

EXERCISE IS MEDICINE

Jonathan S. Halperin MD, FABPMR

Chief: Physical Medicine and Rehabilitation

Sharp Rees Stealy Medical Group

DipSportMed (CASEM)

CAQ Sports Medicine (ABMS)

Vice Chair: Joint Commission on Sports Medicine and Science



Empowering health care professionals to promote exercise

- The benefits of exercise in the prevention and treatment of disease has been clearly established
 - There is a linear relationship between physical activity and health status
 - Inactivity is a powerful and modifiable risk factor for chronic disease and health status
- Physicians and other health care providers have an ethical obligation to assess and prescribe exercise
 - We should inform our patients about the risks of inactivity
 - We should recommend physical activity to all of our patients to improve health
- Exercise is responsible for the primary and secondary prevention of Diabetes, Breast and Colon cancer, Hypertension, Osteoporosis, Coronary artery disease, Depression and dementia

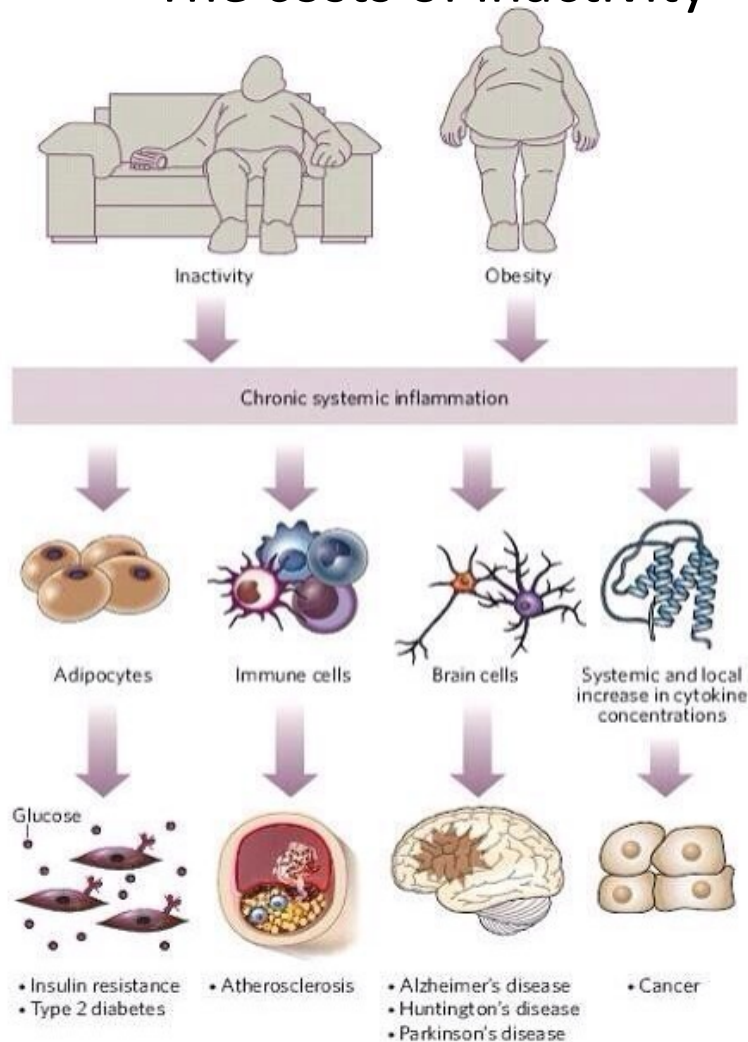
The power of health behaviors:

How this affects health status

- **INACTIVITY IS ONE OF THE LEADING CAUSES OF DISABILITY AND DEATH**
- Up to 37,000 patient deaths a year from inactivity in the United Kingdom
- Only one in three doctors give exercise advice during routine visit (CDC 2012)
- By age 74, 58% of men and 78% of women cannot walk for 30 mins or more (BHF 2012 Statistics)
- 65% of Cancer survivors do not exercise (Macmillan Cancer Report 2011)
- 56% of adults who have had a cardiac event DO NOT attend a cardiac rehabilitation program (Cardiac Rehabilitation Statistic 2013 UK)
- An inactive person spends 38% more days in the hospital than an active person (DOH 2011)

