

Exercise Is Medicine

Why You Need to Take It Daily



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Chairman
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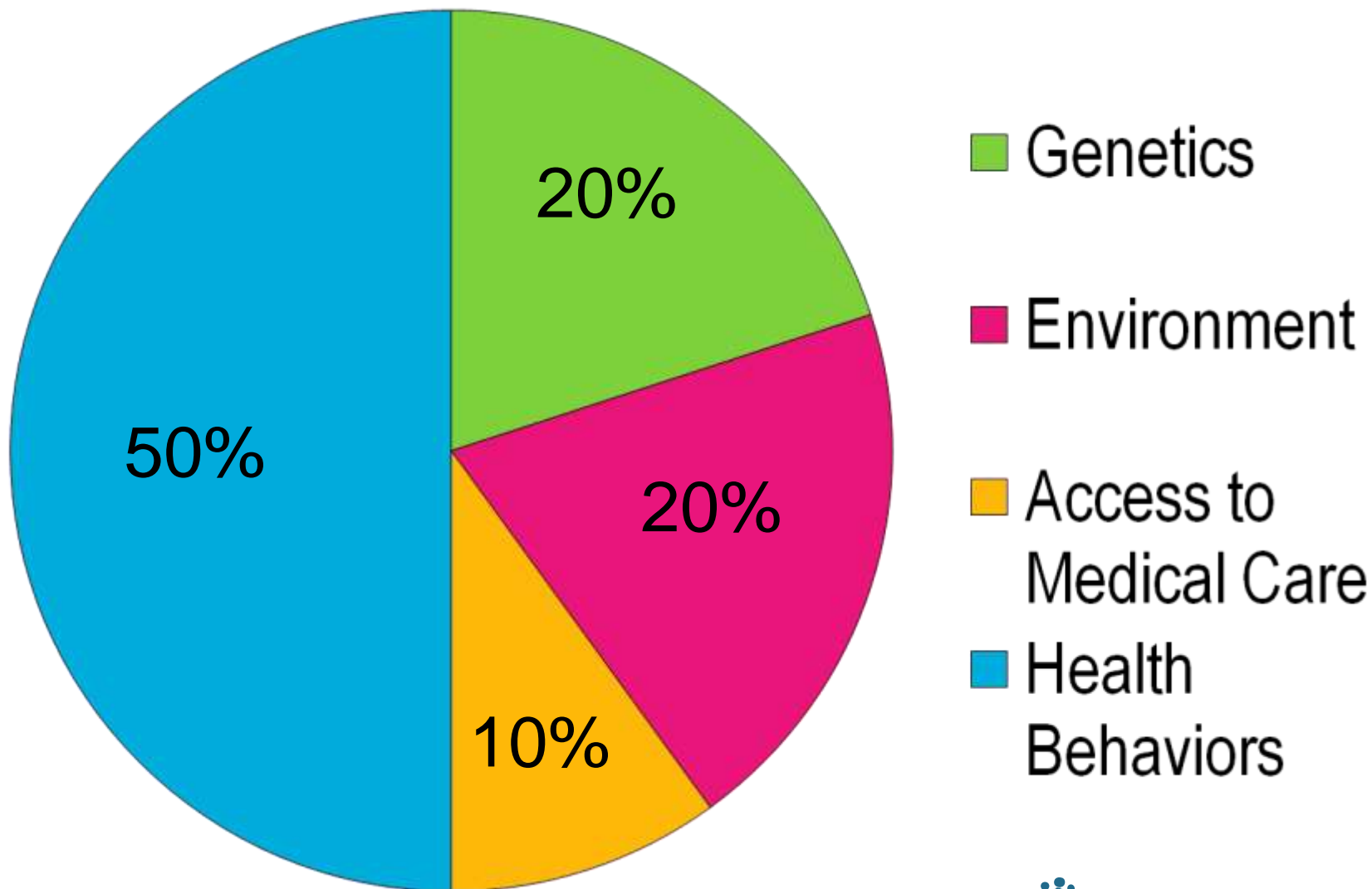
Clinical Professor
Family Medicine
UC Riverside
School of Medicine

Every Body **WALK!**
The Campaign to Get America Walking

Exercise
is Medicine™

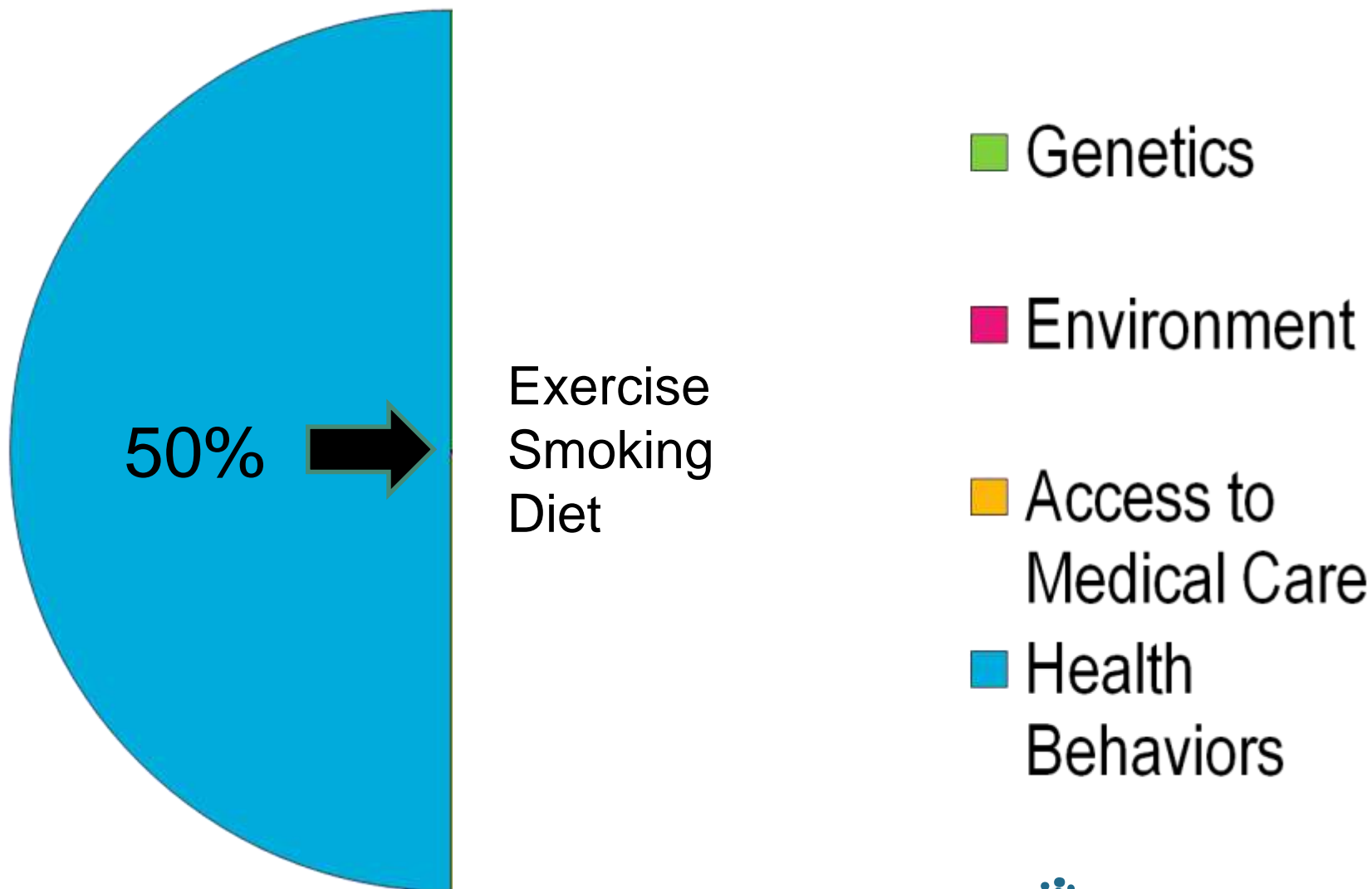
 KAISER PERMANENTE®

Contributors to Overall Health Status; The Power of Health Behaviors



Source: CDC 2000

Contributors to Overall Health Status; The Power of Health Behaviors



Source: CDC 2000

Exercise and Health

- Physical inactivity has an astonishing array of harmful health effects.
- Exercise is a powerful tool for both the treatment and prevention of chronic disease and obesity, as well as premature death.
 - There is a linear relationship between physical activity and health status.
 - The association between disease and an inactive and unfit way of life persists in every subgroup of the population.
- Physical inactivity is **THE** major public health problem of our time.

THE LANCET

“In view of the prevalence, global reach and health effect of physical inactivity, the issue should be appropriately described as *Pandemic*, with far-reaching health, economic, environmental and social consequences.”

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Physical Activity

July 2012

THE LANCET

“We Urge all sectors of government and society to take immediate, bold actions to help make active living a more desired, affordable, and accessible choice for all population groups.”



