ALIve
ASHER LONGEVITY INSTITUTE

The Nine Steps to a Healthier and MUCH Longer Life

The Longevity Opportunity

- The technologies, therapies and protocols are available to enable robust health to 100 and beyond
  - including playing non-contact sports

- Coalition for Radical Life Extension

Recent Longevity Studies by Prestigious Research Organizations

*"Healthy human life span will soon **increase by 20 years.**"*

- Journal of the American Medical Assn (JAMA) 9/17/2018

*"Senolytics have the potential to **transform geriatric medicine and reverse aging.**"*

- The American Geriatrics Society (2017)

***"Aging is looking more and more like a disease** and a treatable one at that."*

- Studies at Mayo clinic and Scripps Research Institute, LA Times 7/10/18

***"The largest overall longevity increase** has been found using a **combination of Rapamycin and Metformin (20 years).**"*

- Life Extension Institute (2021)

- Peer Reviewed Periodicals

Longevity Advances Growing at an Exponential Rate

- Coalition for Radical Life Extension
- Age-reversal.net

- Technologies that support longevity research are growing exponentially
  - Nanotechnology
  - Biotechnology
  - Artificial Intelligence
  - Machine Learning
  - Big Data
  - CRISPR
  - Data Analytics
  - Gene Sequencing
  - Automation
- Worldwide forum of longevity practitioners sharing their research
- The last decade was the decade of technology
- This decade will be the decade of biotech

An Explosion of Longevity Related Investment

- *Wall Street Journal*
- *Investors Business Daily*

- **Amazon/Mayo Clinic ($116M)**
  - ✓ To cure death
- **Gates Foundation**
  - ✓ To cure disease ($54B)
- **Mark Zuckerberg ($3B)**
  - ✓ To cure disease
- **Google/Calico ($1.5B Research Center)**
  - ✓ To cure cancer
- **In 2017, $400M invested in longevity startups**
  - ✓ $800M in 2018
  - ✓ $1.6B in 2019
  - ✓ 4.2B in 2020
  - ✓ Expected to double again in 2021

Major Universities with Longevity Programs

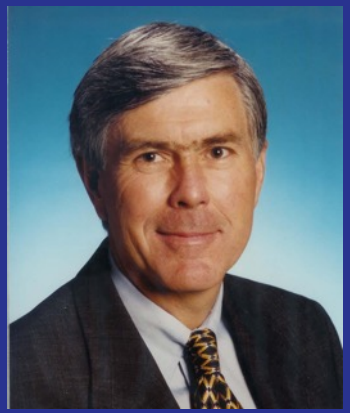
- Columbia University
- Duke University
- Eastern Illinois University
- Florida State University
- Harvard University
- Iowa State University
- Johns Hopkins University
- Penn State University
- Stanford University
- University of California, Los Angeles (UCLA)
- University of Maryland
- University of Pittsburgh
- University of Southern California (USC)
- Washington University in St. Louis
- Western Kentucky University
- Yale University

Founders

Chief Executive Officer
John Asher

Chief Operating Officer
debra Borchardt

Chief Medical Officer
Jeffrey L. Boone, M.D., M.S.



Chief Marketing Officer
Hube Hopkins

Chief Revenue Officer
John Edwards

Regional Chief Medical Officers

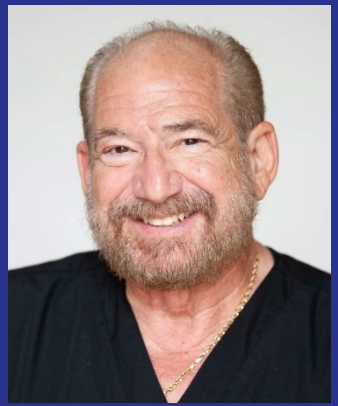
East

Dr. Delara Tavakoli, MD
Tavicare Clinic
Age Management Program

Midwest

Dr. James Lewerenz, MD
Longevity Institute

West



Dr. Phillip Milgram
Age Reversal Clinic
Scipps La Jolla Hospital

South

Dr. Jeanine Livermore,
Medical Director
Quantum Cellular Medicine

Examples of Super Longevity Practitioners

- The NFL GOAT
- LeBron
- Meredith Vieira (CEO Incredible Aging: Adding Life to Your Years)
- Bill Gates
- Bill Faloon (CEO Life Extension Institute)
- Suzanne Somers (Author of 24 books on health and Longevity)
- Jim Strole (Director Coalition for Radical Life Extension)
- Dave Asprey (Founder Bullet Proof Nutrition)
- John Asher (CEO Asher Longevity Institute)

- Life Extension Institute

The Tremendous Potential Benefit

- Lifespan: Average is 79 years
- Health span: Limiting conditions start at average age of 63
- If you adhere to the ALI planning guide purposefully (90%)…
  - The probability of major diseases is greatly reduced
- You can potentially live to 99
  - Gaining 20 years of lifespan (79 + 20)
  - And 36 years of health span (99 - 63)

- *Coalition of Radical Life Extension*
- *WHO Information Data*
- *Multiple NIH studies*

A Logical Goal for All of Us

- Take action to stay healthy and alive for as many years as possible
  - Beginning age doesn't matter
- The probability of an unlimited life increases every year
  - As an ongoing explosion of new longevity research protocols, therapies and technologies become available

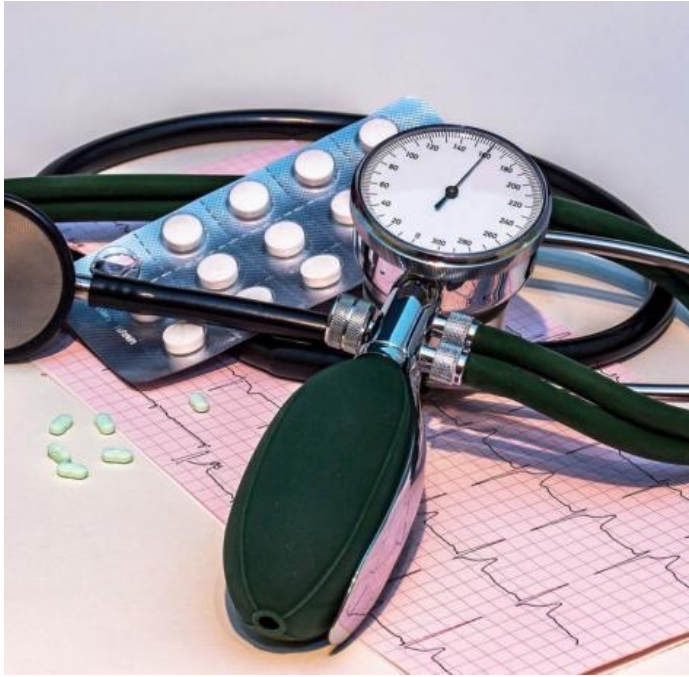
The Path to Longevity

- Rapidly deploy new longevity therapies, protocols and technologies to people who can afford them now
  - Particularly important starting at middle age
    - Significant benefits starting anytime
  - Recognize the tremendous benefit to these early adapters

- Help corporations appreciate the return on investment
  - Less sick days taken
  - Limited productivity from workers not at their best
  - More productive years from workers
  - Much lower health insurance costs

The Problem

- **Lifespan** for seventy percent of people in the USA is limited by five diseases (deaths per year in USA)
  - Atherosclerosis (heart attack/stroke) (800,000)
  - Cancer (600,000)
  - Alzheimer's (120,000)
  - Diabetes (85,000)
  - Respiratory Diseases (flu/pneumonia/COVID-19) (55,000/500,000 plus)
- Many people in the USA have an even shorter **health span** due to unhealthy lifestyle choices
- **Fifty percent of all deaths and shortened health spans are related to chronic inflammation**



- Advisory Board; CDC National Vital Statistics Report

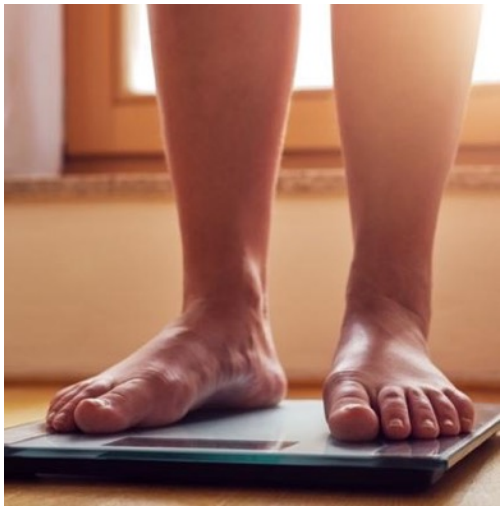
The Problem (con't)

- One in five dollars spent in the USA is spent on healthcare
  - **$3.5 trillion (18% of GNP)**
  - **70% spent on the elderly** (age over 65)
  - **15% spent in last three years before passing**
- Life expectancy is stalled in most developed countries
  - 80 (men)
  - 85 (women)
- **Maximum known lifespan is 117 (women) and 112 (men)**

- Health Care Expenditures in US

USA Results From Eating a Western Diet

- **43% of US adults are obese**
  - Live an average of 13 years less than expected (JAMA)
  - 20 “healthy” years are lost
  - 10% are severely obese
- **Another 32% are overweight**
- **10% have Type II diabetes**
  - Typically lose 10 years of life expectancy (diabetes UK)
  - Also lose 15 years of health span (JAMA)
- **46% have high blood pressure**
  - 27% higher overall mortality from all causes (SPRINT clinical trial)
- All of these conditions lead to **chronic inflammation**



- *WSJ article 6/24/19*
- *National Center for Health Statistics*
- *JAMA*
- *Diabetes UK*

Principle References

The Hacking of the American Mind
The Science Behind The Corporate Takeover Of Our Bodies And Brains — *Robert Lustig, M.D.*

The Longevity Code
Secrets To A Long Life From The Front Lines Of Science — *Kris Verburgh, M.D.*

The Longevity Paradox
How To Die Young At A Ripe Old Age — *Steven Gundry, M.D.*

The Longevity Diet
The Science Behind Stem Cell Activation And Rejuvenation — *Valter Longo, PHD*

The Longevity Solutions
Centuries Old Secrets To A Healthy Life — *James DiNicolantonio, M.D.*
Jason Fung, M.D.

Principle References (con't)

The 5 Blue Zones — *Dan Buettner*
9 Lessons For Living Longer
(Greece/Loma Linda/Okinawa/Sardinia/Costa Rica)

Fast Food Genocide
How Processed Food Is Killing Us And What We Can Do About It — *Joel Fuhrman*

The Plant Paradox
The Hidden Dangers In Healthy Foods — *Steven Gundry, M.D.*

Grain Brain
The Surprising Truth About Wheat, Carbs And Sugar --
Your Brain's Silent Killers — *David Perlmutter, M.D.*

Hacking Darwin
Genetic Engineering And The Future Of Humanity — *Jamie Metzl, PHD, JD*

Principle References (con't)

Wheat Belly — *William Davis, MD*
Lose the Wheat, Lose the Weight and Find Your Path Back to Health

Immortality Inc.
Renegade Science, Silicon Valley Billions and the Quest to Live Forever — *Chip Walter*

The Switch
Ignite Your Metabolism with Intermittent Fasting, Protein Cycling and Keto — *James W. Clement*

Brain Wash
Detox Your Mind for Clearer Thinking, Deep Relationships and Lasting Happiness — *David Perlmutter, M.D, Austin Perlmutter, M.D.*

Successful Aging
The Power and Potential Of Our Lives — *Dr. Daniel Levitin*

Principle References (con't)

How Not To Die
The foods scientifically proven to reverse disease — *Michael Greyer, MD*

A New Way To Age
Cutting edge advances in anti-aging — *Suzanne Somers*

The Longevity Prescription
Eight proven keys to a long, healthy life — *Robert Butler, MD*

Why We Sleep
Unlocking the power of sleep — *Matthew Walker, MD*

Digestive Wellness
Strength the immune system and prevent disease — *Elizabeth Lipski, PHD*

Principle References (con't)

Atomic Habits
Tiny changes, remarkable results — *James Clear*

Breath
The new science of a lost art — *James Nestor*

The Untethered Soul
Mindfulness and meditation — *Michael Singer*

Ageless
Genes that facilitate reproduction have detrimental effects as we age — *Andrew Steel*

Lifespan
The information theory of aging
Aging is a treatable disease — *Dr. David Sinclair*

Successful Aging
We undervalue the contributions the elderly can make to society — *Dr. Daniel Levitin*

The Asher Longevity Institute Solution

Asher Longevity Institute's Nine Steps to an Unlimited Health Span and Lifespan

What We Do

We translate the cutting edge of longevity and age-reversal science

into a set of steps that are genuinely understandable, and will

COMPEL PEOPLE TO IMMEDIATELY TAKE ACTION.

- Asher Longevity Institute

How We Do It

We continuously

analyze

summarize

organize

the immense amount of longevity and age-reversal research into

the nine steps to an unlimited lifespan and health span.

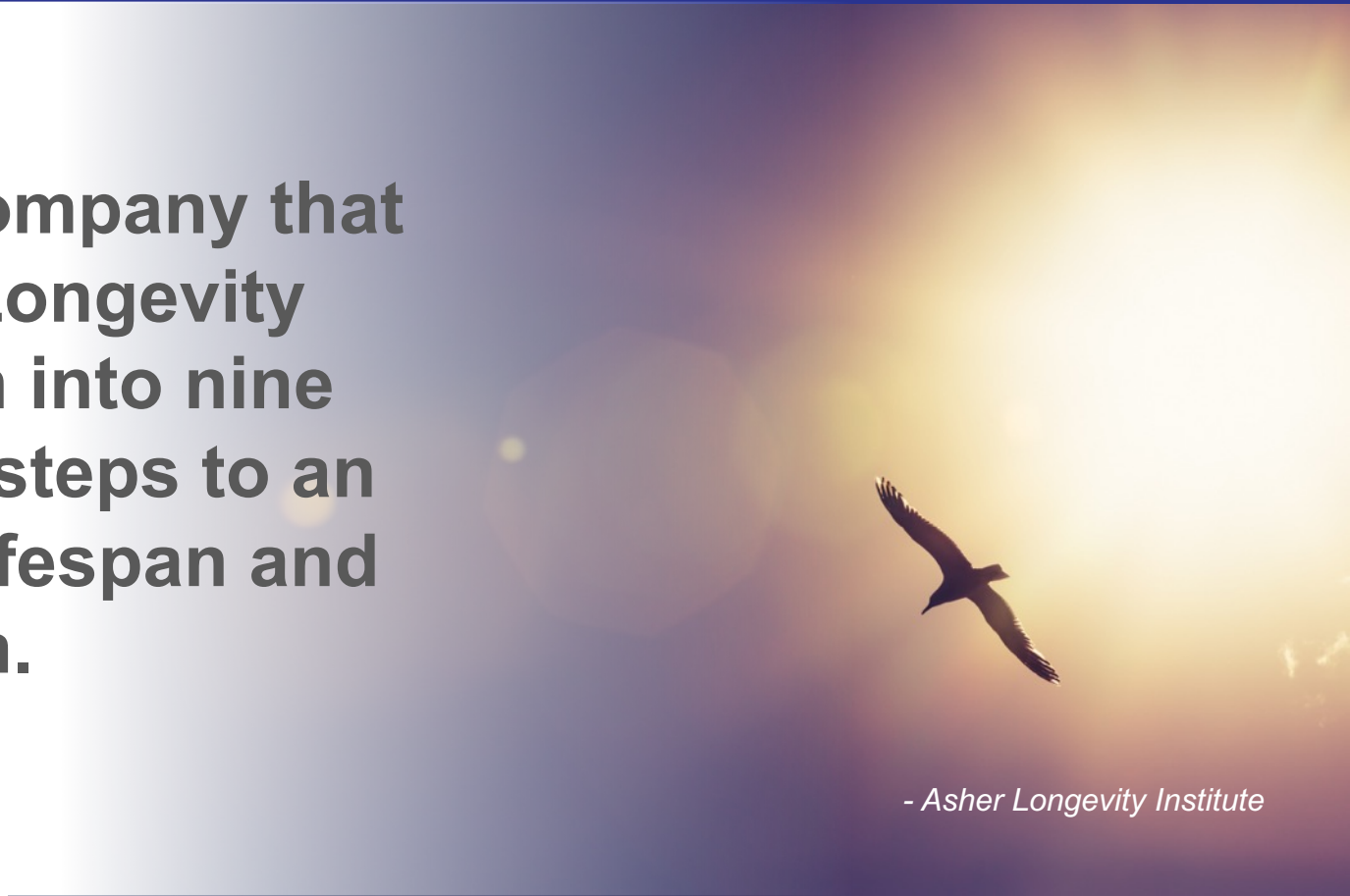
- Asher Longevity Institute

“WHY”

To Save a Billion Lives

Unique Selling Proposition

The only company that distills all Longevity information into nine actionable steps to an unlimited lifespan and health span.



- Asher Longevity Institute

NIH Conclusion: The Principle Cause of Death

"The loss of capability of tissues and organs to maintain and repair themselves."

