BETTER HEALTH & LONGEVITY TIPS

DIET

Eat clean macronutrients. The three "macros" – carbohydrates (CHO), fat, and proteins – are all necessary for the average human to function properly and remain healthy. Consume whole foods like fresh or frozen fruits and vegetables, whole grains, lean proteins, fatty fish, beans, and legumes. REDUCE the number of processed foods, added sugars, high sodium, and saturated fats. It isn't easy because so many food products today contain them, but emphasize these:
Vegetables: Load up on these, especially the leafy greens. All veggies provide many essential vitamins and minerals and very few calories.

Fruit: Like vegetables, loaded with vitamins and minerals. Although they contain more calories than vegetables, they also contain more water to facilitate optimal hydration.

Whole Grains: Make sure the label reads whole grain. Many breads contain refined grains and thus lack fiber and other nutrients. Oats, whole-wheat bread, barley, and quinoa are excellent options.

Lean Proteins: Choose more hormone-free chicken, turkey, fish, and lean red meat. Eggs, low-sugar Greek yogurt, and low-fat dairy products are also healthy. Minimize hormone-laden, deep-fat fried, and cured animal products.

Beans and Legumes: They are an inexpensive source of good carbs, fiber, and protein. Any bean, edamame, and lentils are the options.

Nuts and Seeds: Great between-meal snack food. Plain, raw, roasted, or minimally salted nuts and seeds (not the flavored ones as they contain added sugar). Choose peanut butter with only two ingredients: peanuts and some salt.

Time Restricted Eating

Try to eat all meals within an eight-to-10-hour period. The time after your last meal (including sleep) is a necessary fasting period where your body undergoes many important restoration/clean-out processes for good health. Examples:

- First meal at 6:00 AM, last meal at 4:00 PM. (nine-hour window)
- First meal at 9:00 AM, last meal at 6:00 PM. (10-hour window)

Consume 8 oz. of water every hour. If working out, divide your body weight by 30 = the number of oz. to drink every 15:00 to 20:00.

Consume 2-3 servings/day of fermented food to improve your gut microbiome. A healthy microbiome positively affects both physical and mental health. Try these: Plain yogurt, Kimchi, REFRIGERATED sauerkraut & pickles, Kefir, Kombucha, and brine.

Consume healthy Omega-3 fats. Fat is needed to maintain many body functions, especially healthy poly- and monounsaturated. Fatty fish, like salmon, tuna, and sardines – along with olive and canola oil, and avocados, are great healthy fat options that contain healthy Omega-3 fatty acids.

General diet tips:

- Become a nutrition label reader: no label means no additives (i.e., right from the ground, vine, or tree), and anything with more than four ingredients likely contains unhealthy additives. If 85% of your daily food intake is from products with less than four ingredients, you're on the right path.

- Breakfast: Your first meal of the day – either upon rising or a few hours later - should consist of a healthy carb and protein source.
- Protein intake: aim for one gram/pound per body weight. Because most people do not get enough of it, it should be consumed at each feeding even though one's daily supply can be obtained in different meal combinations (i.e., three to six feedings/day). Therefore, it is more practical to spread out the total daily intake because one usually eats multiple meals within their eight-to-10-hour food intake window.
- Avoid the added sugar and processed food staring you in the eyes at the grocery store checkout aisle. On that point, approximately 73% of all grocery store products contain added sugar!
- Avoid vending machine food. Most of it is junk, including those high-sugar drinks.
- Those sugary drinks (sodas, energy drinks, fruit drinks) either have a lot of calories or contain artificial sweeteners that trigger the insulin response that encourages fat gain and resultant mitochondrial dysfunction EVEN THOUGH THEY POSSESS ZERO CALORIES!
- Packaged meals, microwave meals, frozen pizza, instant noodles, chips, and any food with a long list of hard-to-pronounce ingredients contain emulsifiers, high sodium, HIDDEN SUGAR, and other "extend-the-shelf-life" chemicals that are not healthy.
- Get those Omega 3 and EPA fats daily and add fermented foods for improved gut and brain health.

