



Week 2 ~ Becoming More Physically Active



Becoming More Physically Active

Week 2 – Eight Weeks to Wellness™
Developed by Don Hall, DrPH, CHES


© 1997 - 2006 LifeLong Health



The Problem – Inactivity

- “It is estimated that 250,000 deaths per year in the United States, approximately 12% of the total, are attributed to a lack of regular physical activity.”
JAMA, Vol 273, No. 5, 402-7
- Most people are sedentary
- Nearly 3 out of every 4 adults get little or no regular exercise
- Only 23% get regular, light-moderate activity
- And only 12% get any regular, vigorous activity
CDC, Advance Data # 325, Apr 7, 2002

© 1997 - 2006 LifeLong Health




The Solution – Regular Exercise

- Regular physical activity reduces the risk of:
 - Obesity
 - High blood pressure
 - Heart disease & stroke
 - Diabetes
 - Osteoporosis
 - Many Cancers
 - Anxiety & depression

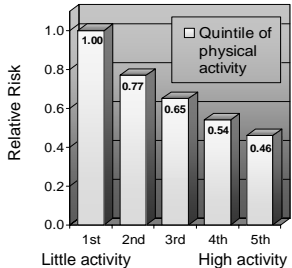
JAMA, Vol 273, No. 5, 402-7

© 1997 - 2006 LifeLong Health




Physical Activity Level and Risk of Heart Attack

- Nurses Health Study, 72,488 women followed for 8 years
- The risk of heart attack decreased with increasing levels of physical activity
- Heart attack risk dropped 54% in the most active women
NEJM, p.650, Aug. 26, '99