- Life Extension Institute

Four Contributing Causes of Aging and Death

1. **With age the body loses its ability to clean out almost dead (senescent) cells**
   - These “zombie” cells pump out inflammatory compounds throughout the body
     - Contributing to **chronic inflammation**
   - They also negatively affect nearby cells
   - Dead proteins accumulate and stick together in the brain
   - An excess of carbohydrates (sugars) creates links between dead proteins increasing the level of accumulation
   - Leading to neurodegenerative diseases

- NIH ITP 2019-study

Four Contributing Causes of Aging and Death (con't)

2. **Signaling in our cells that causes fast growth**
   - Needed to fuel rapid growth from birth to skeletal maturity (adulthood)
   - This signaling does not turn off and can fuel the rapid growth of cancer cells
     - Contributing to **chronic inflammation**
   - Medical term is Mammalian Target of Rapamycin **(mTor)**
     - It is a large, complex protein that regulates cell growth

- NIH ITP 2019-study

Four Contributing Causes of Aging and Death (con't)

3. **Every cell contains a co-enzyme essential for cell function, DNA repair and systemic life sustenance**
    - Decreases rapidly as we age
    - Almost gone at age 80 (2% left)
        - Strong correlation to the average male lifespan (80)
    - Medical term is Nicotinamide Adenine Dinucleotide (NAD+)

- NIH ITP 2019-study

Four Contributing Causes of Aging and Death (con't)

4. **At about age 70, the Thymus Gland has shriveled up leading to a compromised immune system**
    - Explains why so many elderly people die from flu, pneumonia and other viruses (e.g. COVID-19)
    - People who are over 65 and get COVID-19 are 1,100 times more likely to die than those 5 to 17 years old

- *NIH ITP 2019 study*
- *CDC continuing studies*

Five Additional Contributing Factors to Aging

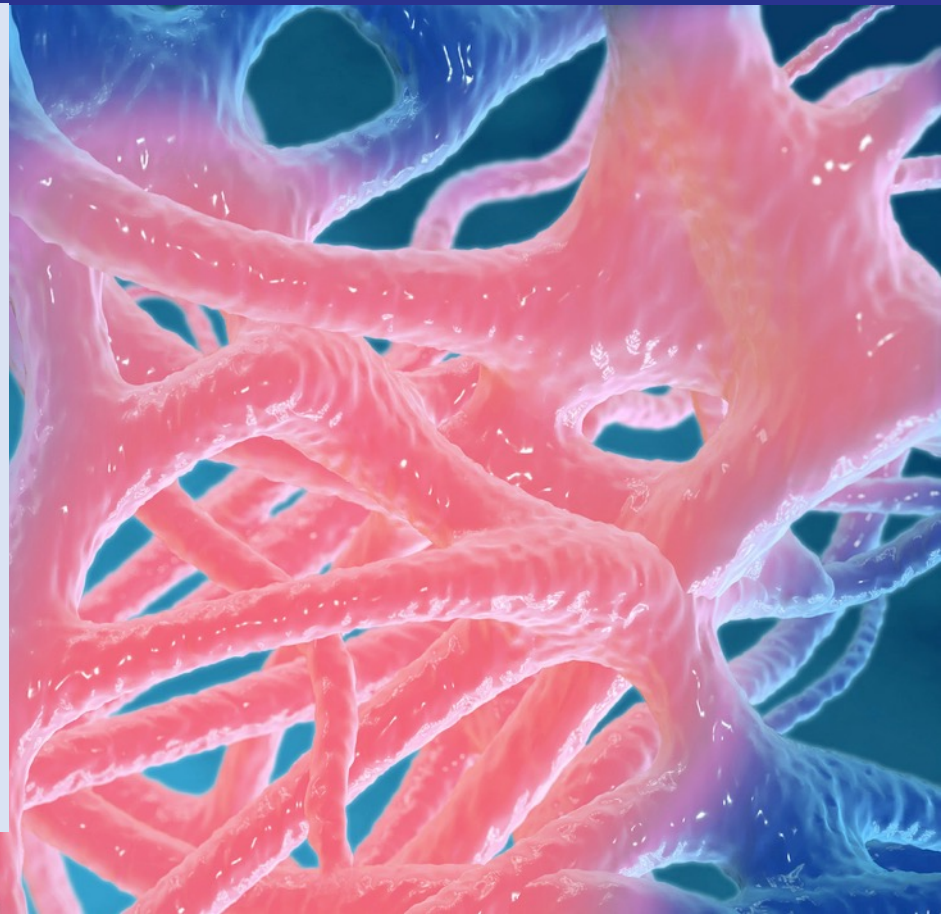
1. **Chronic inflammation** throughout the body
2. Shortening of the end caps on chromosomes (Telomeres)
3. Reduced stem cell inventory (down to 2% at age 65)
4. By age 80, fifty percent of muscle mass lost without regular strength training
5. Chronic damage to the energy furnaces (Mitochondria) in every cell

- NIH ITP 2019-study

Acute Inflammation (Good)

- Acute inflammation is the body's response to disease or injury
- The immune system sends in white blood cells
  - They eat up bad bacteria, viruses and damaged cells from the infection or injury
- If the damage is severe (e.g. COVID-19), the immune system calls in back up cells (neutrophils)
  - They blow up everything in sight, healthy cells or not

- Life Extension Institute



Chronic Inflammation (Bad)

- The neutrophil immune cells continue to be sent in after the real threat is gone
  - Causing damage to the healthy cells that remain
  - Resulting in **chronic inflammation**

- The **chronic inflammation** will start attacking
  - Artery linings
  - Intestinal linings
  - The cells in the liver and brain
  - The tissues in muscles and joints

- This **chronic inflammation** causes cellular damage and will trigger diseases/conditions such as:
  - Diabetes
  - Cancer
  - Frailty
  - Atherosclerosis
  - Arthritis
  - Depression
  - Neurodegenerative disorders
  - Persistent pain in joints

- Life Extension Institute

Other Causes of Chronic (Bad) Inflammation

- Low level infections that last a long time (e.g. Hepatitis C and Lyme disease)
- Bad genetics (a predisposition to certain diseases)
  - Diabetes
  - MS
  - Lupus
  - Rheumatoid Arthritis
  - Certain cancers
  - Endometriosis
- Environmental factors (pollution, bad air/water quality and/or pesticide exposure)
- Poor lifestyle choices
  - Obesity/overweight
  - Frequent acute stress
  - Excessive Advanced Glycation End Products (AGE)
  - Tobacco use
  - Alcohol abuse
  - Poor diet
  - Chronic stress
  - Lack of exercise
  - Poor sleep
  - Insufficient fiber
  - Upset gut microbiome

- Life Extension Institute

The ALI Goal

- Demonstrate to government the potential return on investment
  - Health costs ($4 trillion/year) vs. Longevity investment (much, much less)
- Deploy affordable government sponsored Longevity solutions to all people, e.g.
  - Vaccines for all major diseases
  - CRISPR technology to edit out diseases from our DNA
  - Gene therapy to make all immune to all current and future viruses

The Nine Steps to a Healthier and MUCH Longer Life

1. Get sufficient sleep and deep sleep
2. Eat a healthy diet to preclude disease, infection, fatigue and poor performance
3. Eat a diet tuned for a healthy gut microbiome to avoid ten diseases and three conditions
4. Keep standard biomarkers in the optimum range
5. Take appropriate supplements to ward off disease
6. Take seven prescription drugs/medications to ward off cancer and enhance longevity with additional (off-label) benefits
7. Slow down the four causes of aging with eight supplements, fasting, calorie restriction, exercise, fresh air and purposefulness
8. Rejuvenate stem cells in our entire body
9. Utilize new and emerging technologies, protocols and therapies that greatly extend life

- Asher Longevity Institute

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Longevity Planning Guide

Based on a combination of ease, cost and importance of implementation

ALI Longevity Planning Guide

MONTH ONE: (step 1)

- Sleep 8 hours a night
- Take actions to increase deep sleep
- Purchase a comprehensive blood test plus appropriate hormone panel (from Life Extension Institute) (LEI)
- Obtain free 60 minute analysis with health advisor from LEI of your results including the optimum (not normal) range for each

MONTH TWO:

- Eat much less sugar (step 3)
- Limit processed and prepackaged food (step 2)
- Cook (and eat) food with natural oils (olive, avocado, coconut) not “vegetable” oils (e.g. canola oil) (step 3)
- Increase hydration to 90 ounces of liquid per day for women, 125 for men (step 2)

ALI Longevity Planning Guide

MONTH THREE: (step 7)

- Move every hour for 2 minutes
- Walk every day (30 minutes)
- Be in fresh air every day
- Walk in a forest/park two hours per week
- Perform strength training program once a week

MONTH FOUR: (step 3)

- Limit amount of lectin consumed (grain, bread, pasta)
- Shift from cow dairy products to alternatives
- Pressure cook legumes prior to eating or buy them already pressure cooked (e.g., Eden brand)
- Increase fiber (prebiotic foods)

ALI Longevity Planning Guide

MONTH FIVE:

- Limit meat and poultry consumption (step 3)
- Eat meat from animals and poultry that is grass-finished, pasture raised without hormones or antibiotics (step 3)
- Eat more fatty fish, vegetables, mushrooms, nuts and low sugar fruits (step 3)
- Add walnuts, hemp hearts, chia seed and ground flax seed to diet (step 3)

MONTH SIX:

- Shift to eating mainly organic foods (step 3)
- Cook food at lower temperatures, especially meat (step 2)
- Eat only wild caught fish/shellfish (step 3)

MONTH SEVEN: (step 5)

- Start taking 15 basic supplements (see www.asherlongevity.com)

ALI Longevity Planning Guide

MONTH EIGHT: (step 7)

- Meditate every day for 15 minutes
  - Increase mindfulness
- Keep in touch regularly with social network
- Have a life purpose

MONTH NINE:

- Fast two days in a row for 16 consecutive hours every two weeks (step 7)
- Alternate three months fasting; one non-fasting (step 7)

MONTH TEN: (step 4)

- Schedule periodic testing of all biomarkers
- Take actions to maintain all biomarkers in the optimum range

ALI Longevity Planning Guide

MONTH ELEVEN:

- In middle age, start taking eight Longevity supplements (step 7)
- Take the three prescription drugs (Statin, Beta Blocker and Metformin) to ward off cancer and live longer (step 6)
- Take baby aspirin every day to ward off colon cancer (step 6)

MONTH TWELVE:

- If over 60, start taking Deprenel and Rapamycin. If your primary doctor will not prescribe them, contact ALI for guidance to finding a Longevity MD practitioner in your area (step 6)
- Consider full body stem cell regeneration (step 8)
- Check in with ALI website monthly to see new and approved emerging Longevity protocols (www.asherlongevity.com) (step 9)

The Tremendous Potential Benefit

- Lifespan: Average is 79 years
- Health span: Limiting conditions start at average age of 63
- If you adhere to the ALI planning guide purposefully (90%)…
  - The probability of major diseases is greatly reduced
- You can potentially live to 99
  - Gaining 20 years of lifespan (79 + 20)
  - And 36 years of health span (99 - 63)

- *Coalition of Radical Life Extension*
- *WHO Information Data*
- *Multiple NIH studies*

Four Contributing Causes of Aging and Death (con't)

To learn more about the four principle causes of aging, visit our website at:
http://www.asherlongevity.com/what-causes-aging/

Step One

Get Sufficient Sleep and Deep Sleep

- Enjoy 13 Known Benefits

Step One: Importance of Sleep

If there was an amazing breakthrough that would result in the following 13 benefits based on 17,000 documented studies…

1. Makes you live longer
2. Enhances your memory
3. Makes you more creative
4. Makes you look more attractive
5. Keeps you slim
6. Lowers food cravings
7. Makes you feel happier
8. Protects you from cancer
9. Protects you from Alzheimer's
10. Wards off colds, the flu, and COVID-19
11. Lowers risk of heart attack
12. Lowers risk of a stroke
13. Makes you less depressed

- Why We Sleep

Would you be interested?

Step One: Importance of Sleep

Answer: Consistently getting a full night's sleep

- Documented in more than **17,000** well-scrutinized scientific reports
- Evolution has spent 3,400,000 years designing our bodies to get eight hours of sleep
  - In the last 100 years, humans have gone from 8 ½ to 6 ½ hours of sleep per night
- Causing a catastrophic impact on:
  - Our health
  - Our life expectancy
  - The education of our children
  - Our safety
  - Our productivity

- Why We Sleep

Step One: Importance of Sleep

NBA Player Performance (Golden State Warriors)

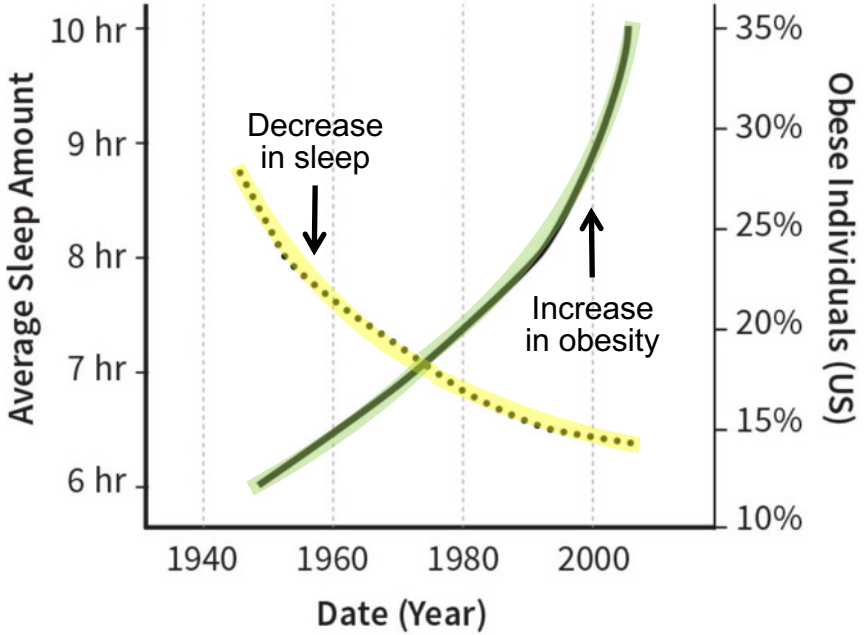
MORE THAN 8 HOURS	LESS THAN 8 HOURS
12% increase in minutes played	**37% increase** in turnovers
29% increase in points/minute	**45% increase** in fouls committed

- Why We Sleep

- One of 17,000 sleep studies

Step One: Sleep Loss and Obesity

- Why We Sleep

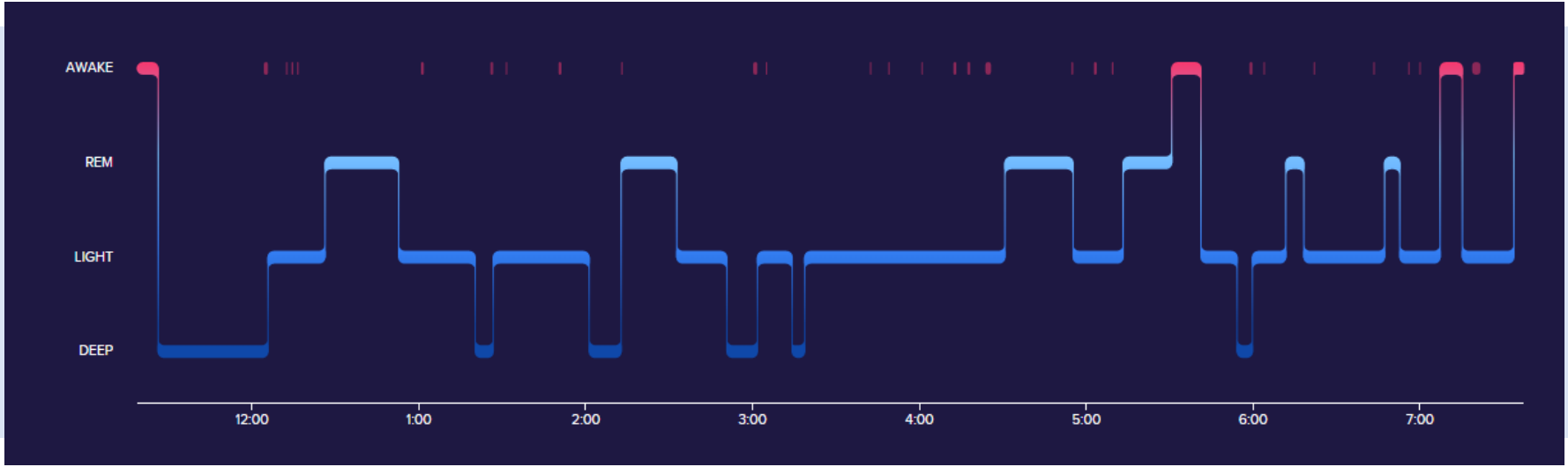


Step One: Four Stages of Sleep

Awake	2-5%
Deep	13-23%
Rapid Eye Movement (REM)	20-25%
Zzz Light	45-55%

- Why We Sleep

Step One: Sleep Stages Measured By FitBit®



Awake – 10.4% REM – 19.9% Light – 54.8% Deep – 14.9%

- FitBit Data

Step One: Rapid Eye Movement (REM) Sleep

REM sleep is the mentally restorative stage

- Information from the previous day is consolidated and preserved to store in long term memory
- Solutions to vexing problems are solved **(sleep on it!)**
- Dreaming occurs
- Heart rate and blood pressure increase
- Breathing becomes fast, irregular, and shallow