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A Series by *The Lancet*

July 2016

Boris Lushniak, MD, MPH

Acting United States Surgeon General



U.S. Department of Health & Human Services



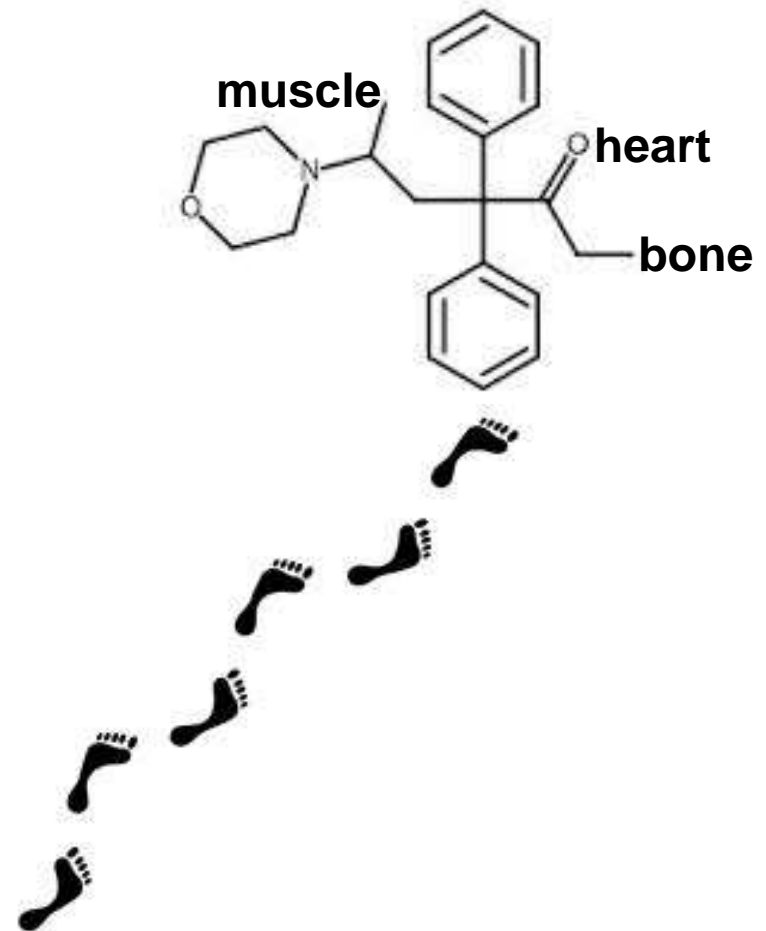
Office of the Surgeon General

ACSM Annual Meeting
Orlando, Florida; May 30, 2014



KAISER PERMANENTE®

A Drug Called Exercise



A Drug Called Exercise

- **Generic name:** physical activity
- **Other Brand names:** jogging, hiking, rolling, swimming, aerobics, biking, tennis, basketball, soccer, dancing, gardening, etc.
- **Dosage:** optimum 150 minutes per week in adults; 60 min per day in children has proven efficacy. Even low doses have been shown to have benefit. Advise to start with low dose and advance as tolerated.
- **Pregnancy and Lactation:** completely safe. Good for mother and baby.



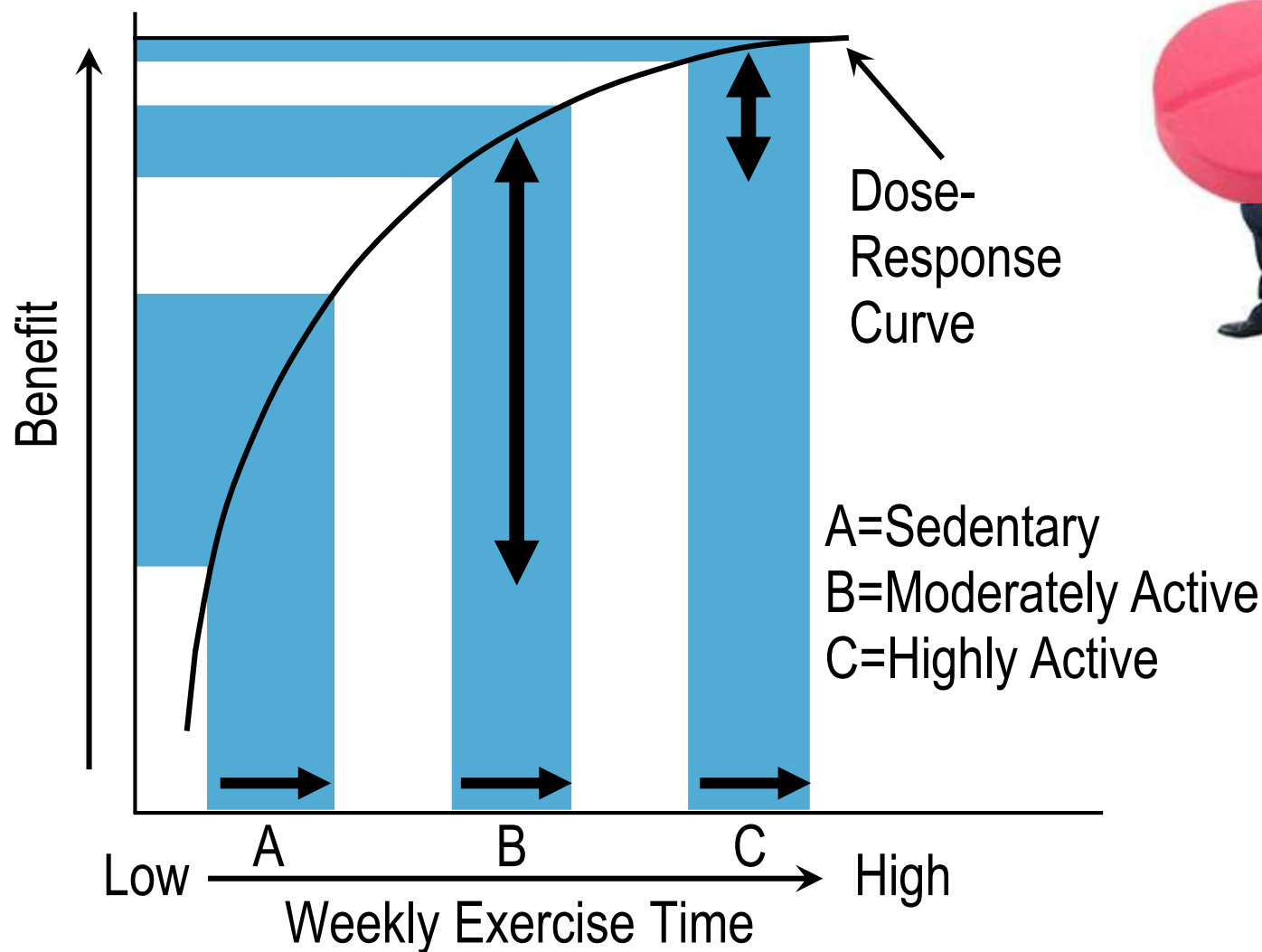
A Drug Called Exercise

■ Indications and Usage:

- Prevent obesity and mitigate its risks
- Reduce development and improve management of diabetes
- Prevent and treat heart disease
- Lower risk of cancer (breast and colon)
- Treatment of hypertension
- Prevent osteoporosis and fractures
- Manage depression and anxiety
- Reduce risk of dementia
- Recreational uses
- Decrease risk of premature death

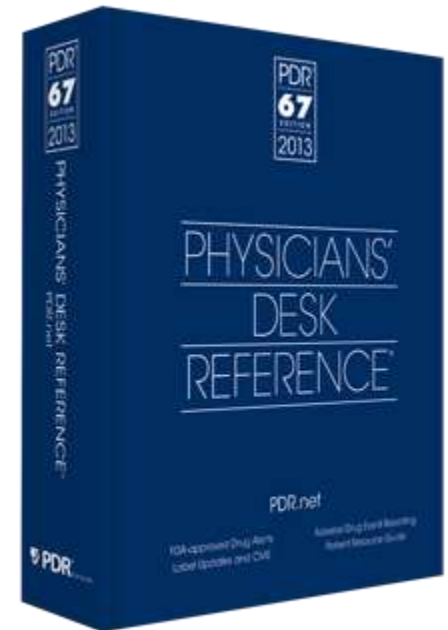


A Drug Called Exercise Dose-Response Curve



A Drug Called Exercise

- **Side effects:** decreased BP, pulse and blood sugar; stronger muscles & bones, weight loss; improved mood, confidence, self esteem and concentration; Bowel & sleep habits improved; Look & feel better.
- **Adverse Reactions:** sweating, injury (overdose), sudden death (extremely rare).
- **Administration:** self administer or with others. Start off slowly, add minutes and intensity PRN. Change formulations to decrease boredom & improve compliance. Take outdoors or indoors any time of day.



