

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>moderate exercise</u> per day	Health promotion Prevention of CV disease
Institute of Medicine	60 min of <u>moderate exercise</u> / day	Health promotion Weight Control
World Health Org	60 min of <u>moderate exercise</u> per day	Health Promotion Weight Control
Surgeon General	30 min or 150 cal /day of <u>moderate exercise</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

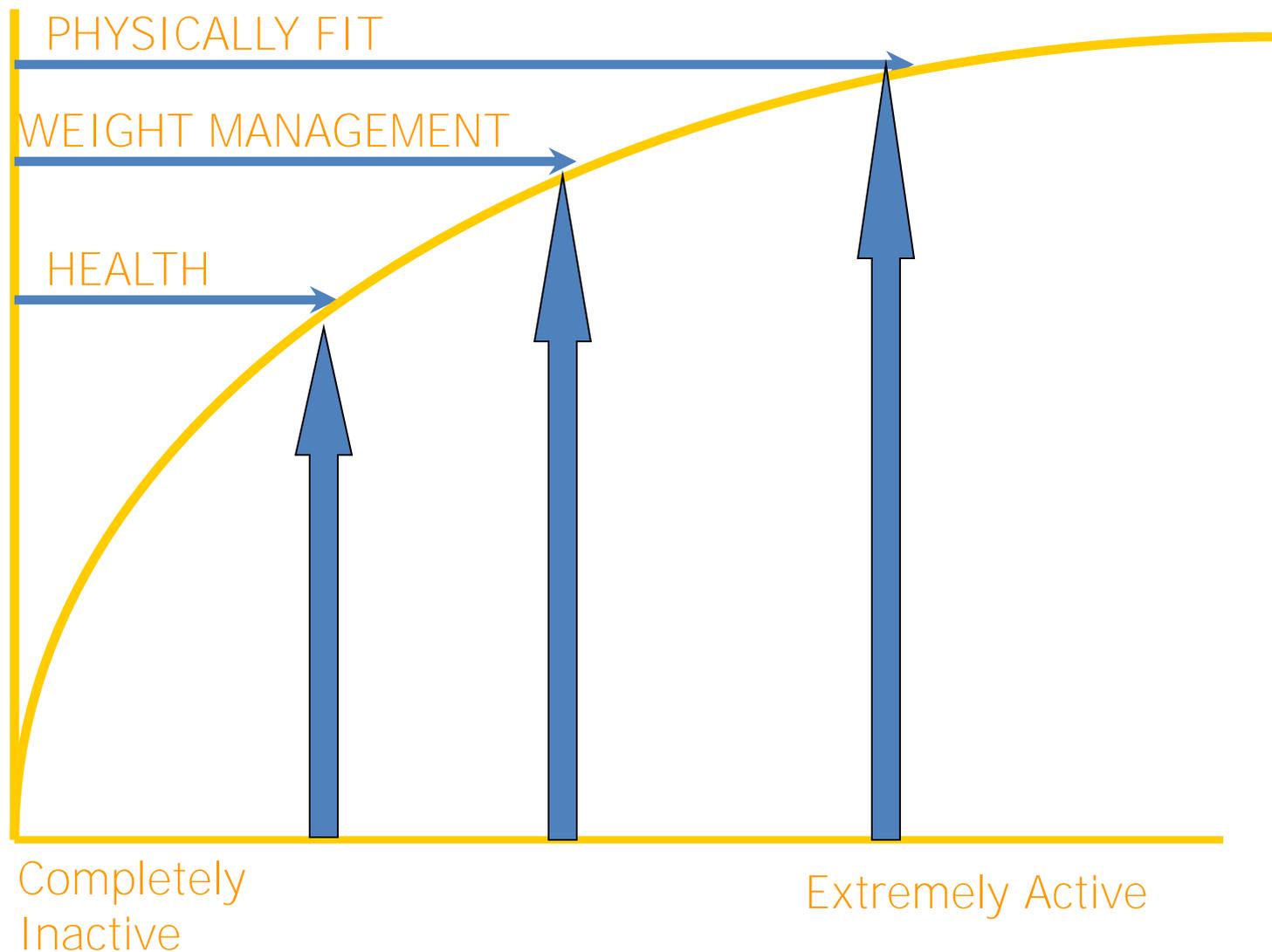
"Appropriate Physical Activity Intervention Strategies for Weight Loss and Prevention of Weight Regain for Adults"; MSSE. 2009; 459-471

"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

- 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