- Why We Sleep

Step One: Deep Sleep

Deep sleep is the physically restorative stage

- Body is motionless
- Muscles and tissues are repaired
- Growth and development are stimulated
- Immune system is stimulated
- Energy is built up for the next day
- The brain flushes out waste

- Why We Sleep

Step One: Importance of Deep Sleep

- Dead proteins can accumulate in the brain leading to Alzheimer's
- In the brain, the **space between cells must be regularly washed clean** of these weak, dead and abnormal cells
- This is the job of the glymphatic system
- The **brain cells only shrink in size** to let the glymphatic fluid through **when we are in deep sleep** (20 times faster)

- Why We Sleep

Deep sleep is incredibly important for longevity

Step One: To Increase Percentage of Deep Sleep

- ✓ Go to bed at a consistent time each night
- ✓ Sleep 8 to 9 hours per night
- ✓ Sleep in a cool environment
- ✓ Darken the bedroom (or use a sleep mask)
- ✓ Use a white noise generator
  - To avoid being awakened by external noises

- Why We Sleep

Step One: To Increase Percentage of Deep Sleep (con't)

- ✓ De-stress by reading for a bit before falling asleep
  - Or use breathing techniques
- ✓ Take a hot bath before bedtime
- ✓ Turn off TV/computer/phone screens (blue light) an hour before bedtime (or wear blue light blocking lens in eyeglasses)
- ✓ Wearing loose fitting socks while sleeping results in:
  - Prolonged sleep time
  - Less awakening
  - Better thermo regulation (consistent 98.6°)
  - Increased body blood flow

- Breath
- Why We Sleep

Step One: Activities to Avoid Before Bedtime

- ✓ Don’t exercise within three hours of bedtime
- ✓ Avoid caffeine drinks and nicotine within eight hours of bedtime
  - Coffee, certain teas, sodas, chocolate
- ✓ Avoid alcoholic drinks within two hours of bedtime
- ✓ Avoid large meals within four hours of bedtime
- ✓ Don’t take naps after 3pm
- ✓ Don’t lie in bed awake
  - Get up and read for a while until sleepy, or
  - Use breathing techniques

- Why We Sleep

Step Two

Eat a Healthy Diet To Preclude:

- Disease
- Infection (e.g. COVID-19)
- Fatigue
- Poor Performance

Step Two: Eat a Healthy Diet

- Eat a balance of protein, good carbohydrates (low glycemic index) and unsaturated fats
- Eat lots of vegetables (except starches) and only some fruit (too much sugar)
- Eat fatty fish (salmon, sardines, mackerel, trout) twice a week

- Fast Food Genocide

Step Two: Hydration

- Benefits of staying hydrated
  - Need balance of water and electrolytes (Na, K, CA and Mg)
  - Every system in our body depends on water to function
    - Regulates body temperature
    - Provides moisture to skin and tissues
    - Carries nutrients to cells
    - Cushions joints
    - Flushes out toxins
    - Prevents constipation

- Institute of Medicine

Step Two: Hydration

- Ounces of fluids needed from all beverages per day
  - 12 eight ounce glasses for women
  - 16 eight ounce glasses for men
- Hydrate when you first get up
- You are getting sufficient hydration if
  - You are urinating every 2 to 4 hours
  - Your urine is clear or light yellow

- Institute of Medicine

Step Two: Dangers of Cooking at High Temperatures

- The bonding of a sugar molecule with a fat or protein molecule is called glycation
- Glycation causes harmful compounds to be formed
  - Advanced Glycation End Products (AGEs)
- AGEs form in food cooked at high temperatures
  - Grilling
  - Broiling
  - Toasting
  - Baking
  - Frying
  - Barbecuing
- Animal foods are most susceptible to AGE formation

- The Longevity Code

Step Two: Dangers of AGEs

- The body will naturally eliminate AGEs to a point
- AGEs will accumulate when eating foods containing more than 5000 KM per day
- The excess will cause oxidative stress and **chronic inflammation**
  - Increasing risk of all major diseases
- A1c measures the buildup of AGEs in the body

- *Journal of American Diet Assoc.*

Step Two: Foods with High Amounts of AGEs (KM Units)

▪ Chicken Thigh with skin roasted and BBQed	16,000
▪ Bacon (no added oil)	12,000
▪ Broiled Hot Dog	10,000
▪ Beef, Steak, pan fried	9,000
▪ Big Mac	7,800
▪ Fried Chicken Nuggets	7,000
▪ Thin Crust Pizza	6,825
▪ 3 oz Broiled Steak	6,600
▪ 3 oz Grilled Chicken	5,200

- 60,000 papers and academic articles

Step Two: The Dangers of Cooking at High Temperatures

- See the bacon sizzle in the pan
- Eat the bacon
- **Imagine your internal tissues sizzling from the AGE generated inflammation!**
- **Get major diseases FASTER**
- **Die sooner**

- The Longevity Diet

Step Two: Bottom Lines for Avoiding AGE Formation

- Limit sugar intake
  - Less than six teaspoons a day
- Limit cooking at high temperatures
  - Cook with moist heat at lower temperatures
- Cooking meat with acidic ingredients can reduce AGE production by 50%
  - Vinegar
  - Tomato juice
  - Lemon juice
- Processed and pre-packaged foods are typically cooked at high temperatures
  - Limit intake

- The Longevity Diet

Step Two: Ratio of Omega-6 to Omega-3 Fatty Acids

- **Desired Ration is 4:1** (Omega 6 to Omega 3)
  - **The typical American diet is 16:1**
- To cut down on Omega-6 consumption, eat less:
  - Processed and prepackaged foods
  - Fatty and/or cured meats
  - Manufactured vegetable oils
- To boost Omega-3 levels, eat/take more:
  - Olive oil
  - Oily fish (salmon, sardines, mackerel, trout)
  - Fish oil supplements
- Excessive omega 6/3 ratios is related to all aging related diseases

- The Longevity Solutions

Step Two: Foods High in Omega-6 Fatty Acid (Bad)

Food	Source	Omega-6 (mg)
Onion Rings	Applebee's	31,000 mg
Fried Fast Food Chicken Sandwich	Chick-Fil-A	12,000 mg
French Fries	TGI Fridays	12,000 mg
Fried Fish Fillet	Denny's	12,000 mg
Mac and Cheese	Cracker Barrel	6,000 mg
Salad w/ vegetable oil based dressing		7,200 mg
Edamame (1 cup)		3,000 mg
Pound Cake (1 serving)		4,500 mg
Poultry Leg		1,800 mg

- The Hacking of the American Mind

Step Two: Fatty Fish High in Omega-3 (per serving) (Good)

• Mackerel	2,600 mg
• Herring	2,500 mg
• Salmon (wild caught)	2,000 mg
• Tuna (line caught)	2,000 mg (but high in mercury)
• Sardines	1,700 mg
• Anchovies	1,500 mg
• Trout	1,000 mg
• Catfish	500 mg
• Shrimp	500 mg

"The Hacking of the American Mind"

Step Two: Omega-6/Omega-3 Ratio (Nuts and Seeds)

Optimum is 4:1

• Almonds	2000:1
• Brazil Nuts	1300:1
• Peanuts	330:1
• Cashews	125:1
• Pistachios	50:1
• Pecans	20:1
• Macadamia Nuts	6:1
• Walnuts	4:1
• Flax Seeds	1:4
• Chia Seeds	1:3

- The Hacking of the American Mind

Step Two: Eat Walnuts Everyday

A SUPER FOOD

- Very high in Omega-3
- Combats cognitive decline, heart disease and cancer
- Decreases **chronic inflammation**
- Lowers total cholesterol, LDL cholesterol and triglycerides
- Reduces the incidence of breast, prostate and kidney cancers and Alzheimer's

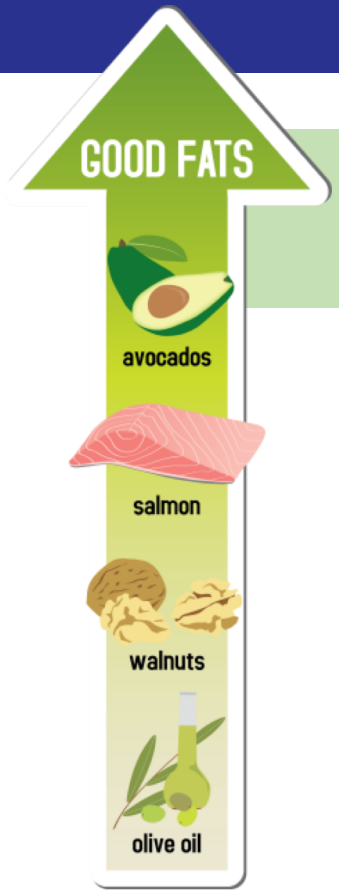
- The Plant Paradox

Step Two: The Amazing Benefit of Seeds (grams/tablespoon)

Seed	Protein	Fiber	Omega-3
Hemp	5	8	yes
Flax	2	3	yes
Pumpkin	3	1	yes
Sunflower	2	7	yes
Sesame	2	1	yes
Poppy	2	1	yes
Wild Rice	6 (grams/cup)	3 (grams/cup)	yes
Note: Chia seeds and Quinoa are whole grains			

- The Blue Zones

Step Two: Good Fats



A diet with healthy fats reduces the risk of all aging related diseases

- **Healthy fats are found in:**
  - Nuts
  - Seeds
  - Olives
  - Avocados
  - Fatty fish
  - Natural oils
- **Healthy natural oils (Mainly Omega-3)**
  - Olive
  - Walnut
  - Flaxseed
  - Palm
  - Avocado
  - Coconut
  - Hemp

- Grain Brain

Step Two: Consume Olive Oil Every Day

A SUPER FOOD

- High in Omega-3 and Omega-9
- Central ingredient in the Mediterranean diet
- Gets rid of dead and damaged cells
- Protects your brain from the dead/damaged cells that don't get washed out at night

- The Plant Paradox

Step Two: When Buying Olive Oil

- Extra virgin (unrefined, not treated with chemicals or altered by temperature)
  - Highest-quality olive oil
- First cold pressed
  - From the initial (first) "press" of the olive crop
  - Not heated
- Organic
  - Non-GMO/no pesticides
- Olives picked by hand, not by machine
  - Machines can include olives that are flawed (bruised, deseeded or over ripe)

Step Two: Bad Fats

- **Unhealthy manufactured oils in food factories are called "vegetable" oils**
  - Canola oil
  - Corn oil
  - Sunflower oil
  - Cotton seed oil
  - Sesame oil
  - Grapeseed oil
  - Peanut oil
  - Safflower oil

Doesn't "vegetable" oil sound healthy? (Yes! But…very unhealthy!)

- **Trans fats from industrially prepared foods**
  - Baked goods
  - Snack bars
  - Candy
  - Chips
  - Deep fat fried food
  - Cookies, cakes & pies

- Grain Brain

ALL high in Omega-6 fatty acids

Step Two: The Dangers of Manufactured "Vegetable" Oils

- They have been extracted from seeds
  - e.g. Rapeseed (Canola oil)
  - Treated with pesticides
- They contain a very high level of Omega-6
  - and a very low amount of Omega-3

- The Hacking of the American Mind

Image Credit Seattle Times

Step Two: Manufacturing Process for “Vegetable” Oils

- Heat the seeds to very high temperatures
  - They oxidize and turn rancid
- Process them with petroleum solvent to extract the oil
- Heat again and add another acid to remove waxy solids
- Treat the oil with more chemicals to improve the color
- Deodorize the oil to mask the smell from the chemical processing
- Ship it to food factories in tanker trucks
- Bottle it and sell it to grocers

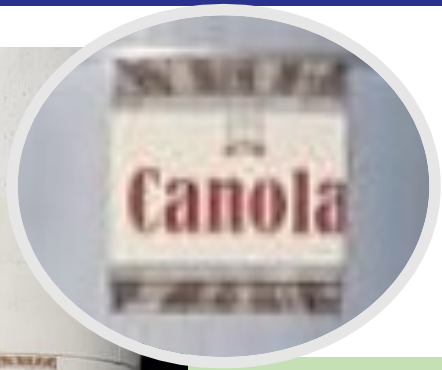
- The Hacking of the American Mind

Step Two: “Vegetable” Oils Shorten Lives

- If we eat too much Omega-6 fats, multiple studies show increased risk of:
  - Cognitive decline (Alzheimer's, dementia, etc.)
  - Breast cancer
  - Cardiovascular disease
  - Depression and other mood disorders
  - Gut problems and gut flora dysfunction
  - Insulin resistance and diabetes
  - Obesity
  - Arthritis

“The Longevity Code”

Step Two: Highly Refined Industrial Oils Are in All Processed Foods



Is this a food manufacturer that makes canola oil or uses it?
Answer: Uses it!

Step Two: Typical Ingredients in Salad Dressing

INGREDIENTS:

1. **Water**
2. **Soybean Oil**
3. **Balsamic Vinegar**

INGREDIENTS:

1. **Water**
2. **Soybean Oil**
3. **Distilled Vinegar**
4. **Olive Oil**

Step Two: Typical Ingredients in Salad Dressing

Step Two: Eat a Healthy Diet (cont.)

For a list of healthy protein, carbohydrate, and unsaturated fat food choices, including the aging-related dangers of eating improperly cooked meats, and foods cooked with manufactured “vegetable” oils, etc. visit our website at:
http://www.asherlongevity.com/science-technology/eating-the-asher-longevity-way/

Step Three

Eat a Diet Tuned for a Healthy Microbiome

- Precludes/reduces symptoms from 13 diseases/conditions in the gut

Diseases

- Celiac (1%)
- Crohn's (1%)
- NAFLD (35%)
- Hepatitis (2%)
- Colitis (1%)
- Multiple Sclerosis (.1%)
- Type 2 Diabetes (10%)
- Lupus
- IBD (2%)
- Rheumatoid Arthritis (1%)

Conditions

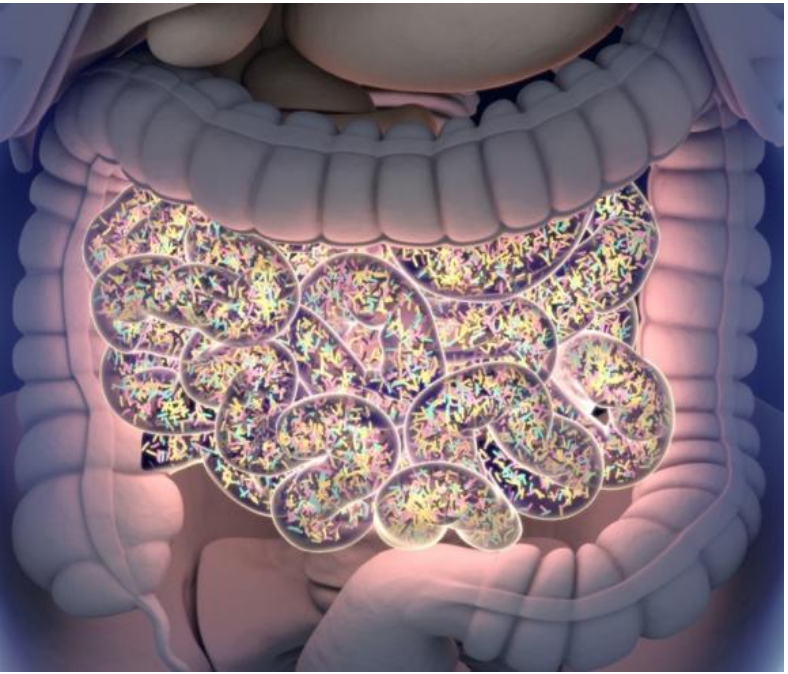
- SIBO (10%)
- SIFO (6%)
- IBS (12%)

Step Three: Eat a Diet Tuned for a Healthy Gut Microbiome

- **Our Gut (digestive system)**
  - Describes our digestive system from the esophagus to the anus
- **Microbiome (what's in our gut)**
  - Our gut is full of trillions of bacteria, viruses, fungi and worms
  - Mainly bacteria (5 pounds)
  - Contains good and bad bacteria

- The Longevity Paradox

Step Three: Probiotics and Prebiotics



- **Probiotics** (the good bacteria in our gut)
- **Prebiotics** (the food our good bacteria eat)
- **Probiotic** supplements will add good, live bacteria to our microbiome
- Having a majority of good bacteria in our microbiome will greatly increase lifespan

- The Longevity Paradox

Step Three: Food That Our Good Gut Bacteria Love to Eat

Prebiotics (High Fiber)

FRUIT

- Raspberries
- Apples
- Blackberries
- Guava
- Avocado
- Persimmon
- ★ Chicory Root
  - 68% Insoluble Fiber

