Health and Wellness Seminars

Fitness for Life: Lifestyle Hacking for Longevity and Life Span Seminar

Presentation
https://bit.ly/fitness-for-life-seminar-presentation-2024
Video
https://youtu.be/RoZoZhEURwY

Lifestyle Hacking for Longevity and Healthspan

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Monadnock Orthopaedic Associates

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Lifespan [2024]

Males ___ yrs

Females ___ yrs

Healthspan = period of your life that you spend healthy, capable, and minimally limited

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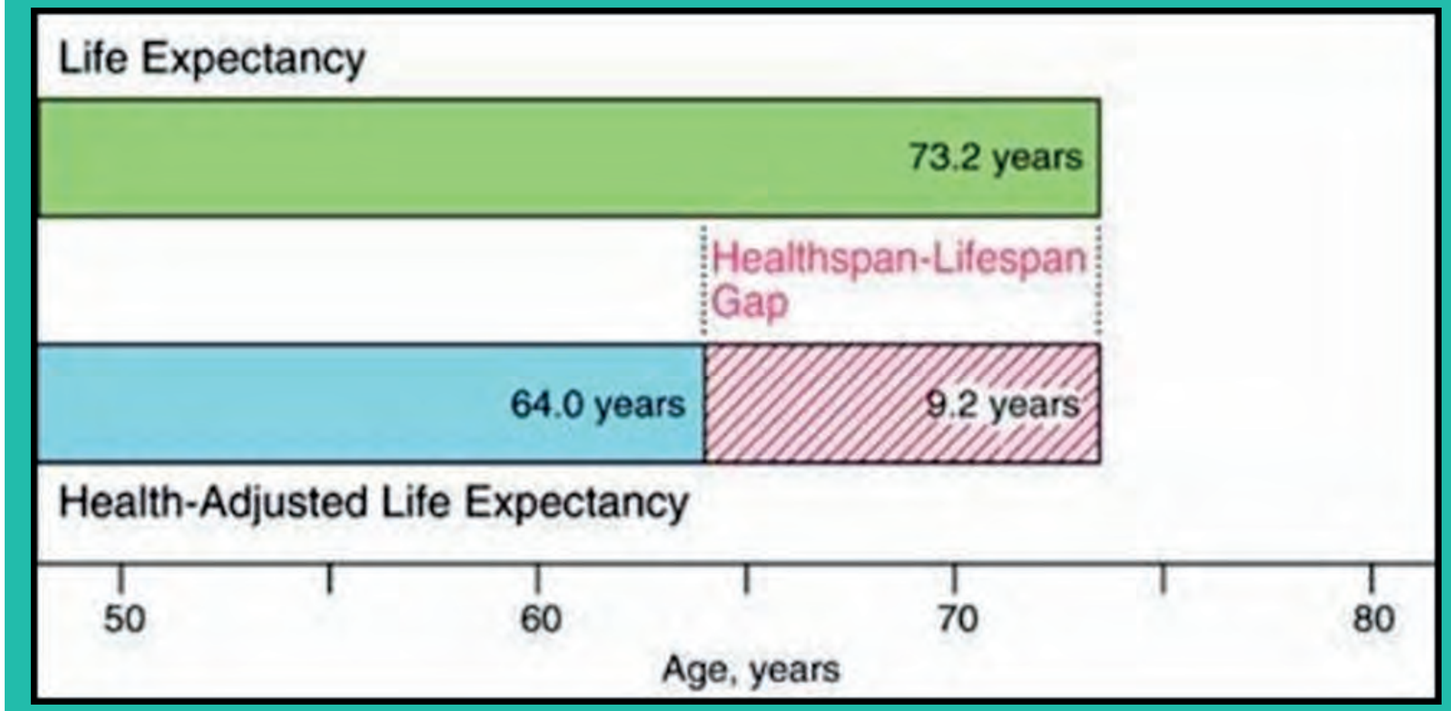
Lifespan [2024]

Males 74.8 yrs

Females 80.2 yrs

Healthspan = period of your life that you spend healthy, capable, and minimally limited

Lifespan vs Healthspan GAP



Cognitive
Physical
Emotional

Is that the ideal situation?

Factors that influence LONGEVITY

Lifestyle - Diet, exercise, alcohol, sleep
Health - DM, HTN, CVD, liver/renal dz
Environment - Socioeconomics, exposures, air/water, community
Genetics - 1/3rd of your risk/reward

* FOX03 and APOE Genes stimulated by natural compounds such as resveratrol, curcumin, astaxanthin

8 Major Modifiable Factors

1. CV and Resistance training
2. Diet
3. Sleep
4. Stress
5. Alcohol
6. Smoking
7. Opioids
8. Social relationships

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Married/Single/Widowed
Pets
Mental wellbeing

Study of 700K veterans
24yrs difference if you control for optimizing the 8 Major Factors

Exercise as the linchpin?

