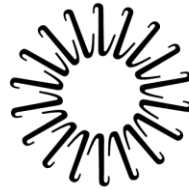


# Benefits of Exercise

## The Reality of How Much Is Enough



**Lifespan Cardiovascular Institute**

**Rhode Island Hospital • The Miriam Hospital  
Newport Hospital**

*Delivering health with care.®*

Center for Cardiac Fitness  
Cardiac Rehab Program  
The Miriam Hospital

## Leading Health Organization Guidelines

AHA	30 min or 150 cal of <u><b>moderate exercise</b></u> per day	Health promotion Prevention of CV disease
Institute of Medicine	60 min of <u><b>moderate exercise</b></u> / day	Health promotion Weight Control
World Health Org	60 min of <u><b>moderate exercise</b></u> per day	Health Promotion Weight Control
Surgeon General	30 min or 150 cal /day of <u><b>moderate exercise</b></u> most, if not all days of the week	Health Promotion
ADA	Follows Surgeon General guidelines	
ACSM	60-85% max HR, 20-60 min, 3-5 day/wk	Cardiovascular Fitness

# Continuum of Misinformation

Only vigorous  
activity promotes  
health



Light, daily  
activities are  
enough








# Defining Exercise & Physical Activity

- **Physical Activity:** Bodily movement produced by skeletal muscles that expend energy above resting state
- **Exercise:** Subset of physical activity
  - Planned, structured, repetitive, and purposeful. Heart rate increases for a period of time
- **Physical Fitness:** Combination of cardiovascular fitness, muscle strength, flexibility, and body composition

# Benefits of Exercise

- **Combat Chronic Disease**

-  Blood Pressure
-  LDL,  HDL,  Trigs
-  Risk of stroke, some cancers
- Improves blood glucose control
- Improves blood vessel function
- Weight management







- **Physical**

- Improves balance, strength, & endurance
- Manage back pain
- Improves immune system

- **Mood**

- Anxiety/Depression
-  Boosts self esteem & confidence
- Improved cognition
- Improves sleep
- Stress management

# Health Promotion Benefits cont

- Blood Pressure
  - Systolic  7.4%
  - Diastolic  5.8%
- Cholesterol
  - HDL  4.6%
  - LDL  1.0%
  - Trigs  1.7%
- Diabetes
  - A1C  1%

# Health Promotion Benefits

- CAD rates of exercisers are half sedentary,  
with minimum exercise recommendation  
independent of other risk factors
- Cardiac patients (with exercise only) have a total mortality decreased by 27%
- Beneficial effects have been shown on myocardial function, coronary artery size, dilation capacity and vulnerability to ventricular fibrillation

# Cardiovascular Exercise Benefits

## Worthy of note.....

### •Cholesterol

- A decrease in circulating lipids can be expected when > 350 cal are expended in one session
- HDL increases with exercise training of 12+ weeks and is even greater with weight loss

### •Diabetes

- The 1% decrease in A1C with exercise is associated with a decrease in macro & microvascular complications similar to what is produced with medication

### •Blood pressure


- Decreases in BP are not related to duration or frequency, ie, any extra movement can be good for blood pressure

"Managing Abnormal Blood Lipids;" *Circulation*. 2005; 112:3184-3209

"Exercise Training for Type 2 Diabetes Mellitus;" *Circulation*. 2009;119:3244-3262

# Weight Management Benefits

Associated with increased volume of exercise

- **Weight Loss**
  -  3%
- **Prevention of weight (re)gain**

# Cardiovascular Exercise Benefits

## Worthy of note.....

### •Weight Control

- National Weight Control Registry has found that most weight loss maintainers expended between 2,445 – 3,298 calories per week
  - Equates to 60-90 minutes per day but.... Can be cumulative
- A weight loss of as little as 2-3% has shown to a more pronounced improvement in LDL, HDL and triglycerides
- Exercise at <150 min per week has showed no change in weight