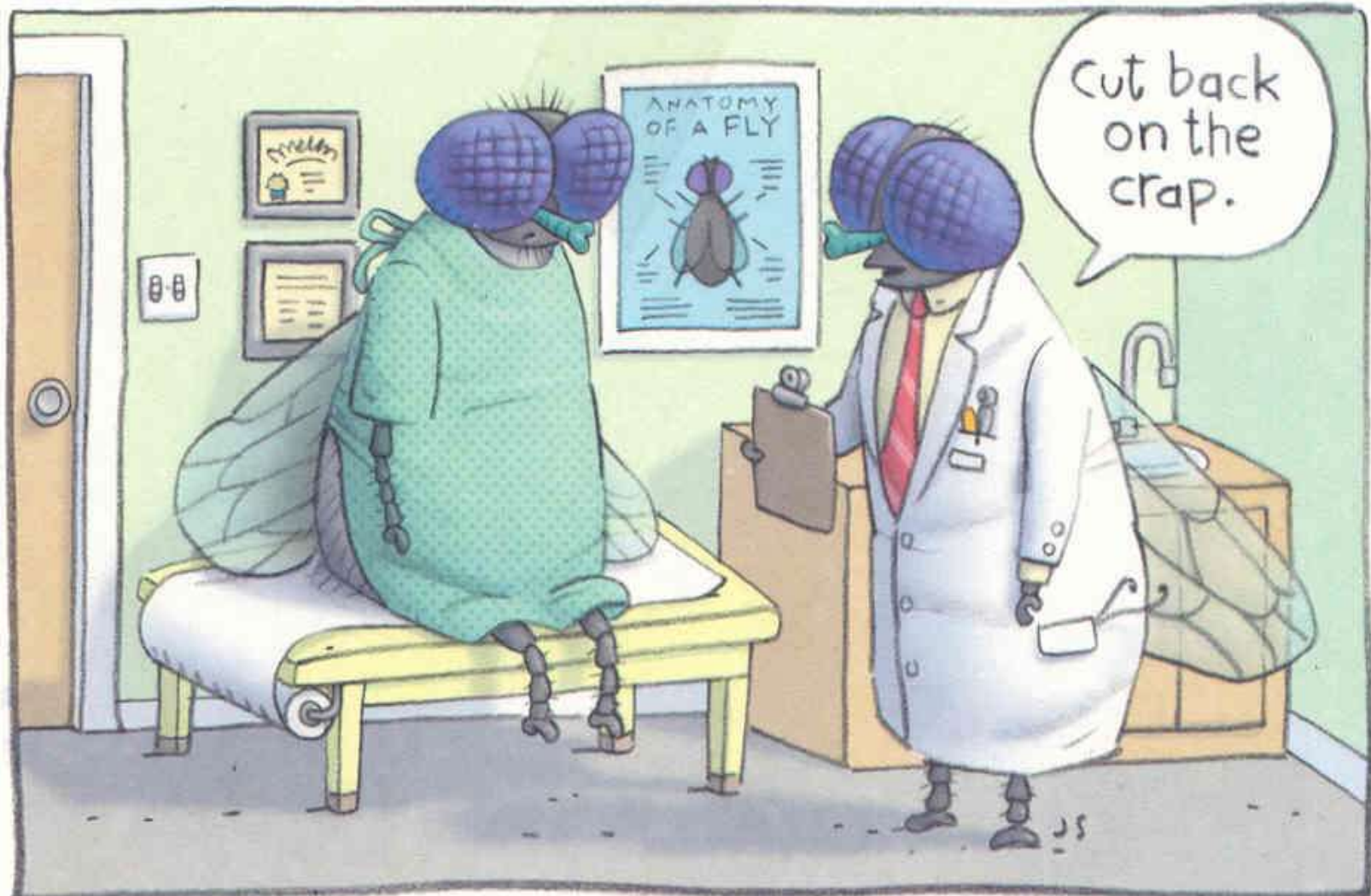
Exercise is a wonder Drug

Physicians should prescribe; Patients should take!

- ***Exercise is Medicine*** that can prevent & treat chronic disease and those who take it **LIVE LONGER.**
- If we had a pill that conferred the proven health benefits of exercise, physicians would prescribe it to every patient and healthcare systems would find a way to make sure every patient had access to this wonder drug.



Patient's deserve to know the facts...



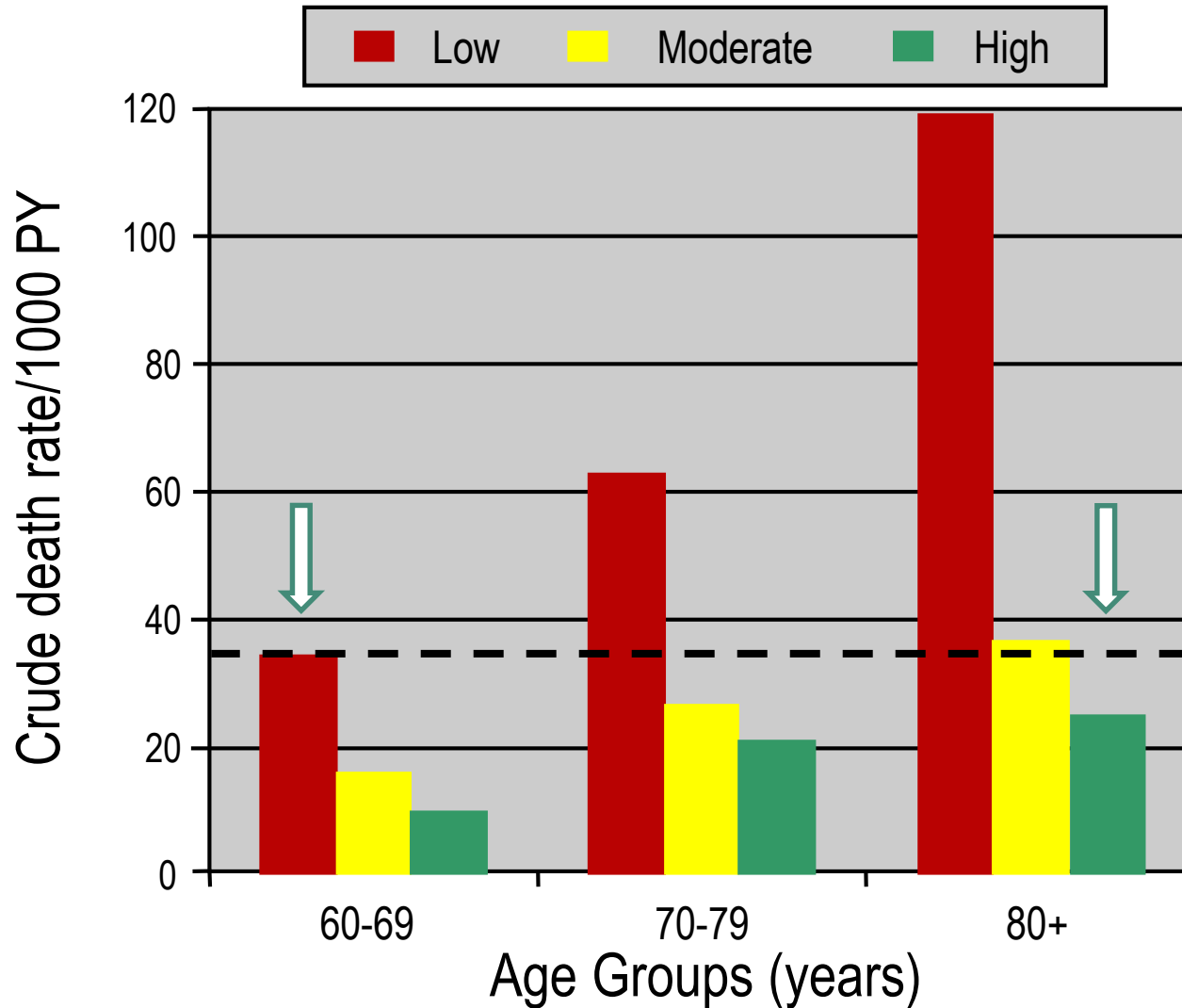
Irrefutable Evidence for Exercise in the Primary and Secondary Prevention of:

- Diabetes mellitus
- Cancer (breast and colon)
- Hypertension
- Depression
- Osteoporosis
- Dementia
- Coronary Artery Disease
- Lower death rate from all causes

