



GLOBAL WELLNESS
SUMMIT 2017



Living to 160

Dr. Michael Roizen, Chief Wellness Officer, Cleveland Clinic, U.S.



**Wellness :The Cleveland Experience:
Vitality: Improve Health, Save Big \$ For
Social Programs, Ed & Research**

**Part of The
Legacy of
Toby Cosgrove**



DISCLOSURE OF INTERESTS:

#1 NEW YORK TIMES BESTSELLER

TURN BACK YOUR BIOLOGICAL CLOCK WITH MORE THAN 80 DELICIOUS & EASY RECIPES

#1 NEW YORK TIMES BESTSELLER!

From the authors of the #1 New York Times
bestseller, *YOU: The Owner's Manual*

REAL

Are You as Young Can

An Age Reduction Program
Live and Feel Up to

44 SCIENTIFICALLY
THAT DELAY AGING

- * Control How Your Genes
- * Learn the Value of Exercise
- * Increase Your Vitality
- IT'S EASIER THAN

MICHAEL F. ROIZEN, M.D.

#1 NEW YORK TIMES BESTSELLER

How well do you know your body? TAKE THE QUIZ!

YOU

#1 NEW YORK TIMES

From the authors of the #1 New York Times
YOU: The Owner's Manual and

YOU

The Owner's Manual for Extending Your Warranty

MICHAEL F. ROIZEN, M.D.
MEHMET C. OZ, M.D.

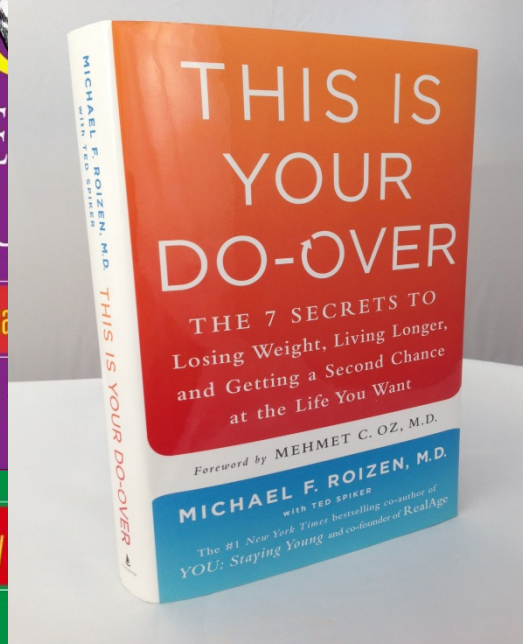
From the authors of the #1 New York Times bestsellers
You: on a Diet and *You: Staying Young*

YOU

BE BEAU

The Owner's Manual

MICHAEL
MEHMET



Waist Management

ROIZEN, M.D.
OZ, M.D.

WORKOUT

Maximum Health,
Minimum Work

Michael F. Roizen, M.D.
Mehmet C. Oz, M.D., with Lawrence A. Armour

Age

Reover

Years off your looks
and them to your life

F. Roizen, M.D.

Insider's Handbook for Getting the Best Treatment

MICHAEL F. ROIZEN, M.D.,
AND MEHMET C. OZ, M.D.

with
THE JOINT COMMISSION
The Patient's Safety Champion



www.Sharecare.com
www.RealAge.com



Entrevista com o médico americano
Michael Roizen, o papa do rejuvenescimento

Editora RGE - edição 1.000
ano 26 - nº 22 - R\$ 5,90
11 de junho de 2000

veja

www.veja.com.br

**RECEITAS
DA CIÊNCIA
PARA
MANTER-SE**

JOVEM

AOS 30, 40, 50...

...E 60 ANOS



#1 NEW YORK TIMES BESTSELLER

BE HALF AS OLD AS YOU ARE!!

The **RealAge** Revolution Gets Serious:
Longevity is the Next Disruptor, Enjoy It

KEEP Your KNOWLEDGE,
Your ACCEPTANCE,
Your EXPERIENCES &
REGAIN Your VIGOR, Your
ENERGY, Your PASSION

Albert B. Ratner, PhD
Peter Linneman, PhD
Michael F. Roizen MD

Outline For GWAS

- **Why Health/Care Needs To Be Fixed If Social Disruption Is To Be Avoided & How CC Has Shown It Can Be Done**
- **9 or 10 Steps You Can Do To Keep YOU & Your Brain Healthy/Younger**
- **How To Plan for The Next Disruptor: A Lot More Healthy Longevity Or Ability to Easily Make Your RealAge A Lot Lot Younger**

Aging is largest driving force in **CHRONIC** disease : So Make Your RealAge Younger

Neurodegeneration & Mental Dysfunction

Cancer

Frailty

Deaths &
Complications
After Surgery

Cataracts &
Macular Degen-
eration

Type II
Diabetes

Arthritis

Heart
Disease & Stroke

AGING

The diagram features a central, multi-pointed star with a red-to-orange gradient and a green outline. The word 'AGING' is written in purple capital letters inside the star. Eight white arrows radiate from the star to different text labels: one points up to 'Neurodegeneration & Mental Dysfunction', one points up-left to 'Cancer', one points up-right to 'Frailty', one points right to 'Cataracts & Macular Degen-eration', one points down-right to 'Heart Disease & Stroke', one points down to 'Arthritis', one points down-left to 'Type II Diabetes', and one points left to 'Deaths & Complications After Surgery'.

Aging is KEY For GWAS

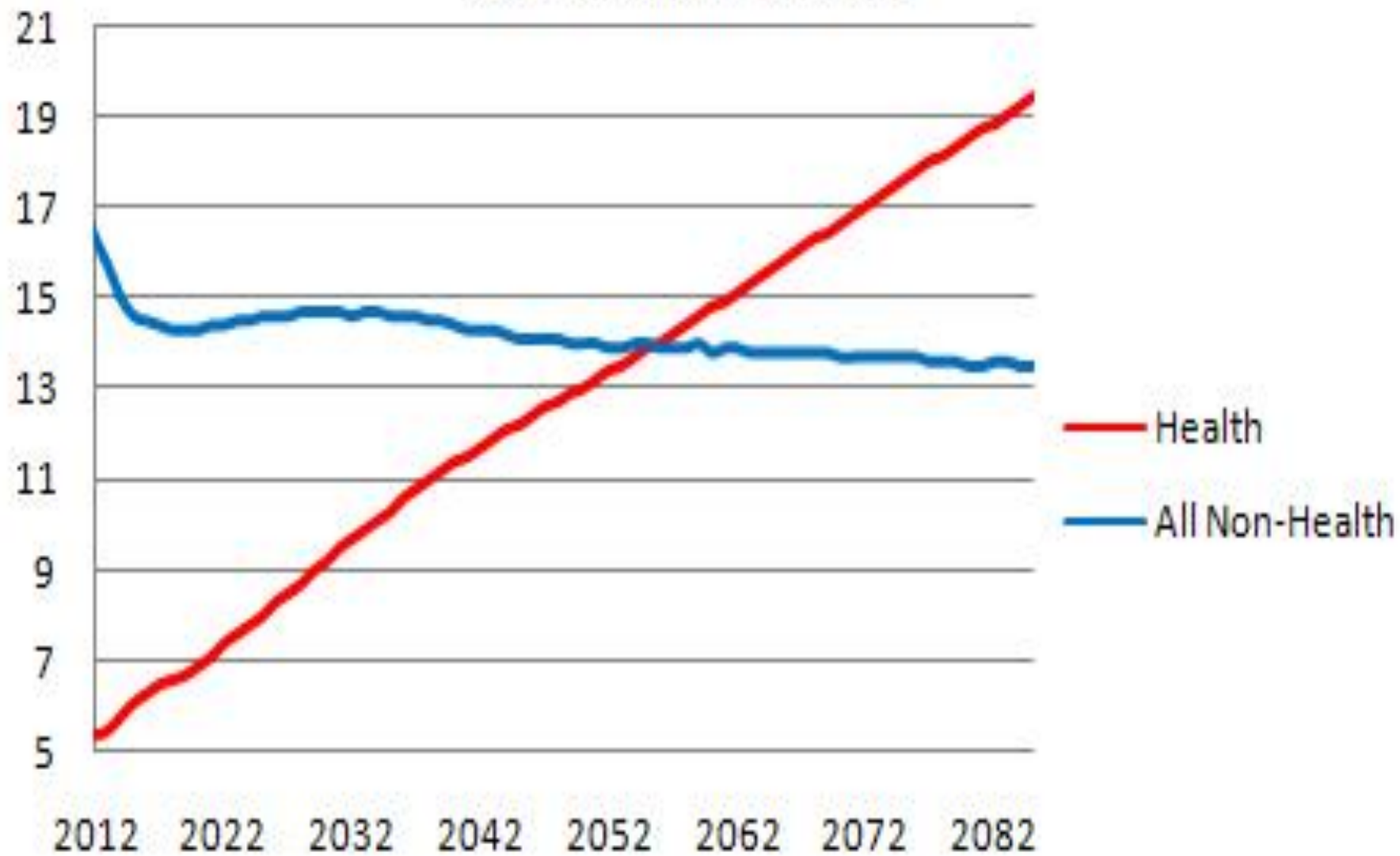
- From Horrendous LDL Cholesterol (260mg/dL) to Ideal (<70 or <30)
= 3 Fold Decrease in Risk of Heart Disease
- From Horrible BP (260/165) to ideal (115/75)
= 5 Fold Decrease in Risk of H/Vasc Disease
- From Chronologic Age of 65 & RealAge of 75 to Ideal RealAge (30 Yrs Younger)
= **27 Fold Decrease in Risk of All Diseases**
- **Aging Is The Greatest Risk & Is Very Modifiable**

Outline For GWAS

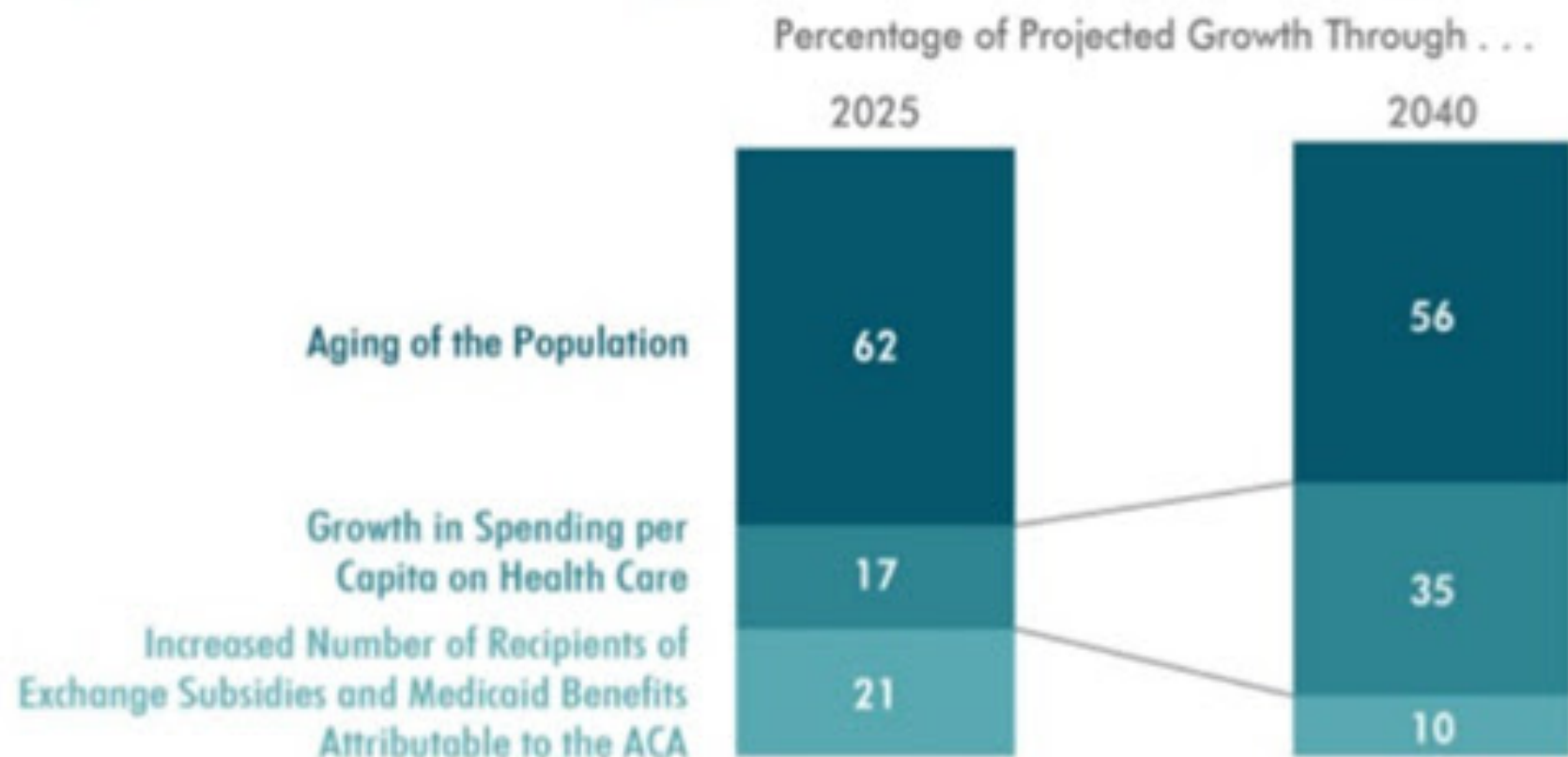
- **Why Health/Care Needs To Be Fixed If Social Disruption Is To Be Avoided & How CC Has Shown It Can Be Done**