★ *Difficult to find fresh available, so use a supplement*

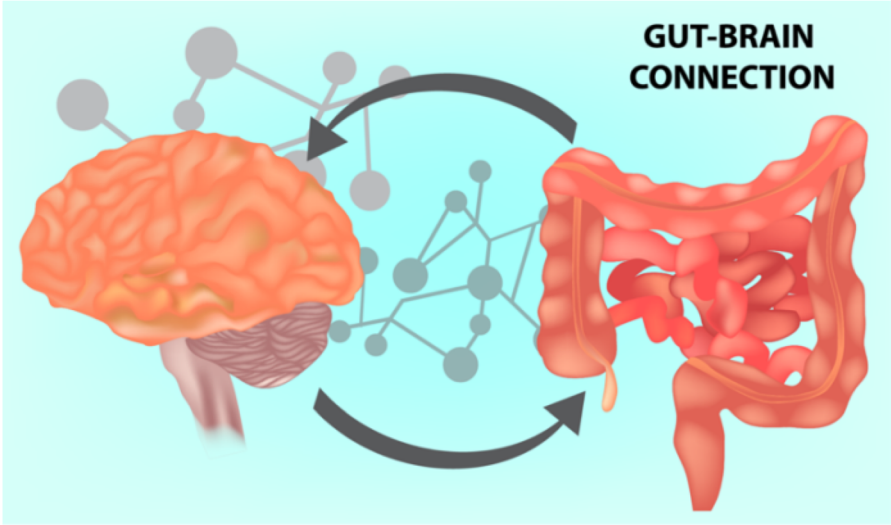
VEGETABLES

- Asparagus/Okra
- Mushrooms
- ★ Jerusalem Artichokes
- Flaxseed (Ground)
- Shallots/Leeks
- Seaweed/Leafy Green Vegetables
- Yams/Parsnips
- Sweet Potatoes

"The Plant Paradox"

Step Three: Our Gut Microbiome Influences Our Thoughts and Actions

- The Vagus nerve connects the brain to the throat, heart, lungs and gut
  - The gut sends 8 times as many signals to the brain as compared to the opposite pathway
- The gut microbiome influences our thoughts, actions, sense of smell and cravings
- It is our second “brain”
- Adds new meaning to the term “gut instinct”

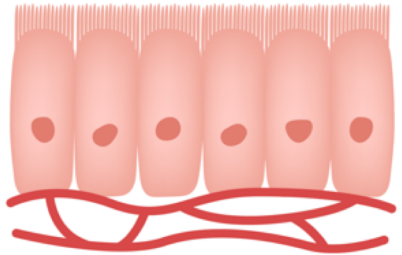


- The Longevity Paradox

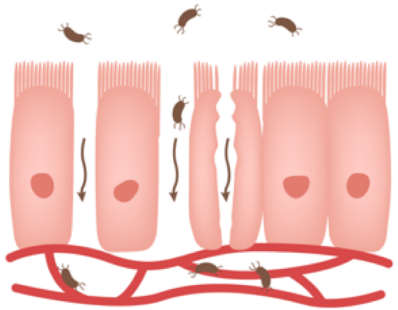
Step Three: We Need a Strong Gut Lining

- Protects our gut from outside invaders
- Prevents the bacteria in our gut from getting out to our blood, lymph system and organs
- Once the bacteria pass through the gut lining, they ignite the immune system causing widespread **chronic inflammation**
  - can result in the “leaky gut” syndrome
  - leading to 10 diseases and 3 conditions
- The gut lining is called our Mucosal Barrier
  - Only one molecule thick

- *The Plant Paradox*



Normal Tight Junction

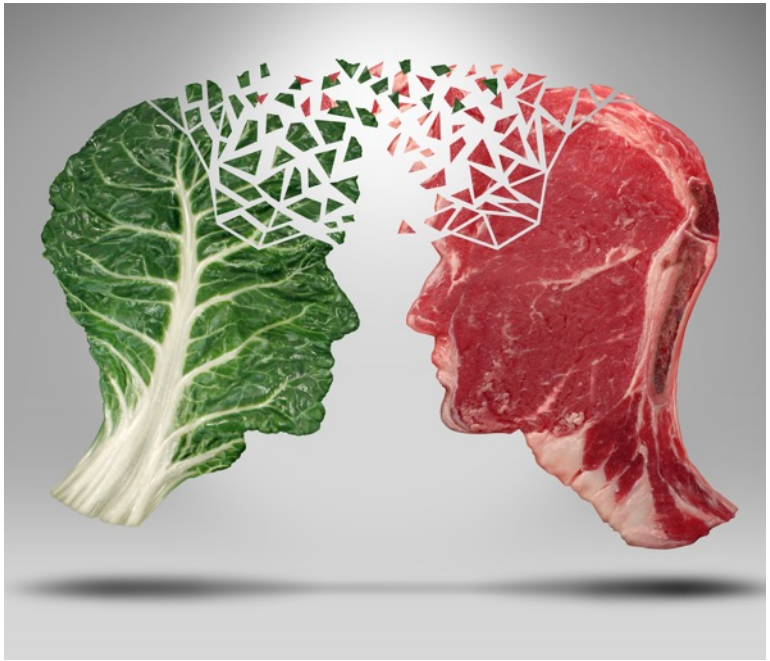


Leaky and Inflamed

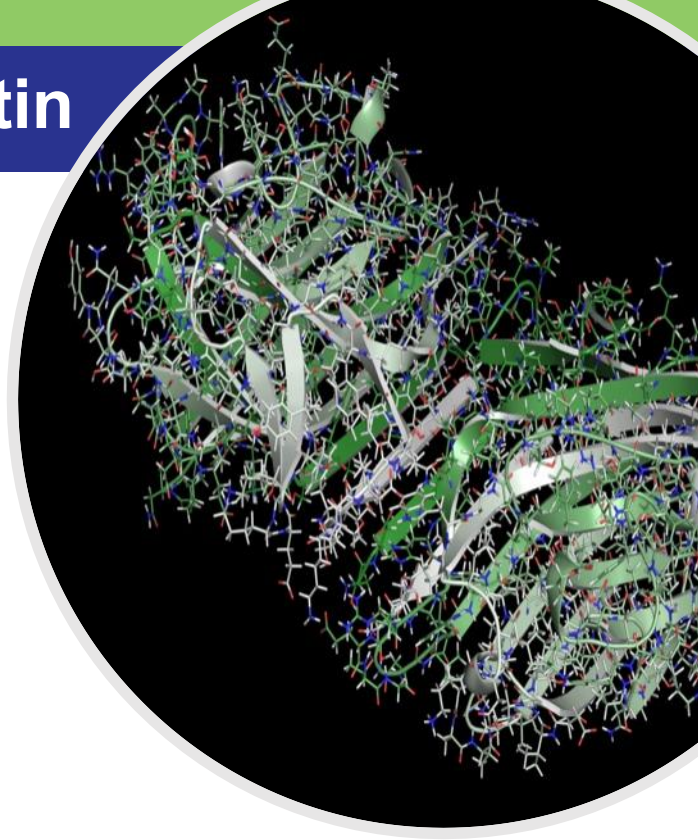
Step Three: What Our Probiotics Love To Eat

- Good bacteria **love** mainly a vegan diet
- Bad bacteria **love a Western diet that includes:**
  - Lectins (protein in all grains)
  - Dairy products from most Western cows
  - Sugar and artificial sugar substitutes
  - Red Meat
  - High glycemic (sugar) carbohydrates
  - Manufactured vegetable oils
- When we switch to a way of eating that feeds the “good bacteria,” overall health improves within days

- Longevity Paradox



Step Three: The Problem with Lectin



- A “sticky” protein that plants started producing as a defense against being eaten by insects and animals
  - Millions of years ago
- Humans started cultivating grain (high lectin content) only 10,000 years ago
  - Our guts have not learned to digest lectin well
- Lectin from grains, especially wheat, will easily break through the gut lining
  - Allowing bacteria to invade the rest of our body

- The Plant Paradox

Step Three: Eat Few Lectins

- Limit eating all grains
  - or animals, poultry or farm raised fish that are fed grains
- All legumes are full of lectin (lectin “bombs”)
  - Beans
  - Peas
  - Chickpeas
  - Lentils
  - Peanuts
  - Soybeans
- Remove lectin in legumes by:
  - Pressure cooking them, or
  - Buying Eden brand canned beans that have already been pressure cooked

- The Plant Paradox

Step Three: The Problem With Gluten

- A plant protein and first cousin of lectin
- Gluten is in the three major cereal grains
  - Wheat
  - Rye
  - Barley
- One-third of the population has a degree of gluten intolerance
  - Celiac
  - Gluten Sensitive
- Gluten can also break through the gut lining
  - Allowing bacteria to invade the rest of the body

- "The Plant Paradox"

Step Three: Grain Free Products are Available (e.g. chips)

Step Three: Grain Free Products are Available (e.g. chips) (con't)

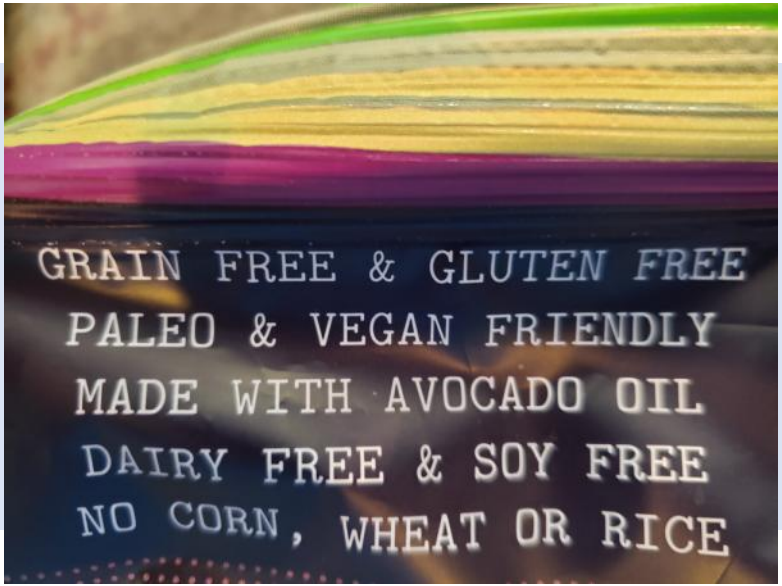
Nutrition Facts

5 servings per container
Serving size 1 oz (28 g) ≈ 9 chips

Amount per serving
Calories 150

	% Daily Value*
Total Fat 8g	10%
Saturated Fat 1.5g	8%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 125mg	5%
Total Carbohydrate 18g	7%
Dietary Fiber 2g	7%
Total Sugars 1g	
Includes 0g Added Sugars	0%
Protein 1g	
Vitamin D 0mcg	0%
Calcium 0mg	0%
Iron 0mg	0%
Potassium 100mg	2%

*The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.



Step Three: Non-Grain/Non-Sugar Healthy Snack Option

ORGANIC INGREDIENTS:

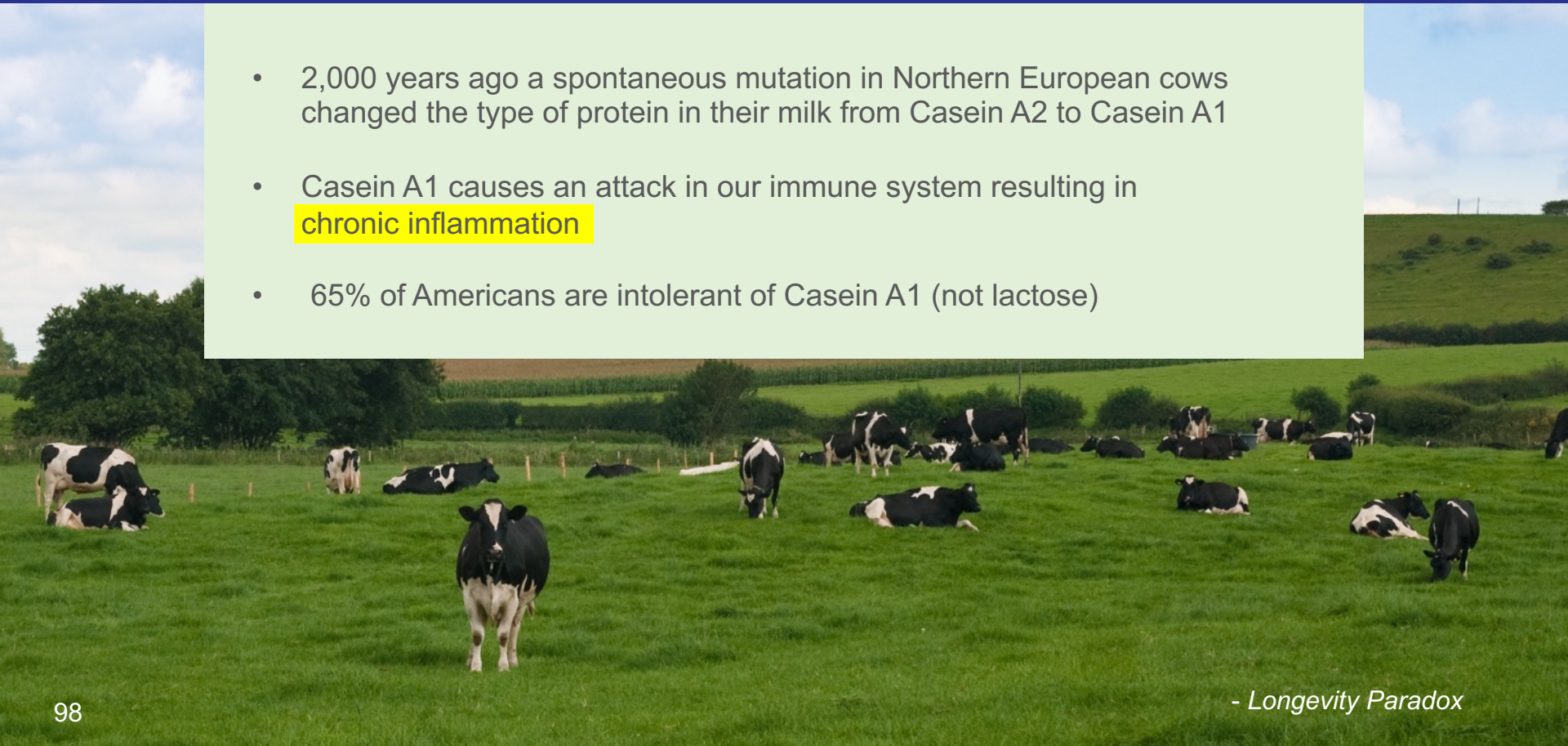
1. **Coconut Flour**
2. **Cassava Starch**
3. **Coconut Oil**

Step Three: Eden Brand Pressure Cooked Beans (Lectin Removed)

Remember your mother/grandmother soaking beans prior to cooking? (to reduce the lectin)

Step Three: The Problem with Dairy Products from Most Cows

- 2,000 years ago a spontaneous mutation in Northern European cows changed the type of protein in their milk from Casein A2 to Casein A1
- Casein A1 causes an attack in our immune system resulting in chronic inflammation
- 65% of Americans are intolerant of Casein A1 (not lactose)

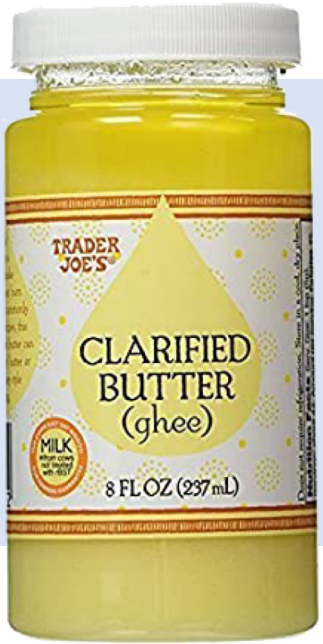


- Longevity Paradox

Step Three: Consume Dairy Products from Other than Most USA Cows

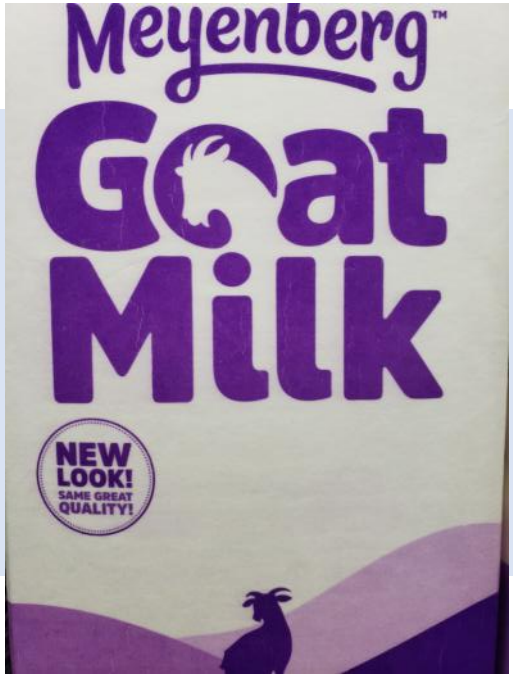
Switzerland	France	Italy
		
Emmentaler (Swiss)	Brie	Mozzarella

Step Three: Consume Dairy Products from Other than Most USA Cows



- No lactose
- No Casein 1 protein

Step Three: Consume Dairy Products from Other than Most USA Cows



All found in Whole Foods

Step Three: The Dangers of Sugar (Addictive)

