

# THE IMPORTANCE OF PHYSICAL ACTIVITY

Chapter 13

# MYTH OR FACT

Being thin is a sign of fitness.



# FACT

- Appearance is not a good indicator of overall fitness. Thin people who do not exercise are likely to have poor heart, lung, and muscular fitness.



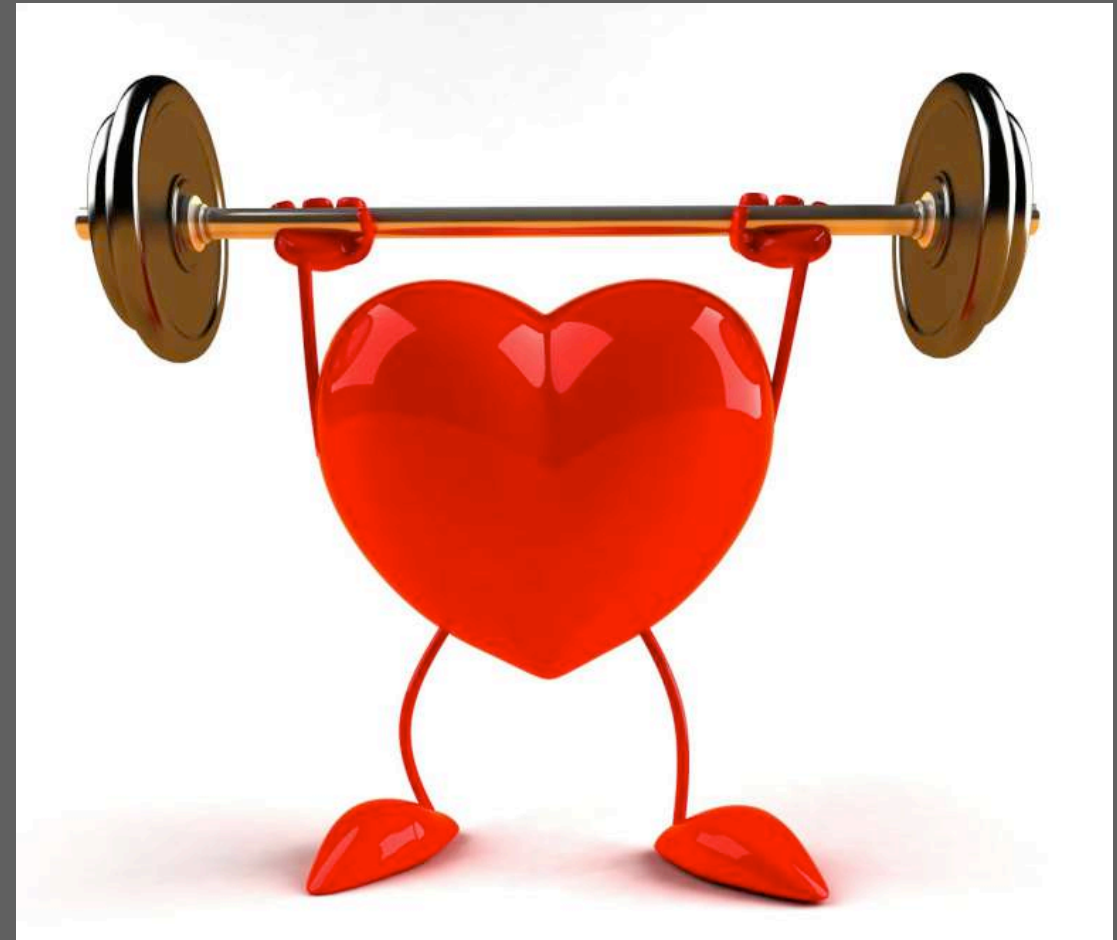
# PHYSICAL ACTIVITY

- Any movement that requires your large muscle groups to work
- 60 minutes or more a day
- Physical activity includes
  - Walking
  - Running
  - Team sports
  - Weight lifting
  - Aerobic class



# PHYSICAL BENEFITS

- **Cardiovascular**
  - Decrease BP
  - Decrease cholesterol
  - Decrease resting HR
- **Weight maintenance**
  - Active metabolism
- **Bone strength**
  - Decrease osteoporosis
- **Balance and coordination**
  - Reduce risk of injury



# PSYCHOLOGICAL BENEFITS

- Brain releases endorphins
  - Block pain messages from reaching your brain
  - Feel good, satisfaction
- Self- confidence
- Reduced stress levels
- Focused/Alert



# SOCIAL BENEFITS

- Fun
- Bond with friends/family
- Build new relationships

# TYPES OF PHYSICAL ACTIVITY



- **Aerobic**

- Ongoing physical activity that raises your breathing and heart rate
- Increase oxygen that your body takes in and uses
- Swimming, running, soccer, rugby