Components of Federal Spending

(as percentage of GDP)



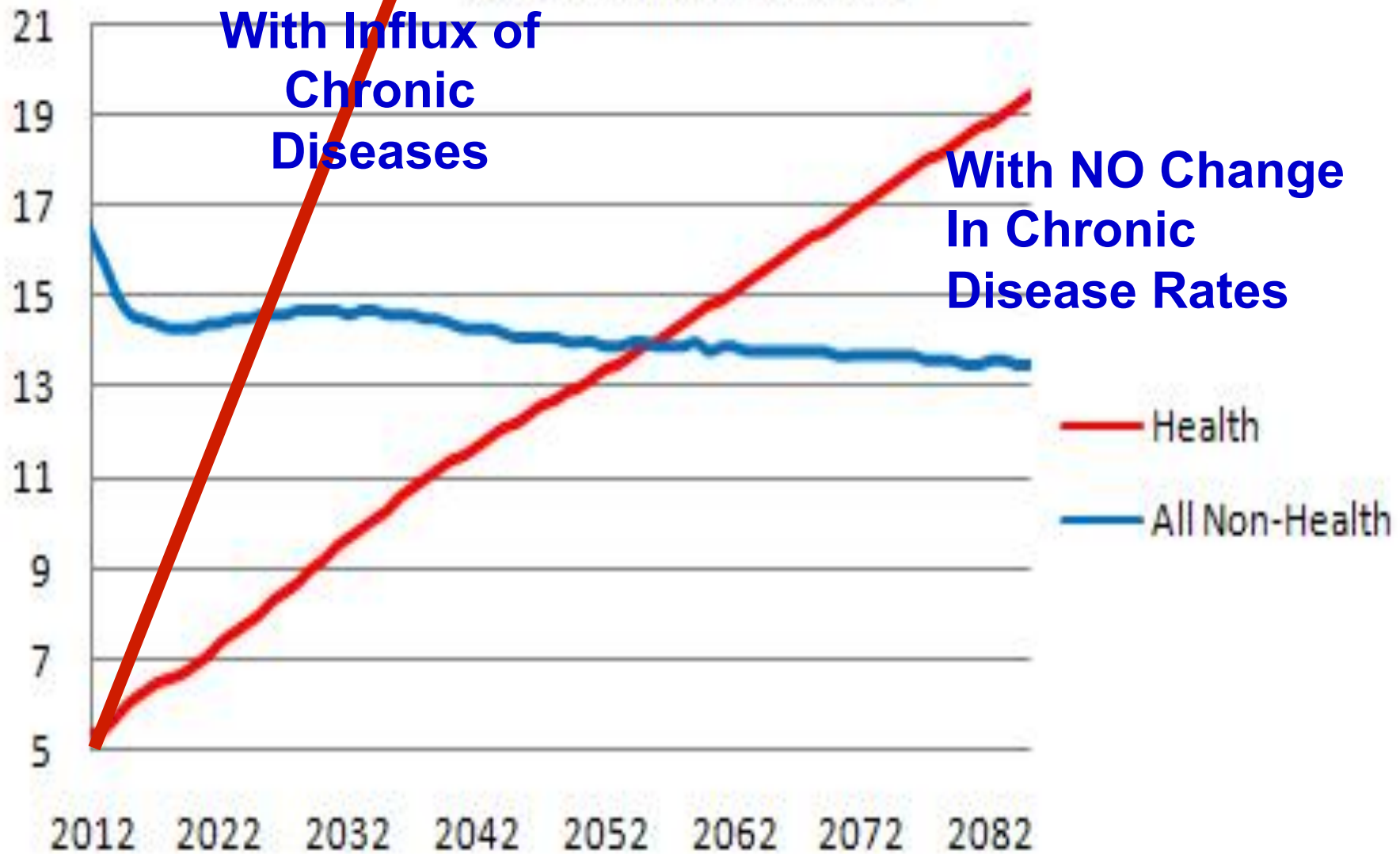
Explaining Projected Growth in Federal Spending for Major Health Care Programs and Social Security



The aging of the population will increase the share of the population receiving benefits and also affect the average age (and thus the average health care costs) of beneficiaries. Health care costs per beneficiary, adjusted for demographic changes, will grow faster than economic output per capita, CBO projects, as they have historically. Finally, enrollment in Medicaid under the Affordable Care Act and the number of people receiving subsidies for health insurance purchased through the exchanges are projected to continue to increase.

Components of Federal Spending

(as percentage of GDP)



Type 2 Diabetic Prevalence In USA

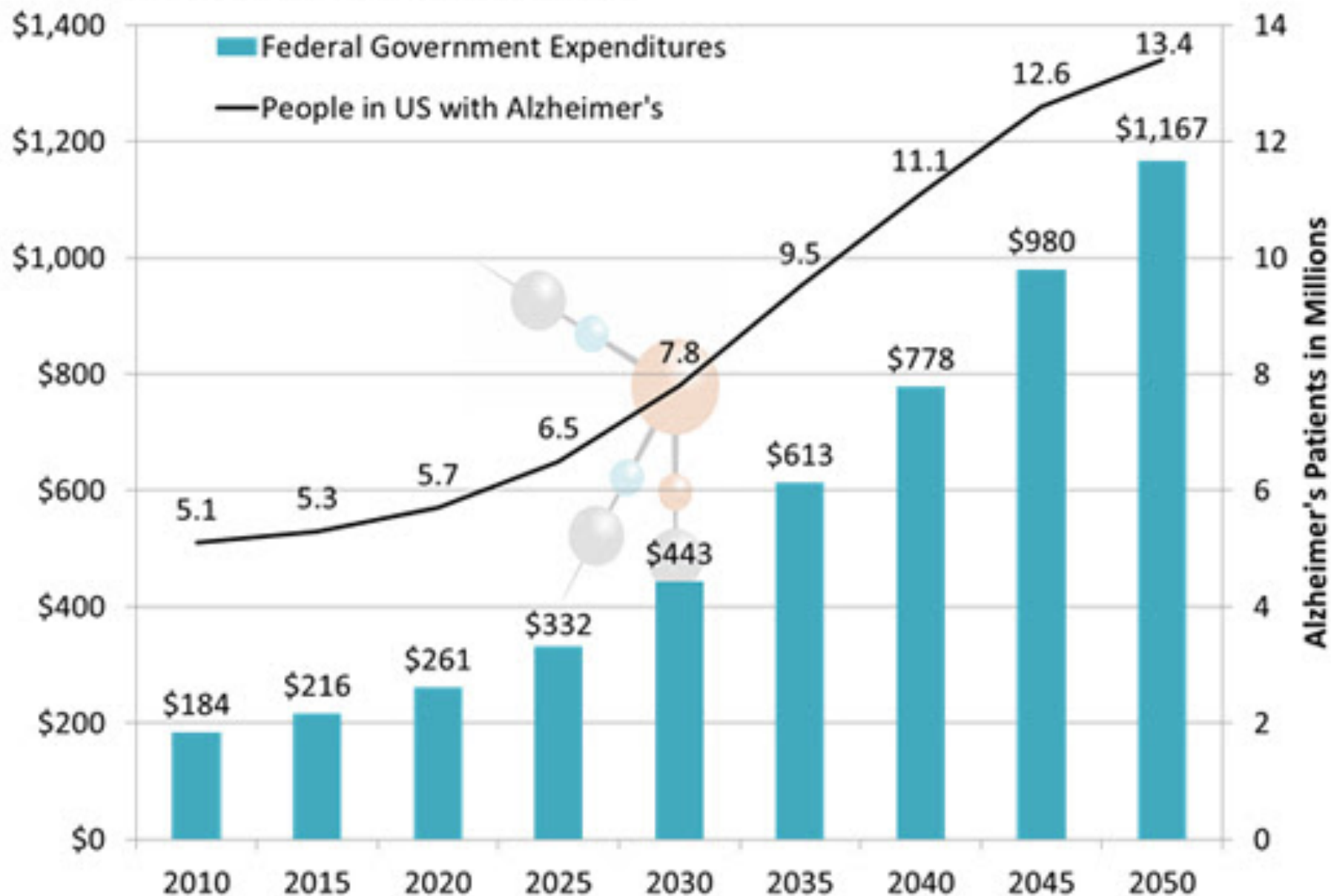
- 1974: **2.2** million of 211 million = 11/1000
- 1983: **4.6** million of 235 m = 24/1000
- 1994: **6.8** m of 260 m = 30/1000
- 2004: **15.0** m of 292 m = 55/1000
- 2014: **29.0** m of 320 m = 91/1000
- 2050: Predicted **120-180** m (CDC incr predictn for 2050 to **220** m on 9 15 15 = 500/1000

Total Hip & Knee Arthroplasties in USA

- 1974: **0.067** million of 211 million = 0.003/1000
- 1990: **0.327** million of 235 m = 0.13/1000
- 2006: **0.675** m of 292 m = 0.02/1000
- 2010: **1.05** m of 320 m = 0.03/1000
- 2050: Predicted **6.33** m (4.17 K & 1.86 H) = 0.2/1000

Alzheimer's Growth and Cost

Government Spending in Billions



Alzheimer's Patients in Millions

Why Is H/C in USA More Expensive: One Of Biggest Reasons -- As of Now We Treat More Chronic Disease

Type2Diabetic Prevalence In USA

- 2014: 29.0 m of 320 m = 91/1000 (16.9 million were treated & use 1.5% of GDP)

Type2Diabetes & Prediabetes in China

- Total in 2010 = 607.3 million people (20 fold more than in USA)
- 2010: Diabetics: Treated = 11.6 million with OK Glycemic control (0.11% of GDP—14 fold less than in USA)

Chronic Disease Management Causes 84% of all Costs & 67% of Costs are in under 65 Year Olds (2012 data)

- **Tobacco**
- **Food Choices & Portion Size**
- **Physical Inactivity**
- **Unmanaged Stress**

Obesity, Abdominal Obesity, Physical Activity, and Caloric Intake in US Adults: 1988 to 2010

Uri Ladabaum, MD
Published Online: May 1, 2014

Altmetric 218

DOI: <http://dx.doi.org/10.1016/j.amjmed.2014.04.008>

[Article Info](#)

[Abstract](#) [Full Text](#)

Abstract

Background

Obesity and abdominal obesity are associated with these risks. We examined trends from 1988 to 2010.

Calories Consumed Increased 2% Compounded Annually From 1983 To 2000 then down a little (250-350 More Calories A Day)

Physical Activity Decreased To Zero (ZERO!!) In 47.5% In 2010 From 17% In 1988!!!

Obesity, Abdominal Obesity, Physical Activity, and Caloric Intake in US Adults: 1988 to 2010

Uri La
Publis
 **Net Result: USA's Costs Increased From 11.7 to 17.6% of GDP (50%+ Increase) As**

DOI: [10.1016/j.amj.2014.06.008](#)

 Article

Ab

A

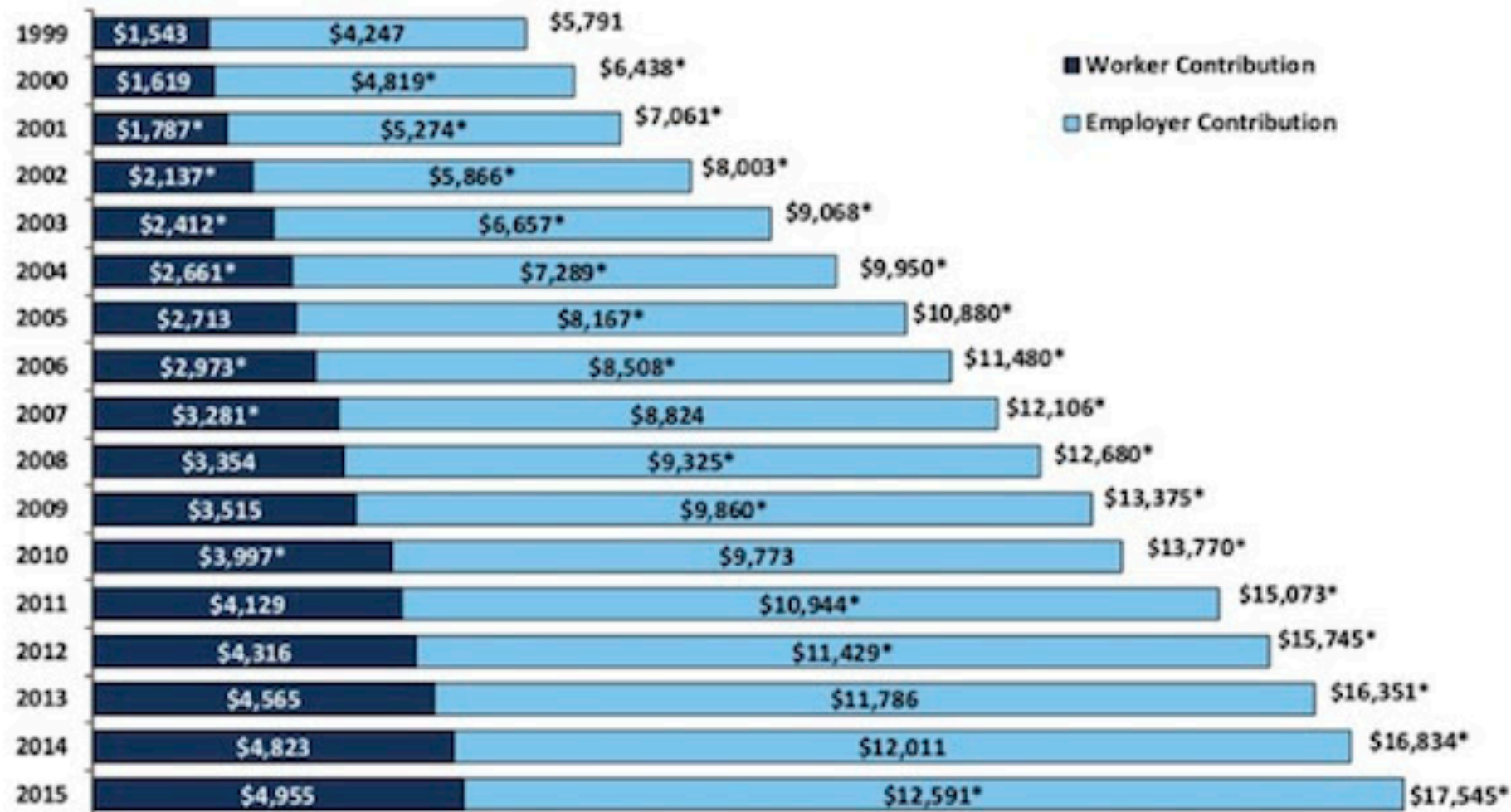
Ba

Obesity and abdominal obesity are associated independently with morbidity and mortality. Physical activity attenuates these risks. We examined trends in obesity, abdominal obesity, physical activity, and caloric intake in US adults from 1988 to 2010.