EXERCISE

Strength training at least two times/week. Work all major upper and lower body muscles with high effort using time-efficient workouts and progressive overload protocols. Five to seven exercises for one hard set each have been shown to work

well, provided you give 100% effort and always attempt to progress each workout. Therefore, one does not need to train four or more days per week using a high volume of multiple sets and many exercises. If you spend many hours in the gym weekly, you're either not working hard, doing too much, or unnecessarily overtraining your body.
IMPORTANT POINT: A "Cardio" effect can be gleaned from strength training if you go hard on each set and minimize the rest time between exercises. Yes, it will be physically and mentally challenging. However, if you push yourself, that approach will elevate your heart rate the entire session, thus providing an added benefit: no need to complete additional time-consuming conventional "cardio" workouts each week that could create more scheduling issues.

Bottom line: An effective strength training workout can be completed in less than 30 minutes, including a warm-up and cool-down. And if you minimize the rest between exercises, it will elevate the heart rate for a cardio effect. Get in, suck it up, and get it done, then move on to other important things in your life.

High-Intensity Interval Training (H.I.I.T) can be implemented if you're completely obsessed with "doing cardio." Understand this: the high-effort, minimal rest-between-exercises strength training is all that most people need to improve many physical metrics (strength, endurance, fat loss). However, if you have time and cannot deal with not doing "Cardio," I suggest implementing time efficient H.I.I.T. that can be completed in under 15 minutes. Examples:
Using an electronic device like a stair stepper, elliptical machine, rower, or climbing device, alternate a hard all-out effort with an easier back-off segment, such as:

:40 hard/:20 easy for 10 minutes.
1:00 hard/:30 easy for 15 minutes.
5:00 easy warm-up followed by :30 hard/:30 easy for 10 minutes.

3:00 warm up followed by :20 hard/:10 easy for seven minutes.
Design your own but make it challenging.

Zone 2 cardio can be added IF YOU HAVE TIME (and in place of H.I.I.T.) two to three days/week on separate days, or before strength training workouts. Remember, if you complete the strength training workouts with high effort with minimal rest time between sets - or if you opt for H.I.I.T. workouts – those can be considered cardio and should be sufficient to help you reach your health goals. If that harder work scares you and you have valuable time (because it is time-consuming), Zone 2 cardio would involve at least 30 to 60 minutes of continuous effort at a level where you can maintain a conversation (i.e., brisk walking or slow running). So, it's your choice: choose higher-effort and time-efficient strength training and H.I.I.T. or add lower-effort and lengthier zone 2 cardio.

COLD THERAPY

Cold emersion in water up to the neck has been shown to offer many health benefits, including:

- Increased brown and beige adipose fat which facilitates fat loss.
- Increased metabolism.
- Increased hormones which improve focus & mood.
- Decreased inflammation.
- Increased acclimation to cold.
- Increased testosterone & sex drive.
- Decreased anxiety.
- Enhanced benefits of fasting when used during T.R.E.

Any tub, container, or commercially sold tank that allows for total body emersion up to the neck is ideal, but Cryotherapy, cold showers, or a cold pool or lake will also work using the following protocol:

- Use an "uncomfortable" temperature between 60^0 to 40^0 Fahrenheit, but not too cold as it may shock the heart.
- :30 to 1:00 in/out without drying off. Repeat every 1:00 to 3:00.
- The key is to activate the shiver response by emersion → get out → no drying → back in. That activates the hormone succinate to enhance brown and beige adipose tissue function relative to fat burning.
- One to five times per week for a total of 10:00 to 12:00/week.
- Over time, slowly decrease the water temperature as you become more comfortable.
- The best time of day for it is early to midday as any later time may interfere with the body needing to decrease its temperature to get into deep sleep.

GET SUNLIGHT EARLY

It sounds crazy (and often impractical to do), but getting direct sunlight early in the day sets your daily biological clock to optimize many biological functions:

- Exposure to sunlight sets your Circadian clock to allow you to sleep on a regular schedule. It sets in motion an internal "timer" that prepares you to fall asleep approximately 16 hours from the time you rise in the morning.
- Optimizes the function of the billions of cells you possess.
- Enhances the hormone melatonin which has a positive effect on bone mass, puberty, and antioxidant functions.
- Triggers the increase of the hormone cortisol which augments wakefulness and alertness in the morning.