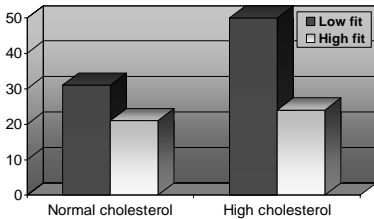


© 1997 - 2006 LifeLong Health




Physical Activity and Cholesterol Level

All Cause Mortality Men
n=25,341
19 yrs of follow-up



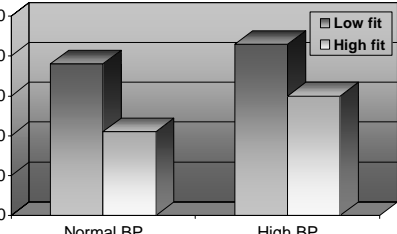
JAMA, Vol 276, No. 3, pp.205-210, 1996

© 1997 - 2006 LifeLong Health



Physical Activity and Blood Pressure

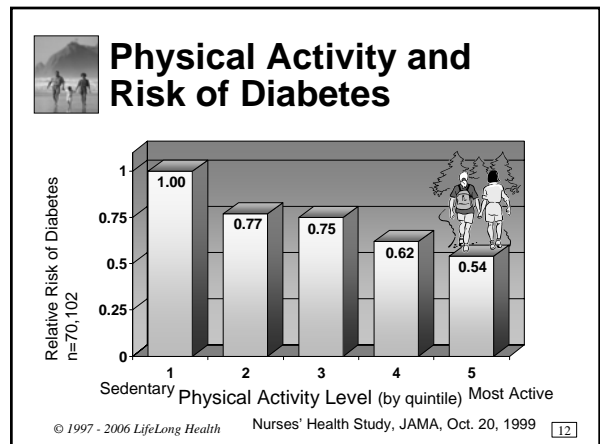
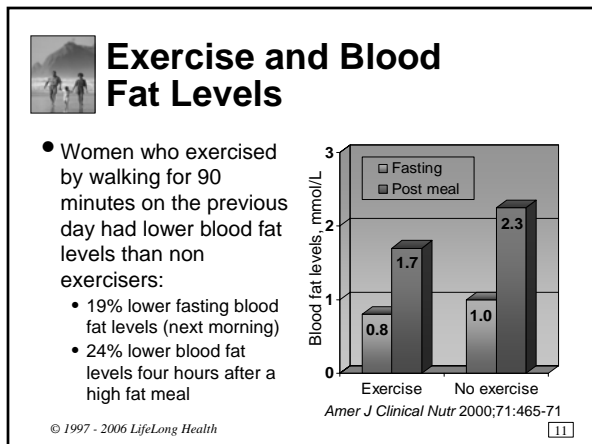
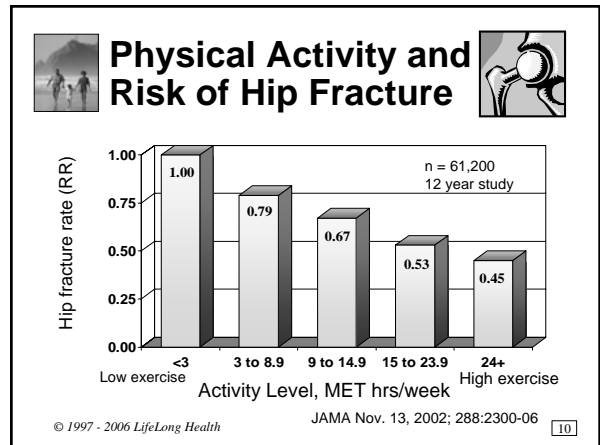
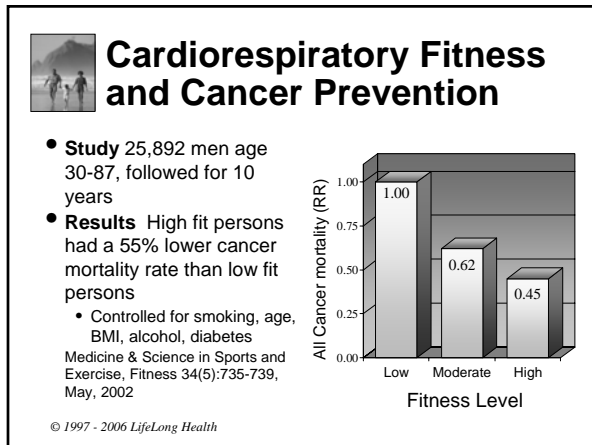
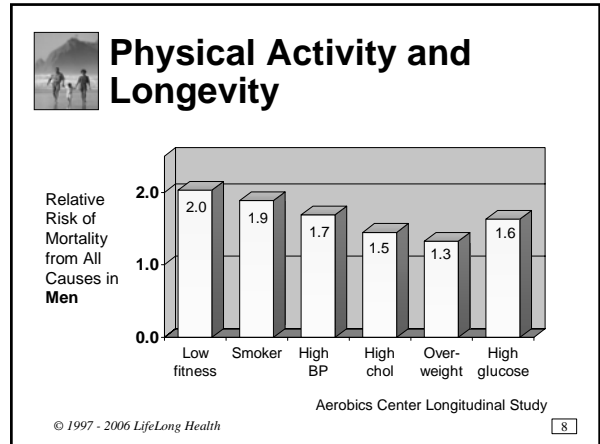
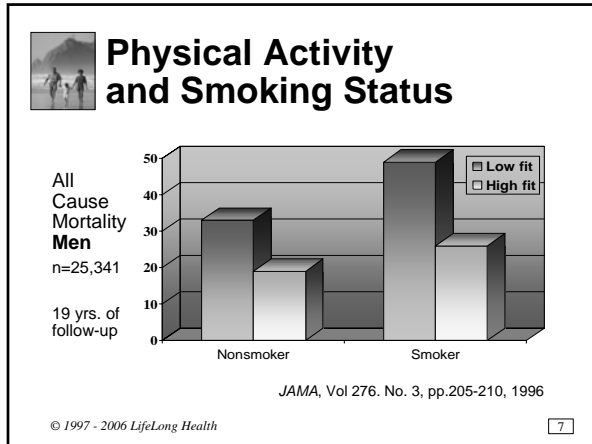
All Cause Mortality Men
n=25,341
19 yrs. of follow-up




