Wall Street Journal, December 2022

Since November 2022, public conversation has been abuzz about ChatGPT—a natural language processing chatbot that some say is poised to transform daily life as we know it. It's impossible to predict exactly how this type of artificial intelligence will influence health care but some researchers say that utilizing a similar protein-language model could streamline drug development. Companies are attempting to use this tech to analyze and synthesize large numbers of proteins that could become the basis of new drugs. As a result, the time required for the early stages of drug discovery could shrink from years to months, Karen Hao writes. The approach could not only improve existing drugs but also lead to novel molecules that could treat previously "undruggable" diseases.

How a Failed Eczema Treatment Triggered an Interest in Traditional Medicine

Nature, January 2023

A fascinating interview with Dr. Grace Nambatya Kyeyune, a natural-products research scientist and director of research at the Natural Chemotherapeutics Research Institute (NCRI), part of the Ugandan Ministry of Health dedicated to evaluating traditional medicines. Dr. Kyeyune uses modern scientific methods and conducts clinical trials to help validate the efficacy and safety of products based on traditional medicine. So far, Uganda's National Drug Authority has registered more than 230 natural products that are already on the market. The scientist says that many traditional medicines already commonly used are scientifically sound treatments. They just need clinical validation for standardization to develop the right dose and delivery method for safety and effectiveness.

Updates & Events

- The 36th Annual American Hospital Association Rural Health Care Leadership Conference is taking place February 19-22 in San Antonio, TX. The conference brings together top practitioners and thinkers to share strategies and resources for accelerating the shift to a more integrated and sustainable rural health system. Speakers include Michael Easter, author of *The Comfort Crisis: Embrace Discomfort to Reclaim Your Wild, Happy Healthy Self*; John M. Haupert, the president and CEO of Grady Health System in Atlanta, GA; Rick Pollack, the president and CEO of the American Hospital Association; and Nadja West, the first African American Army Surgeon General and Former Commanding General of the United States Army Medical Command. Learn more at ruralconference.aha.org

- The Lake Nona Impact Forum will occur March 8-10 in Lake Nona Medical City in Orlando, FL, a life sciences and healthcare cluster of excellence featuring some of the nation's top universities, hospitals and research institutions. The three-day event will focus on building the well-being ecosystem of the future by exploring the intersections of health, wellness, medical and scientific innovation to optimize human performance. Speakers include Dr. Amy Abernethy, president of clinical studies platforms at Verily; Dr. Michelle Williams, dean of the faculty at the Harvard T.H. Chan School of Public Health and Angelopoulos Professor in Public Health and International Development at the Harvard T.H. Chan School of Public Health and Harvard Kennedy School; Dr. Richard Carmona, the 17th Surgeon General of the United States, chief of health innovations at Canyon Ranch and distinguished laureate professor at the University of Arizona; Dr. Francis Collins, 16th Director, U.S. National Institutes of Health and Dr. Robin Smith, president of the Cura Foundation, among many others. Learn more at lakenonaimpactforum.org

- The Cell & Gene Meeting on the Mediterranean is scheduled for April 12-14 in Barcelona, Spain. The conference brings together the cell and gene therapy community from Europe and beyond. More than 80 presentations will cover a range of commercialization topics from market access and regulatory issues to manufacturing and financing. Learn more at meetingonthemed.com

- On April 30 to May 3, the 26th Annual Milken Institute Global Conference will bring together thought and industry leaders around the theme of "Advancing a Thriving World." From gene therapies to renewable energy, AI to infrastructure and DEI to FinTech, attendees will gain valuable insights and make crucial connections to drive progress and prosperity. Learn more at milkeninstitute.org/events/global-conference-2023

Join Us	Donate	Get in Touch
Become an Advocate	**Make a Contribution**	**Contact Us**
@CuraFdn	If you would like to help further our mission, we ask that you think of the Cura Foundation as you invest your time, energy and dollars.	(212) 584 4176
TheCuraFoundation		info@thecurafoundation.org
CuraFdn		**The Cura Foundation**
The Cura Foundation		PO Box 5298, New York, New York 10185
CuraFdn	**thecurafoundation.org/donate**	**thecurafoundation.org**

If you have any questions or feedback, please contact: curalink@thecurafoundation.com

Newsletter created by health and science reporter and consulting producer for the Cura Foundation, Ali Pattillo, and associate director at the Cura Foundation, Svetlana Izrailova.