- Sunlight exposure to the skin increases the motivation to mate via increases in testosterone and estrogen. STUDY: more light increases sex hormones and vitamin D3 due to increasing the P53 pathway. The p53 pathway is also a major tumor suppressor that prevents the proliferation of irregular cells via regulating DNA repair, and cell progression, deterioration, and death.
- Improves spleen and immune system function.

IMPORTANT:

- View sunlight first thing when rising in the morning within 30-60 minutes.
- Look toward the sun – NOT DIRECTLY AT IT – for at least 5:00.
- Viewing through windows, car windshields, and sunglasses does not count as they block needed ultraviolet light.
- On cloudy days it will still work but increase the viewing to 10:00 of exposure.
- On very dark or rainy days LED ring lights can be used.
- If there is no direct sunlight and you use artificial light, try to get outside as soon as possible.

DO BREATHING EXERCISES

Note these:

- We all face stressful events, some occasionally and multiple times per day, and breathing exercises can help decrease that stress.
- Proper breathing is underrated, and learning how to master that innate function can enhance overall health.
- Nasal breathing by itself has many benefits, including the ability to inhale more oxygen and reduce the amounts of airborne viruses and bacteria hovering in the air around you.
- Some people over breathe and some under breathe. Over breathing can result

in increased excitability, a decreased ability to learn due to the over-stimulation of neurons, and the inability to keep CO2 in the body long enough. Under breathing for many occurs during sleep and causes decreased O2 intake and sleep apnea which can cause daytime sleep issues, headaches, stress, and snoring.

- You can improve the following during the inhale process:
  - The ability to remember things.
  - Peripheral vision due to dilating pupils.
  - The ability to learn better.
- For nasal inhaling, specifically it:
  - Increases brain function.
  - Allows the Olfactory system to optimally sense environmental chemicals.
  - Decreases reaction time.
  - Increases nitric oxide gas which results in muscles relaxing and capillaries dilating.
  - Improves facial aesthetics (i.e., skin texture, straighter teeth).
  - Decreases snoring during sleep.
- Ideal breathing results in inhaling O2 at approx. six liters/minute with 12 shallow in & out breaths.
- Breathing tests and exercises:

  CO2 tolerance test – how well you control CO2.

  1. Inhale via the nose until full.
  2. Start a timer/clock & exhale slowly through the nose until the lungs are empty:
     - <:20 = low CO2 tolerance (use :03 for the box breathing test below).
     - :25-:45 = moderate tolerance (use :05-:06 for box breathing).
     - >:50 = high tolerance (use :08-:10 for box breathing).

Box breathing – THROUGH NOSE.

1. Inhale for above CO2 tolerance test time.
2. Hold for the same time.
3. Exhale for the same time.
4. Hold for the same time.
5. Repeat that "4-side" process for 2:00. Doing box breathing 2-3 times/week offers these benefits:
   - Increased phrenic nerve control of the diaphragm.
   - Increased mechanical control of breathing (diaphragm movement).
   - Improves the ability to inhale the normal six liters of O2/minute.

Physiological sighing – Do this for 5:00 and with your eyes closed.

It decreases stress, increases the quality of sleep, and improves mood.

1. NOSE inhale on a 3-count: long deep inhale → 2) a short inhale → 3) one last short but sharp inhale (which allows the collapsed Alveoli to reinflate).
2. Exhale through MOUTH on a slow 6-count.

Cyclic hyperventilation – deliberate hyperventilation.

It involves the completion of 25 total breaths of inhaling actively, then actively or passively exhaling.

It creates deliberate anxiety to increase adrenaline release.

It triggers the gasp reflex because it senses a threat due to a high CO2 level that needs to leave the body.

SLEEP

Getting proper sleep is HUGE. It is one of the most important behavioral tools a person can control for optimal health.

Think about this:

Take an average person who has minimal energy expenditure during the day. They sit most of the day, perform minimal exertion tasks (i.e., some walking, a few stairs climbed, computer work), do not exercise, and watch television or surf the Internet at night. To accomplish those minimal energy-using tasks alone, ideally, they need to eat healthy meals and get adequate sleep at night to recover and re-energize for the ability to do it again the following day.