SITTING IS THE NEW SMOKING

The costs of inactivity



CLINICAL CONSEQUENCES OF INACTIVITY

METABOLIC DISEASES:

Obesity, type 2 diabetes, dyslipidemia and hypercholesterolemia, metabolic syndrome, gallstone formation

CARDIOVASCULAR DISEASES:

Coronary artery disease, angina, myocardial infarction, congestive heart failure, stroke, intermittent claudication, platelet adhesion and aggregation, atherosclerosis, thrombosis, hypertension

PULMONARY DISEASES:

Asthma, chronic obstructive pulmonary disease

CANCERS:

Breast, colon, endometrial, prostate, pancreas, melanoma

NEUROLOGICAL DISEASES:

Cognitive dysfunction, dementia, learning and memory, depression, mood and anxiety disorders, neurodegeneration (Alzheimer's, Parkinson's, Huntington's)

MUSCULOSKELETAL DISORDERS:

Osteoarthritis, rheumatoid arthritis, osteoporosis and related fractures, low back pain

QUALITY OF LIFE:

Decreased psychological well being, physical frailty, ability to perform daily chores and social interactions, functional independence, mobility, susceptibility to stress, impaired sense of balance, flexibility and agility as well as reaction skills

INTESTINAL MOTILITY, CONSTIPATION

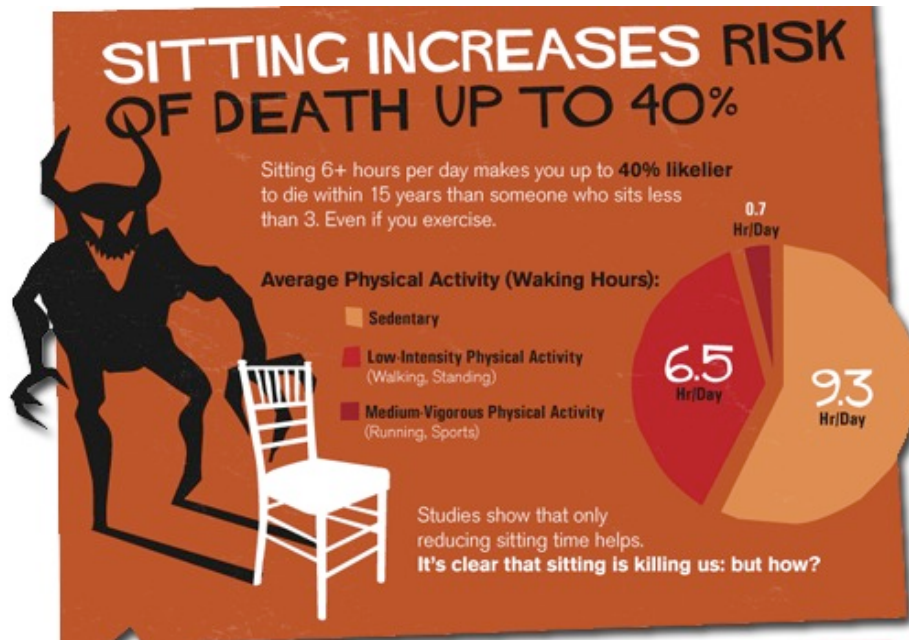
MORBIDITY AND MORTALITY OF CHRONIC DISEASE

IMMUNE DYSFUNCTION, CHRONIC INFLAMMATION

SARCOPENIA

LIFE EXPECTANCY

SITTING IS THE NEW SMOKING

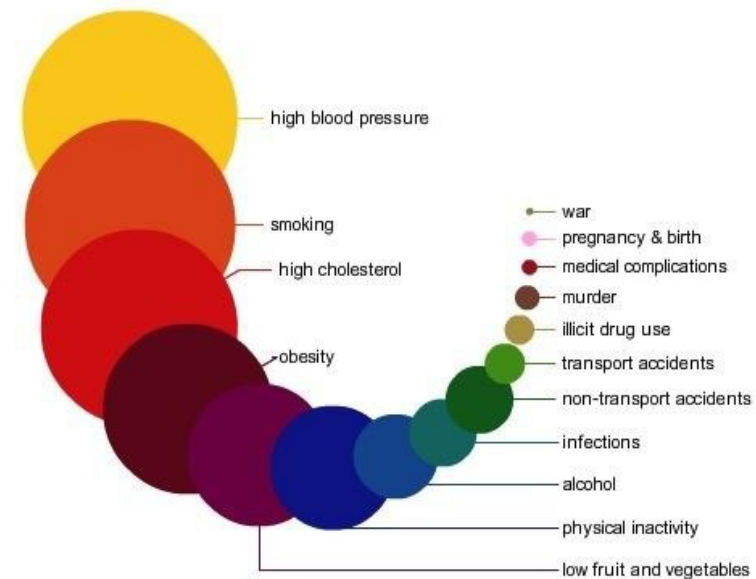


“ This year, 5.3 million deaths will be attributed to physical inactivity. Smoking is responsible for 5 million deaths per year. ”

The Exercise has a role in primary and secondary disease prevention

- Inactivity is 4th leading cause of death globally (WHO 2010)
- 80 % of heart and stroke death is preventable (CDC 200))
- 50% of overall health status are modifiable health behaviors: Exercise, Smoking , and Diet

Risks leading to death in perspective



Exercise is Medicine: Physicians should prescribe it, Patients should take it!!

- Exercise (Physical activity) may be the most important thing that we prescribe to prevent chronic disease and extend life
- If we had a medication that provided our patients with the known benefits of Exercise, health care providers would prescribe it for every patient . The Healthcare system would find ways to make sure this “wonder drug” was available to all patients



Exercise is Medicine: Physicians should prescribe it, Patients should take it!

- Exercise may be the vaccine that would be used to prevent chronic disease and extend life
- Health care professionals should integrate exercise assessment and Rx into their practice: **Every Patient, Every visit, Every treatment plan**