Care Cost w/9.5%/yr Inc At CC For Employees +

- 2008: \$305 pmpm
- 2009: \$334 projected num here & below
- 2010: \$366
- 2011: \$401
- 2012: \$439
- 2013: \$481
- 2014: \$526
- 2015: \$576
- 2016: \$631 An additional \$395 million

Average Annual Worker and Employer Contributions to Premiums and Total Premiums for Family Coverage, 1999-2015



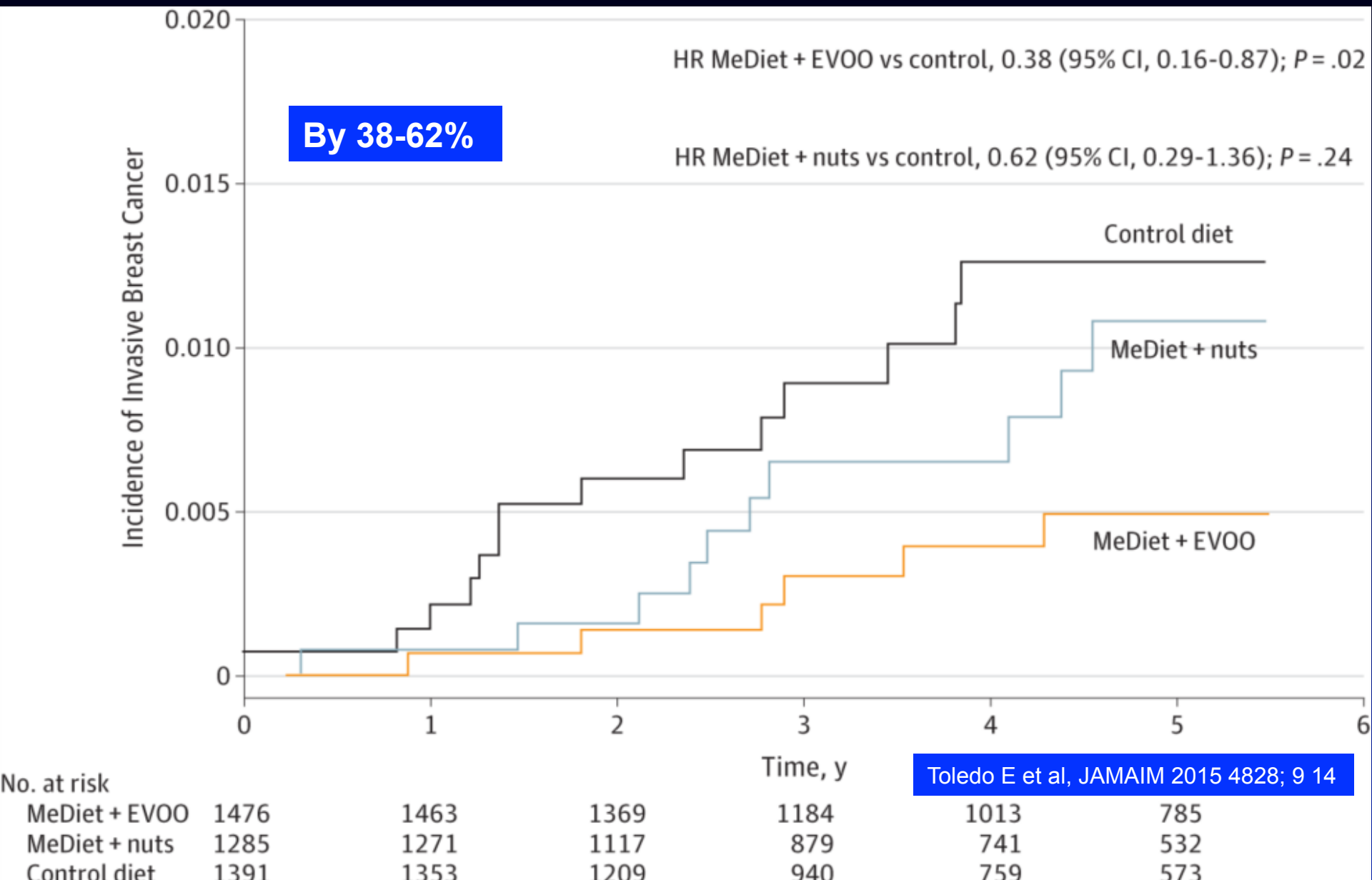
* Estimate is statistically different from estimate for the previous year shown ($p < .05$).

SOURCE: Kaiser/HRET Survey of Employer-Sponsored Health Benefits, 1999-2015.

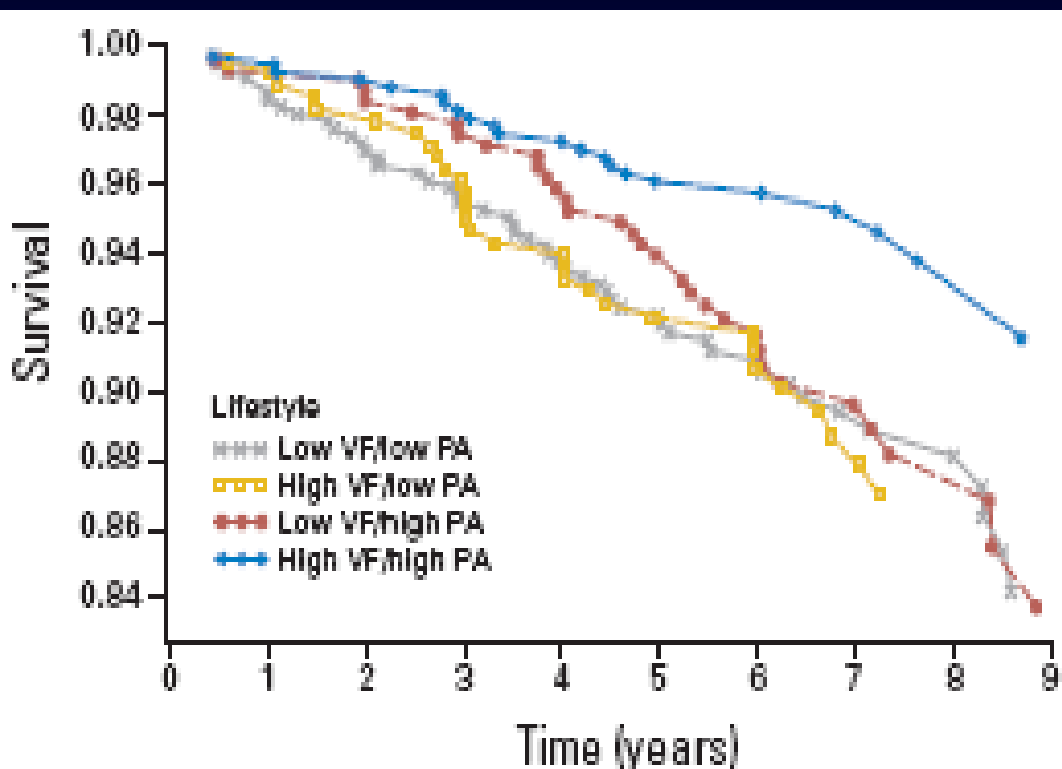
What Really Matters to Chronic Disease

- **If Do 5 Behaviors** Have Only 10-20 % of Risk of All Others For CV & Cancer --
- **Only 4% Did 5 Behaviors** (88+K Nurses Health Study, NEJM, 2000 & 2015)
- **Swedish Men: Same Result 1% did 5** (35+K EHPJ, 2014)

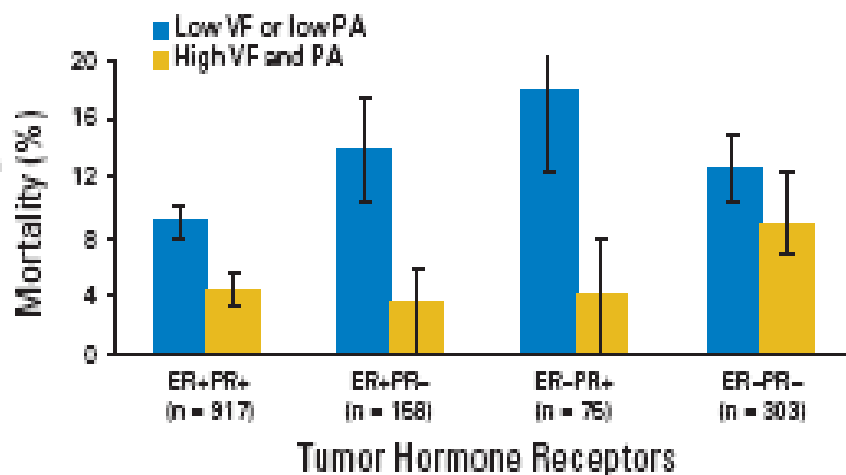
Med Diet (Walnuts + Olive Oil) Substantially Reduces Invasive Breast Cancer



More Vegetables, Fruits & Physical Activity = Improved Breast Cancer Patients' Survival



Women's Healthy Eating and Living (WHEL) Study

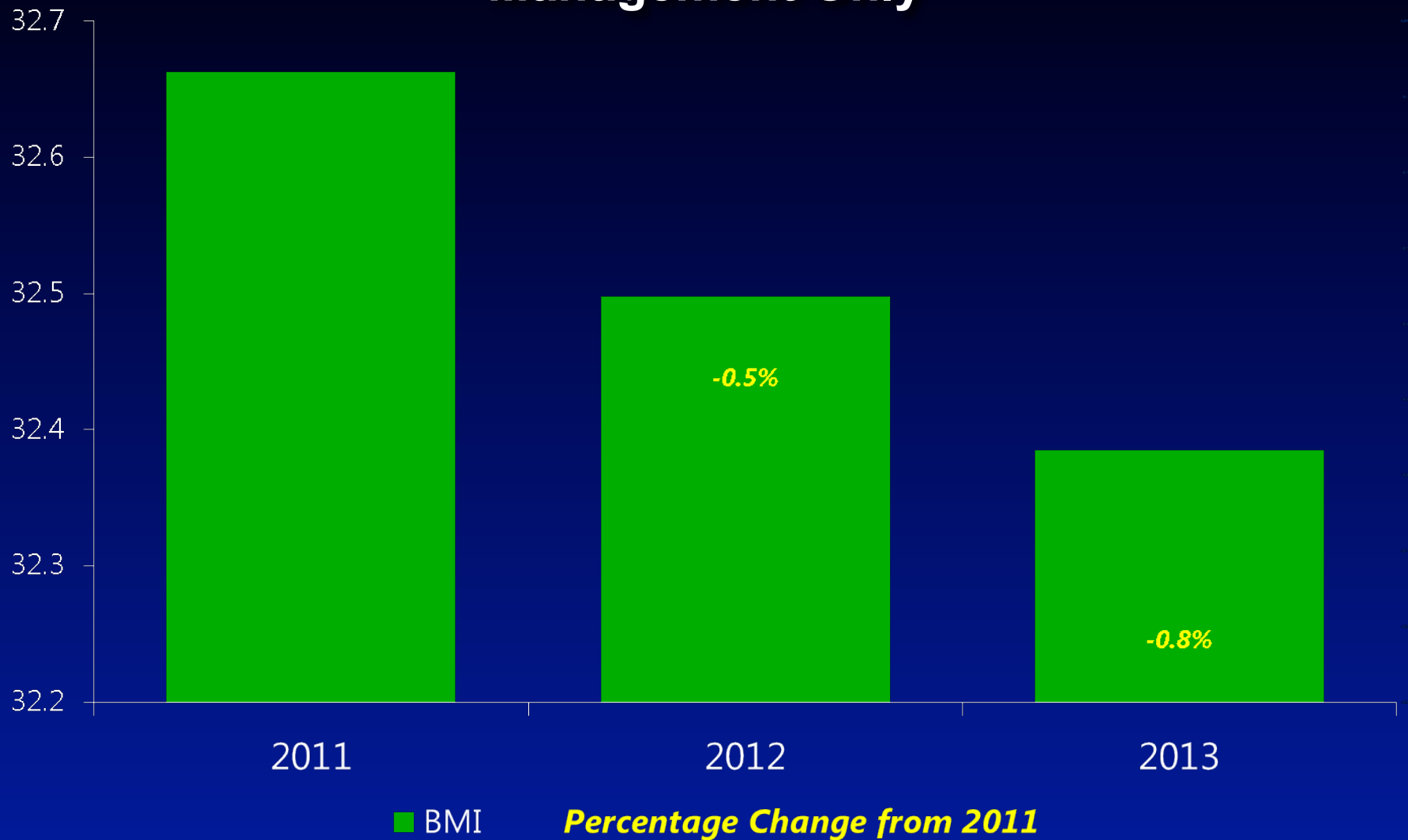


What Really Matters to Chronic Disease

- **If Do 5 Behaviors** Have Only 10-20 % of Risk of All Others For CV & Cancer -- **Only 4% Did 5 Behaviors** (88+K Nurses Health Study, NEJM, 2000 & 2015)
- **Swedish Men: Same Result 1% did 5** (35+K EHPJ, 2014)
- **In USA in 2010-16, Only 2.7%** Had Healthy Diet, Body Fat, 30 min Phys Activity 5 days a week & Didn't Smoke (4754 NHANES; MCP, 16)
- **How Do We Get Many More To Do 5 Healthy Behaviors ???? The Biggest & Most Important Question in Health Today.**