Ref. JAMA, Vol 276, No. 3, pp.205-210, 1996

© 1997 - 2006 LifeLong Health

Week 2 ~ Becoming More Physically Active



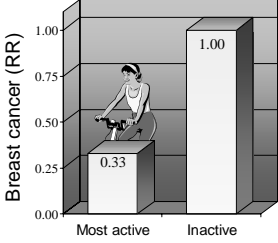
Week 2 ~ Becoming More Physically Active



Physical Activity and Breast Cancer


Breast Cancer Study

- 6,160 women free of breast cancer, followed for 10 years.
- Women age 50+ who consistently had high activity levels, compared to those who were inactive, had 67% less breast cancer.

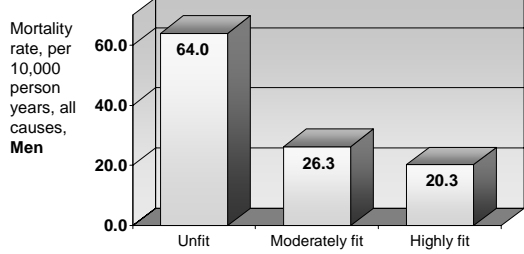


Cancer Epidemiol Biomarkers Prev, July 2001

© 1997 - 2006 LifeLong Health




Moderate Activity and Health

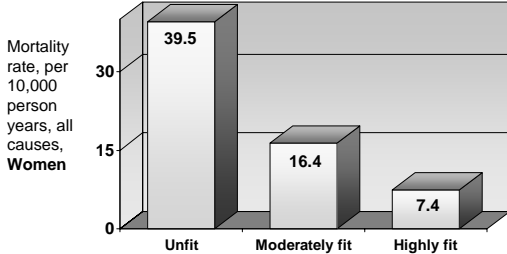


JAMA Vol 262:2395-2401

© 1997 - 2006 LifeLong Health




Moderate Activity and Health



JAMA Vol 262:2395-2401


© 1997 - 2006 LifeLong Health



Physical Activity Guidelines


Every U.S. adult should accumulate 30 minutes or more of moderate intensity physical activity on most, preferably all, days of the week.

The goal is to expend 200+ calories daily, or the equivalent of a 2-mile brisk walk.



Source: Centers for Disease Control and Prevention and the American College of Sports Medicine, JAMA, Vol 273, No. 5.

© 1997 - 2006 LifeLong Health




Institute of Medicine Fitness Guidelines

- To prevent weight gain and to gain optimal health benefits from physical activity, 60 minutes of daily moderate intensity physical activity is recommended. Examples include:
 - Brisk walking (4 mph when possible)
 - Walk/jogging (5 mph)
 - Other activities equivalent to these activities
- Children also need 60 minutes or more of daily activity.

Nat. Academy of Sciences, IOM, 2002


© 1997 - 2006 LifeLong Health



Physical Activity is Good Medicine

"All who can possibly do so ought to walk in the open air every day, summer and winter.


A walk, even in winter, would be more beneficial to the health than all the medicine the doctors may prescribe."



Counsels on Health, 52

© 1997 - 2006 LifeLong Health

Week 2 ~ Becoming More Physically Active



Examples of Physical Activity


Moderate

- Walking briskly, 3-4 mph
- Cycling for pleasure, 10 mph
- Swimming, moderate level
- Conditioning exercises
- Golf, carrying/pulling clubs
- Canoeing/rowing, 2-3 mph
- Mowing lawn, raking leaves, hoeing in garden

More Vigorous

- Walking briskly uphill or climbing stairs
- Cycling fast, 12-16 mph
- Swimming, fast crawl
- Active sports:
 - Tennis
 - Racquetball
 - Basketball
 - Jogging/Running