- Physical activity should be recorded as a vital sign. Patients are advised to participate in 30 minutes of moderate exercise five days per week



"What fits your busy schedule better, exercising one hour a day or being dead 24 hours a day?"

EXERCISE WORKS!!!

An investment in quality exercise advice and access to physical activities for \$1 results in \$3.20 in saving in overall health costs

(World Health Organization/ CDC 2000)



What can you do??

- Integrate exercise assessment and exercise prescription into your practice!
 - **EVERY PATIENT. EVERY VISIT. EVERY TREATMENT PLAN**
- Physical activity should be recorded as a vital sign and patients should be advised to:
 - Incorporate 30 minutes of moderate exercise 5 days per week
 - Walk, jog, hike, bike, swim etc.
- The message should be the same from every medical provider, regardless of specialty



The Exercise Score/ Exercise Vital sign

1. Do you exercise?? Yes or no?
2. If yes, how many days a week of moderate to strenuous exercise, like a brisk walk, do you typically do?
3. Of those days, how many minutes, on average to you exercise at this level?

Multiply #2 by #3 to get exercise score

The screenshot displays a medical software interface for a patient named John W. Smith. The interface includes a sidebar with navigation options like 'SnapShot', 'Chart Review', 'Flowcharts', 'Problem List', 'History', 'Labs', 'Demographics', 'Proactive Care', 'Order Entry', 'Immunizations', 'Allergies', 'Medications', 'Activity/Referrals', 'Forms', 'Enter/Exit Results', 'Test Download', 'Test Manager', and 'Utilities List'. The main content area shows patient information: '4/22/2009 visit with TEST DUMMY MD', 'Allergies: Sulfis Class, Acetaminophen, 5-alpha Reductase Inhibitors, Acetaminophen + Propoxyphene Napsylate', 'Last Vitals: BP 120/80 P 80 T 98.6 HR 72 RR 18 SpO2 98', 'BMI: 27.26 kg/m2, BSA: 2.08 m2', 'Exercise Vitals: 180 minutes', 'Height: 5' 10" (1.778 m)', and 'Peak Flow: 350 L/min'. A 'Charting' section is visible with options like 'Chief Complaint', 'History', 'Progress Note', 'SmartSet', 'Di and Orders', 'PT Instructions', 'LOS', 'Follow-up', and 'Close Encounter'. A 'Review Exercise Vitals' window is open, showing 'Instant Taken: 4/22/2009', 'Time: 11:43', and 'Exercise Level of Effort' with a scale from 1 to 7. Below this, there are checkboxes for 'Days per week of moderate to strenuous exercise (like a brisk walk)' and 'On average, minutes per day of exercise at this level'. A 'Medication Documentation' section at the bottom lists 'ATENOLOL 100 MG ORAL TAB' and 'ATENOLOL 100 MG ORAL TAB' with 'Take 1 Tablet orally daily' and '1 tab po daily' instructions, and 'Provider: William Lewis (M.D.) Sperling'.