Reduction in Body Mass (BMI) by Year

Employee Health Plan – Employees in Weight Management Only

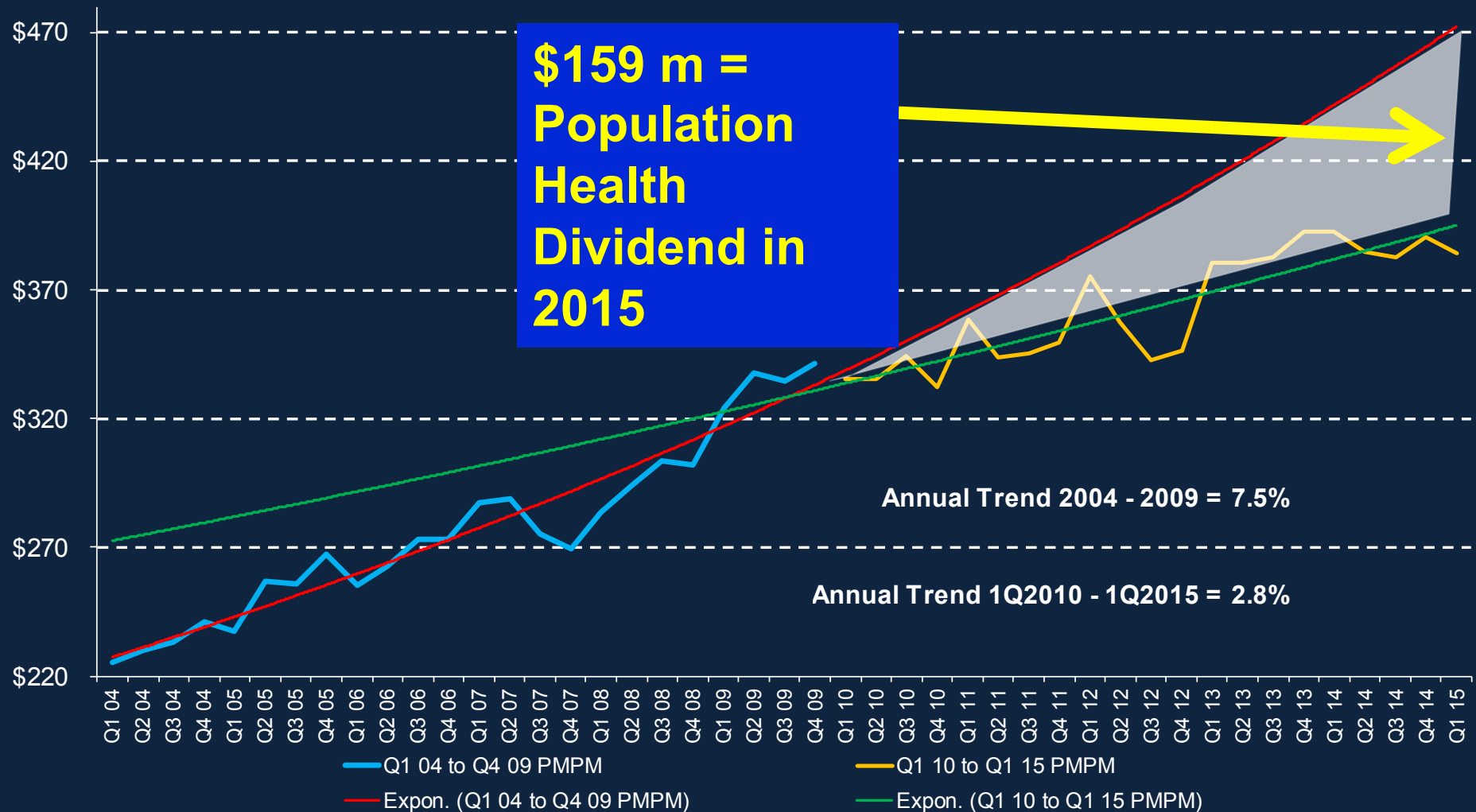


We Think Cleveland Clinic Helped It's Typical Employee Get About 5.3 Years Younger in Last 8 Years

For Example:

- **Smoking Rates Decreased 10+% from 15.4 to 5.3% = 1.2 yrs younger for Avg**
- **BMI down 0.5% per yr = 0.4 yrs younger**
- **Immuniz Rates from 51 to 90+% = 0.2 yrs younger**

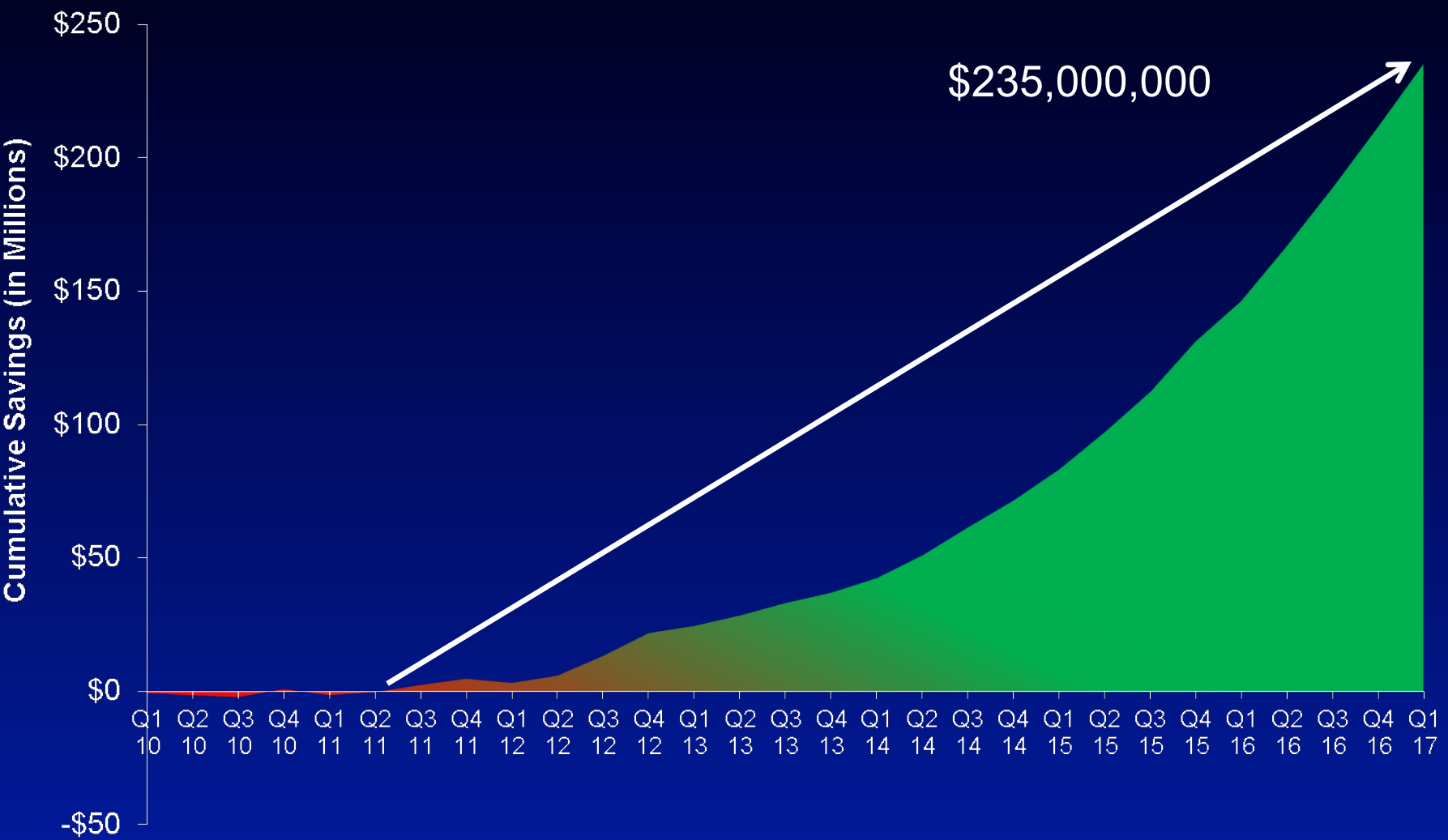
Trended EHP Paid PMPM by Quarter (Medical and Pharmacy Claims)



Care Cost Include Wellness & Admin w/ 9.5% / yr Inc At CC For Employees + = 101,000

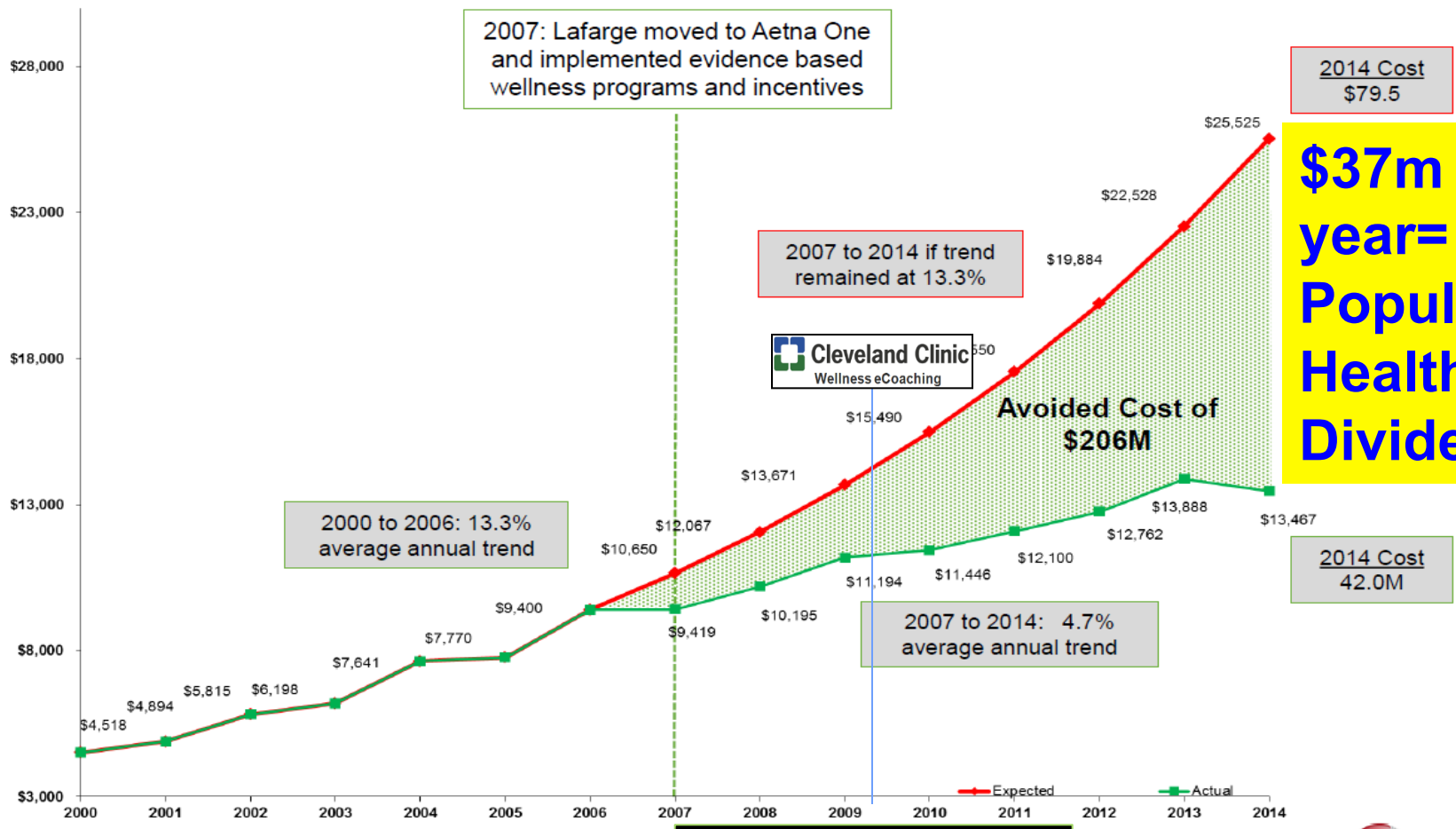
- **2008: \$305 pmpm**
- **2009: \$334 but became 328**
- **2010: \$366 but became 346**
- **2012: \$439 but became 368**
- **2013: \$481 but became 395**
- **2014: \$526 but became 397**
- **2015: \$576 but became 392**
- **2016 1st half 625 became 388**
- **Saving \$241 million/y (or \$156 m/y @ 6.8%)**