Cardiovascular training
Resistance training

In general exercise protects against Dementia, insulin insensitivity, CV disease, frailty and is associated with longevity and healthspan

Cardiovascular (CV) training

Zone 2 vs VO2 max

You need them both!

CARDIO and STRENGTH

Cardiovascular health needs to be split into long/steady endurance Zone 2 and VO2 max maximal aerobic effort

Strength + Power and Stability as the foundation that keeps us safe from injury

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The Wonders of Zone 2

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"Light intensity"; still able to talk , no burn

Slow twitch muscle fibers

Endurance muscle

No lactate accumulation

Rejuvenates mitochondria

*cycling/rowing/swim/TM

every other day 30-60min

But why VO2 max ?

Powerful correlation with longevity and disability!

VO2 max declines rapidly after 30
10%/decade, 15% after 50

What once was easy becomes difficult or impossible

VO2 Max

www.omnicalculator.com/sports/vo2-max

**"Any increase, at any age,
will improve how long you live and
how well you live"**

* training can increase VO2 by up to 10-15%/yr
Equivalent to gaining 6 years of fitness age

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VO2 Max training

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Start with Zone 2 and
strength training x 6 months

Then ADD bursts of HARD INTENSITY
2-4 min intervals
Recover to your Zone 2 heart rate and repeat
Do 2 sessions a week

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Only the strong survive!
Strength and Longevity

Muscle mass declines from age 30
by 50% of our mass over next 50 yrs.
We lose strength 2x faster than mass.
We lose power [strength x speed]
2x faster than strength

Sarcopenia

Sarcopenia is muscle loss that
occurs with aging
affecting quality of life

Immobility

Physical inactivity/Sedentary

Obesity

Chronic diseases: COPD, kidney disease,
insulin resistance/diabetes, cancer

Rheumatoid arthritis

Malnutrition or inadequate protein (2gm/kg)

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FRAILTY

Unintended weight loss

Exhaustion or low energy

Low daily physical activity

difficulty with 10 stairs?

Slowness of walking/poor balance

history of falls?

Weakness of grip

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Strength building for longevity

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GRIP - almost all ADL's require gripping

Squat - especially the eccentrics [chair squats]

PUSH/PULL - rowing, wall press

Hip Hinge movements - step ups, kettle bell swings, deadlift

Rucking - walking with weighted vest or backpack

Carrying loads - Farmers carry

Coordination sports - On average, tennis players lived 9.7 years longer, badminton players 6.2 , soccer players 4.7, cyclers 3.7 , swimmers 3.4 , joggers 3.2 years

GRIP as predictor and Key Indicator

Grip-strength of <57 pounds for men and <35 pounds for women was associated with "higher overall risk of death and higher risk for chronic illnesses"

For each 11-pound decrease in grip strength, there is a 16 percent higher risk of death from any cause

Frailty

Hospitalizations

ACM

Loss independence

CV disease

... overall strength, upper limb function, bone mineral density, fractures, falls, malnutrition, cognitive impairment, depression, sleep problems, diabetes, and quality of life.

