



# 10 HEALTH LONGEVITY TOOLS THAT I USE:

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# WHEN I EAT

When we eat as is almost as important as what and how much we eat. Fasting in one form or another is part of nearly every religious tradition and culture. Fasting can also have many goals [weight loss, spiritual effects, etc.] which will influence the way that it is done.

For over a year I've skipped breakfast and lunch to power up health and longevity genes. I've never felt sharper mentally or had more energy during workouts and, wow, that single meal of the day (after fasting for 20 hours) has never tasted better!! It's sometimes called OMAD (one meal a day). It really simplifies my life as I now no longer have to worry about what to eat for breakfast or lunch. Rather than doing a longer fast at infrequent intervals, I've opted to have a daily shorter fast that has become a regular habit. Because direct measures of autophagy, longevity and other beneficial effects are difficult to determine, the optimum fasting strategy for this purpose is still a topic of debate.



# WHAT I EAT

I Don't Diet. Dieting is a temporary change in eating habits to accomplish a short-term goal. To accomplish a permanent change in my health, I make a permanent change in my eating habits. I am carbohydrate intolerant. I love the taste of sugar, baked goods, and other carbohydrates but they adversely affect my health parameters. So I eat minimal carbs and avoid seed oils. It's not a diet, it's what I eat. I also try to eat organic foods, especially when imported from other countries where pesticide laws are not as strict as the US. And, yes, I am in healthy ketosis [not ketoacidosis] most of the time.

# HOW MUCH I EAT

I count carbs not calories. I only eat once a day so I can pretty much eat as much as I want. Of course, I'm not stupid and try not to eat sugar, high carb foods, or seed oils. I also try not to overeat protein which means I eat healthy fats for the needed calories. Without the carbs to spike my insulin and drive hunger, my body gets full and I stop eating[usually] at a natural point.



# PHYSICAL EXERCISE

I treat physical exercise like a drug and monitor the dose. Along with diet, exercise is one of the most powerful lifestyle factors that we can easily manipulate [Fitzgerald 2021]. Beginning this year, I committed to riding an exercise bike at least 10 miles every day. I've now passed 2200 miles on the odometer, and I've never felt better.

Little habits add up.

To help the habit stick and make me stick to the commitment, I use a [free charity website](#) to publicly declare and track a goal to the world. I decided to start with a 3000-mile virtual bike ride across America to raise money for a charity as my first challenge. I use the free [Strava software](#) to automatically connect to my exercise bike and upload my daily miles to update the charity website tracker.

The more people that know about my exercise goal/commitment, the more humiliation that I would face if I wimp out and miss my goal. By the time I reach 3,000 miles in another month or so, I anticipate that the daily habit will be locked in, and I will likely extend the commitment to 6,000 miles for a virtual ride across America [and back].

I need to expand my physical exercise menu to include more aerobic exercise and strength training. Any suggestions appreciated. I am thinking of starting a daily habit of 1 push-up and one sit-up. The amount is not important, as I just want to lock in the habit, then I will increase the dose.



# MENTAL EXERCISE

Like physical exercise, I treat mental exercise like a drug and try to quantify it.

Mental activity is associated with decreased risk for Alzheimer's and other neurodegeneration as well as innumerable benefits for other diseases. [Yu 2020]

I try to keep learning. If someone says that they have "Completed their education, they don't understand education". Education is a lifelong process that only gets better with time.

For example, I recently passed day 425 of daily 10-minute free Mandarin lessons on the [Duolingo app](#). If I miss more than a day the app will delete my streak. That's an incentive to not miss days. Ever.

I also read a lot of books. I'm including some short videos of ones that I especially like on my [YouTube Channel](#).

I love music but the mental exercise benefit of merely listening to music is minimal. But it takes off when one performs the music, sings, or dances along. To maximize the health benefits from music, I have started taking weekly classical piano lessons along with my daughters. This means I get to follow along with them in their music theory classes and practice techniques and pieces with them every day. It keeps me mentally [and physically] agile and the shared experience deepens my connection with them.



# SLEEP

I try to get too much sleep, not too little. My body will tell me when I have had enough. A healthy sleep-wake cycle is critically important for longevity. Like many people, I used to stay up late and get up early with an alarm clock and then be tired all day. Now I go to sleep with my daughters by 10 pm and wake up without an alarm by 4 or 5 am in time to ride 10 miles [see above] before the rest of the family wakes up.

# STRESS MANAGEMENT

Resilience and stressreduction are critical to managing factors that direct affect our health and longevity.



# MEDITATION

There are many good tools and apps out there to explore this powerful technology. The current one I am using is [Waking Up from Sam Harris](#).