Estimated Cumulative Savings by “Bending the Trend” Since 2010



Source: EHP Financial Summary; claims paid through May, 2017

Lafarge Historical Per Capita Medical and Rx Cost for Active Employees and Pre-65 Retirees



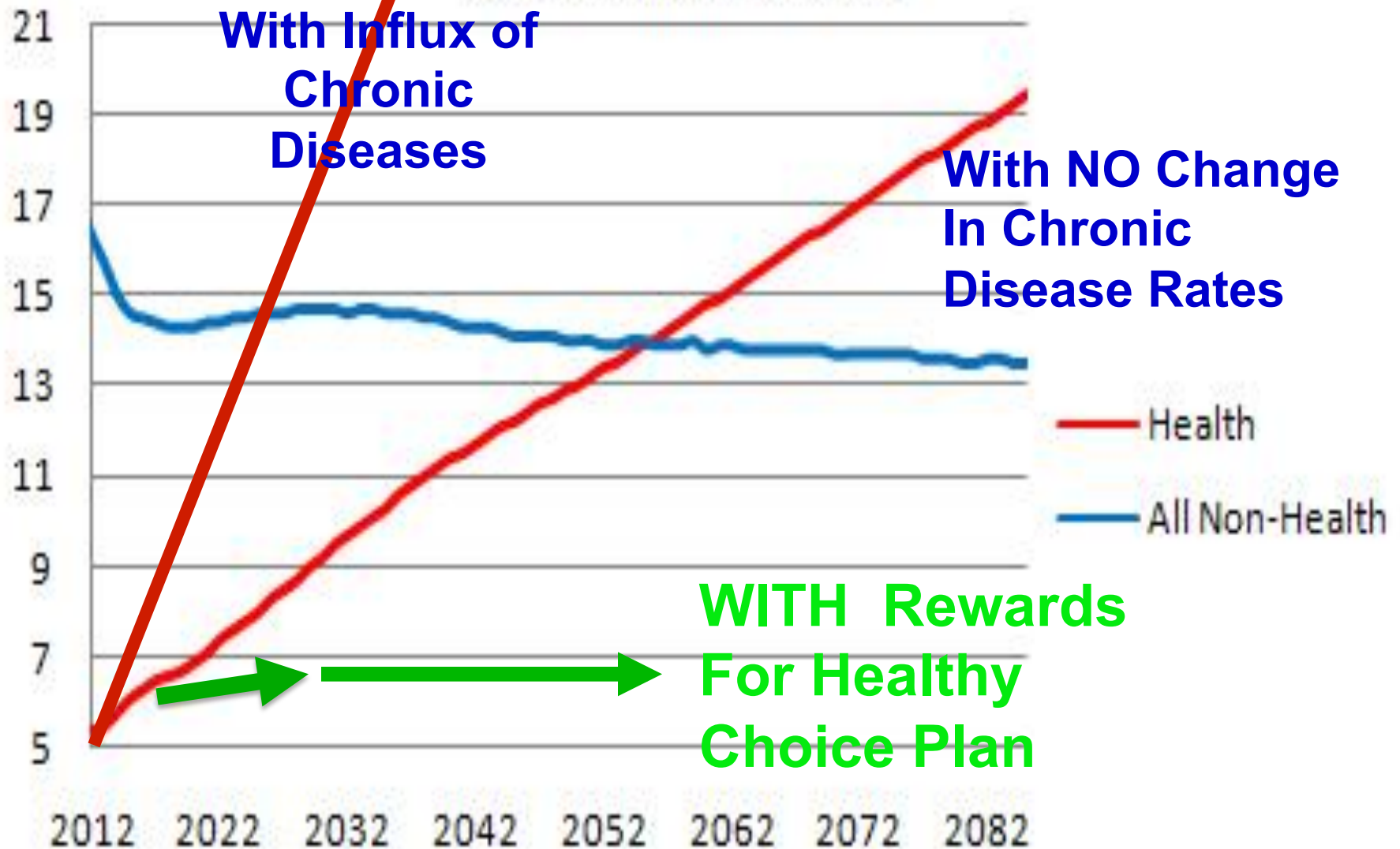
\$37m this year= Population Health Dividend

And Spread to The Many Communities of That Company



Components of Federal Spending

(as percentage of GDP)



Aging 2017

- **Why Are Medical Costs Per Employee Rising, But Not For Cleveland Clinic or Lafarge-Holcim & a Few Other Cos**
- **You Can Slow Your Aging & Become AgeProof**
- **The Largest Cause of Aging is Stress—The Greatest Way of Reducing Usual Aging Is Managing Stress**

Make Your *RealAge* Younger

	Years Younger
✓ BP Control	up to 25 years
✓ Cigarette Cessation	8- 12 years
✓ Stress Control	up to 32 years
✓ Patrol Own Health	8.2 years
✓ Quality/Quantity of Sex	up to 16 years
✓ Nutritional Choices	up to 27 years



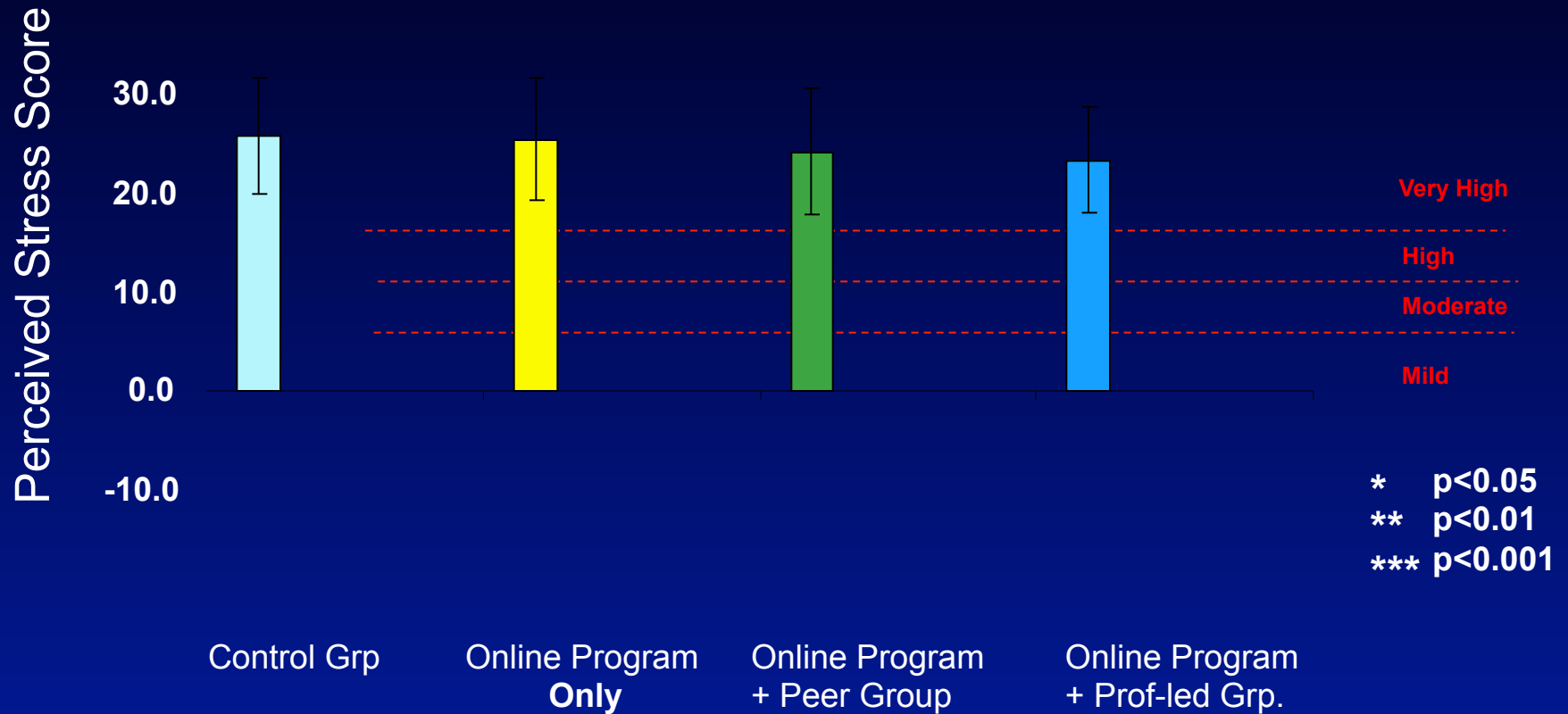
**Calendar Age 77; RealAge 77;
Life Expectancy 80**



**With Proper Repair & Maintenance
RealAge 53; Life Expectancy 80**

Stress Free Now

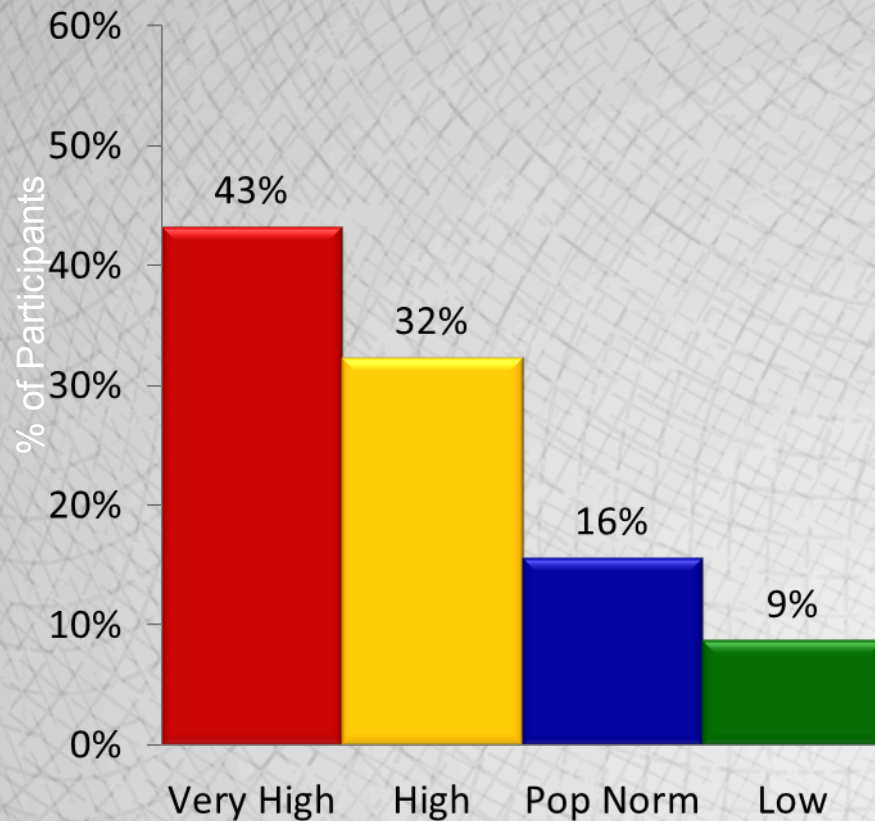
0-16 wks



Perceived Stress Scale

Measure of how unpredictable, uncontrollable, and overloaded respondents find their lives

Mean Score: 19.4



Sample Items

How often have you felt difficulties were piling up so high that you could not overcome them?

How often have you felt that you were unable to control the important things in your life?

How often have you found that you could not cope with all the things that you had to do?

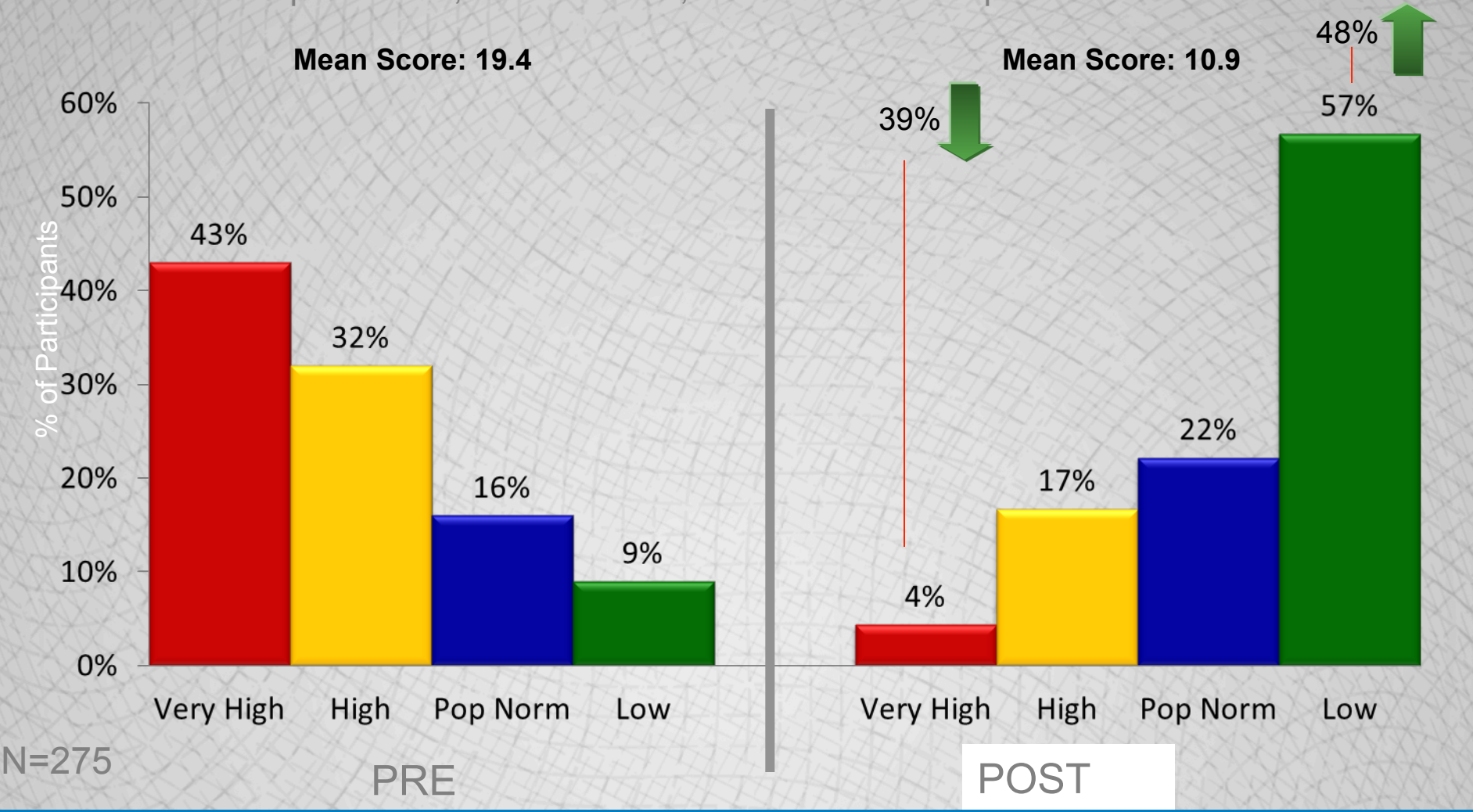
N=275

PRE

75% high to very high perceived stress

Perceived Stress Scale

Measure of how unpredictable, uncontrollable, and overloaded respondents find their lives