Developed at Kaiser Permanente. Began to use in 2009. 2.5 million patients assessed
Of those with EVS recorded: 36% inactive, 33% insufficiently active and 31% were meeting guideline (> 150 min/week)

What can you do?

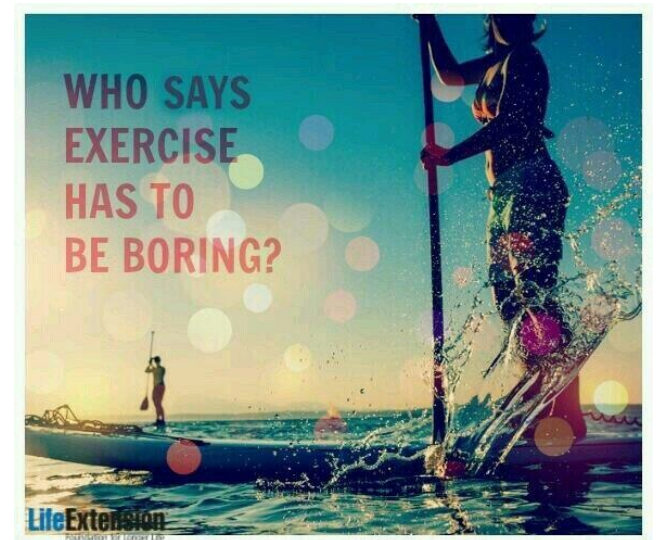
- **Zero Minutes:** Hopefully clinical staff has entered the exercise score in the chart. Make notation to discuss exercise status on next visit
- **One Minute for advice:**
 - Quickly congratulate patients who are getting 150 minutes or more of moderate or greater physical activity/week
 - Advise patients who getting minimal or no exercise of the importance of physical activity. Make connection between their current medical issues and the benefits of exercise
- 45 seconds of advice: “ I want you to start on an exercise plan to help in the treatment of _____. When I see you for a follow up visit, in addition to discussing your current health problems and medications, I will be also reviewing the effectiveness of regular exercise in helping us to manage your (current disease or condition)”

What can you do??

Two minutes: Review key messages about importance of physical activity. Offer an Exercise prescription. Suggest useful resources (website, DVD, or community resource)

Five minutes: Assess readiness for change regarding exercise habits. Discuss barriers to Exercise and brainstorm how to get around them. Explain in detail how exercise can be part of daily routine with minimal effort

**INTEGRATE EXERCISE ASSESSMENT AND RX INTO YOUR PRACTICE:
EVERY PATIENT, EVERY VISIT AND EVERY TREATMENT PLAN**



Breaking down the barriers

- **Make exercise a habit**
- **150 minutes per week is the goal- not the starting point. Start small:**
 - One to two days per week
 - Try three ten minute bouts per day
- **Make weekends count!!**
 - Change your mindset; weekends are for fitness!
 - If you walk 60 minutes on Saturday or Sunday, then only need 90 more minutes to meet your goal
- **Be creative!**
 - find an exercise partner
 - Set goals (fun run, sprint triathlon)

Stay ahead of the Grim Reaper!!

- Several studies have shown a correlation between walking speed and survival
- In Australia, 1,705 men age > 70; Measured walking speed at usual pace for 6m (20 feet). Speed correlated mortality rates over 5 years:
 - Walking speed of 0.82m/s (2.0mph) was most predictive of mortality
 - No men walking at speeds > 1.36m/s (3.0mph) were caught by the Grim Reaper!!
- **You need to walk faster than 3mph to stay ahead of the Grim Reaper!!**



BMJ, 2011 Dec15;343:d7679
How Fast does the Grim Reaper Walk?
Stanaway FF et al

SUMMARY

- The benefits of exercise in the treatment and prevention of chronic disease are well established
- Medical professionals have a responsibility to assess exercise habits and inform patients of risk and prescribe appropriate exercise
- A healthy clinician = a healthy patient; We all should be role models for our patients
- Exercising patients= healthier patients= significant cost savings