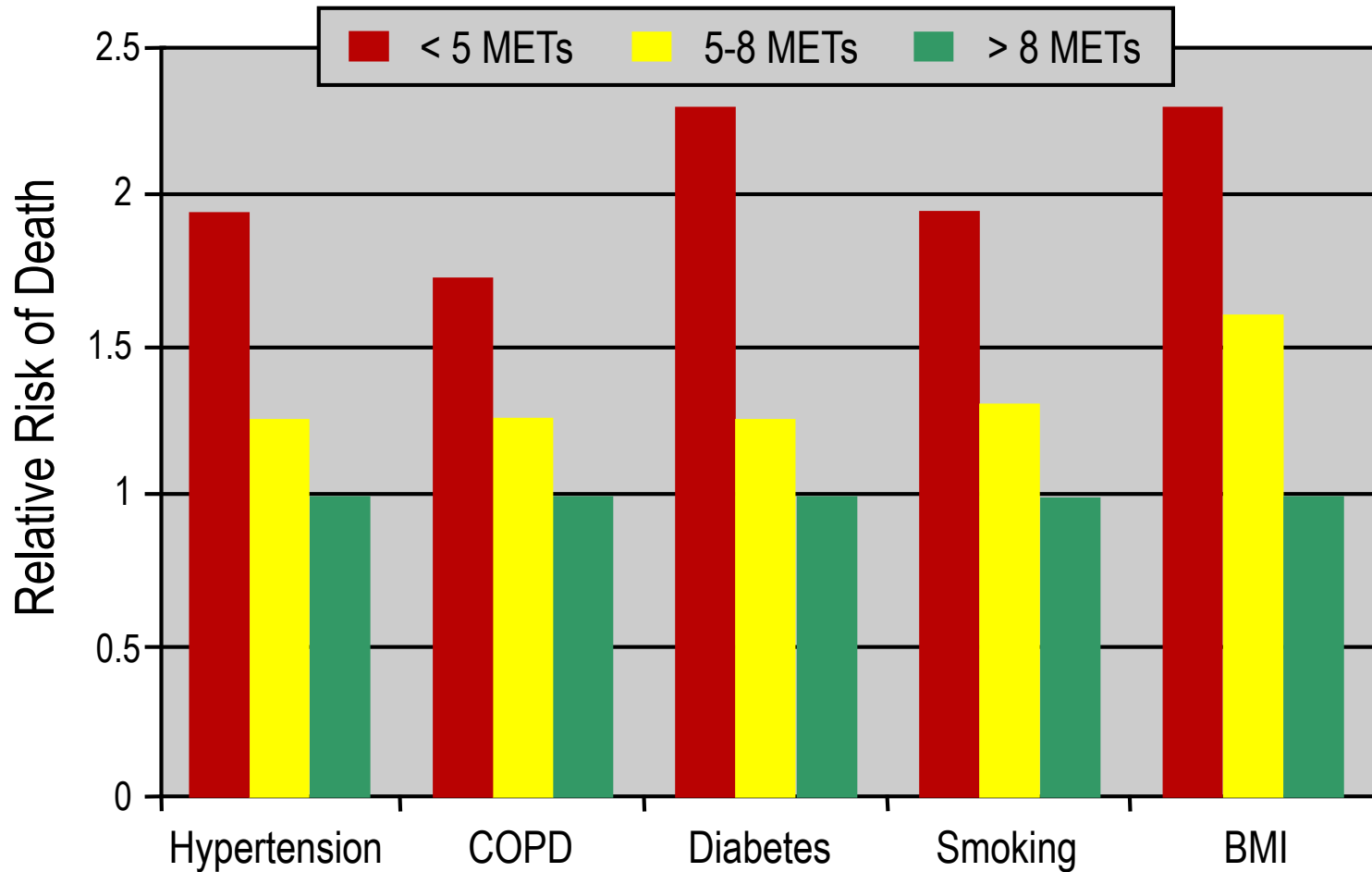
Physical Activity Lowers Mortality: Even With Increasing Age and Chronic Disease