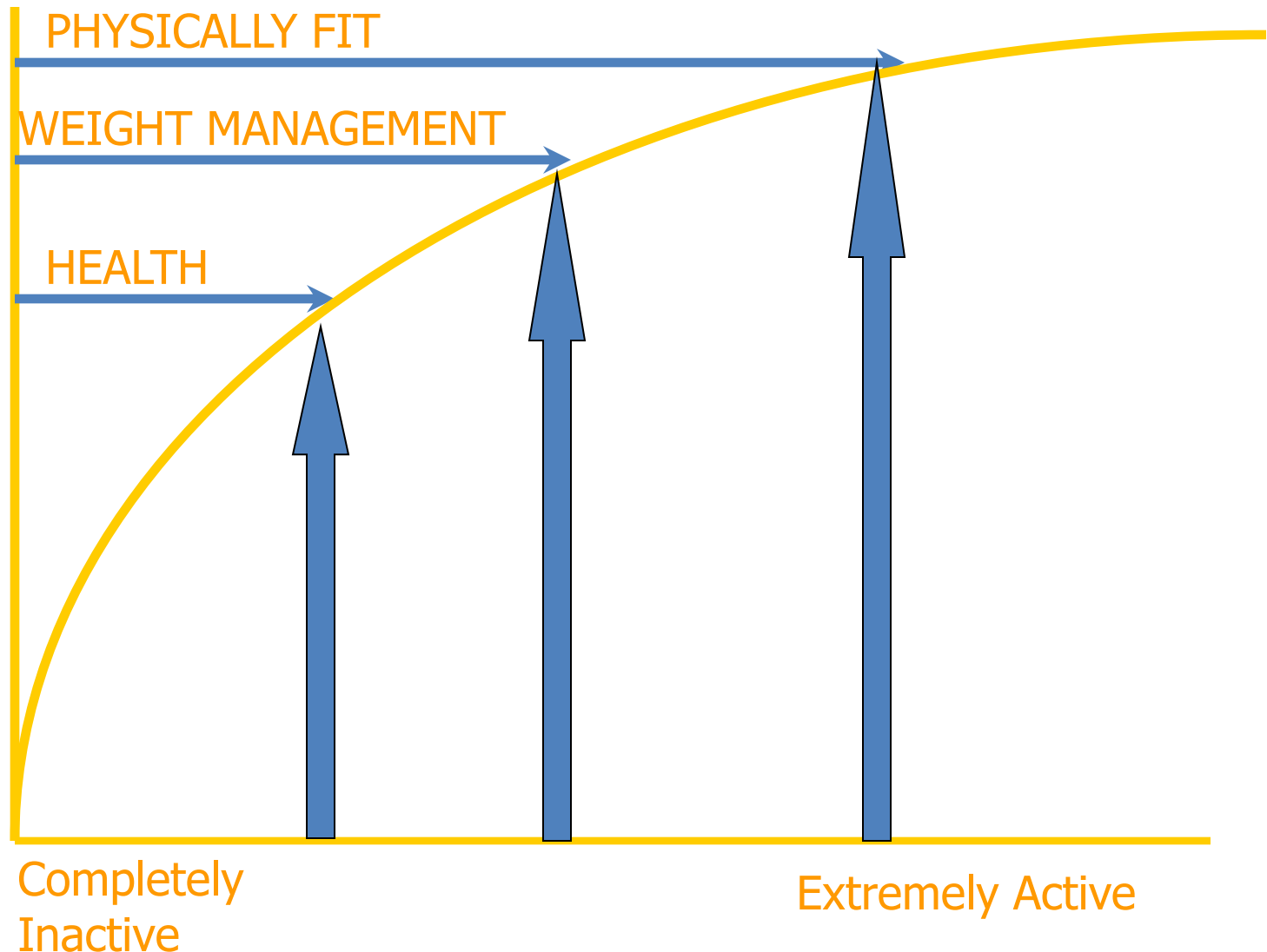
"Appropriate Physical Activity Intervention Strategies for Weight Loss and Prevention of Weight Regain for Adults"; MSSE. 2009; 459-471

"Physical Activity and Public Health;" Circulation. 2007;116:1081-1093

# Steps To Achieving Your Exercise Goals



# 1. Assess how active you currently are and what you would like to accomplish



**2. Use guidelines to determine how much exercise you need**

**3. Be Realistic!**

**4. Evaluate your day... where are you pockets of time?**

# 5. Monitor

- **Calories**

- Most equipment will track your calories
- You can use a website that will estimate calories burned for an activity, e.g,

[www.prohealth.com/weightloss/tools/exercise/calculators\\_2.cfm](http://www.prohealth.com/weightloss/tools/exercise/calculators_2.cfm)

- Remember ~1000 calories / week for health  
>2000 calories / week for weight loss

## 5. Monitor continued

- **Minutes**
  - Track the amount of time you are doing moderate exercise
    - In general moderate = >3 mph walking, 75 watts on bike or <10mph, Water aerobics, line dancing, singles badminton, swimming
    - Newest research: 3000 steps in 30 minutes
  - Remember >150 minutes / week for health  
> 250 / week for weight loss

## 5. Monitor continued

- **Steps: (10, 000 steps/day??)**
  - **Using a pedometer**
    - **Has shown increases of 2000-4000 steps per day (over baseline) = extra 20-40 minutes of activity**
    - **Results in 2-3 % weight loss in one year**
    - **In all studies pedometer monitoring increased physical activity from baseline**
    - **Studies with 10000 steps as the intervention show the greatest improvement**

**"Pedometer Based Walking Interventions and Weight Loss." Annals of Family Medicine. 2008; 6(1)**

**"Effects of Pedometer-Based Physical Activity Interventions: A Meta Analysis;" RQES; 2009; 80(3); 648-655**

## 6. Track

- **Write it down**

## 7. Assess Barriers

- Look at your past exercise attempts – why did you stop?
  - e.g. Time, physical limitations, lack of enjoyment, weather, kids, expense, etc

# Remember.....

- One “pill” doesn’t always work
- What worked for your friend may not work for you
  - Cardiovascular exercise
  - Resistance training
  - Core training (ball, pilates, etc)
  - Circuit training