RESOURCES

<http://everybodywalk.org/>

<http://www.letsmove.gov/>

<http://www.youtube.com/watch?v=aUaInS6HIGo> Dr. Mike Evans 23 ½ hours

<http://exerciseismedicine.org/>



Every Body **WALK!**



RESOURCES

**The American Heart Association
Recommendations for Physical
Activity in Adults**

For Overall Cardiovascular Health:

At least 30 minutes of moderate-intensity aerobic activity **At least 5 days** per week for a **total of 150 minutes**

OR

At least 25 minutes of vigorous aerobic activity **At least 3 days** per week for a **total of 75 minutes**

or a combination of the two

AND

Moderate to HIGH INTENSITY muscle-strengthening activity **At least 2 days** per week for additional health benefits

For Lowering Blood Pressure and Cholesterol:

An average of 40 minutes of moderate- to vigorous-intensity aerobic activity **3 or 4 days** per week

© 2014 Learn more at heart.org/ActivityRecommendations.

ADULTS NEED
150 MINUTES
OF HEART PUMPING
PHYSICAL ACTIVITY PER WEEK.



Research shows that even short,
10 minute bouts of physical activity
are associated with increased fitness.

Source: Canadian Society for Exercise Physiology: Canadian Physical Activity
Guidelines for Adults


PARTICIPACTION
Let's get moving.

participACTION.com

RESOURCES



The American Heart Association Recommendations for Physical Activity in Kids

At least 60 minutes of *moderate- to vigorous-intensity* aerobic activity **Every day**



© 2014 Learn more at heart.org/KidsActivityRecommendations.

LET'S GET MOVING, CANADA!



3 – 4 year olds spend

50%
of waking hours
being **SEDENTARY**.



For 5 – 11
year olds it's

57%

and

68%

for 12 – 17
year olds.

For adults, it's **OVER**

**10 HOURS
A DAY!**



Source: Active Healthy Kids Canada (2013). Are We Driving our Kids to Unhealthy Habits?
2007-2011 Canadian Health Measures Survey

PARTICIPACTION
Let's get moving.

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RESOURCES

52 REASONS TO BE ACTIVE IN 2014

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- Physical activity leads to better health
- Being active = more FUN!
- An active lifestyle helps us make new friends
- Reduces the risk of heart disease
- An active lifestyle reduces the risk for many types of cancer
- Physical activity promotes healthy circulation
- Physical activity makes us happier
- The more we do it, the greater the benefits
- Increased confidence!
- Exercise helps improve our posture
- Those who are obese but fit, are 2 X LESS LIKELY TO DIE of cardiovascular disease than those who are thin but inactive
- An active lifestyle helps keep us young in body, mind and spirit
- Better sleep
- Physical activity reduces the risk of premature death (now, that sounds good!)
- Physical activity RELIEVES STRESS
- Regular physical activity can help us look better in and out of our clothes
- ACTIVE KIDS GET BETTER GRADES
- HELPS IMPROVE MUSCLE TONE
- WEIGHT TRAINING BUILDS STRONGER MUSCLES AND CONNECTIVE TISSUES WHILE INCREASING JOINT STABILITY
- BEING ACTIVE CAN HELP US RETAIN FLEXIBILITY AND IMPROVE RANGE OF MOTION
- PHYSICAL ACTIVITY BURNS CALORIES
- EXERCISE CAN HELP TO MANAGE AND PREVENT PAIN
- Be an active role model
- Can assist with weight loss and weight maintenance
- Exercise helps MANAGE ANXIETY
- Regular exercise promotes better balance
- EXERCISE IMPROVES COORDINATION
- HELPS MAINTAIN HEALTHY CONNECTIVE TISSUES
- CAN BE AS EFFECTIVE IN THE TREATMENT OF MILD TO MODERATE DEPRESSION AS MEDICATION
- WEIGHT BEARING PHYSICAL ACTIVITY HELPS REDUCE THE RISK OF OSTEOPOROSIS
- PHYSICAL ACTIVITY CAN ASSIST IN THE MAINTENANCE OF HEALTHY BLOOD PRESSURE AND CHOLESTEROL
- OUTDOOR ACTIVITY RECONNECTS US WITH NATURE
- Regular physical activity can improve overall athletic performance
- You'll have more ENERGY for everyday activities
- An active lifestyle is a privilege, not a punishment. Exercise is a great way to thank your body for all it does
- WEIGHT TRAINING CAN INCREASE GLUCOSE UTILIZATION AND REDUCE THE RISK OF DEVELOPING DIABETES
- REGULAR EXERCISE CAN ENHANCE SELF-ESTEEM
- ACTIVE TRANSPORTATION IS OFTEN FASTER THAN DRIVING OR PUBLIC TRANSPORTATION
- PHYSICAL ACTIVITY IS A GREAT WAY TO BLOW OFF STEAM.
- DON'T GET ANGRY OR EVEN...GET ACTIVE!
- IT'S A GREAT WAY TO ENJOY SOME "ME" TIME!
- WALKING IS UNDER-VALUED BUT IT'S LIKELY THE BEST THING MOST CANADIANS CAN DO TO IMPROVE THEIR HEALTH
- PARTICIPATION IN GROUP ACTIVITIES AND SPORTS FOSTERS A SENSE OF COMMUNITY AND BELONGING
- DISCOVER SOME NEW INTERESTS
- IT'S NEVER TOO LATE TO GET STARTED – TODAY COULD BE YOUR DAY!
- IT'S PERSONAL! THERE'S NO RIGHT OR WRONG WAY TO BE ACTIVE... DO WHAT YOU ENJOY!