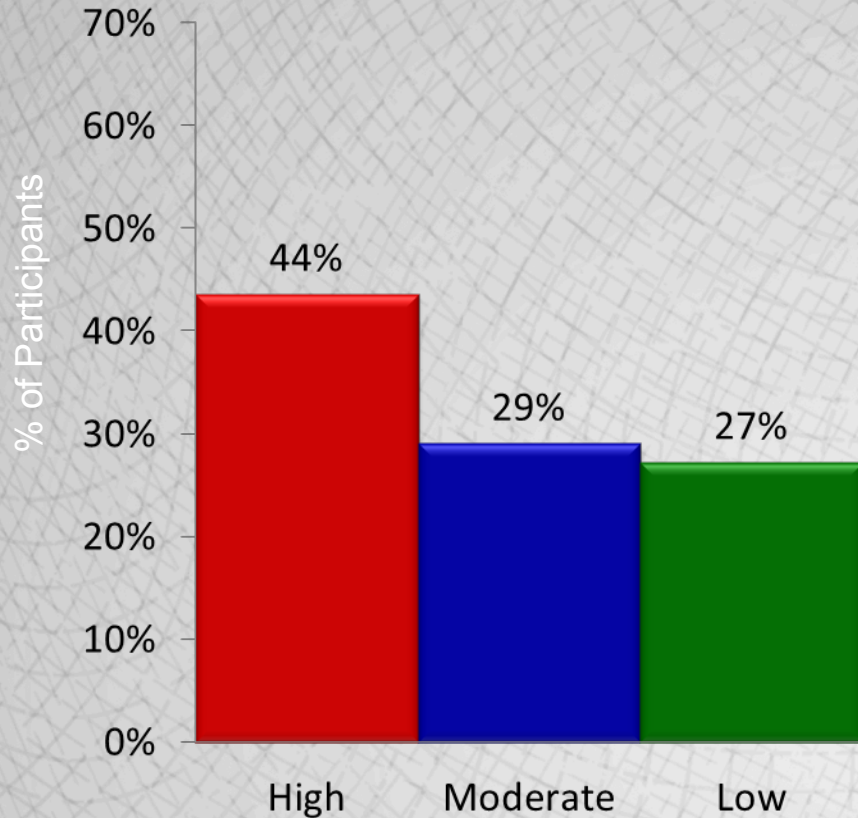


44% decrease in perceived stress

Emotional Exhaustion (Maslach Burnout Inventory)

Depletion of emotional energy, distinct from physical exhaustion or mental fatigue. Emotional exhaustion is a clear signal of distress in emotionally demanding work.

Mean Score: 24.6



Sample Items

I can effectively solve the problems that arise in my work.

I feel used up at the end of the workday.

I feel emotionally drained from my work.

N=275

PRE

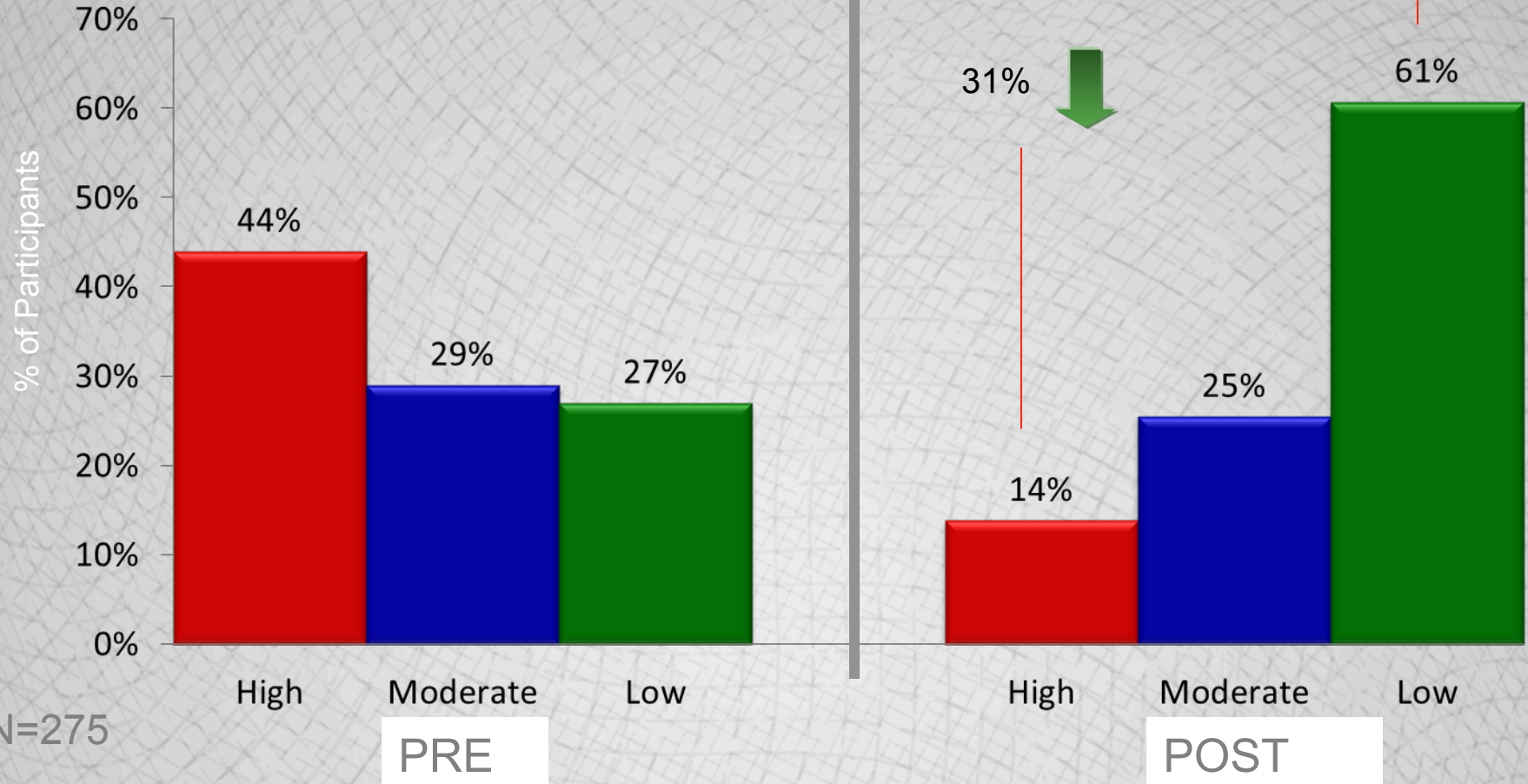
44% report high burnout

Emotional Exhaustion (Maslach Burnout Inventory)

Depletion of emotional energy, distinct from physical exhaustion or mental fatigue. Emotional exhaustion is a clear signal of distress in emotionally demanding work.

Mean Score: 24.6

Mean Score: 15.3



38% decrease in burnout

Outline For GWAS

- **Why Health/Care Needs To Be Fixed If Social Disruption Is To Be Avoided & How CC Has Shown It Can Be Done**
- **9 or 10 Steps You Can Do To Keep YOU & Your Brain Healthy/Younger**

Preventing Brain Dysfunction:

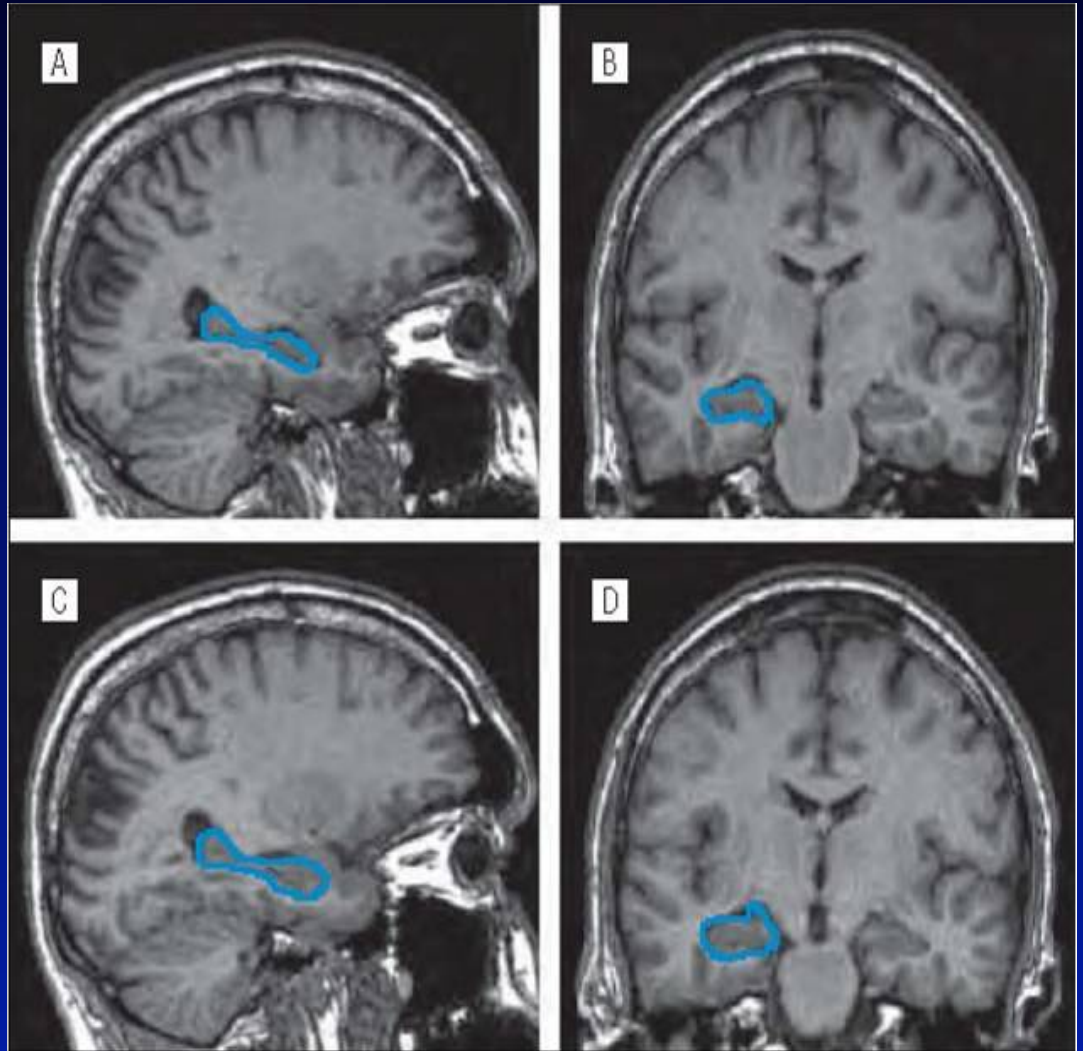
- 1. Manage Stress**

- 2. Do 4 Components of Phys Activity**

Step 3: Move Your Body

Best documented for younger memory

**Increase in
Size of
Hippocampus
with 3
Months of
Aerobic
Exercise**



Do Minimum Physical Activity For Maximum Health Benefit

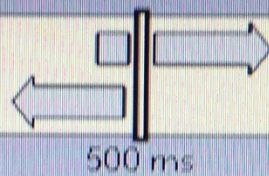
- **General = 100 min a day of movement
10,000 Steps A Day**
- **Resistance Exercise = 30 min a week**
- **Cardio = 21 min Three X a Week at 80% of
Max HR...With 2 mins At End at Maximum
Intensity (If MD Allows)**
- **40 Jumps a Day**

Preventing Brain Dysfunction:

- 1. Manage Stress**
- 2. Do 4 Components of Phys Activity**
- 3. Do “Speed Of Processing Games”**

Want to try out our new training selection features?