- Sugar is not a food; it is a food additive
  - Up until 50 years ago it was a simple condiment
- There is no biochemical reaction in any animal cell that requires sugar
- Thirty years ago, there was a low-fat craze
  - Since disproven
- To compensate for the resulting poor taste
  - Food manufacturers added sugar

- The Longevity Paradox

Step Three: The Dangers of Sugars - The Stealth Ingredient

- **Unhealthy foods with lots of sugar**
  - Low fat salad dressing
  - BBQ/Pasta sauce
  - Whole grain foods
  - Breakfast cereals
  - Store bought fruit juices
  - Soft drinks
  - Baked goods
  - Candy and cakes
  - Molasses, honey and maple syrup
  - **Ketchup (25% sugar)**
- Sugar is addictive for exactly the same reasons and via the same pathway as alcohol
- **Study of 4,500 people who drink soft drinks daily**
  - 43% higher risk of heart attack

- Grain Brain

Step Three: When You Eat Potatoes, You Might as Well Be Eating Candy

- **Potatoes, bread, corn, rice and pasta are made of starch**
  - Starches are long chains of glucose (sugar)
- A study of 75,000 women over 10 years who ate a lot of food with high glycemic load (sugar)
  - **98% higher risk of heart attack**

- Journal of American Diet Association

Step Three: The Problem with Sugar/Sugar Substitutes

- The bad bacteria in our microbiome thrive on simple sugar
- Sugar and artificial sweeteners kill good gut bacteria
- Artificial sweeteners also promote weight gain
  - Our brain thinks we are getting sugar
  - When the sugar never arrives, our brain signals to our body to get more sugar
- **Sugar is addictive**

- Grain Brain

Step Three: Poison to the Body

Step Three: Use Natural Sweeteners

- **Monk Fruit**
  - A melon-like fruit growing on vines in China/Thailand
  - **250 times sweeter than sugar**
  - Zero calories

- **Stevia**
  - From a first cousin plant to mums
  - 150 times sweeter than sugar
  - Zero calories

- **Both approved by the FDA as sugar substitutes**

- Grain Brain

Step Three: Non-Grain/Non-Sugar Healthy Snack Option

INGREDIENTS:

1. **Cassava Flour**
2. **Monk Fruit Sweetener**

Step Three: Sugar Free Syrup

Step Three: Ingredients in Smucker's Sugar Free Breakfast Syrup

- **Sorbitol** (artificial sweetener)
- **Acesulfame Potassium** (non-nutritive sweetener)
- **Sucralose** (non-nutritive sweetener) (Splenda)
- **Cellulose Gum** (thickening agent)
- **Natural and artificial flavors** (chemicals)
- **Carmel color** (chemical; potentially carcinogenic)
- **Xanthan Gum** (thickening and stabilizing agent)
- **Sorbic Acid** (preservative)
- **Sodium Benzoate** (preservative)
- **Sodium Hex metaphosphate** (emulsifier/texturizer)
- **Phosphoric Acid** (provides a tangy taste)

Artificial sweeteners kill certain strains of good bacteria in the gut

- *The Longevity Paradox*

Step Three: The Danger of High Fructose Corn Syrup (HFCS)

- Added to thousands of processed foods and soft drinks
- Inhibits the liver's ability to process fat (fat gets stored)
- Contributes to poor mitochondrial function
- Leads to obesity, metabolic syndrome, diabetes and atherosclerosis
- Table sugar is 50% glucose and 50% HFCS
    - Honey is a better alternative (no HFCS)

- Dr. Williams (The Alternate Newsletter)

Step Three: Dangers of Eating Meat

- For meat eaters, numerous worldwide studies show an increased incidence of
  - Cancer
  - Diabetes
  - Resistance to antibiotics
  - Heart disease
  - Food born illnesses (70%)
  - Stroke
  - Cognitive decline
  - ED
- Eating meat shortens lifespan significantly
  - Vegetarian men outlive meat eaters by 10 years
  - Vegetarian women outlive meat eaters by 6 years
- Meat is devoid of fiber and high in saturated fat
  - Full of hormones (natural and injected)
  - Full of antibiotics

- *Cancer research*
- *The Science of Nutrition*
- *JAMA Internal Medicine Study of 70,000 people*
- *Adventist Health Study - 2*

Step Three: Is a “Beyond Burger” Good for You?

Looks and tastes great!

However……

- Harvard Medical School

Step Three: Is a “Beyond Burger” Good for You?

- **An Ultra Processed Food**
  - According to NOVA food classification system
  - 40 ingredients including:
    - **Titanium dioxide** (whitening agent used in paint)
    - **Potato starch** (candy)
    - **Methylcellulose** (bulking agent used in laxatives)
    - **400% more sodium than lean burger meat**
- Protein provided by legumes (peas and beans)
  - **Full of lectin**
- Contains lots of **manufactured oils** (canola and sunflower)
  - **Full of omega-6 fatty acids**

- Harvard Medical School

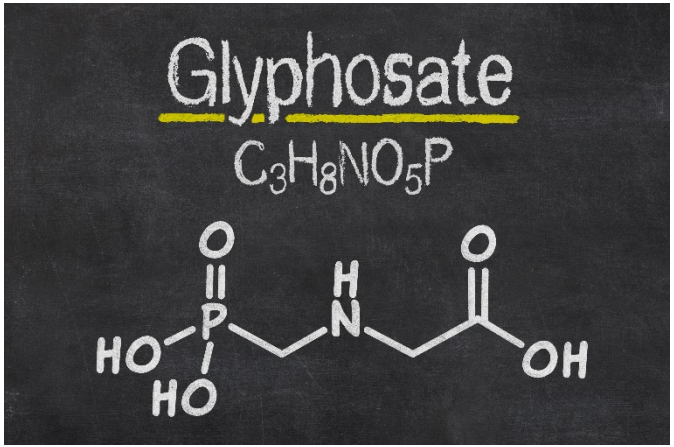
Step Three: The Dangers of Pesticides

- The pesticide Roundup contains an antibiotic (Glyphosate)
- 93% of humans test positive for it
  - They are eating grains that have been sprayed with Roundup,
  - Or eating animals who have eaten grain
- Antibiotics kill our gut bacteria (good and bad)
- Stick to organic food (no pesticides)

- Journal of Epidemiology and Community Health

Step Three: Dangers of Roundup (Glyphosate)

- Striking correlation between the
  - The rise of Glyphosate use and the
  - Rise of chronic diseases including
    - Inflammatory bowel disease
    - Diabetes
    - Obesity
    - Intestinal infections
    - Depression



- World health organization (2015) determined that
  - Glyphosate is probably carcinogenic to humans

- EPA determined that glyphosate levels above 1 ppm are toxic
  - GMO corn is 18 times this level

- *WHO Study (2015)*
- *EPA Study*

Step Three: What Does Organic Mean?

- No harmful artificial pesticides
- Can mean different things for different foods
- Cow's milk
  - From cows fed only organic feed/non-GMO
  - No hormones or disease preventing antibiotics
  - At least 30% of food from pasture grazing
  - Can be 70% corn or grain fed
- Prepackaged salads
  - No harmful synthetic pesticides
  - From fields that practice crop rotation to enrich the soil
- Eggs
  - Raised organically after age of 2 days
  - Only fed organic feed
  - No antibiotics
  - Outdoor access (not necessarily pasture raised)

Step Three: The Non-Organic Fruits and Vegetables Most Contaminated with Pesticides

The "Dirty Dozen"

- Celery
- Spinach
- Kale
- Tomatoes
- Potatoes
- Apples
- Peaches
- Strawberries
- Nectarines
- Grapes
- Cherries
- Pears

The pesticides cannot be washed off

Buy Organic

Does a non-organic apple a day keep the doctor away?

NO! They have:

- **16 chemicals that are hormone disrupters**
- **6 chemicals that are known/suspected carcinogens**
- **5 neurotoxins**

- USDA/Environmental Working Group (2019)

Step Three: The Dangers of Antibiotics Fed to Farm Animals

- Broad spectrum antibiotics and hormones are administered to all commercially raised animals in shocking quantities
  - To help them grow faster, larger and fatter
  - To prevent premature death of these valuable animals from all bacterial diseases
- These antibiotics kill the good and bad bacteria in the microbiome

- The Longevity Paradox

Step Three: Eating Fish/Shellfish, Poultry and Meat

- Eat a max of 4 oz a day of fish/shellfish or poultry
- Fish/Shellfish
  - Wild caught only as farm raised are fed grain, canola oil, antibiotics, hormones, and chicken feces pellets
- Poultry
  - Pasture raised (no grain)
  - “Range free” is not acceptable
  - Free of antibiotics and hormones
- Meat
  - Eat only 4 oz a week
  - Grass finished, without antibiotics and hormone free
- Found at Costco, Whole Foods and Trader Joe’s

- The Longevity Paradox

Step Three: Wild-Caught Fish/Shellfish is Available

- Costco
- Whole Foods
- Also many other grocers

- The Longevity Paradox

Step Three: “Farm” Raised Salmon

Artist’s rendering of grey salmon

- Farm-raised salmon is naturally gray – **the pink color is added.**
- Wild salmon is naturally bright pink or orange due to their diet which include astaxanthin, a reddish-orange compound found in krill and shrimp.

- Alkaline Vegan

Step Three: Farm-Raised vs. Wild-Caught Salmon

- The top one is farm raised after the pink dye is added
- The bottom one is salmon as it comes out of the ocean

Step Three: Organic, Pasture-Raised Chickens Without Hormones or Antibiotics are Available

- Pasture raised
- No antibiotics
- No pesticides
- No hormones (prohibited by FDA)

Available at Whole Foods

- The Longevity Paradox

Step Three: Organic, Pasture-Raised Eggs

- Pasture-raised
- Organic

- The Longevity Paradox

Step Three: Organic, Free-Range Eggs

- Free range
- Organic
- Omega 3 added

- The Longevity Paradox

Step Three: Organic Grass-Finished Beef is Available

- Grass Finished
- No Hormones
- No Antibiotics
- No Pesticides

Available at most grocers

- The Longevity Paradox

Step Three: Summary – What Foods Not to Feed Your Gut Microbiome

- Lectin (grains/processed foods) (leaky gut)
- Dairy from most USA cows (chronic inflammation)
- Sugar and artificial sugar substitutes (kills good bacteria)
- High glycemic fruits and vegetables (high sugar content) (kills good bacteria)
- Poultry and red meat fed grains, antibiotics and/or hormones (kills good bacteria) (leaky gut) (all major diseases)
- Fish/shellfish farm raised (fed grains) (leaky gut)
- Industrial oils (excessive AGEs and Omega-6)

- Grain Brain

Step Three: Summary - What to Eat for a Healthy Gut Microbiome

- Protein from nuts, mushrooms and vegetables
- Vegetables and fruit with a low glycemic index (low sugar content)
- Dairy from sources other than most USA cows
- Fish/shellfish in limited amounts (wild caught)
- Poultry in limited amounts (pasture raised and with no antibiotics or hormones)

- The Longevity Paradox

Step Three: Summary - What to Eat for a Healthy Gut Microbiome (con't)

- Very little red meat (grass finished with no antibiotics or hormones)
- Natural oils (olive, avocado, palm, walnut, flaxseed, hemp, coconut)
- Fermented foods (adds good bacteria to gut)
- Organic food (no pesticides)

- The Longevity Paradox

Step Two: Examples of Fermented Foods

Fermented foods contain live good bacteria (probiotics)

"*Fast Food Genocide*"

Step Three: Vegetables That Contain the Most Protein

4-5 grams of protein per cooked cup

- ✓ Broccoli
- ✓ Spinach
- ✓ Asparagus
- ✓ Artichokes
- ✓ Potatoes
- ✓ Sweet Potatoes

22 grams of protein per cup

- ✓ Legumes
- ✓ Beans, Peas, Chickpeas

- The Plant Paradox

Step Three: A Healthy Gut Microbiome Tuned Diet Day

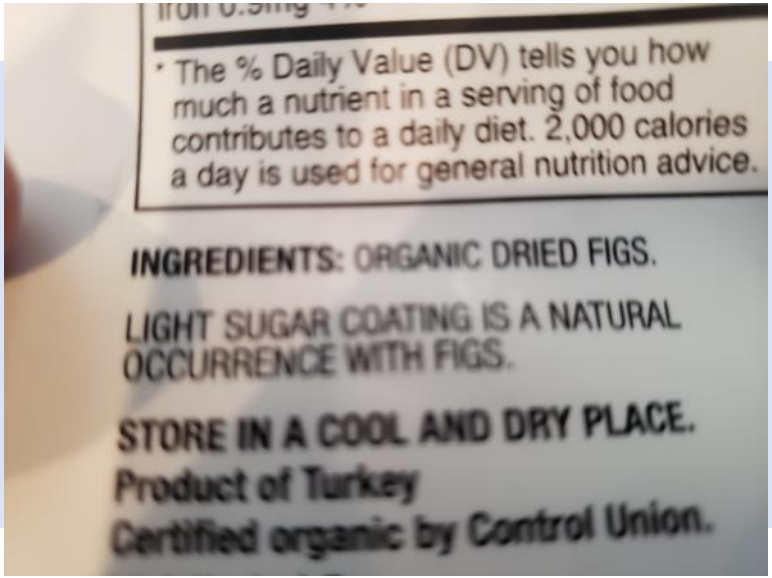
- *The Longevity Paradox*

Example #1

- **Breakfast**
  - A closed fistful (each) of walnuts and macadamia nuts
  - A cup of mixed berries
- **Lunch**
  - A “smoothie” (use a blender) consisting of:
    - ✓ 8 different leafy green vegetables
    - ✓ An avocado
    - ✓ A half green banana (low sugar)
    - ✓ 6 oz goat yogurt
    - ✓ A teaspoon each of hemp hearts, chia seed and flax seed (ground)
    - ✓ Sauerkraut
    - ✓ Olive Oil (2 tablespoons)
    - ✓ Hemp or coconut milk (unsweetened) (as the liquid)
    - ✓ Spices (oregano, ginger, turmeric, garlic, rosemary, parsley, basil and thyme)
- **Dinner**
  - 4 oz of fish, poultry or red meat (once a week) cooked with low heat
  - Steamed or roasted vegetables and mushrooms with olive oil cooked with low heat
  - 2 Figs (fresh or dried)

- *More recipes in “The Longevity Paradox”*

Step Three: A Healthy Dessert with No Added Sugar



Step Three: A Healthy Gut Microbiome Tuned Diet Day

- The Longevity Paradox

Example #2

Breakfast

- Two eggs cooked in olive oil/low heat
- Cup of fruit (orange/apple/tart cherries)

Lunch

- Large salad with mushrooms, multiple leafy greens and other low glycemic vegetables
- Olive oil and vinegar dressing

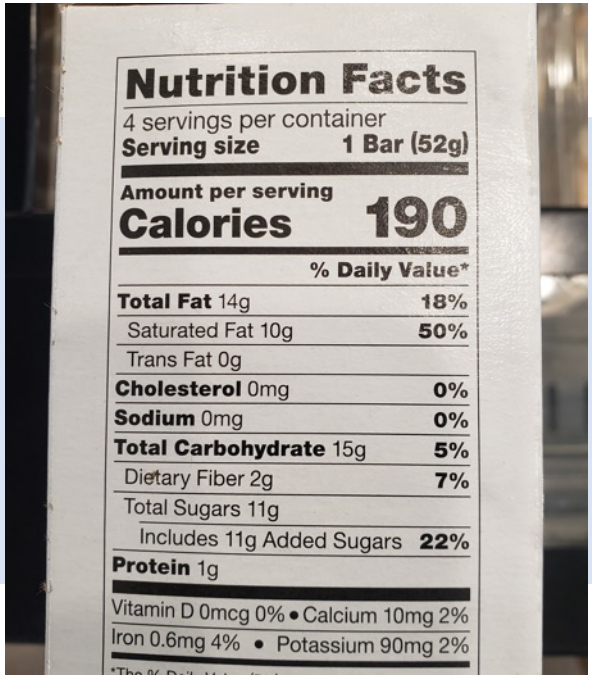
Dinner

- 4 oz of fish, poultry or red meat (once a week) cooked with low heat
- Steamed broccoli, cauliflower and fennel
- Coconut milk ice cream bar

- More recipes in The Longevity Paradox

Step Three: Non-Dairy Desserts are Widely Available

Step Three: Another Healthy Dessert



Nutrition Facts

4 servings per container

Serving size **1 Bar (52g)**

Amount per serving

Calories **190**

	% Daily Value*
Total Fat 14g	**18%**
Saturated Fat 10g	**50%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 0mg	**0%**
Total Carbohydrate 15g	**5%**
Dietary Fiber 2g	**7%**
Total Sugars 11g	
Includes 11g Added Sugars	**22%**
Protein 1g	