Death Rates & Fitness Level



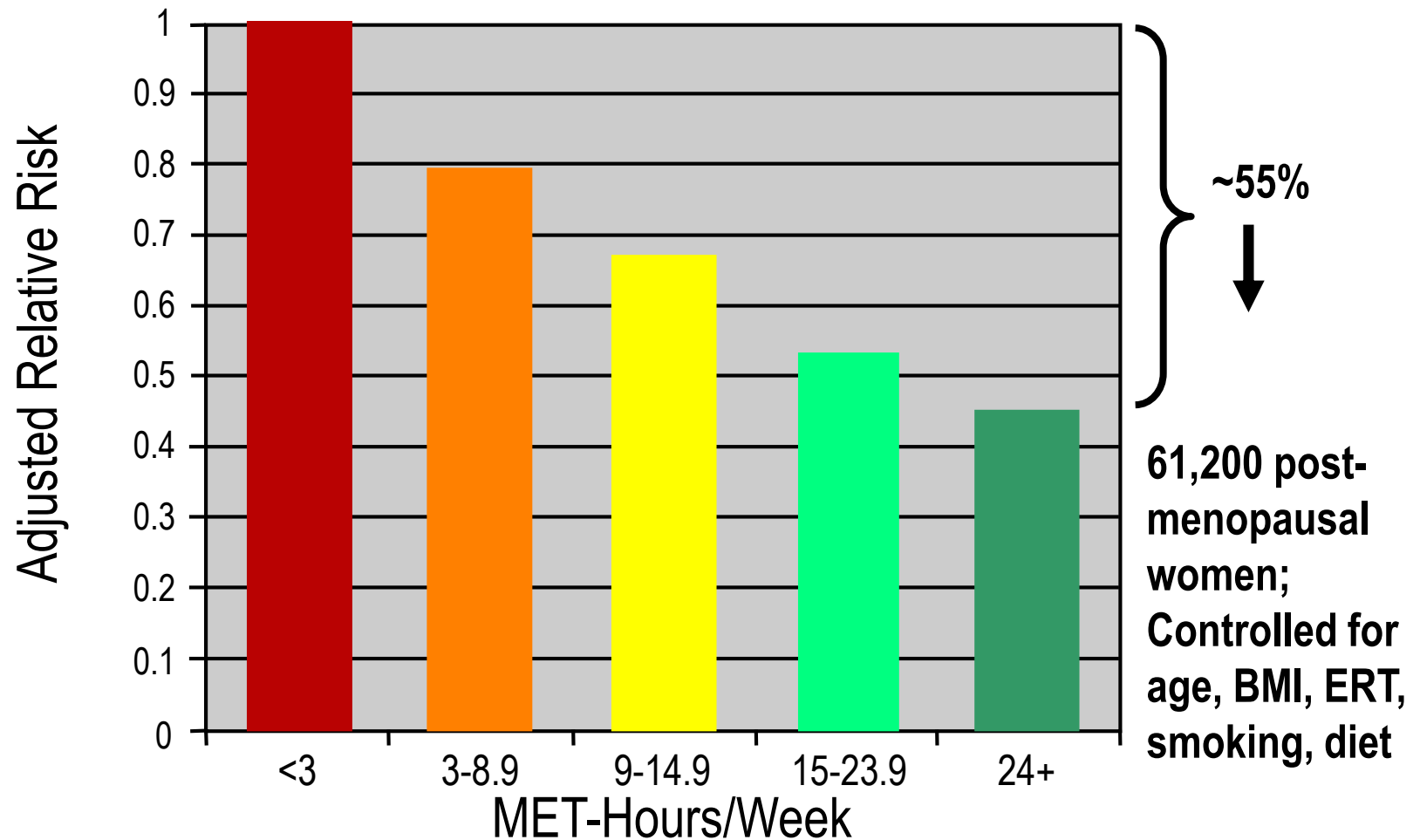
Exercise & Chronic Disease Mortality



Exercise is Cost Effective Medicine



Physical Activity & Hip Fracture Risk



Osteoporosis Drug Treatments

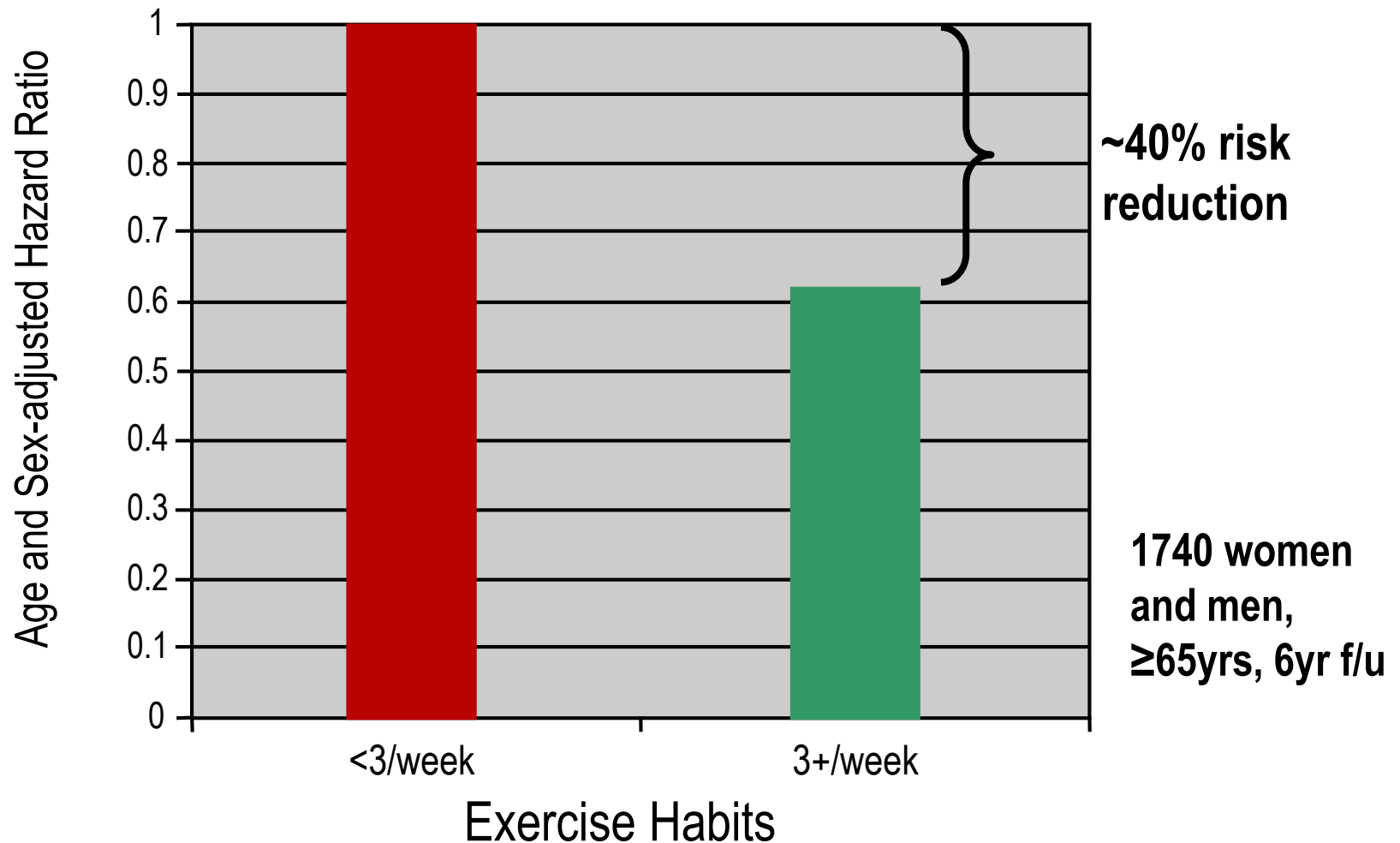
Cost Comparison

- Improve bone density, not primary hip fracture risk!*
- Alendronate (Fosamax) 70 mg weekly
 - \$102 per month**; \$1224 per year
- Evista (Raloxifene) 60 mg daily
 - \$150 per month**; \$1,800 per year
- Forteo (Teriparatide) 20 mcg SC daily
 - \$1016 per month**; \$12,192 per year
 - Efficacy > 2 yrs not established; May cause osteosarcoma in rats

*Cochrane Database Reviews

**Price for brand name on www.drugstore.com

Exercise and *Dementia*

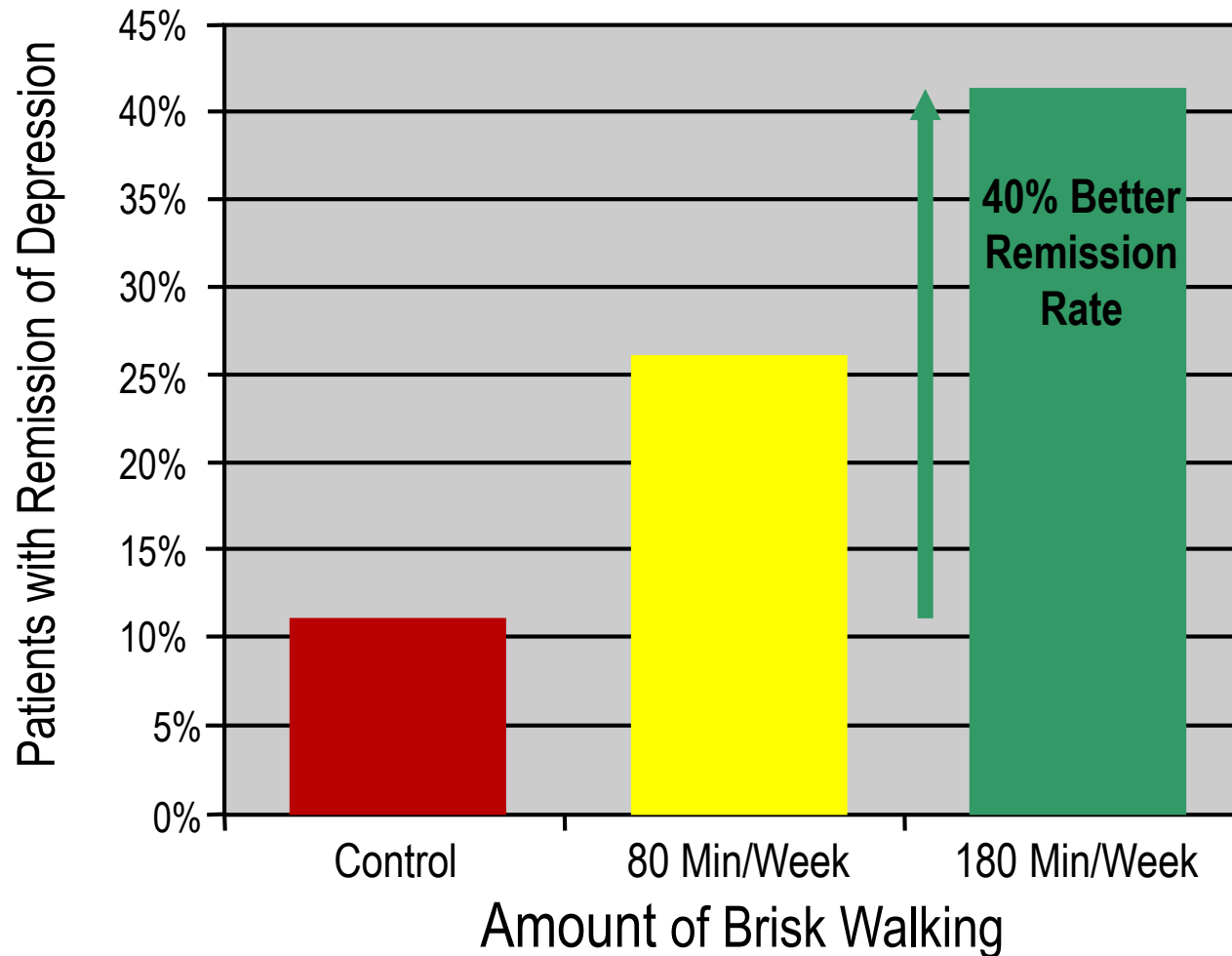


Alzheimers Drug Treatment Cost Comparison

- No evidence these drugs prevent dementia, *may* delay progression by 6-12 months
- Aricept (Donepezil) 10 mg QD
 - \$239 per month*; \$2868 per year
- Namenda (Memantine) 10 mg BID
 - \$191 per month*; \$2292 per year
- Exelon (Rivastigmine) 6 mg BID
 - \$250 per month*; \$3000 per year

*Price for brand name on www.drugstore.com

Exercise is a Treatment for *Depression*



Depression Drug Treatments Cost Comparison

- ~30% achieve remission of depression on meds*
- Zoloft (Sertraline) 100 mg daily
 - \$139 per month**; \$1668 per year
 - Black Box warning for increased suicide risk!
- Abilify (Aripiprazole) 40 mg daily
 - \$765 per month**; \$9180 per year
- Zyprexa (Olanziprine) 20 mg daily
 - \$1286 per month**; \$15,432 per year

*STAR*D Study

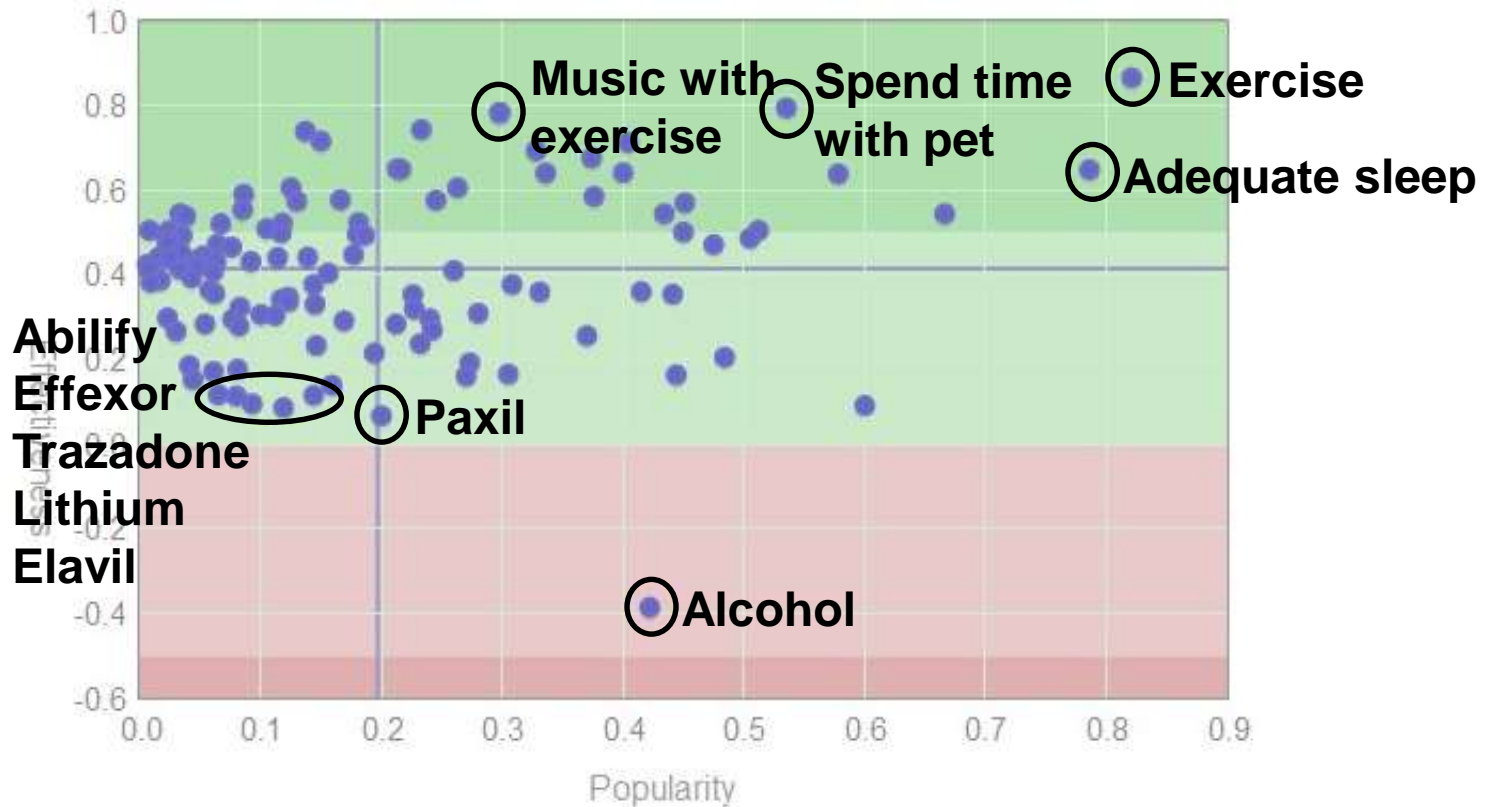
**Price for brand name on www.drugstore.com

Exercise is Powerful Medicine Just ask patients who use it!