30



See objects fast



S of P Games PREVENTED 48% OF DEMENTIA:

- Multisite, randomized controlled trial: 3 cognitive training programs to 2,832; average age 73.6 years
- 1. strategy-based memory or
- 2. reasoning training;
- 3 computerized, process-based speed of processing training, or no-contact controls.
- **Dementia incidence after 10 yrs in controls was 14%.** & the same in 2 of test groups; but Dementia incidence was 12.1% among those completing 10 or fewer sessions of speed of process training **& 8.2% if completed more than 10 hrs of speed of processing training**



**Calendar Age 77; RealAge 77;
Life Expectancy 80**



With Proper Repair & Maintenance

RealAge 53; Life Expectancy 80



1970-'s Last 70,000 miles

RealAge 53; Life Expectancy 80



2017 Lasts 200,000 miles

RealAge 53; Life Expectancy 120

Preventing Brain Dysfunction:

- 1. Manage Stress**
- 2. Do 4 Components of Phys Activity**
- 3. Do “Speed Of Processing Games”**
- 4. Eat Salmon/Ocean Trout or 900 mg DHA:**
- 5. Avoid SSSSnake oil Foods**
- 6. Give Sleep Respect**
- 7. Avoid Toxins**
- 8. Drink Coffee-No Additives Please**
- 9. Take the Fab 8+**

The Fab 8+ Or Are They?:

1. $\frac{1}{2}$ Multi 2x a day

1/2 Multi Twice a day

- **Insurance Policy Against Imperfect Diet**
- **Of 26 million people who took detailed RA nutrition analysis test, it was possible to get all nutrients needed from diet:**
96,000 of 26 million (about 1/3rd of 1%)
did so

Prenatal Multivitamins + DHA

- **Decrease congenital birth defects (major) by 80%**
- **Decrease childhood cancers by 65%+**
- **Decrease Autism & Autistic spectrum disorders by 40%+ (if taken for 3 months prior to conception)**
- **Improve IQ outcomes**

MultiVitamins & Cancer in Health Professionals

- 14,461 men—avg age 64.3
- No Change in CV risks
- 12% reduction in non-prostate cancers in all men
- 18% reduction in non-prostate cancers in men over age 70
- 27% reduction in total cancers in men with prior cancers

WilliamsPT & PD Thmpson
Atheroscler Thromb Vasc Biol
2013;33: 1085-91

MultiVitamins & Cardiovascular Disease in Health Professionals

- 18,530 men—avg age 52.8 (14,700) vs 52.2 (3790)
- After 10 in RCT and after 12.2 in Prospective Yrs, no signif CV benefit or risk, save 39% dec in fatal MI's in RCT
- **After 20 Yrs, a 43% reduction in heart attacks or strokes (lifestyle, age, diet adj)**
- **55% reduced need of CV revascularization**
- **27% reduction in CV deaths**

Rautianen S et al (Sesso HD) J Nutrit
2016; 146:1235-40

Sesso HD et al JAMA 2012; 308:1751-60

The Fab 8+:

- 1. ½ Multi 2x a day**
- 2. Vit D2/3 to level of 35-80**
- 3. Calcium Citrate with Mg++**
- 4. DHA: 900 mg a day**
- 9. Aspirin 2 babies with half a glass of warm water before & after**
- 10. A statin –atorvastatin or rosuva-**
- 7. CoQ10 200mg a day**
- 8. Probiotic**
- 9. Consider Omega-7 420mg a day**

Preventing Brain Dysfunction:

- 1. Manage Stress**
- 2. Do 4 Components of Phys Activity**
- 3. Do “Speed Of Processing Games”**
- 4. Eat Salmon/Ocean Trout or 900 mg DHA:**
- 5. Avoid SSSSnake oil Foods**
- 6. Give Sleep Respect**
- 7. Avoid Toxins**
- 8. Drink Coffee-No Additives Please**
- 11. Take the Fab 8+**
- 12. Enjoy An Infrared Sauna for 20 min 4 Times Each Week**

10. Enjoy An Infrared SAUNA For 20 Minutes 4 TIMES Each Week

Not-sweating In An Infrared Sauna (Much Cooler Than A Radiant Heat Sauna) For 20 Minutes 4 Times/Week

- Reduces The Chance You'll Have Sudden Death By More Than 50%**
- Reduces Your Risk Of Dementia And Stroke By More Than 60%.**

Get A Two Person Version For Your Home & Help Your Spouse Enjoy A Younger Heart &

Outline For GWAS

- **Why Health/Care Needs To Be Fixed If Social Disruption Is To Be Avoided & How CC Has Shown It Can Be Done**
- **9 Steps You Can Do To Keep YOU & Your Brain Healthy/Younger**
- **How To Plan for The Next Disruptor: A Lot More Healthy Longevity Or Ability to Easily Make Your RealAge A Lot Lot Younger**

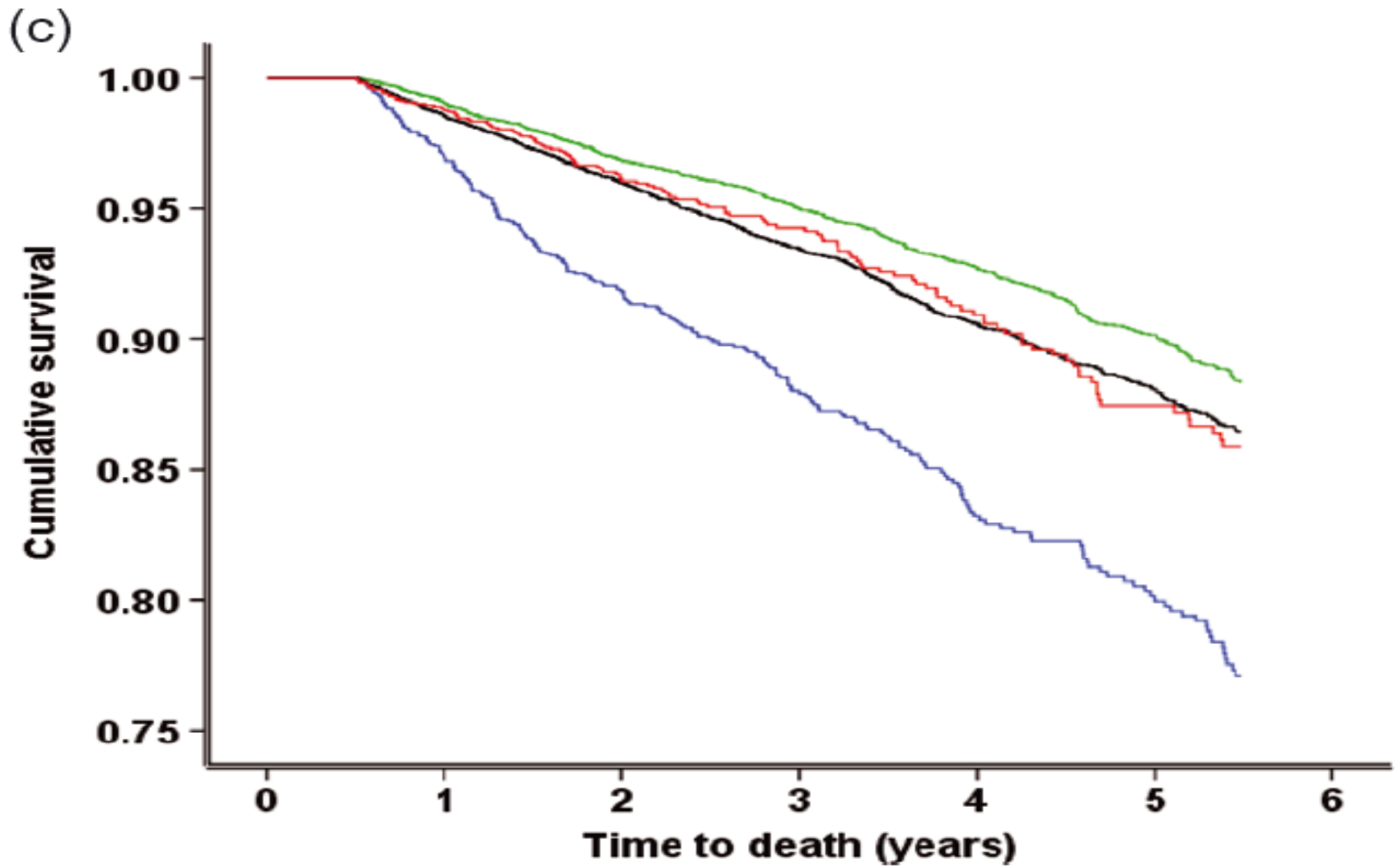
The Holy Grail Of Aging Is Repair

- **14 Areas of “Hot” Research Into Why You Age**
- **Some, Like Mitochondrial Errors & Wear & Tear may Be Able to Be Reduced**
- **But The Key Is Having A Great Repair/ Replacement System: Pluripotent Stem Cells**
- **Example of Sunburn/ Heartburn**
- **Example of Heart Attack & Stroke**

5 Day a Month Modified Calorie Restriction May Rejuvenate Your Pluripotent Stem Cells

- **Calorie Restriction in 21/23 Species Extends Median & Max Life Span**
- **5 days a Month Seems To Be Almost As Good, Maybe Better in 2 Species (Longo et al)**
- **1000 calories 1st day, Followed By Four 750 calorie days; Then Medit Diet**
- **Reduced Biomarkers of Aging, Inflammation & Lengthened Telomeres on Stem Cells**

