

## GROUP FITNESS I - STUDY GUIDE

### HEALTH RELATED COMPONENTS OF FITNESS

1. **CARDIORESPIRATORY/ CARDIOVASCULAR**: a person's ability to move for an extended period of time without becoming overly tired. The heart pumping blood and oxygen efficiently.  
Example: jogging, in line skating, biking, cross country skiing, 20-60 minutes, your recovery heart rate should be 60% of MHR. The quicker your heart rate recovers the more fit your heart muscle is.

#### **AEROBIC VS. ANAEROBIC**

Aerobic: with oxygen (jogging, walking, swimming, cycling) – steady pace

Anaerobic: without oxygen (sprints) – short and fast bursts

#### **TAKING YOUR PULSE**

The number of beats per minute (60 seconds) is your heart rate. DO NOT USE THUMB!

Other methods to assess whether you are in your THRZ include perceived exertion and the "talk test".

#### **CALCULATING TARGET HEART RATE (THR)**

The ideal intensity level at which your heart is being exercised but not overworked.

Step 1:  $220 - \text{Your Age} = \text{Maximum Heart Rate (MHR)}$

Step 2:  $\text{MHR} \times .60 = \text{Minimum (lowest) Target Level}$

Step 3:  $\text{MHR} \times .90 = \text{Maximum (highest) Target Level}$

Target Heart Rate Zone is from \_\_\_\_\_ to \_\_\_\_\_  
(Minimum Target Level or step 2) to (Maximum Target Level or step 3)

2. **MUSCULAR STRENGTH**: A muscle's ability exert force (How much)  
Example: Repeat exercises 8 - 12 times (reps-repetition-performance of an exercise 1 time), repeat 3 times (sets-group of reps)
  3. **MUSCULAR ENDURANCE**: The ability to use a muscle many times without getting tired. (How long)  
Example: Repeat exercise for a certain body part for one minute, repeat 8 times (be sure to exercise the whole body)
- REST**: 48 hours between body parts exercised. Either lift every other day or upper body one day and lower body the next.

#### **Vocabulary**:

Atrophy- Partial or complete wasting away of part of the body.

Hypertrophy- Increase in the volume of an organ or tissue.

Concentric – Shortening or contraction of the muscle.

Eccentric – Lengthening contraction, muscle elongates while under tension.

4. **FLEXIBILITY**: Range of motion of a muscle, limberness of length of muscle across the joint.  
Example: Stretch and hold the stretch for 10 - 15 seconds, repeat 3 times resting between stretches (be sure to stretch the whole body)

#### **HOW DOES STRETCHING HELP?**

1. Injury Prevention: allows body parts and joint to move more freely
2. Improved Performance: more flexible, less energy to move
3. Reduced Muscle Soreness: reduces next day soreness
4. Increased Blood Flow: gets nutrients to the joints

### **STRETCHING TIPS** – to increase your range of motion

1. Be **static** and steady, never **ballistic** or bouncy
2. Stretch to a stretch, not to pain
3. Hold for 15 seconds and relax – **static**
4. **Dynamic stretching** involves movement where the end position is not held.
5. Warm-up or cool down before stretching
6. Breathe slowly and deeply, stay relaxed

Factors that affect flexibility include: age/inactivity/body type/gender.

### 5. **BODY COMPOSITION:** % Body Fat: Ratio of lean muscle mass to fat in the body.

1 pound = 3500 calories. Body fat helps protect the organs and regulate body temperature. You must maintain a healthy body fat percentage.

Example: exercise enough to stay lean, 20 minutes in your THRZ (cardio exercise)

### **3 PARTS OF A WORKOUT**

1. Warm-Up/Stretching (5 – 10 minutes) –increasing blood flow, flexibility and body temperature to ready the body for exercise.
2. Training/Exercise/Activity – the main part of the exercise program
3. Cool Down/Stretching (5 – 10 minutes) – slowly bringing the body back to pre-exercise level  
(should be within 60% of MHR before stopping cool down)

### **F.I.T.T.**

F: Frequency: How often you exercise (need at least 3-5 times per week)

I: Intensity: How hard you exercise (within target heart rate zone)

T: Time: How long you exercise (need 20 minutes in THR zone)

T: Type: What kind of fitness is being used (cardio, flexibility, strength)

### **PRINCIPLES OF TRAINING**

- ♦ **Overload** - various systems of the body will become stronger & function better if increased demands are placed on it.
- ♦ **Progression** - The amount of overload should be increased gradually over time.
- ♦ **Specificity** - Training for a certain activity, you get result in the area you train. Exercise effect is specific to the muscles involved in the activity.

### **SKILL RELATED COMPONENTS OF FITNESS** (in addition to the Health related components):

**Agility:** The ability to change directions quickly and control movement of the entire body.

**Coordination:** The ability to use senses together with body parts or to use several body parts together.

**Balance:** The ability to keep your body in an upright posture while standing still or moving.

**Power:** The ability of muscles to do work in an explosive manner