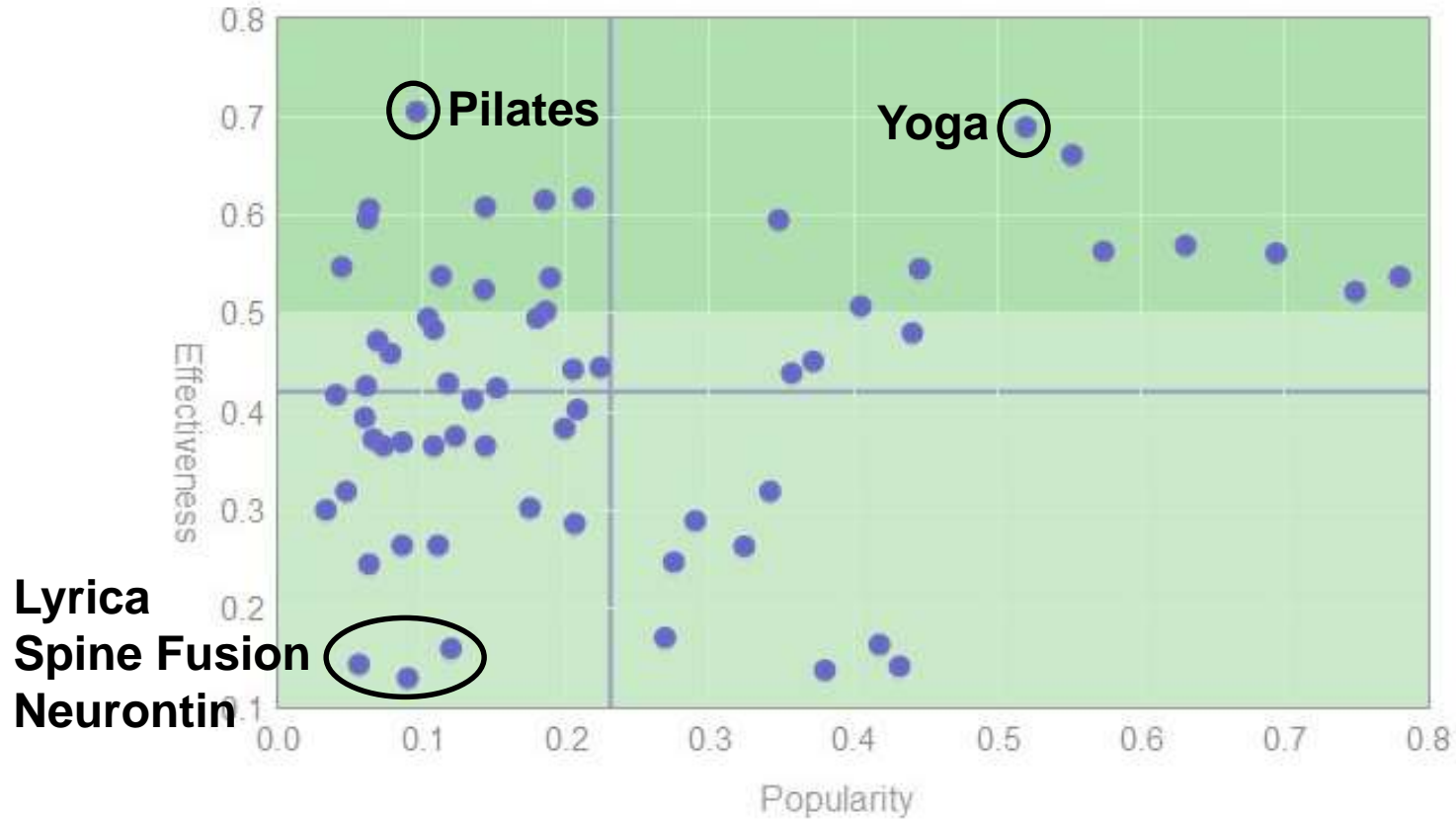
117 Depression Treatments Compared
Hover over each dot to see what treatment it represents.



This infographic is based on a total of 22,800 treatment effectiveness ratings.

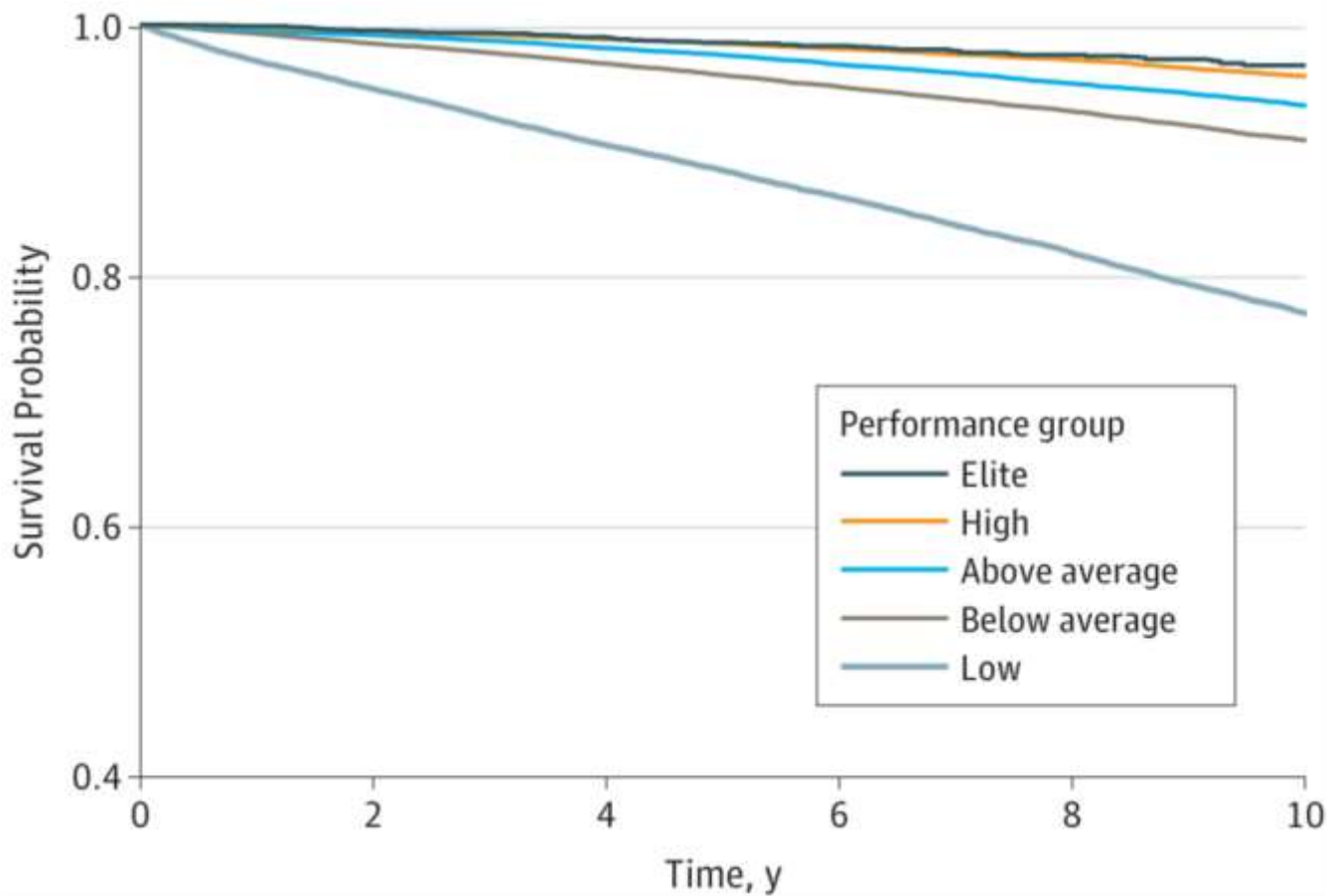


63 Lower Back Pain Treatments Compared
Hover over each dot to see what treatment it represents.



This infographic is based on a total of 4,044 treatment effectiveness ratings.