Metformin - A Retrospective Study

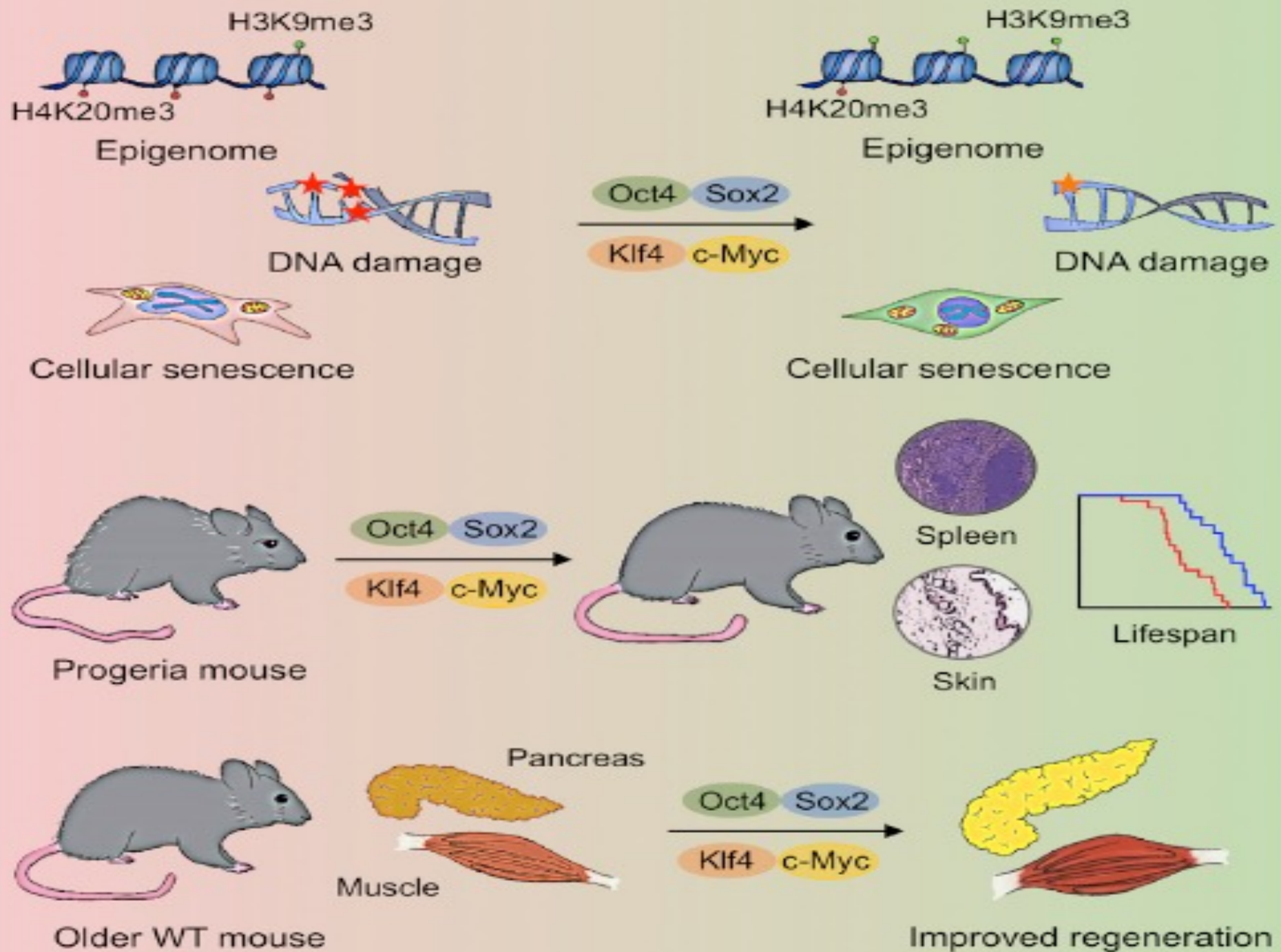


Metformin monotherapy Sulphonylurea monotherapy

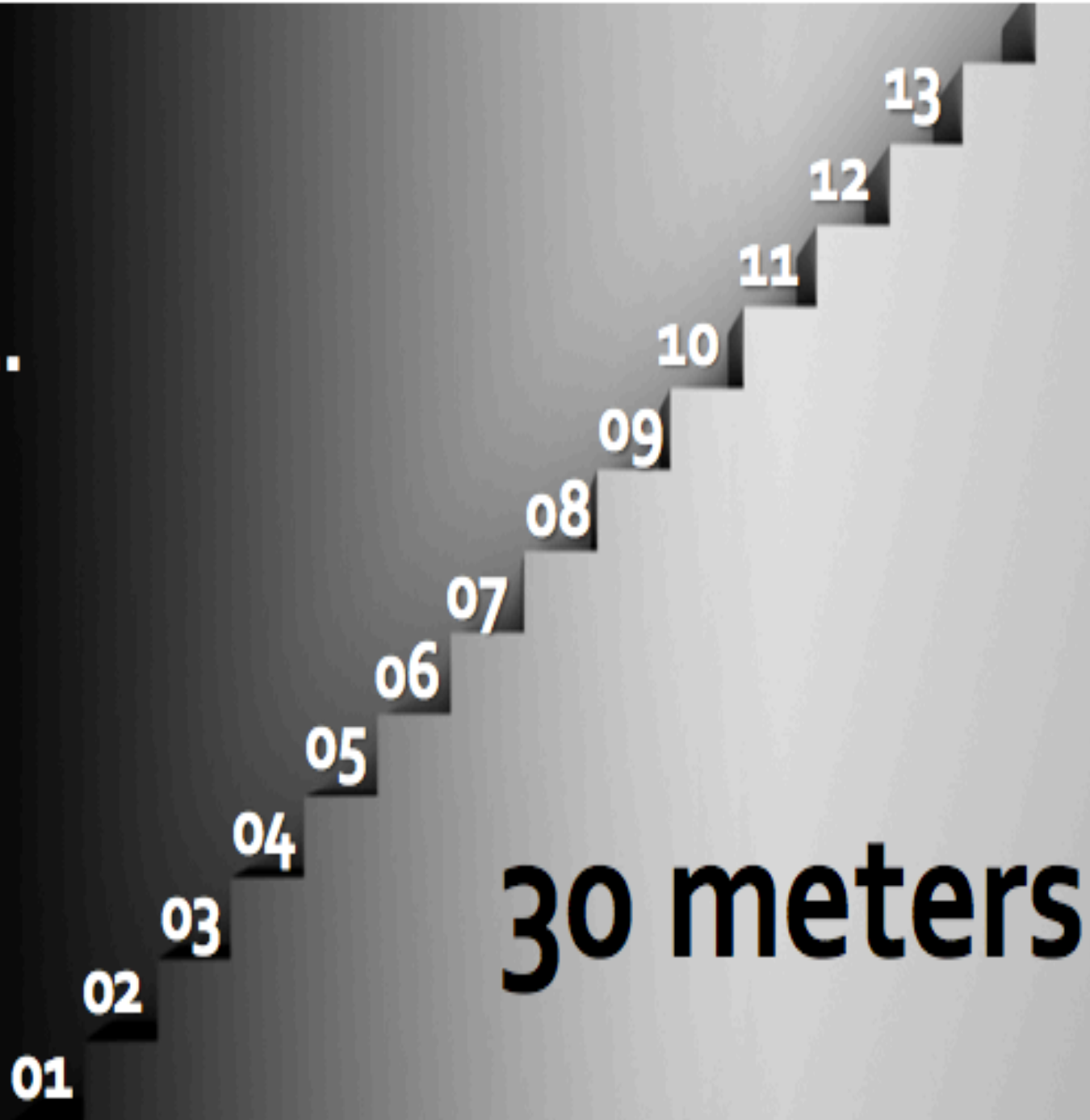
Controls (matched with metformin) Controls (matched with sulphonylurea)

When Your RealAge Approaches Life Expectancy You Lack Energy= Frailty

- **Your NAD+ = Much Lower, As Used Up By Chronic Inflammation & Acute Inflammation**
- **NAD+ Key For SIRT's (Sweet-16) Effects & For Energy Prod in Your Mitochondria**
- **Maybe You Can Rejuvenate By Giving SIRT stimulant & NADr**
- **Animal Studies & DMD Pts = Big Benefits=10+ yrs Younger Real Age**
- **Human Studies Show Dose & Safety**
- **Huge % of Aging Researches Taking**
- **Human Outcome Studies Lacking**



Take 30
LINEAR
paces...



Take 30

EXPONENTIAL

steps...

26X
around
the Earth!

01 02 04 08 16 32 64 128 256

... **1,073,741,824 meters**



Life Expectancy At Birth & At Age 65

- 1900 = 47 & 1 yrs About 1.5 yrs/10 yrs since 1840
- 2000 = 77 & 17.6 yrs About 1.5 yrs/10 yrs
- 2016 = 80 & 20.2 yrs About 2 yrs/10 yrs

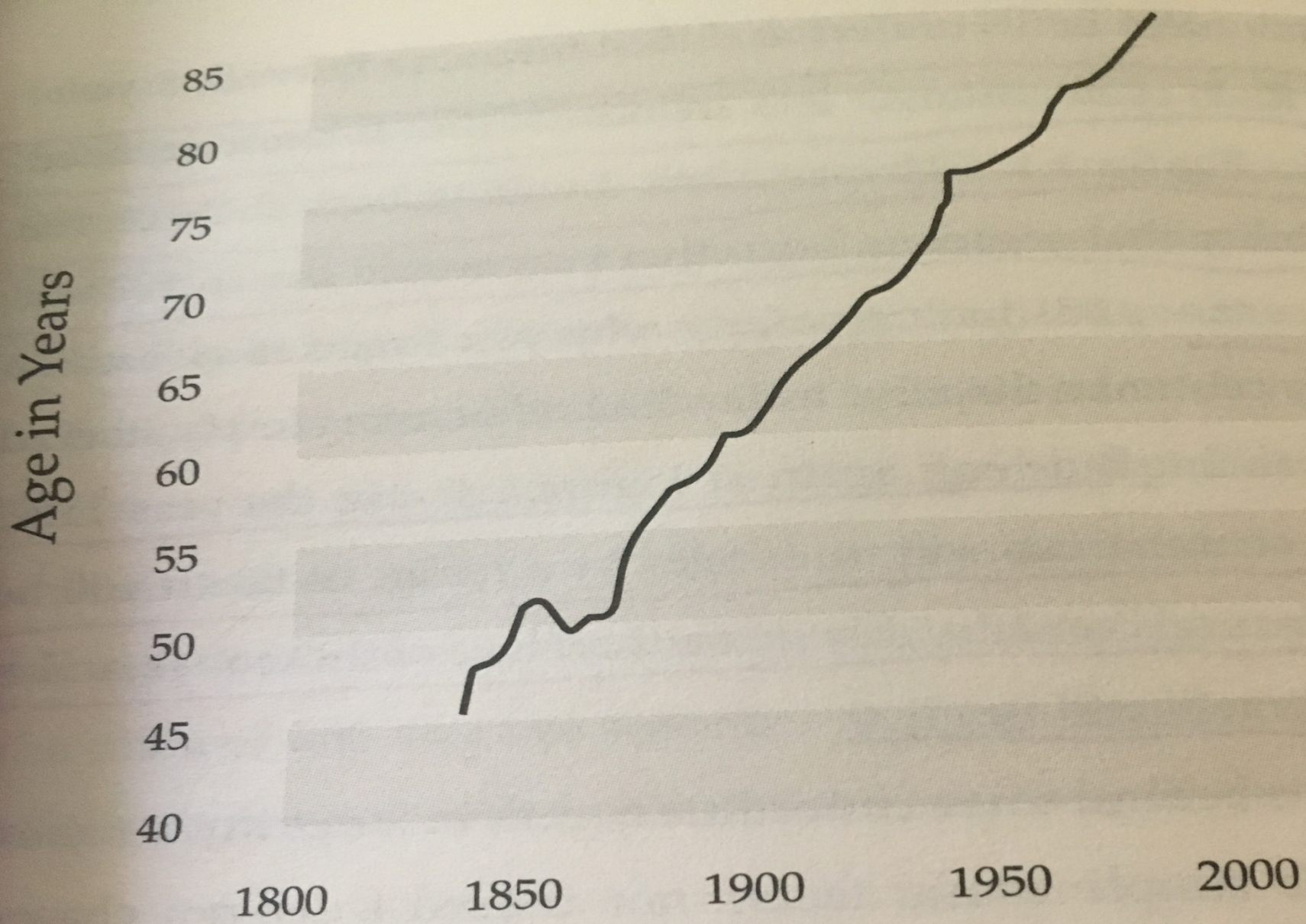


FIGURE 1.2 *Best Practice Life Expectancy.*

Source: Calculated using data from Human Mortality Database, U

Life Expectancy At Birth & At Age 65

- 1900 = 47 & 1 yrs
- 2000 = 77 & 17.6 yrs About 1.5 yrs/10 yrs
- 2016 = 80 & 20.2 yrs About 2 yrs/10 yrs
- Conservative Prediction
2030 = 84 & 23 yrs About 2 yrs/10 yrs
- Best MFR Prediction
2030 = 120 & 45 yrs About 1.5yrs/ 1 yr

We & YOU Have Entered Age Of Exponential Gains
in Longevity After Exponential \$ in Aging Research



**Calendar Age 77; RealAge 77;
Life Expectancy 80**



With Proper Repair & Maintenance

RealAge 53; Life Expectancy 80



1970-'s Last 70,000 miles

RealAge 53; Life Expectancy 80



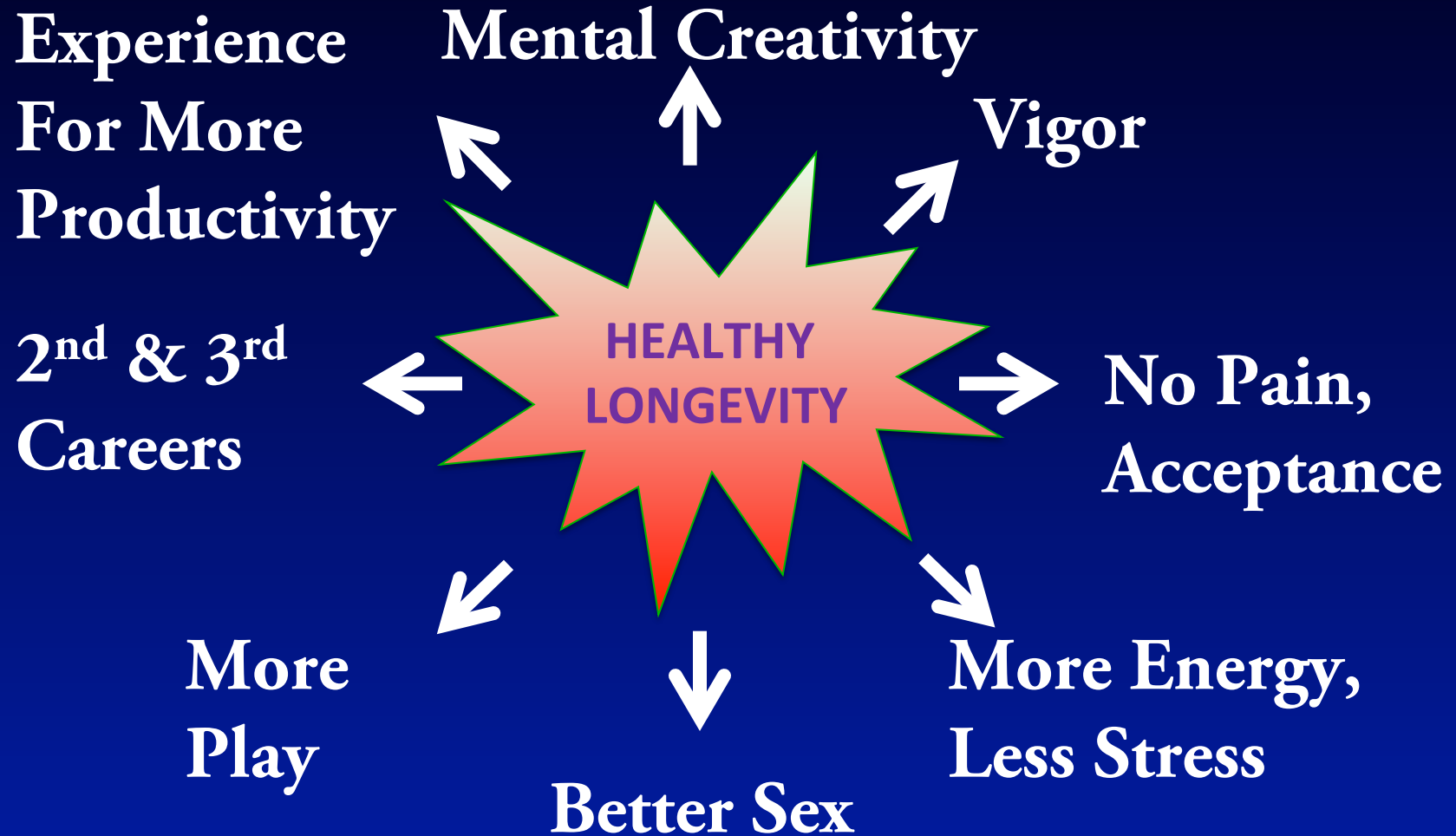
2017 Lasts 200,000 miles

RealAge 53; Life Expectancy 120

The Cleveland Clinic Personalized Approach to Health, Well-Being & Longevity Revolution: The Premier Program- PEP

- **Whatever It Takes To Keep
You Healthy & Younger No
Matter What**

The Next Disruptor: A Lot More Healthy Longevity Or Ability to Easily Make Your RealAge A Lot Lot Younger





**Calendar Age 77; RealAge 77;
Life Expectancy 80**



With Proper Repair & Maintenance

RealAge 53; Life Expectancy 80



1970-'s Last 70,000 miles

RealAge 53; Life Expectancy 80



2017 Lasts 200,000 miles

RealAge 53; Life Expectancy 120



Cleveland Clinic

Every Life Deserves World Class Care



GLOBAL WELLNESS SUMMIT 2017

globalwellnesssummit.com