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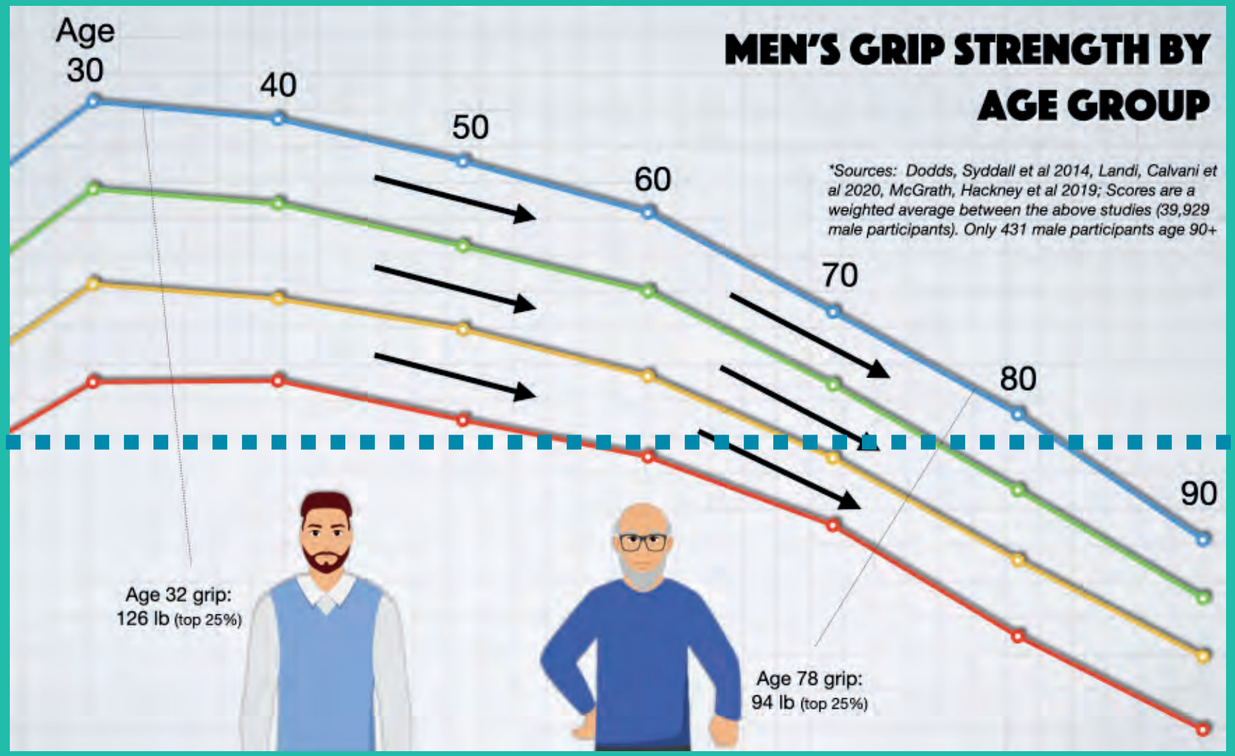

GRIP STRENGTH FOR MEN (LB)

Age	Top 10%	Top 25%	Good (50-74%)	Fair (25-49%)	Lowest 25%
20	>118.2	104.9 → 118.1	91.9 → 104.8	80.0 → 91.8	< 79.9
30	>138.9	125.7 → 138.8	111.3 → 125.6	96.5 → 111.2	< 96.4
40	>136.4	123.5 → 136.3	109.3 → 123.4	96.8 → 109.2	< 96.7
50	>129.8	117.2 → 129.7	104.5 → 117.1	90.8 → 104.4	< 90.7
60	>122.1	110.3 → 122.0	97.4 → 110.2	85.2 → 97.3	< 85.1
70	>107.2	96.2 → 107.1	85.0 → 96.1	74.9 → 84.9	< 74.8
80	> 91.6	80.3 → 91.5	69.6 → 80.2	58.2 → 69.5	< 58.1
90	> 72.8	63.9 → 72.7	55.1 → 63.8	44.1 → 55.0	< 44.0

GRIP STRENGTH FOR WOMEN (LB)

Age	Top 10%	Top 25%	Good (50-74%)	Fair (25-49%)	Lowest 25%
20	> 80.0	71.3 → 79.9	62.3 → 71.2	53.7 → 62.2	< 53.6
30	> 85.3	75.7 → 85.2	67.4 → 75.6	58.9 → 67.3	< 58.8
40	> 85.0	76.0 → 84.9	67.7 → 75.9	59.2 → 67.6	< 59.1
50	> 80.5	71.8 → 80.4	63.2 → 71.7	55.1 → 63.1	< 55.0
60	> 73.8	67.0 → 73.7	58.4 → 66.9	49.1 → 58.3	< 49.0
70	> 66.9	58.6 → 66.8	51.9 → 58.5	43.6 → 51.8	< 43.5
80	> 56.6	49.6 → 56.5	40.8 → 49.5	34.3 → 40.7	< 34.2
90	> 44.1	37.5 → 44.0	30.9 → 37.4	24.3 → 30.8	< 24.2

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DIET

2022 Norwegian study
10 yr increase in lifespan
with ideal diet modifications

Red Meat
Processed Foods
Sugar
Refined Grains
Eggs

Legumes/ Greens
Nuts
fish
Fruit
Vegetables

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BLUE ZONES

Family connections
Low smoking incidence
SEMI (90%) vegetarian diet
Legumes
'Constant' activity
Strong social networks

Supplements

Omega 3 - inflammation and heart health
Seafood/Seaweed/Chia/Flax
Curcumin - lowers CRP, improved DM @ 1000mg/day
Resveratrol - improved BS control
grapes/blueberries/dark chocolate
Green tea - EGCG, reduced all cause mortality
Sulforaphanes - Reduce inflammation/ DM/ Cancer
Brussels/ Broccoli/Kale/ raw veggies
Folate - improves chromosomal stability
Spinach/artichoke/asparagus
Glutathione - reduced cellular stress "Master Antioxidant"
Mushrooms/ Asparagus/Okra/Fish

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Live well.... and prosper

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