© 1997 - 2006 LifeLong Health 19



Total Activity Time

- It's not necessary to do all of your activity at one time.
- You may want to break it up into
 - Two 15-minute or
 - Three 10-minute sessions


Two 15-minute sessions

- Walk 1 mile briskly
- Ride the stationary bike for 15 minutes in the evening

Three 10-minute sessions

- Walk 10 minutes to work
- Walk another 10 minutes at noon
- Mow lawn for 10 minutes in the afternoon


© 1997 - 2006 LifeLong Health 20



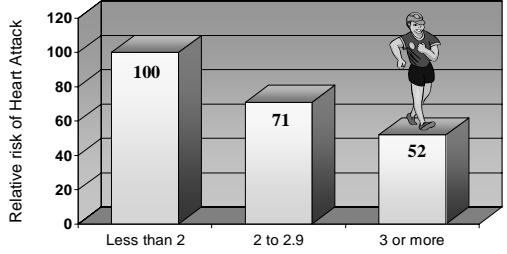
Exercise Intensity

- You need to maintain your activity for the full time planned (10-30+ minutes) without undue strain or fatigue.
- Your activities should feel "fairly easy" to "somewhat hard."
- Your activity should make you breathe deeply but not make you out of breath.
- A moderate sweat is a good indicator that health benefits are occurring.

© 1997 - 2006 LifeLong Health 21




Walking Pace and Heart Health



Walking Pace (mph)	Relative risk of Heart Attack
Less than 2	100
2 to 2.9	71
3 or more	52


n=72,000 women
© 1997 - 2006 LifeLong Health New England Jour. Medicine, Aug. 1999 22



Progression

- Start with moderate activities:
 - Activities you can do without getting out of breath, that are "fairly light" to "somewhat hard".
- Gradually build up to 30+ minutes per day.
- For higher levels of fitness, add vigorous activities or increase activity time to 60 minutes after you are used to regular physical activity.
- If you have a heart or other serious health problem, get your doctor's clearance first.

© 1997 - 2006 LifeLong Health 23




Medical Clearance

- Most adults do not need to see their physician before starting a moderate intensity physical activity program.
 - However, men older than 40 years or women older than 50 years who plan a vigorous program,
 - Or, anyone with either chronic disease or risk factors for chronic disease, should consult his or her physician to design a safe, effective program.

Source: Centers for Disease Control and Prevention and the American College of Sports Medicine, JAMA, Vol 273, No. 5.

© 1997 - 2006 LifeLong Health 24


Week 2 ~ Becoming More Physically Active



Strength and Flexibility

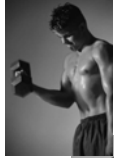
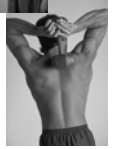
- Include strength and flexibility exercises two to three times per week for other important health benefits.
- Strength and flexibility training helps...
 - Protect against back pain and injuries
 - Maintain bone mineral content and bone strength
 - Prevent the loss of muscle mass
 - Improve your figure/physique
 - Prevent disability in older age

© 1997 - 2006 LifeLong Health 25




Use Proper Technique

- Perform each exercise through a full range of motion.
- Weights should be lifted and lowered in a slow, controlled manner.
- Keep muscular balance by alternating pairs of muscles (e.g. perform a pull for each push exercise).
- Breathe normally, don't hold breath and strain.
- Work in a team for safety & feedback.