Vitamin D 0mcg 0% • Calcium 10mg 2%

Iron 0.6mg 4% • Potassium 90mg 2%

Strategy for a Healthier Gut Microbiome

(Just Take One Step a Month)

1. Eat less processed foods and prepackaged foods

2. Consume less sugar and artificial sugar substitutes

3. Eat red meat only once a week — only grass finished with no antibiotics or hormones

4. Eat fish/shellfish frequently — only wild caught with no antibiotics or hormones

5. Eat poultry infrequently — only pasture raised with no antibiotics or hormones

6. Increase consumption of protein from nuts, mushrooms and leafy green vegetables

Strategy for a Healthier Gut Microbiome
(Just Take One Step a Month)

7 Consume mainly organic food — no pesticides

8 Cut out all grains, especially wheat — and legumes (unless pressure cooked)

9 Eat low glycemic fruits and vegetables frequently

10 Substitute goat/sheep products for cow dairy products — milk, cheese, yogurt

11 Limit using/eating industrial (manufactured) oils — use only natural oils (olive, hemp, avocado, palm, walnut, flaxseed, coconut)

12 Shift drinking habits — only one (women) or two (men) alcoholic beverages per day

Step Four

Keep Standard Biomarkers in the Optimum Range

- Do periodic testing
- Take action when out of optimum range

Step Four: Keep Biomarkers in the Optimal Range

Standard Blood Test

- **Glucose** = less than 85 mg/dL
- **A1c** = less than 5.0%
- **Homocysteine** = less than 7
- **Ferriten** = between 40 and 60 Ng/ml
- **HDL** = greater than 70 mg/dL
- **LDL** = less than 50 mg/dL
- **Triglycerides** = less than 50 mg/dL
- **ApoB (particle content)** = less than 50 mg/dL
- **LP(a)** = less than 30 mg/dL
- **Vitamin D** = greater than 50 (mg/ml)
- **Thyroid Balanced** = between T3 and T4
- **C-Reactive Protein** = less than 1.0

Additional Blood Tests

- **Male/Female Hormones**

- Life Extension Institute

Step Four: Keep Biomarkers in the Optimal Range

Self Monitor

- **Blood Pressure** = less than 110/70 mm/hg (home device)
- **Heart Rate** = less than 60 BPM (Fitbit or other wearable)

Body Mass Scale

- **Body Fat** = 8 to 15%
- **BMI** = 18 to 22
- **Visceral Fat** = less than 8%

- Life Extension Institute

Step Four: Benefits of Lower Blood Pressure

- A large five year study was stopped after 3 years
- Participants with a blood pressure level less than 120 mm/hg had:
  - ✓ **38% lower risk of heart failure**
  - ✓ **43% lower risk of cardiovascular death**
  - ✓ **27% lower overall mortality from all causes**
- Than people with blood pressure over 140 mm/hg

- SPRINT clinical trial (FDA)

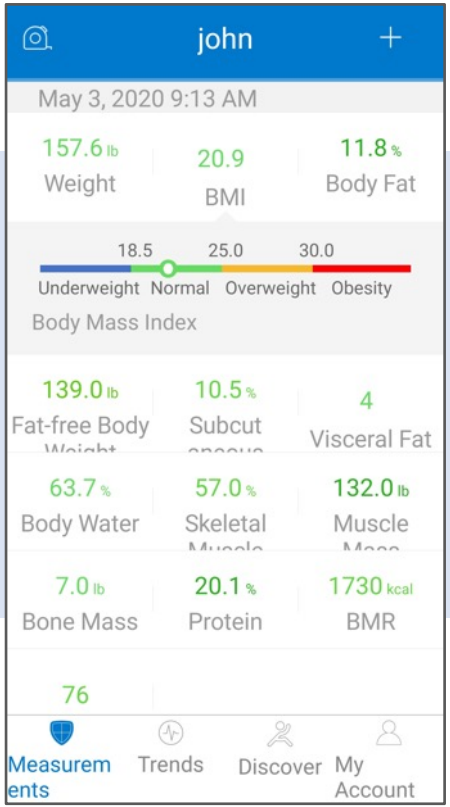
Step Four: Body Mass Scale Measures

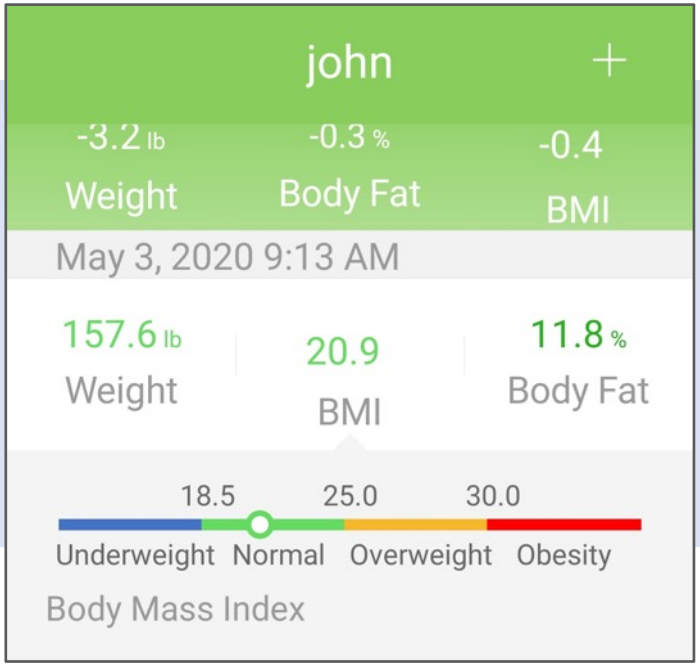
- Weight (155lbs)
- Body Mass Index (21)
- Percent Body Fat (12%)
- Visceral Fat (Around Organs) (4%)
- Percent Body Water (63%)
- Bone Mass (7%)
- Muscle Mass (133lbs)
- Skeletal Muscle (57%)
- Protein (20%)
- Metabolic Rate (1750 kcal)

- Life Extension Institute

NOTE: Scales available on Amazon at a reasonable price (about $30)

Step Four: Renpho® Body Mass Scale





Step Four: Recommended Periodic Testing

- Life Extension Institute

DAILY

- Weight (body mass scale)
- Blood pressure
- Heart rate

QUARTERLY

- Comprehensive blood analysis including male/female hormone levels

SEMI-ANNUALLY

- Ultrasound of organs in abdomen
- Follow up with MRI if mass found

ANNUALLY

- Comprehensive physical
- Microbiome analysis (parasites/bacteria)
- Micronutrient blood test (absorption of supplements at cellular level)
- DRE/PSA (men) (starting at age 50)
- Mammogram (women) (starting at age 40)

Step Four: Recommended Periodic Testing

BI-ANNUALLY (starting at age 50)

- CTA (status of heart artery blockages)
- Whole body MRI
- Bone density testing

EVERY FIVE YEARS (starting at age 50)

- Colonoscopy
- Neuro Legion quant Assessment (MRI of brain plus WAVI Brain Scan)

ONCE

- Susceptibility to disease (genome analysis)

- Life Extension Institute

Step Four: Keep Biomarkers in the Optimum Range (cont.)

- For a full list of biomarkers, recommended screenings (and how often), as well as ways to control heart and cardiovascular risk factors, visit our website at:

  http://www.asherlongevity.com/science-technology/managing-your-bio-markers-for-a-long-healthy-life/

Step Five

Take Appropriate Supplements To Ward Off Disease

Step Five: Take Appropriate Supplements to Ward Off Disease

★ 1. Multi-vitamin (overall health)
★ 2. Fish oil (heart and brain health)
★ 3. Vitamin D (protection from all major diseases)
★ 4. Curcumin (supports immune system and all major organs)
★ 5. Vitamin K (bone density and heart health)
★ 6. Maintain a lower blood glucose level with plant extracts
7. CoQ10 (heart, brain and kidney health)
8. Mitochondrial Support (increased energy to every cell)
9. DHEA (supports overall hormone balance)
10. Improve brain health with plant extracts
11. Bone Strength (calcium plus other critical minerals)
12. Prostate Support (appropriate plant based nutrients)
13. Breast Support (appropriate plant based nutrients)
14. Magnesium (improved cognitive ability)
15. B Vitamins (helps make blood and nerve cells)

- Life Extension Institute

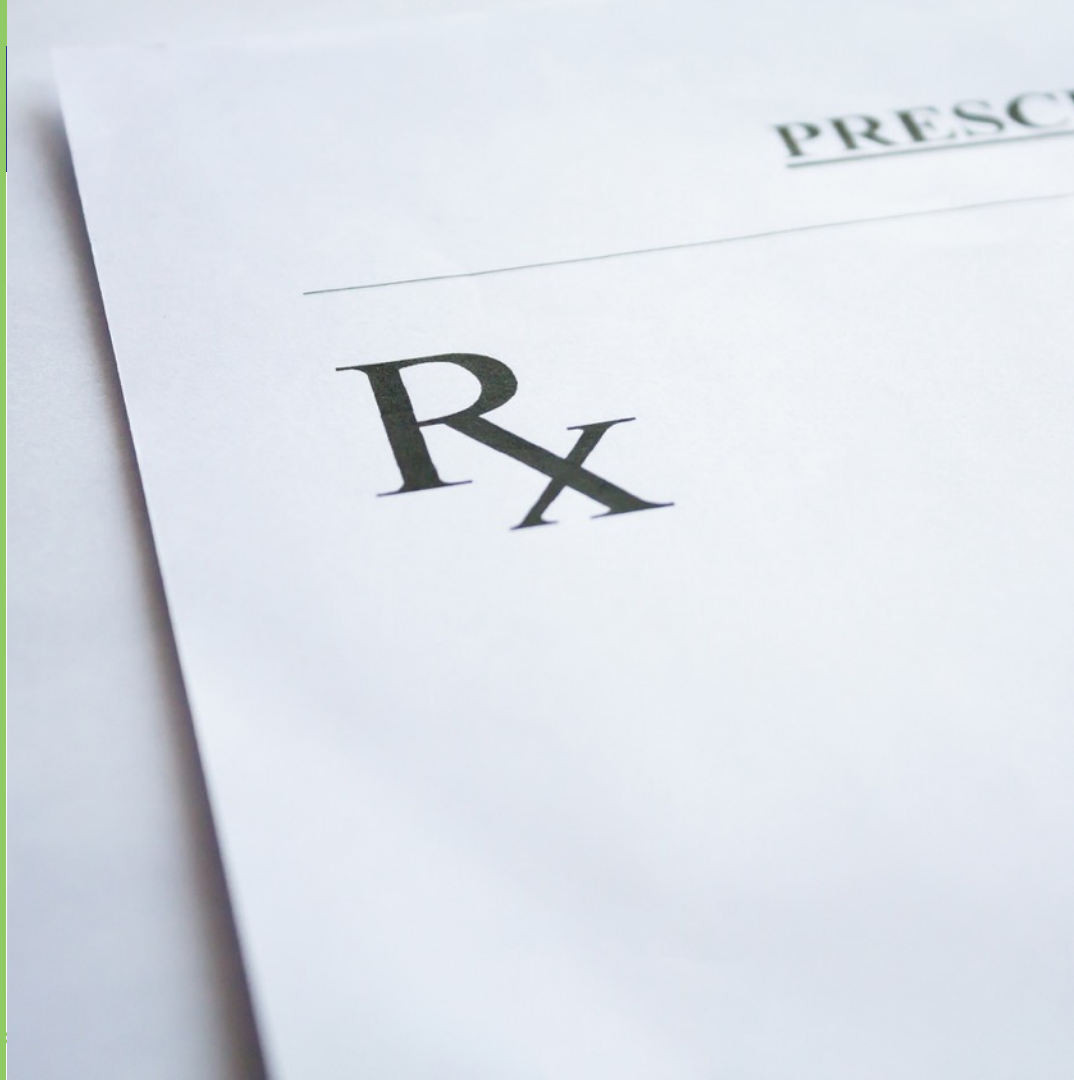
★ *Beginning as a pre-teen (age 10). The rest as we approach adulthood (age 18).*

Step Five: Take Appropriate Supplements to Ward Off Disease (con't)

For more information on each of these supplements and to conveniently order them online, visit us at:
http://www.asherlongevity.com/shop/

Step Six

Take Seven Prescription Drugs/Medications with Additional (off-label) Therapies to Significantly Increase Lifespan



Step Six: Medical Trials, Studies and Analyses

Clinical Trial:

- Required by FDA to approve a prescription drug
- Large, expensive, randomized sample over a long time period
- Placebo controlled; double blind
- Can identify the benefit and side effects of one variable (the drug)
- Determines if benefits outweigh the side effects
- Can be used in emergencies for additional off-label uses (e.g. COVID-19)

Epidemiology Study:

- Study of a very large population over a very long time
  - Framingham and other similar studies
- Many variables
- Can draw realistic inferences
- Cause and effect cannot be proven

Human Challenge Study:

- Virus introduced to healthy young people
- Progression of disease is monitored
- Air transmission of particles is assessed

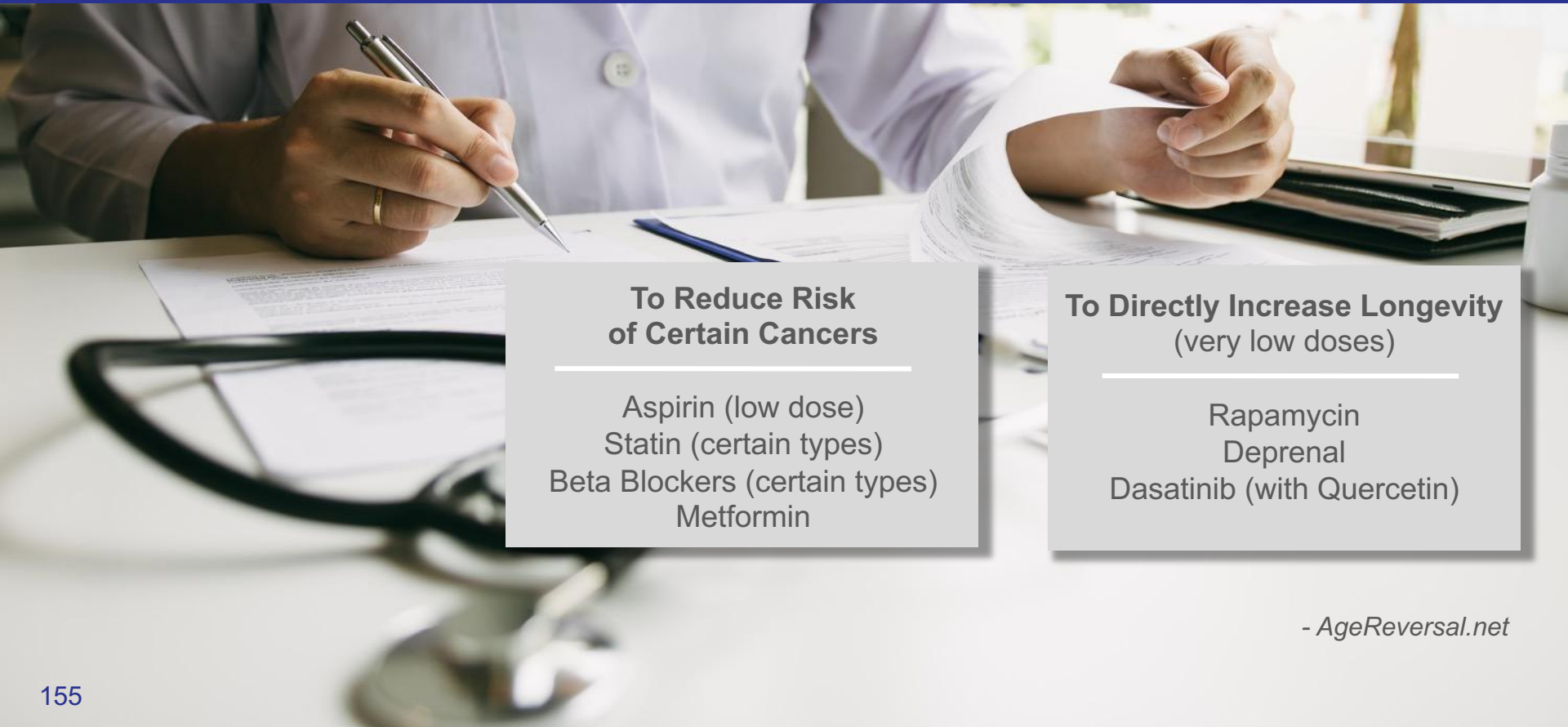
- *NIH Analysis*
- *FDA website*

Step Six: Medical Trials, Studies and Analyses (con't)

- **Meta Analysis**
  - A summary of a large number of similar epidemiology studies
  - To assess overall mortality risk
- **Studies in fruit flies, worms, mice, rats and dogs (Canada only)**
  - All have a similar genome to humans
  - Can get results quickly because of shorter life spans
  - To determine if a study on humans would be worthwhile
- **Small studies in humans**
  - To get an initial idea of the benefit and risk
  - To assess suitability for a clinical trial