For more tips and ideas from our Active Living Ambassador, Catherine Cameron, visit www.participACTION.com

30 REASONS TO WALK MORE



Did you know that walking more is likely the single best thing most people can do to improve their health?

Walking...

- Helps prevent heart disease
- Reduces the risk of some types of cancer
- Can help prevent osteoporosis
- Lowers blood pressure
- Helps maintain healthy cholesterol
- Reduces the risk of pre & type 2 diabetes
- Reduces the risk of heart attacks
- Reduces the risk of stroke
- Boosts bone density
- Burns calories
- Makes us happier and more relaxed
- Helps us sleep better
- Introduces us to others
- Is an ideal form of transportation
- Is a great way to get to know your community
- Puts us in touch with the natural world
- Is good for the environment
- Reduces vehicle congestion
- Improves our posture
- Nordic walking engages 90% of the muscles in the body
- Saves us time: no more traffic jams or hunting for parking
- Saves us money (no gas to buy, parking tickets to pay, etc.)
- Helps us feel less anxious
- Gives us more energy
- Improves mental health
- Requires nothing but shoes (and even those aren't essential!)
- Is FREE!
- Can be enjoyed almost anywhere (including in the water)
- Brings us closer to those we enjoy it with
- Is FUN!

For more tips and ideas, visit www.participACTION.com

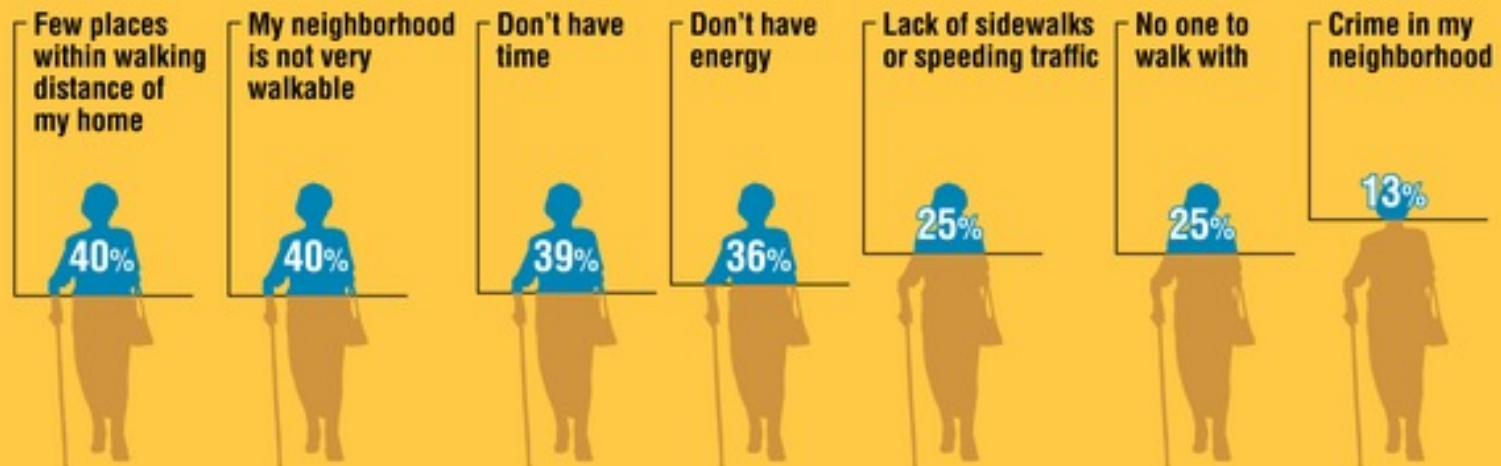