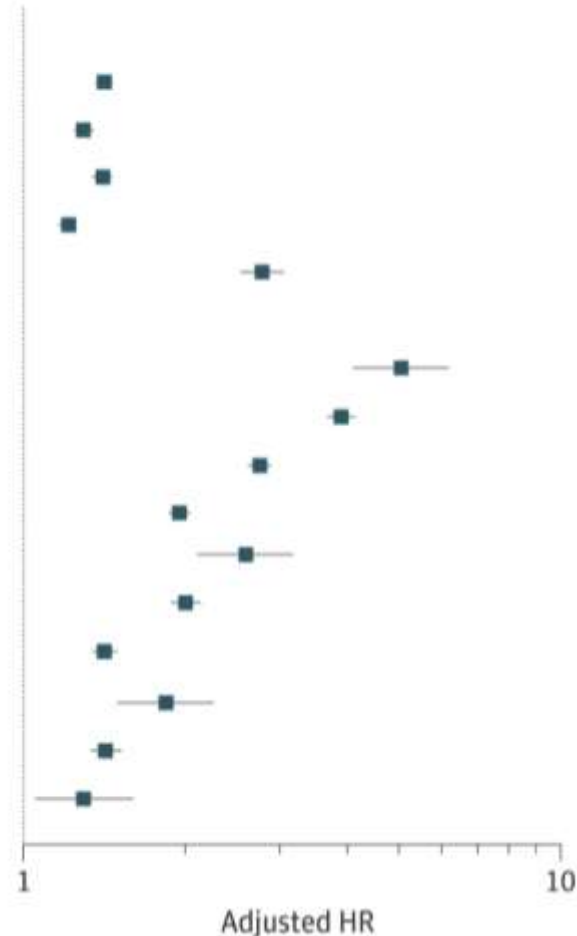
Association of Fitness With Mortality in Adults Undergoing Ex Treadmill Testing



**-122,007 adults with ETT at Clev Clinic
-1991-2014 (23 yrs)
-Fitness inversely a/w all-cause mortality in 5 quintiles of fitness**

Low Fitness Was Bigger Risk than Hypertension, Diabetes, CAD or Smoking

Variable	HR (95% CI)	P Value
Comorbidity		
Smoking	1.41 (1.36-1.46)	<.001
CAD	1.29 (1.24-1.35)	<.001
Diabetes	1.40 (1.34-1.46)	<.001
Hypertension	1.21 (1.16-1.25)	<.001
ESRD	2.78 (2.53-3.05)	<.001
Group comparison		
Low vs Elite	5.04 (4.10-6.20)	<.001
Low vs High	3.90 (3.67-4.14)	<.001
Low vs Above Average	2.75 (2.61-2.89)	<.001
Low vs Below Average	1.95 (1.86-2.04)	<.001
Below Average vs Elite	2.59 (2.10-3.19)	<.001
Below Average vs High	2.00 (1.88-2.14)	<.001
Below Average vs Above Average	1.41 (1.34-1.49)	<.001
Above Average vs Elite	1.84 (1.49-2.26)	<.001
Above Average vs High	1.42 (1.33-1.52)	<.001
High vs Elite	1.29 (1.05-1.60)	.02



Why Has the Medical Community Neglected Physical Activity as a Treatment?

- Easier for physician to issue a prescription to reduce BP, cholesterol, glucose or BMI.
 - Medication adherence is very low (1 in 6 take meds as prescribed).
 - Reliance on pills transfers responsibility for health to doctor resulting in lower patient physical activity.
- Widespread belief we cannot change physical activity habits. However:
 - Evidence brief counseling and pedometer programs can increase physical activity.
 - We are able to convince patients to take insulin shots, Coumadin, chemotherapy, etc – why not exercise?

Name this medical device?



Circa 1750's-1810's

Tobacco Smoke Enema



Rectal tube attached to fumigator & bellows to treat drowning (also constipation, cholera and convulsions)

Tobacco Smoke Enema



Hence the term “Blowing smoke up your ass”
is actually a medical term

If we can convince a walrus to exercise...



What Can be Done?

- World wide exercise prescription initiative:
 - Every patient. Every visit. Every treatment plan.
- Physical activity should be recorded as a vital sign and patients advised to do:
 - 30 minutes moderate exercise, 5 days per week.
 - Walk, jog, bike etc.
- Message should be the same from every medical provider, regardless of specialty.
- We must begin to merge the healthcare industry with the fitness industry.

Goal:

- To make physical activity assessment and exercise prescription a standard part of the disease prevention and treatment paradigm for all patients



Exercise IS Medicine

- A national initiative sponsored by the ACSM and AMA.
- National launch held November 07' in Washington, D.C.
- Supported by Surgeon General, along with President's & CA Gov Councils.





May 26-30, 2015 • San Diego, California USA



- Over 40 Countries represented; 7 Regional Centers:

- North America
- Latin America
- Europe
- China
- Southeast Asia
- Africa
- Australia



Exercise as a Vital Sign

- Essential first step in moving EIM initiative forward.
 - Every patient needs to be asked about their exercise habits at every visit.
 - Record with traditional vital signs, BMI and smoking hx.
- EVS in use at KP So Cal since October 2009; All regions since 2012.
 - 35 Medical Centers; ~10 million patients.
 - Medical assistant ask and record EVS at every patient visit, regardless of specialty.

Smith, John W

MRN Age Sex PCP

Allergies

Alert Spec Feat kp.org

000017701887 30 year M Spero, Robert David (M.) *Sulfa Class, Acarbose, 5-alpha Reductas*

N Inactive

SnapShot

4/22/2009 visit with TEST DUMMY MD

Chart Review

Images Questionnaires Admin Benefits Inquiry References SmartSets Open Orders Preview AVS Print AVS

Flowsheets

Allergies: Sulfa Class, Acarbose, 5-alpha Reductase Inhibitors, Acetaminophen + Propoxyphene Napsylate Reviewed on 2/27/2009

Problem List

Last Vitals: BP: 120/80 P: 60 T: T Src: Resp: 22 W: 190 lbs (86.183 kg) H: 5' 10" (1.778 m)

History

BMI: 27.26 kg/m2, BSA: 2.06 m2 Exercise Vitals: 180 mins/wk

Letters

Height 5' 10" (1.778 m)

Demographics

Peak Flow

Proactive Care

Charting

Chief Complaint

Nursing Notes

Vitals

Exercise Vitals

Review Exercise VS

Med. Document

BestPractice

History

Progress Note

SmartSets

Dx and Orders

Pt. Instructions

LOS

Follow-up

Close Encounter

Exercise Vitals - Exercise Vitals (SHIFT+F6 to enter comments)

Instant Taken:

Date: 4/30/2009

Time: 1149

Exercise Level of Effort

Days per week of moderate to strenuous exercise (like a brisk walk)

0 1 2 3 4 5 6 7

On average, minutes per day of exercise at this level

10 20 30 40 50 60 90 120 150 or greater

Restore

Close F9

Cancel

Previous F7

Next F8

Review Exercise Vitals

Mark as Reviewed

Last Reviewed by SHARMA, PANKAJ on 4/24/2009 at 12:36:26 PM

Medication Documentation

Current Prescriptions

Taking? Start Date End Date

ATENOLOL 100 MG ORAL TAB

4/29/2009

TAKE 1 TABLET ORALLY DAILY

Provider: William Lewis (M.D.) Spering

ATENOLOL 100 MG ORAL TAB

4/29/2009 5/29/2011

1 TAB PO DAILY

Provider: William Lewis (M.D.) Spering

Hotkey List

Exit Workspace

Navigator Hotkeys

Write a walking Rx for patients!



Name: John W. Smith Age: 30

Walking **R_x**

Date: _____

Recommended activity level: Moderate

Minutes per day: 30 minutes

Number of days per week: 5 or more

Intensity: Hard enough that you can't sing,
but not so hard you can't talk during exercise.

Stop: If you experience chest pain,
excessive shortness of breath or feel ill.

Signature: Robert Sallis, MD

Every Body
WALK!
www.everybodywalk.org

“At Kaiser Permanente, we want you to Live Well, Be Well and THRIVE!”


thrive



Exercise
is Medicine™

 KAISER PERMANENTE®

Kaiser Permanente – “Cause”



Every Body WALK!

The Campaign to Get America Walking

www.everybodywalk.org

EVERY BODY WALK!

LET'S ALL WALK FOR FUN AND BETTER HEALTH

I'd like to personally invite you to join me on an important and fun mission to walk 30 minutes a day, five days a week ... and to help us spread the word about how walking may be the single most important commitment you can make to your health and the health of our nation.

If we each walk 30 minutes a day (or 15 minutes twice a day), five days a week, we will be taking the most effective course of action possible to help prevent or help manage chronic health conditions, including type 2 diabetes, heart disease, depression, and asthma. It's really that simple. The research supporting the benefits of walking is irrefutable and growing every day — and you'll feel good doing it.

I am pleased to announce that we are introducing a new online walking program, called KP Walk!, to support and encourage all of us at Kaiser Permanente to walk 30 minutes a day, five days a week. To learn more about this program, go to www.kpwalk.com and get started on your journey to better health.

KP Walk! is complemented by an external campaign that Kaiser Permanente is launching called Every Body Walk! Information about this campaign can be found at www.everybodywalk.org.

Let's all walk ... and thrive!