- NIH Analysis
- FDA website

Step Six: Take Seven Prescription Drugs/Medications with Additional (off-label) Therapies



To Reduce Risk of Certain Cancers

Aspirin (low dose)
Statin (certain types)
Beta Blockers (certain types)
Metformin

To Directly Increase Longevity
(very low doses)

Rapamycin
Deprenal
Dasatinib (with Quercetin)

- AgeReversal.net

Step Six: Take Four Prescription Drugs/Medications to Reduce the Likelihood of Cancer

Drug/Medications	Primary Use	Additional (off-label) Use (Reduces Likelihood of These Cancers)	Suggested Dose
Statins (Lipophilic type only)	Lowers LDL. Reduces incidence of atherosclerosis, heart attack & stroke	Breast, prostate, pancreatic & kidney	40 mg/day
Aspirin (low dose)	Reduces **chronic Inflammation** throughout the body	Colon	1 baby aspirin/day (81 mg)
Beta Blockers (Propranolol, Atenolol & Carvedilol only)	Lowers blood pressure & heart rate (less stress)	Prostate & breast	40-200 mg/day
Metformin	Type II diabetes	Pancreatic, colon, stomach, liver & endometrium	1000 mg/twice a day

- AgeReversal.net; Life Extension Institute

Step Six: Benefit of Low-Dose Aspirin Therapy

- Recommended for people over 45 with one or more cardiovascular risk factors:
  - male gender
  - high blood pressure
  - high LDL
  - diabetes
  - cigarette smoking
  - lack of exercise
  - family history of heart attack or stroke
- Immediate and long lasting effect on blood platelets
  - Making them less likely to clump together and form a blood clot
- Bonus: Lancet publication determined that low-dose aspirin therapy reduced cancer incidence by 21%

- In eight trials involving 25,000 patients

Step Six: Take Metformin to Increase Longevity

- An FDA approved drug for treating people with Type II diabetes by keeping sugar levels in check
- Diabetics not taking Metformin lose 15 years of health span and 10 years of lifespan
  - Diabetics taking Metformin live longer than people who don't have diabetes (90% of Americans)
  - FDA clinical trial in progress for additional (off-label) benefits for longevity
- The only clinical trial started to date to assess longevity benefits
  - TAME (Targeting Aging With Metformin) Study

- Multiple NIH studies

Step Six: Take Three Drugs with a Direct Longevity Benefit (in a VERY Low, Safe Dose)

Drug/Medications	Primary Use	Normal Dose (Very High)	Additional (off-label) Use	Suggested Dose (Very Low)
Rapamycin	Organ transplant rejection prevention	5mg a day	Longevity	5 mg/once a week (pulse dosing)
Deprenal	Anti-depressant Parkinson's Disease	10mg a day	Longevity	Very small dose: 1 mg/day
Desatinib	Slows cancer growth in leukemia (certain types)	100 to 200mg a day	Longevity	• Very small dose • Varies per body weight • Take only twice a year

- Multiple small trials in mice, dogs and humans

Step Six: Take Rapamycin to Increase Longevity

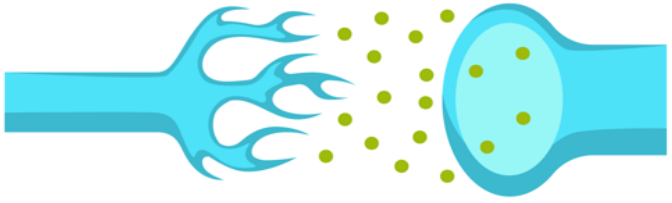
- Rapamycin is an FDA approved organ transplant rejection prevention drug
- Rapamycin leads to 25% longer lives in yeast, fruit flies, worms, mice, rats and dogs (Canadian study)
- By regulating cell growth, Rapamycin is extremely useful where rapid cell growth is the problem as in
  - All major diseases
- It provides the benefits of calorie restriction (in a pill)

- Major NIH Study 2009

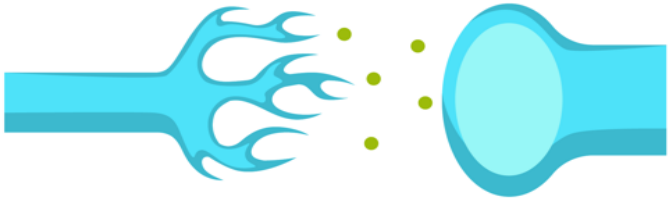
Step Six: Take Deprenel to Increase Longevity

- Primary uses include:
  - Anti-depressant (approved by FDA)
  - Parkinson's disease (additional (off-label) therapy)
  - Alzheimer's disease (additional (off-label) therapy)
- Deprenel regulates levels of Dopamine in the brain
  - Supports a positive mood, increased energy and enthusiasm
  - Improves attention, planning and inhibition control
- Considered to be a biological route to longevity
  - A Metformin for the brain

- *Proven in multiple studies in mice, rats and dogs*



DOPAMIN LEVELS IN NORMAL NEURONES



DOPAMIN LEVELS IN PARKINSON's AFFECTED NEURONES

Step Six: Rid Body of Excessive Senescent (Almost Dead) Cells to Increase Longevity

The current options to get rid of them include:

1. Periodic fasting **(good)**
    - Two days in a row for 16 hours every two weeks

2. Theaflavins + Quercetin **(better)** (contained in Senoyltic Activator supplements), or Fisetin (supplement), or

3. Dasatinib (chemo drug) plus Quercetin (supplement) **(best)**
    - For people over 60
    - In two very small, safe semi-annual doses
    - Study at Mayo Clinic in progress

- AgeReversal.net
- Life Extension Institute

Step Seven

Slow Down the Four Causes of Aging with

- Eight Supplements
- Calorie Restriction
- Fasting
- Exercise
- Fresh Air
- Purposeful Practices

Step Seven: Slow Down the Four Causes of Aging

1. Clean out senescent (dead) cells with three supplements:
   - Senolytic Activator
   - Ageless Cell
   - Fisetin

2. Suppress mTor signaling with one drug, two supplements, and periodic fasting:
   - Metformin (drug)
   - Periodic fasting two days in a row for 16 hours every two weeks
   - Supplements:
     - AMPK
     - Longevity AI

- *Life Extension Institute*

Step Seven: Slow Down the Four Causes of Aging

3. Maintain NAD^+ with supplements
   - Restore with NAD^+ infusions if over 45
   - Then continue NAD^+ supplements

4. Restore immune system with:
   - Get fresh air every day (2 days in a forest)
   - Get regular exercise
   - Two supplements:
     - Flor assist GI (w/ phage technology)
     - Immune senescence

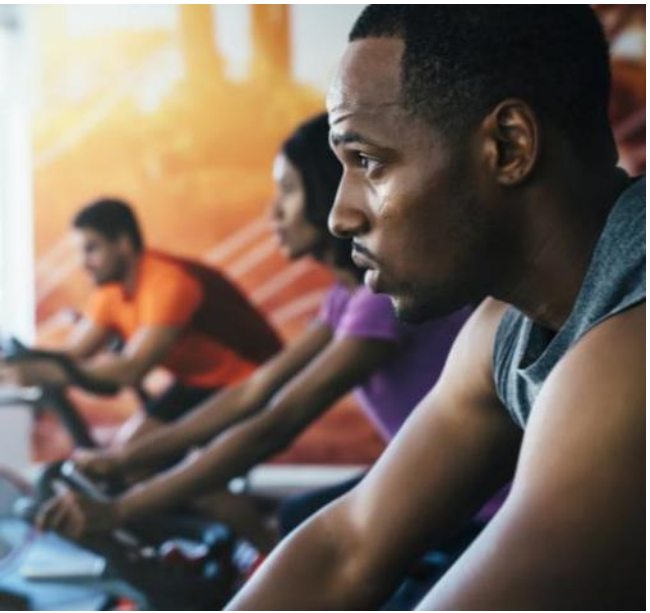
- Life Extension Institute

Step Seven: Summary of Supplements

- Important for optimum health beginning as a **pre-teen** (six supplements)
- Very important to ward off disease as we approach **adulthood** (eight supplements)
- Essential for greatly increased longevity as we enter into **middle age** (eight supplements)

For more information on each of these supplements and to conveniently order them online, visit us at: http://www.asherlongevity.com/shop/

Step Seven: Induce Small Amounts of Stress to Build Longevity



- The favorable response of an organism to lower doses of stress that would be harmful in large doses
  - **HORMESIS**
- When stressed, our cells prepare for an impending threat to survival
  - Weak cells that can't survive are kicked out
  - Existing healthy cells are strengthened
- At the right low dose, all of the following stressors can promote longevity
  - Exercise (cardio or strength)
  - Alcohol
  - Heat (sauna)
  - Cold (cold shower)
  - Ultraviolet light
  - Low Levels of radiation
  - Toxins
  - Calorie restriction and/or fasting (extends life in all creatures studied to date)

- "The Longevity Paradox"

Step Seven: Loss of Muscle Mass as We Age

Without regular strength training:

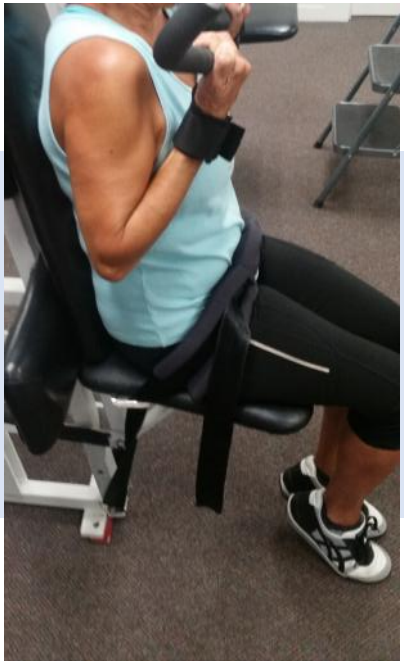
After age 40, we lose 1% of our muscle mass per year

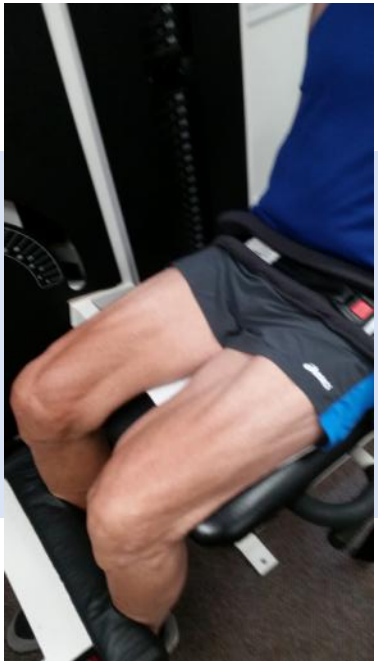
After age 70, we lose 1.5% per year

- At about age 80, we become vulnerable to external stresses that would otherwise be minor
- Loss of muscle mass results in frequent falls
  - Many frail people never recover
  - Especially when weak bones are broken
- Medical term: Sarcopenia

- Body by Science

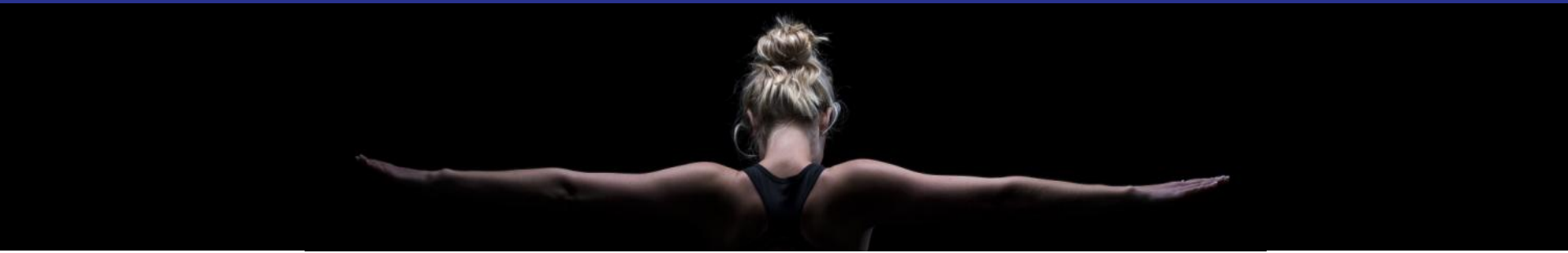
Step Seven: “Slow Burn, High Intensity" Workout Methodology (20 minutes a week)





Do they look like eighty-year-olds?

Step Seven: Hormetic Foods and Spices



Hormetic Foods

- Dark chocolate
- Regular coffee
- Broccoli
- Kale
- Cabbage
- Spinach
- Vinegar
- Brussel sprouts
- Blueberries
- Strawberries
- Raspberries
- Pomegranate
- Green Tea
- Lemon juice

Hormetic Spices

- Oregano
- Ginger
- Turmeric
- Garlic
- Rosemary
- Parsley
- Basil
- Thyme

"The Plant Paradox"

Step Seven: Using a Natural Sweetener in Dark Chocolate

Sweetened with Stevia

Step Seven: Purposeful Longevity Practices

- Mindfulness
  - Focusing our attention on the present moment without judgement of our thoughts, emotions, other people or events
    - Lowers stress levels
- Meditation
  - A practice of concentrated focus to increase awareness
  - Reduces stress
  - Headspace app
- Maintain a strong social network
  - Results in increase of five years in lifespan
  - Sense of well being is enhanced
  - Stress is reduced

- *NIH Study on Social and Emotional Aging, Meditation and Mindfulness*
- *Buddhist Traditions (Zen)*
- *Complete Reference of Complementary and Alternate Medicine*

Step Seven: Purposeful Longevity Practices (con't)

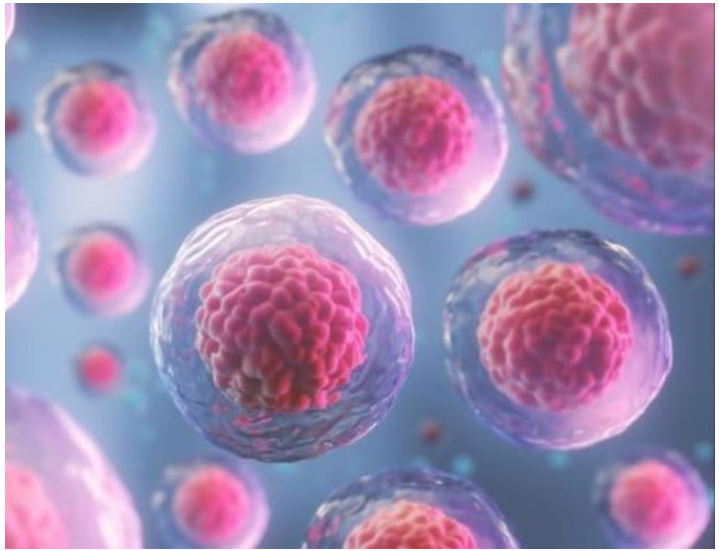
- Having a life purpose (or WHY you do what you do)
  - Provides an unlimited supply of fulfillment
    - Powerful antidote to depression and sadness
  - Provides endless motivation to add more value and make a positive impact on the lives of others
  - Makes you more
    - Alive
    - Content
    - Graceful
    - Resilient
    - Successful
    - Happy
  - Reduces stress and susceptibility to all major diseases

- *NIH Study on Social and Emotional Aging*
- *Blue Zone Studies*
- *Study of 70,000 Japanese adults*

Step Eight

Rejuvenate Stem Cells in Our Entire Body

Step Eight: Rejuvenate Stem Cells in Our Entire Body

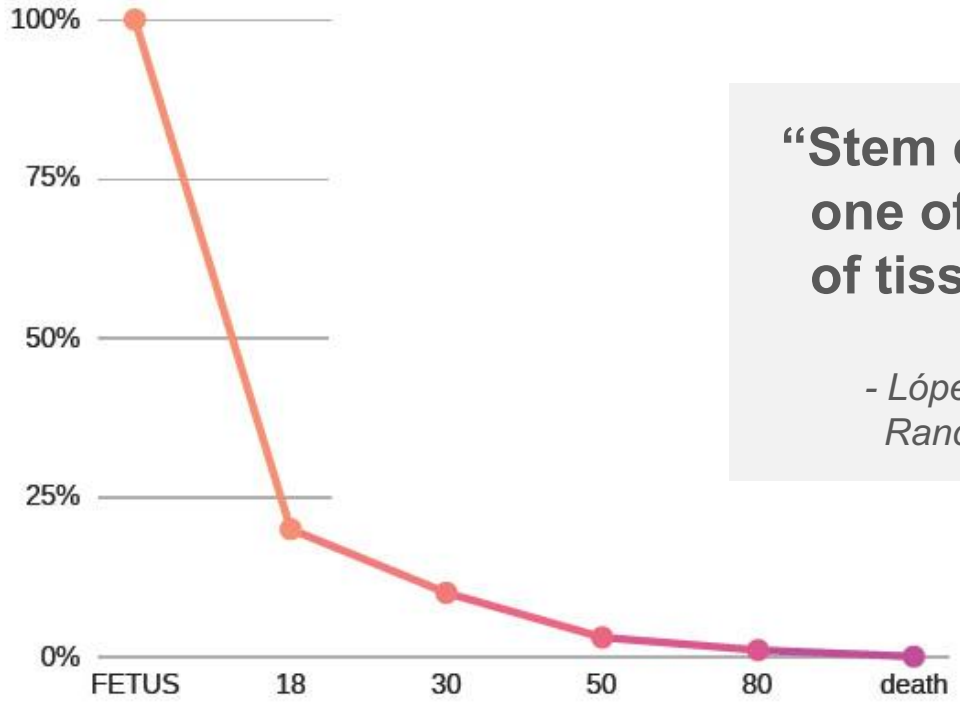


- When cells in our body become old or damaged, they are replaced by stem cells that have been transformed into the cell they are replacing
- As we age our stem cells lose their ability to regenerate
  - At age 60 we have 5% left
- Stem cell therapy has vast potential for repair

- The Longevity Code

Step Eight: Stem Cell Exhaustion

Percentage of Stem Cells Left with Aging



"Stem cell exhaustion… one of the ultimate culprits of tissue aging."