# PERSONAL GROWTH & TRANSFORMATION

Always moving along the path of personal growth is very valuable. There are many effective options available. I am currently in a remarkable program at [HeartCore Leadership](#). If you are interested in this program please reach out to me at [Contact](#).



# SUPPLEMENTS

This is an involved discussion that we don't have space for here so I will just list the supplements that I am currently taking (note all disclaimers below).

- [Nicotinamide Mononucleotide\(NMN\)](#)
- [Resveratrol](#)
- [Lion's mane](#)
- **Multivitamin** [available from many sources]





# LABS/IMAGING/ TESTS

What labs do I check? A full discussion is beyond the scope of this discussion and will be covered in detail later.

One key point I find valuable. I don't try to get my labs in the "normal range" according to the lab. I try to get my labs into the "optimal range" which in many cases is not the same as the "normal range". In addition to the usual lipid and metabolic panels here are a couple others that I check:



# INSULIN

Serum glucose can fluctuate significantly even when fasting. Just wear a CGM and you will understand. Glucose elevation is sadly, a relatively late finding in diabetes. It is usually preceded by a decade or more of insulin resistance and elevation with eventual pancreas failure. Take home message: waiting until glucose rises to diagnose diabetes means that it is diagnosed late after a decade or more of damage has already been done.

EvenHA1C can show long-term glucose levels but still misses up to a decade of insulin resistance and elevation that precedes any glucose changes in many people.



# DNA TESTING

Consumer DNA testing is increasingly affordable. Once complete I download the data file and check SNPs (single nucleotide polymorphisms) as they become available. Example: ApoE4 alleles for Alzheimer risk, etc. Deeper dives to follow.

# MEDICAL IMAGING STUDIES

MR brain volume scan

CT Coronary artery calcium score

CT or MR Cancer screen- chest abdomen and pelvis- either CT or MR

CT or MR Liver fat quantification

# OTHER SCREENING

PSA

Colonoscopy



# DEVICES

“You can't manage what you can't measure.” It's as true in health/longevity as it is when Peter Drucker said it about business management. Unfortunately, there aren't a lot of good ways to measure many of the things we would like in longevity health such as longevity genes [SIRTUINS, mTOR, AMPk], autophagy/apoptosis, and innumerable nutrients and other biomarkers. But as our understanding increases along with technology there is a growing list of devices that allow us to start to peek under the hood.

## More details in a later deep dive but here are some basics:

1. **SCALE** - I have an inexpensive [\[\\$17\] one linked to my smartphone](#) that I jump on each time I take a shower. It just provides basic information about where I am with weight and does Bioelectrical Impedance Analysis (BIA) technology to measure my body composition including Body Fat, BMI, etc.
2. **KETO BREATH MONITOR**. For monitoring ketosis, I don't like sticking my finger for blood levels and I don't find the urine levels useful. I use an acetone breath monitor which is a fast, convenient, and accurate way to monitor acetones levels as a marker for ketosis. There are many available, but [this is the one that I use](#).



# DEVICES

3. **CONTINUOUS GLUCOSE MONITOR** - These measure interstitial glucose levels with a small [painless] patch worn for 2 weeks at a time and connect to a smartphone. I use the [Freestyle Abott](#), but the ones from other vendors are also good. I just started using these this year [note I am not diabetic] to understand how my body responds to different things that I eat. These require a prescription from a physician in the US but are becoming increasingly available through companies like LEVELS, Nutrisense, and Vital that use them for overall health management. Rumor has it that both Android and Apple watches may be releasing a smartphone based glucose monitor using a form of Raman spectroscopy as soon as 2021.