RESOURCES

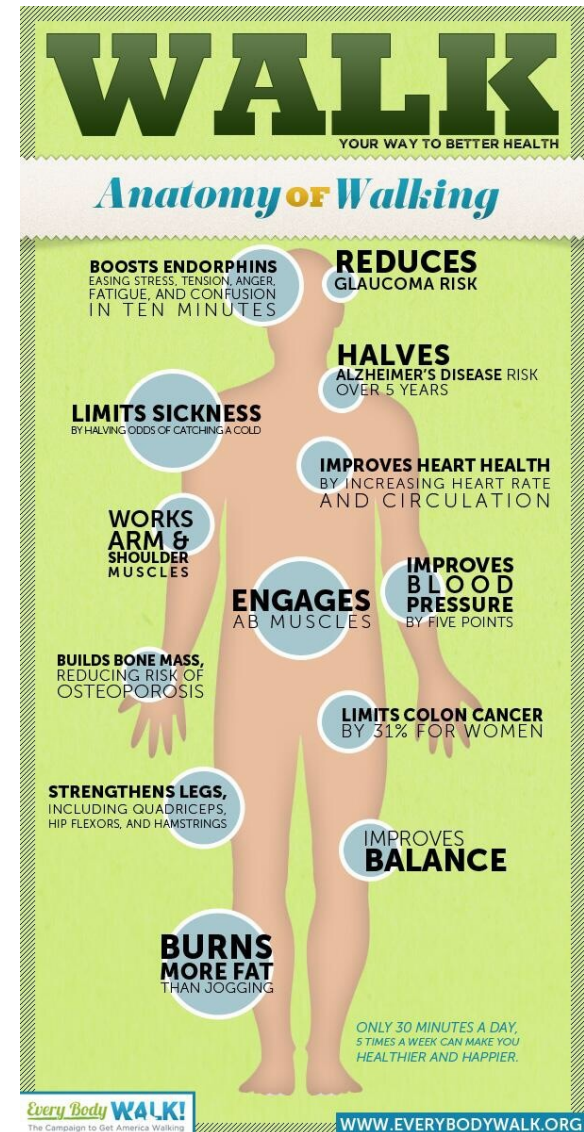
▼ Overwhelming majority of Americans believe walking is good for them:



▼ Why Americans don't walk more:



RESOURCES



RESOURCES

Our generic '**Exercise Medicine Label**' transforms how patients prevent and treat many chronic diseases with the help of a format that health professionals see and can recommend as a '**Medicine**'



Directions for use

At least 30 minutes 5 days a week, or 150mins of exercise a week.

Side effects

- 35-40% Reduction in risk of heart related events
- 50% reduction in breast cancer death
- 50% reduction in bowel cancer death
- 42% reduction in diabetes related death
- 42% reduction in risk of developing diabetes
- A significant reduction in blood pressure: about 7mmHg systolic and nearly 6mmHg diastolic
- Reduction in risk of falls and maintenance of bone health in men and post menopausal women
- And generally happier, healthier patients!

Uses

For the prevention and treatment of most non communicable diseases such as: heart disease, cancer, hypertension, stroke, obesity, diabetes, osteoporosis, mental health problems, parkinson's disease, multiple sclerosis, asthma, chronic obstructive airways disease, musculoskeletal problems and for over 100 different diseases that commonly present to family and hospital doctors and a wide variety of allied health professionals.