- López-Otín et. al, 2013, Rando and Chang, 2012

- Buck Institute

Step Eight: Stem Cell Treatment Applications

- Aging Frailty/Osteoarthritis
- Alzheimer's Disease/Cognitive Impairment
- Joint Deterioration/Injury
- Chronic Lyme Disease
- Chronic Fatigue Syndrome
- Post Stroke Treatment
- Post Shingles Treatment
- Heart Failure (Not Afib)
- Glaucoma
- Asthma
- Autoimmune Diseases

- Hacking Darwin

- **Full Body Rejuvenation**

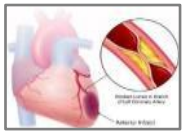
Stem Cell Product Delivery Methods

DELIVERY ROUTE	THERAPEUTIC AREA	MEDICAL CONDITION
Nasal Spray	CNS Ophthalmology	• Alzheimer's • Dementia • Glaucoma
Nebulizer	Pulmonology	• Lung Fibrosis • Asthma
I.V.	Cardiology	• Myocardial Infarction • CHF
Topical Cream	Dermatology	• Skin Conditions • Wound/Burn Healing • Cosmetics
Eye Drops	Ophthalmology	• Corneal Ulcers
Microneedle/ Subcutaneous Injection	Hair Regrowth	• Hair Recession

OPTHALMIC HEALTH

PULMONARY HEALTH

BRAIN HEALTH



CARDIOVASCULAR HEALTH

HAIR REGROWTH

WOUNDS/ BURNS

- Stemedica

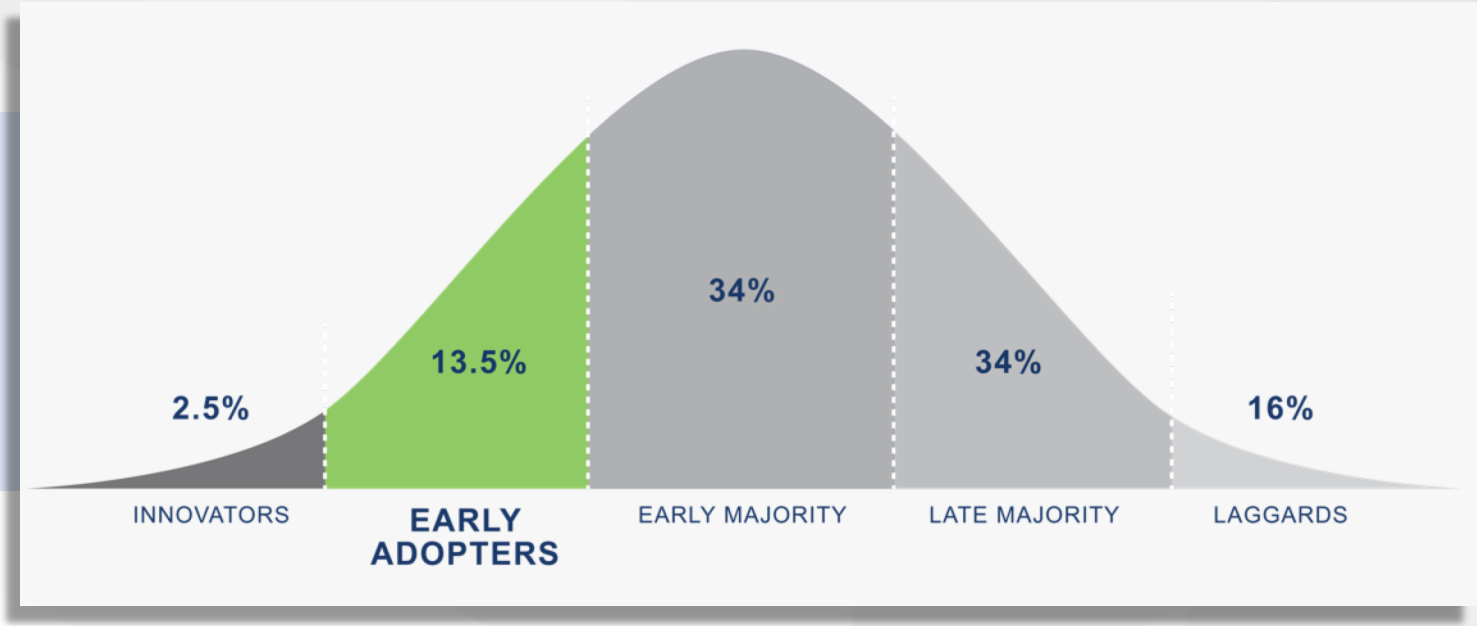
Step Eight: Rejuvenate Stem Cells

To learn more about Stem Cell therapeutic treatments, visit our website at:
http://www.asherlongevity.com/stem-cell-rejuvenation-for-anti-aging/

Step Nine

Utilize New and Emerging Technologies, Protocols and Therapies that Greatly Extend Life

Step Nine: Be an Early Adopter to Live Towards an Unlimited Life



- Diffusion of Innovation Theory

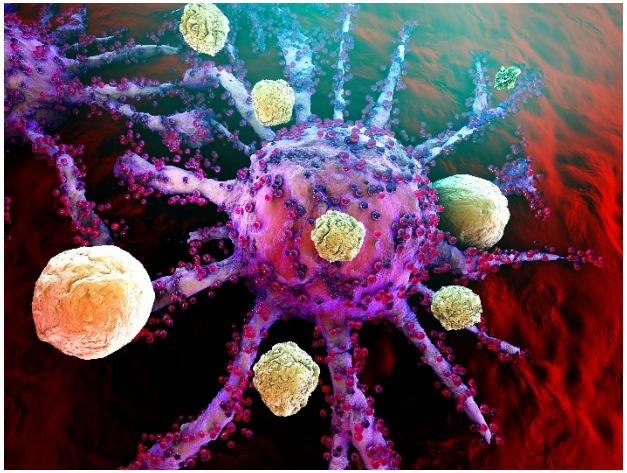
Step Nine: Take Advantage of Advanced Longevity Technologies

- Cancer Immunotherapy
- Bioelectronic Medicine
- Using peptides to lengthen telomeres
- Transfusions of blood plasma from young people (18 to 25) to older people
- Use of electric fields at specific frequencies to disrupt division of cancer cells (manufacturer: novocure)

- The Longevity Code

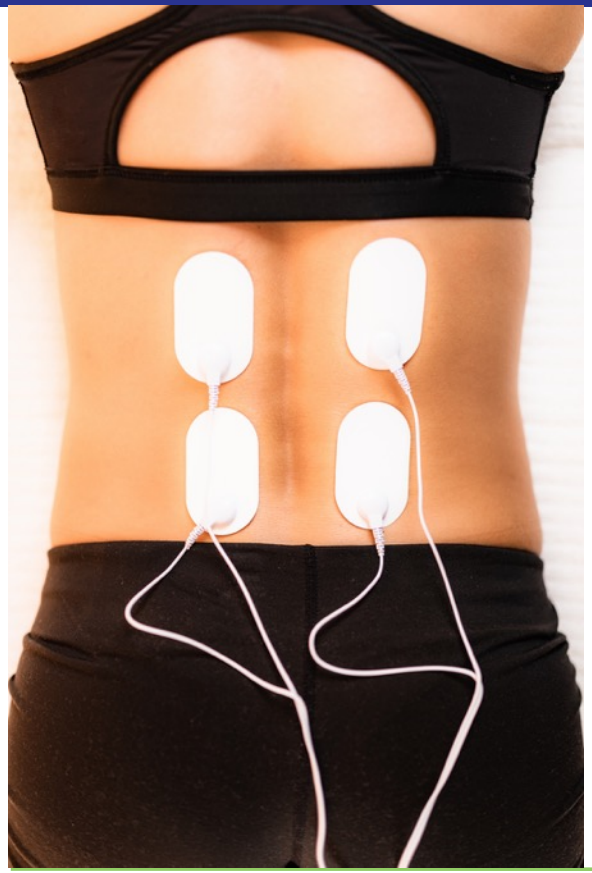
Step Nine: Cancer Immunotherapy

- Enlisting the patients own immune system to fight cancer
- New survival data from long running medical trial for melanoma
  - 52% of patients were alive after 5 years
  - Previous chemotherapy treatments resulted in only 5%
- Other current applications (e.g. bladder cancer)



- cancer.org

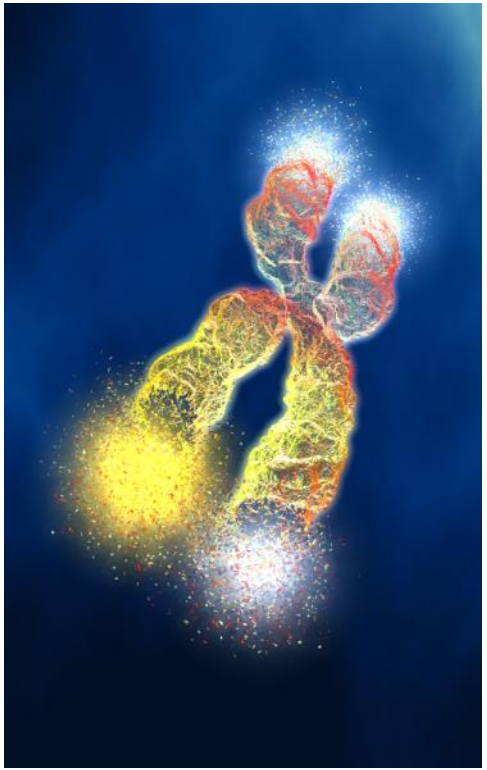
Step Nine: Bioelectronic Medicine



- The use of precise electrical pulses to treat chronic diseases
  - Can be activated when needed to **stimulate or "dial down"** unwanted nerve stimulation
  - By regulating the body's immune and metabolic responses
- Currently used to treat conditions such as headaches, depression, sinus pain, and **chronic inflammation**
- Being tested to help with:
  - Blood pressure
  - Arthritis
  - Diabetes
  - Dementia
- TENS device, one of a few currently available commercially

- Some applications already approved by FDA

Step Nine: Take Peptides to Lengthen Telomeres



- Peptides are similar to proteins except with shorter chains of amino acids
- Telomeres are the caps on the end of all chromosomes
  - They “fray” (shorten) as we age
- People with shortest telomere length have a 20% higher risk of death
- Numerous studies on humans show that taking appropriate peptides can lengthen telomeres and extend life

- Study of 100,000 people over 65

Step Nine: Take Peptides to Lengthen Telomeres

- In a twelve year Russian study (2003), **peptides provided an increase in human lifespan of 12 years**
  - Using a combination of pineal and thymus peptide bio-regulators
  - They activate the enzyme telomerase restoring telomere length

- Four year USA Trial (Telomeres Activation Protocol) (TAP trial), **preliminary results suggest 16 year increase in longevity**
  - No negative side effect
  - A follow-on clinical trial starting in 2021

-TAP Trial (2019)

Step Nine: Age Reversal with Young Blood Plasma

- Plasma is blood without red and white blood cells
  - Does contain healing and growth factors
- Proven in studies on mice
  - Trade blood between young and old mouse
  - All tissues in the older mouse rejuvenated
  - All tissues in the younger mouse deteriorated
- “Ambrosia Trial” tested young blood in 81 older humans (2019)
  - Well being and mental clarity improved
- FDA currently discourages use
- Widespread “underground” use in South Florida

- *Ambrosia trial (2019)*

Step Nine: Consider Early Adoption of Emerging Longevity Technologies

- CRISPR proteins (to actually repair or reprogram DNA)
- Regeneration of the Thymus Gland
- 2019 Longevity trial in fruit flies with Metformin, Rapamycin and Lithium
- Vaccines against all major diseases
- Sugar cross-link breakers (replacement mitochondrial DNA pieces)
- Epigenetically reprogramming cells (to turn an aging cell into a different type)
- Gene therapy to make the human body resistant to viruses (Harvard Medical School)

- Life Extension Institute

Step Nine: CRISPR Technology

- A CRISPR protein is like an old west most-wanted poster of a virus (enemy of bacteria) that bacteria store in their genetic code
- When the virus shows up, the CRISPR protein cuts the DNA (genetic code) of the virus
- CRISPR technology can cause breaks in DNA strands at precise locations
  - CRISPR can then insert new DNA at any location
- Diseases for which there is no cure can be potentially edited out of our cells
  - Recently demonstrated against progeria

- The Longevity Code

Step Nine: Current Use of CRISPR Technology

- A recent emergency order by FDA to assess CRISPR for use in saliva testing for COVID-19
- An Arctic apple that does not brown when cut
- Bruise-resistant potatoes are in supermarkets now
- Papaya edited to avoid the rainbow virus
- Wheat with higher fiber and lower gluten content
- Tomatoes better able to grow in warm climates

- The Longevity Code;
15,000 CRISPR Published Studies

Step Nine: Regenerate the Thymus Gland

- The Thymus gland makes T-cells (killer cells) that fight off viruses and bad bacteria
  - Non-functioning after age 70
  - Explains why flu, pneumonia , and COVID-19 are so dangerous for the elderly

- A recent small trial in humans demonstrated regeneration of the Thymus gland
  - A combination of DHEA, Metformin and a human growth hormone (rhSH)
  - Age was reversed by 2½ years as measured by an epigenetic clock

- Four year TRIIM Trial in Humans (2019)
-TRIIM-X Trial (proposed for 2020)

Step Nine: 2019 Longevity Trial in Fruit Flies

Lithium + Rapamycin + Metformin trial

48% increase in lifespan in fruit flies

Note: Fruit flies, worms, mice and dogs have genomes similar to humans

The Nine Steps to a Healthier and MUCH Longer Life

1. Get sufficient sleep and deep sleep
2. Eat a healthy diet to preclude disease, infection, fatigue and poor performance
3. Eat a diet tuned for a healthy gut microbiome to avoid ten diseases and three conditions
4. Keep standard biomarkers in the optimum range
5. Take appropriate supplements to ward off disease
6. Take seven prescription drugs/medications to ward off cancer and enhance longevity with additional (off-label) benefits
7. Slow down the four causes of aging with eight supplements, fasting, calorie restriction, exercise, fresh air and purposefulness
8. Rejuvenate stem cells in our entire body
9. Utilize new and emerging technologies, protocols and therapies that greatly extend life

- Asher Longevity Institute

Asher Longevity Institute Typical FAQ

Q: To fully implement, how much time will these steps take out of my day?

A: Once new habits are formed, not much

Q: Have there been studies on interactions between recommended prescriptions?

A: - Information is widely available
- Seek doctor's advice before taking prescriptions

Q: What is the ROI of supplements?

A:
- Difficult to immediately measure
- An antibiotic will fix a typical infection (e.g. strep throat) quickly
- Some supplements can have an immediate effect (probiotics)

Q: What will it cost to fully implement?

A: Main costs are supplements, testing and prescriptions ($5 - 10K per year, per person depending on insurance coverage)

The Tremendous Potential Benefit

- Lifespan: Average is 79 years
- Health span: Limiting conditions start at average age of 63
- If you adhere to the ALI planning guide purposefully (90%)…
  - The probability of major diseases is greatly reduced
- You can potentially live to 99
  - Gaining 20 years of lifespan (79 + 20)
  - And 36 years of health span (99 - 63)

- *Coalition of Radical Life Extension*
- *WHO Information Data*
- *Multiple NIH studies*

If You Would Like Further Information…

Presentation information

- ❑ Copy of the slide deck
- ❑ Link to a VES Longevity one-hour webcast
- ❑ Free monthly newsletter on new and emerging age reversal protocols and technologies

Longevity workshop (half day)

- ❑ For your company
- ❑ For other organizations

Other useful information

- ❑ Longevity planning guide (how to get started)
- ❑ Guide to ID Longevity practitioner in your area
- ❑ Referral to a holistic Longevity coach
- ❑ ALI investment opportunities

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