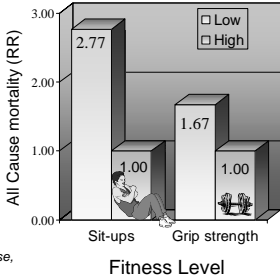



© 1997 - 2006 LifeLong Health 26



Musculoskeletal Fitness and Mortality


- **Study** 3,933 men age 20-69, followed for 13 years
- **Results** Persons with low abdominal fitness and low grip strength had significantly higher mortality rates.
- **Summary** Strength-training improves survival



Activity	Low Fitness Level	High Fitness Level
Sit-ups	2.77	1.00
Grip strength	1.67	1.00

Medicine & Science in Sports and Exercise, Fitness 34(5):740-44, May, 2002

© 1997 - 2006 LifeLong Health 27



Low Strength and Relative Risk for Disability

Activity	RR*
Poor walking ability	2.8
Unable to rise from a chair	2.7
Lift 10 pounds	1.9
Do housecleaning	1.7


*Relative risk (low strength compared to high strength) adjusting for age, weight, education, smoking, physical activity, and chronic health problems.

Grip Strength Rating*	
	Kg
Low strength	< 37
Middle strength	37-42
High strength	Over 42


*One hand

JAMA, 1999, Vol 281, No. 6, 558-60

© 1997 - 2006 LifeLong Health 28




Preventing Disability



The bottom line is . . .

- If you want to remain independent and have fewer limitations as you grow older, it is vital to build and maintain good muscle strength now!
- Do muscle strength-training exercises two to three times each week. Choose eight to 10 exercises of the major muscle groups and do eight to 10 repetitions of each exercise at near maximal effort. Increase the effort as you get stronger.
- Be careful not to overstrain.

© 1997 - 2006 LifeLong Health 29



Case Studies

© 1997 - 2006 LifeLong Health 30

Week 2 ~ Becoming More Physically Active



Ben Levensin, 103 year old sets new world record in shot put for men over 100 years old.

At the World Senior Olympics

Mavis Lindgren 90 year old marathoner

- Mavis started running in her mid 60s because of health problems.
- She holds records for her age division in 11 Portland marathons.
- She has competed all over the world: New York, Los Angeles, San Francisco, San Diego, and London.



Commitment

“I complained about bad feet, until I met the person without feet.”



Aimee Mullins 33

© 1997 - 2006 LifeLong Health



Summary

- Warm-up/Cool-down: Ease into and out of exercise. Don't strain. Allow your body to adjust gradually.
- Activities: Choose activities that use the large muscle groups, that are rhythmic, and that you enjoy.
- Duration/Intensity: Exercise daily when possible.
- Intensity: Choose moderate activities to begin and increase your activity time or vigorous activities gradually.
- Strengthening/Stretching: Do strength and stretching exercises at least two to three times a week.

CDC and the American College of Sports Medicine. *JAMA*, Vol. 273, No. 5

© 1997 - 2006 LifeLong Health

34



Being Active for a Lifetime

- Choose a variety of physical activities you enjoy.
- Don't overdo it and become discouraged. Set realistic goals.
- Do activities with your spouse or friends.
- Keep a written record, an activity log to track progress toward your goals.
- Think of physical activity as play. Have Fun!

© 1997 - 2006 LifeLong Health

35



Quiz

1. T/F 250,000 people die prematurely each year due to inactivity.
2. T/F Regular activity can cut the risk of heart disease in half.
3. T/F Regular activity can cut the risk of heart disease, stroke, high blood pressure, breast cancer, diabetes, and cirrhosis.
4. T/F Smokers who exercise regularly have a lower mortality rate than sedentary nonsmokers.
5. T/F Obesity is a stronger predictor of mortality than a low fitness level.

© 1997 - 2006 LifeLong Health

36

Week 2 ~ Becoming More Physically Active

Quiz continued

6. For best health you need ___ to ___ minutes of moderate physical activity on most, preferably all, days of the week.
7. T/F Most people do not need to see their physician before starting a moderate intensity physical activity program.
8. For best health, strengthening and stretching exercises should be done at least ___ to ___ times per week.
9. T/F The “warm up” is more important than the “cool down” period of an exercise session.
10. List two key principles for encouraging physical activity to be maintained for a lifetime.



www.LifeLongHealth.us

© 1997 - 2006 LifeLong Health