George Halvorson
Chairman and CEO
Kaiser Foundation Health Plan, Inc. and Kaiser Foundation Hospitals

♻️ This material is printed with 50% recycled paper using 30% post-consumer waste and soy-based ink.



George Halvorson
Chairman and CEO

Kaiser Health Plan and Hospitals

A promotional graphic for the 'Every Body Walk!' campaign. At the top right, it says 'healthyworkforce For the people who power KP'. The main title 'EVERY BODY WALK!' is in large, bold letters. Below it, the tagline 'LET'S ALL WALK FOR FUN AND BETTER HEALTH' is displayed. The graphic includes three photos: a group of diverse people walking together, a scenic view of a dirt path through a forest, and a landscape with mountains under a blue sky. At the bottom, the 'kpwalk!' logo is shown with the text 'Introducing a new way to bring walking into our lives.' The background features a stylized map of the United States with a blue path winding through it.

 KAISER PERMANENTE.

Every Body WALK!

The Campaign to Get America Walking

www.everybodywalk.org

Every Body WALK!
THE CAMPAIGN TO GET AMERICA WALKING
Celebrating Occupational Therapy Month

Home Blog Read Watch Meet Up Partners App Newsroom

Meet Up

Find walking meet ups near you with the help of MeetUp.com!

Enter zipcode or city
Example: "97000" or "Portland"

Meetup is the world's largest network of local groups. Meetup's mission is to revitalize communities and help people self-organize. Join one of many existing walking clubs, organize meetings and events, or form new walking groups in your neighborhood.

Meet up, motivate, meet or zip code

meetup

Available on the Google play Available on the App Store

Every Body WALK!
THE CAMPAIGN TO GET AMERICA WALKING
Celebrating Occupational Therapy Month

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Watch

Walking only 30 minutes a day can make a difference in your health. We've brought in medical experts to offer advice on getting started; we met up with walking groups to inspire ideas to bring walking to your community; and tracked down success stories to prove that walking really can improve your overall health.

Share 9 Tweet 0

Home Blog Read Watch Meet Up Partners App Newsroom

Read

Updates

National Walk To Work Day: 5 Great Health Benefits Of Walking

Today is the eighth annual National Walk to Work Day. If you're reading this, you may already be at your desk. And, like 51 percent of the population, you probably arrived there by car (86 percent) or public transportation (5 percent). But it's not too late! There's still time to pound the pavement on your way back home -- or, if that isn't possible, take a walk during your lunch break. If you happen to be in New York, the new "pedestrian center" in midtown might be a good place to start.

Latest News

- National Walk To Work Day: 5 Great Health Benefits Of Walking
- "The Way" Offers Inspiring Journey
- Take Walking To Work To The Next Level
- The Best Cities For Walking
- National Start Planning Now
- Diabetes Alert Day: Take A Risk, Test, Save Your Life
- A Long Walk Unspooled
- Time To Walk Off The Weight and Forget Your Escapes Ladies
- November Month 2012: 25 Common Food Myths Busted

Bob Sallis, MD: Wear a Pedometer

Robin Williams Ann Barbara

Tommy Khalil Shana

How fast do you need to walk; To stay ahead of the Grim Reaper?



- Several studies have shown correlation between walking speed and survival.
- 1705 Australia men, age ≥ 70 ; Measured walking speed at usual pace for 6 m (~20 feet); Speed correlated with mortality rates over 5 yrs.:
 - Walking speed of 0.82 m/s (2 mph or 3 kph) was most predictive of mortality (i.e. speed of Grim Reaper)
 - No men walking at speeds ≥ 1.36 m/s (3 mph or 5 kph) were caught by Grim Reaper
- Walking faster protects against mortality!

Kaiser Permanente – Thrive “Find Your Thing”



Vivek Murthy, MD, MBA

Surgeon General's Call to Action on Walking



Washington DC
September 9, 2015



Clinicians need help!

How do we integrate fitness into healthcare?

- I need something beyond telling my patient to go walk!
- Components of fitness
 - CV fitness
 - Strength
 - Flexibility
- Need to be able to refer
 - Health Club and Fitness professional
 - Exercise id Medicine Solution



A Challenge to the Fitness Industry

- Role of the fitness professional;
Merging fitness with healthcare
 - Change focus from clients to patients.
 - Change focus from abs and buns to hearts and lungs.
 - **How do we engage them?!**
- Role of Health Clubs;
Place your emphasis on health
 - Reach out to new demographic.
 - Target the population that really needs your services.
 - **Why aren't more clubs interested?!**

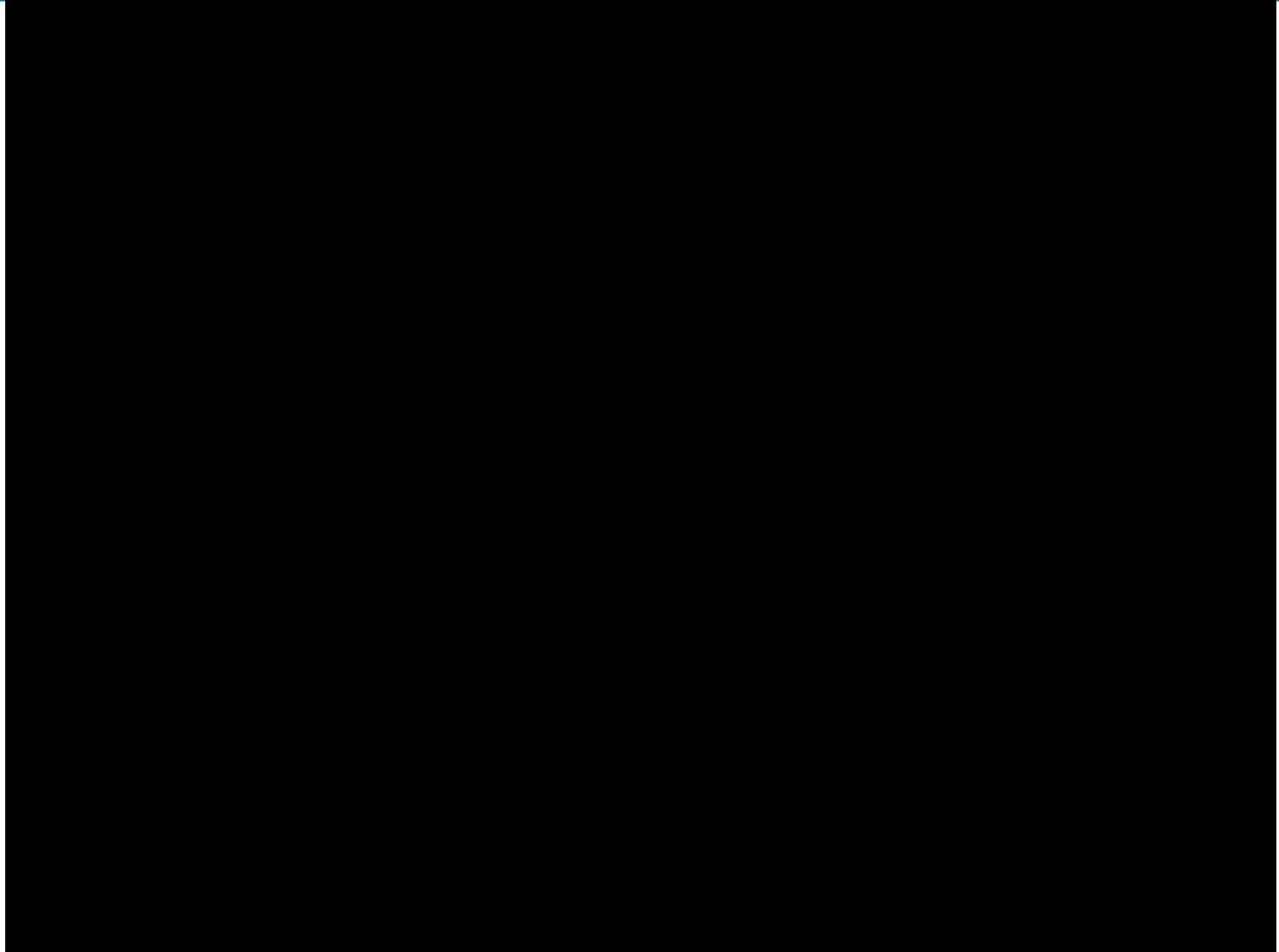


Summary

- Evidence is overwhelming on the cost and health burden of physical inactivity.
- Benefits of exercise in prevention and treatment of chronic disease are irrefutable.
 - Healthcare providers have an obligation to inform patients of the risks of being sedentary and prescribe exercise.
 - Fitness Professionals and Health Clubs needs to step up and play a role in improving health.
 - No student should graduate without a lifetime plan for fitness.
- ***Exercise is Medicine*** that everyone needs to take!
What can you do to help make that happen?



It's time for a change...



Upcoming Exercise is Medicine Presentations **Robert Sallis, MD**

- **Tuesday @ 5 PM;** *“Exercise and a Healthy Brain: What’s the Connection?”*
- **Wednesday @ 5 PM;** *“Fitness Vs Weight: What’s More Important to Your Health?”*
- **Wednesday @ 8 PM;** *“Managing Chronic Pain: What Are the Best Non-Drug Options?”*

Thank You!



RANCHO LA PUERTA

Tecate • Baja California • Mexico

Questions?