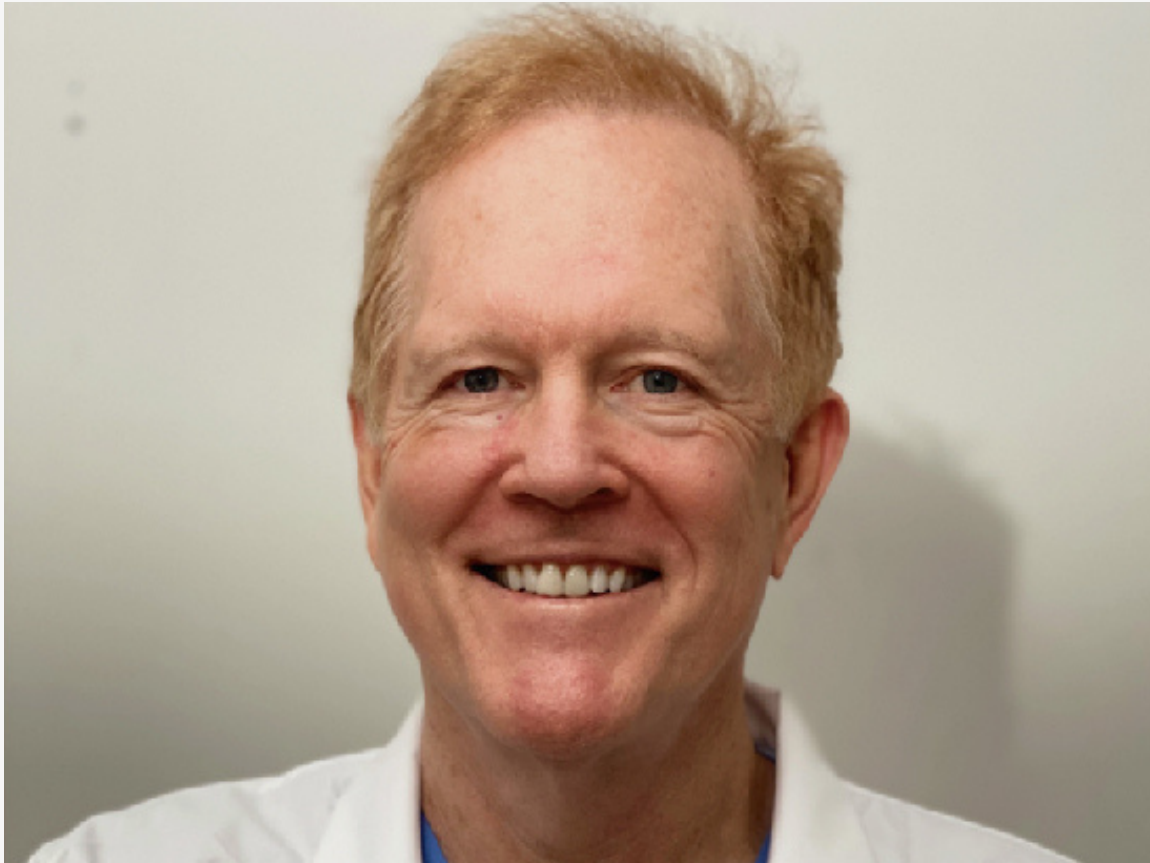


# OTHER THINGS ON MY HEALTH LONGEVITY TO-DO LIST

Silent retreats  
Sauna  
Ice baths  
Sound baths  
Isolation tanks  
Cryotherapy  
Other activities to induce hormesis

If you have suggestions or advice, please let me know

[CONTACT ME](#)



## ABOUT ME

@robertlufkinmd

Dr. Lufkin has served as Full Professor of Radiology at both the UCLA David Geffen School of Medicine and at the USC Keck School of Medicine. He is currently a Clinical Professor of Radiology, at the USC Keck School of Medicine with an academic focus on the applied science of longevity. Dr. Lufkin is a practicing physician and the author of over 300 scientific papers and 14 textbooks translated into six languages. He studied computer science at Brown University and completed his medical degree at the University of Virginia School of Medicine.

He is a frequent invited and/or keynote speaker around the world and was named one of the '100 Most Creative People in Los Angeles' by Buzz Magazine. His honors include serving as President of the Society of Magnetic Resonance Imaging, President of the American Society of Head and Neck Radiology, and numerous other professional affiliations. Among his many inventions including several patents in artificial intelligence, he developed an MR-compatible biopsy needle which is used worldwide today as the "Lufkin Needle." He has also founded and/or invested in numerous technology companies.

## REFERENCES

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- Yu, Jin-Tai, Wei Xu, Chen-Chen Tan, Sandrine Andrieu, John Suckling, Evangelos Evangelou, An Pan, et al. "Evidence-Based Prevention of Alzheimer's Disease: Systematic Review and Meta-Analysis of 243 Observational Prospective Studies and 153 Randomized Controlled Trials." *Journal of Neurology, Neurosurgery & Psychiatry* 91, no. 11 (November 2020): 1201–9. <https://doi.org/10.1136/jnnp-2019-321913>.

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## **NOT GENERAL ADVICE**

This is an N=1. This is what I do for myself based on the best information that I have now. Everyone is different. These are a constantly evolving set of tools that I adjust as I learn more about metabolism, health, and longevity and my own body and the science moves forward. These work for me now based on my own unique metabolism, genomics, history, and epigenome. Everyone is different. Actual mileage may vary. Objects in the mirror are closer than they appear.

## **LIMITED INFORMATION**

Due to length constraints, this is a superficial summary list. Deeper dives and more details to follow on each of these topics. Please stay tuned and subscribe at

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