Now, take a person who does the above and energy-depleting exercise sessions multiple times each week. Their energy demands are much greater, which places even more emphasis on adequate sleep and nutrition.

Finally, take a person on their feet most of the day working a physically active job (i.e., construction worker, athlete, other long-hour manual laborer). Their need for adequate sleep and nutrition is even more important, especially if they, too, engage in demanding exercise sessions on top of their highly active workday.

The point is that to remain alive and have the ability to function at a high level - even when energy expenditure is minimal like the first example - adequate sleep is a biological necessity. And the greater the physical stress incurred, the more important it becomes.

During sleep two stages are cycled through: rapid eye movement (REM) and non-REM sleep. Usually, there are four to six cycles per night, each lasting 90 minutes. During these stages, specific processes are undertaken which facilitate the recovery and regeneration of many body parts and functions.

Non-REM sleep has three sub-stages:
- Sub-stage 1 which is the transition between wakefulness and sleep.
- Sub-stage 2 is when you fall asleep.
- Sub-stage 3 is called slow-wave/deep sleep. One usually spends more time in

this stage early in the night. It is important for cleaning out the brain (when you essentially "get away from yourself" to be ready for the next day).

REM sleep:

Normally more REM sleep occurs later during sleep.

During REM sleep the brain is active, similar to the activity during waking hours.

Dreams normally occur during REM sleep.

Skeletal muscles are normally inactive during REM sleep to prevent one from acting out dreams.

It is during REM sleep when:

- Skill learning and cognition occur.
- Growth hormones are released in large amounts.
- Protein synthesis occurs. It's time to repair and rebuild body tissues, including muscle.

DO NOT SMOKE TOBACCO & DO NOT DRINK ALCOHOL

Easier said than done, but if you are a smoker or a drinker, quitting immediately is the best move you can make to improve your health right now. Smoking for sure is the number one worst habit a human can do. Regarding drinking, ideally going cold turkey is the best option, but even cutting back is better than nothing.

SMOKING:

What person in their right mind would inhale toxic smoke and other chemicals into their lungs where clean oxygen is needed for optimal cell function? On the surface it is insane, however, the power of nicotine controls so many due to its highly addictive nature making it difficult to quit.

Needless to say, smoking tobacco offers zero health benefits. It wreaks havoc on the human body in ways we've known for decades:

It causes lung cancer, heart disease, stroke, lung diseases, diabetes, and chronic obstructive pulmonary disease (COPD) including emphysema and chronic bronchitis, diabetes, an increased risk of tuberculosis, certain eye disorders, and immune system dysfunction, including rheumatoid arthritis. But wait, there are more:

- Erectile dysfunction.
- Ectopic pregnancy.
- Decreased bone density.
- Increased risk of colorectal cancer.
- Cleft lip and cleft palate.
- Fertility issues.
- Gum disease.

Seriously, find a way to quit if you smoke. No one is forcing a cigarette to your lips. You are. Know that quitting is possible because it's a matter of behavioral modification that MANY have successfully done. Breaking that habit can be done if you are mentally strong enough to abstain for the first 10 days, your toughest stretch. If you can then make it 20 more days, it will be easier each day due to changing your routine of normal nicotine triggers.

DRINKING:

The popular advice from medical professionals was that "one or two drinks per day" was at one time acceptable, but that has recently been found to be specious. More recent research suggests that any amount over a week, and week after week, can lead to:

- Thickening of the brain cortex.
- Neurodegeneration of other brain regions.
- Increased the risk of cancer, especially breast cancer by 4 to 13% even at <10 grams of alcohol per day (i.e., one beer, one glass of wine).
- Altered gene expression in all cells.
- Decreased testosterone levels.
- Increased female hormone estrogen levels in males.
- A disrupted gut microbiome because alcohol can:
  - Kill good bacteria in the gut which alters the entire gut microbiome.
  - Result in bad bacteria leaking from the gut (Leaky gut syndrome).
  - Increase inflammatory cytokines produced in the liver which leads to programming the brain to drink more.

Like smoking, quitting drinking can be done by using behavioral modification: change your environment/triggers for alcohol, suck it up for the first 10 days, and hold on for 20 more to become free of addiction. Millions have done it, and you can, too.