- **Anaerobic**

- Intense physical activity that lasts for a few seconds to a few minutes
- Intense/quick
- Does not supply muscles with enough oxygen to produce energy
- Lifting weight, sprinting, baseball, football



# TYPES OF PHYSICAL ACTIVITY CONT'D

- Isometric exercise

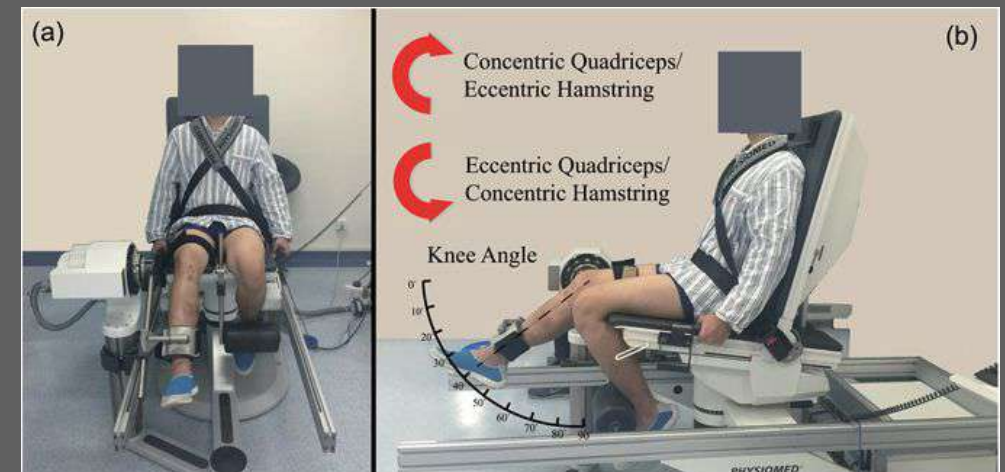
- An exercise in which muscles contract but very little body movement takes place
  - Place your palms together and push them against each other, wall sit

- Isotonic exercise

- Contracting and relaxing your muscles through a full range of motion
  - Bicep curl

- Isokinetic

- Muscle contract at a constant rate
  - Done with a fitness machine



# COMPONENTS OF FITNESS

## MUSCULAR STRENGTH

- The ability of a muscle to produce force
- The amount of weight you can lift
- Tests
  - Standing long jump
  - Vertical jump
  - Medicine ball throw
  - 1 rep max



# COMPONENTS OF FITNESS

## MUSCULAR ENDURANCE

- Ability of your muscles to work for an extended period of time
- Tests
  - YMCA bench press test
  - Pull ups
  - Push ups
  - Sit ups



# COMPONENTS OF FITNESS- CARDIORESPIRATORY ENDURANCE

- Your heart, blood vessels, and lungs are able to distribute nutrients and oxygen and remove wastes efficiently during prolonged exercise
- Regular exercise improves cardiorespiratory endurance
- Tests
  - 1 mile walk
  - 1 mile run
  - Step test
  - PACER test

# HEART RATE

Maximum Heart Rate (MHR)

$$220 - \text{Age} = \text{MHR}$$

Target Heart Rate (THR)

$$\text{MHR} \times \text{Intensity} = \text{THR}$$

# PRACTICE

1. If your coach tells you to go on a long slow run at an intensity of 65%, what would your target heart rate be during your work out?
2. If you are doing a speed work out today and your coach says you should be at an intensity of 85%, what would your target heart rate be?



# COMPONENTS OF FITNESS

## FLEXIBILITY

- The ability to move within the range of motion of joint
- Joint- two or more bones meet
- Tests
  - Sit and reach
  - Shoulder test

### How to perform this test?

•To test your left shoulder flexibility, stand and raise your right arm straight up overhead.

•Bend your right elbow and let your right palm rest on the back of your neck and slide it down your back and between your shoulder blades.

•Reach behind you with your left hand so the back of your hand rests on the middle of your back.

•Now slide your right hand down and your left hand up to try to touch the fingertips of both hands.

•Measure the minimum distance between the fingertips of the right and left hand. Record any overlap as well.

•Switch your hands to perform the test on the opposite shoulder.



# COMPONENTS OF FITNESS

## BODY COMPOSITION

- The amount of fat tissue in your body compared to the amount of lean tissue, such as muscles and bones
- Tests
  - BMI
  - Skin fold
  - Underwater weighing
  - Bioelectrical impedance





# BMI EQUATION

$$\text{BMI} = \{ \text{weight} / (\text{height} \times \text{height}) \} \times 703$$

Example

If Ana weighs 130lbs and is 63" tall

$$\{ 130 / (63 \times 63) \} \times 703$$

$$(130 / 3969) \times 703$$

$$0.0327 \times 703$$

$$= 23.0259$$