PA Reasons and Recommendations

Report of the Surgeon General-1996

Revised by ACSM and AHA - 2008

- People who are usually inactive can improve their health and well-being by becoming even moderately active on a regular basis.
- Physical activity does not need to be strenuous to achieve health benefits.
- Greater health benefits can be achieved by increasing the amount (duration, frequency or intensity) of physical exercise.

Benefits of Regular lifelong Physical Activity

- Reduces the risk of dying prematurely
  - 1.5-4 years, but 6-8 longer independently
- Reduces the risk of dying from heart disease
  - 30+ percent
- Reduces the risk of developing obesity and diabetes
  - 42% lower risk for type 2 diabetes
- Reduces the risk of high blood pressure
  - 35-52% lower risk of high BP

Benefits of PA

- Helps reduce blood pressure in people who already have high blood pressure.
  - 5-40 mmHg
- Reduces the risk of developing colon and prostrate cancer.
  - 12-14% (colon) 30% (prostrate)
- Reduces feelings of depression and anxiety
  - 30-60% lower in PA
- Helps control weight

Benefits of PA

- Helps build and maintain healthy bones, muscles and joints
  - Reduces osteoporosis risk
- Helps older adults become stronger and better able to move without falling.
  - Live independently 2-6 years longer
- Promotes psychological well-being.
  - Scores average 40-50% higher in PA

Definitions

Wellness – another way to describe the quality of life, specifically in all areas of life.

Health – refers to a state of complete physical, mental and social well being that allows you to function in an optimal level in many areas of life.

Fitness – state of physical well-being that allows you to:

- Perform daily activities with vigor
- Reduce risk of health problems related to lack of exercise
- Establish a fitness base for participation in a variety of fitness activities

Wellness Components

1. **Social** – meaningful relationships
2. **Physical** – responsible for health by exercising, eating healthy, and avoiding physical risks
3. **Intellectual** – ability to think critically
4. **Emotional** – ability to deal with stress, change
5. **Spiritual** – finding meaning in life

Health related physical fitness

Most important to a person's *health*.

1. **Cardio-respiratory Endurance** – Refers to the efficiency of the circulatory and respiratory systems.
2. **Flexibility** – Person's ability to move a joint through a full range of motion.
3. **Muscular Strength** – Ability to exert force against a resistance for a short period of time.
4. **Muscular Endurance** – Ability to keep working muscles or a period of time without becoming fatigued.
5. **Body Composition** – Amount of muscles, bones, and fat tissue that make up a person's body.

Skill Related Physical Fitness

- Power
- Agility
- Balance
- Coordination
- Reaction Time
- Speed

Major Exercise Training Principles

1. **Overload** – Each person must slowly do more to gain benefits.

2. **Recovery** – Hard and easy days and weeks should be carefully planned to avoid burnout and injury.

3. **Specificity** – Training needs to be specific to each area of fitness.

Major Exercise Training Principles

4. **Individualization** – Exercise should be specific to a persons needs, wants, and goals.

5. **Reversibility** – Benefits diminish if fitness is not maintained.

6. **Maintenance** – Training must be continued in order to maintain benefits.

Basic Components of an Exercise Prescription

- Overload
  - Frequency – How often?
  - Intensity – How hard?
  - Time (Duration) – How long?
  - Type (Mode) – What type?
- Progression – Gradual increase F.I.T.

- Warm-up – To prepare the body for activity and reduce the risk of injury
- Cool-down – Alleviate muscle soreness.

Readiness For Exercise

- More than 50% of people who start an exercise program drop out in the first 3-6 months.
- Why is this?
  - Mastery and self-control
  - Attitude
  - Health
  - Commitment
  - Goals
  - Lack of knowledge….

Intensity Using RPE

Figure 7-4

Rate of perceived exertion (RPE) scale.

An RPE of 11-13 is generally where individuals will feel comfortable.

Training Zone is 12-16.

What is Recommended for health?

- **Cardio-Respiratory**
  - F – 5 days per week
  - I – 12-16 RPE
  - T – 30 or more minute
  - T – Aerobic, Large Muscle Groups

What are some cardio-respiratory activities?

Duration per Session

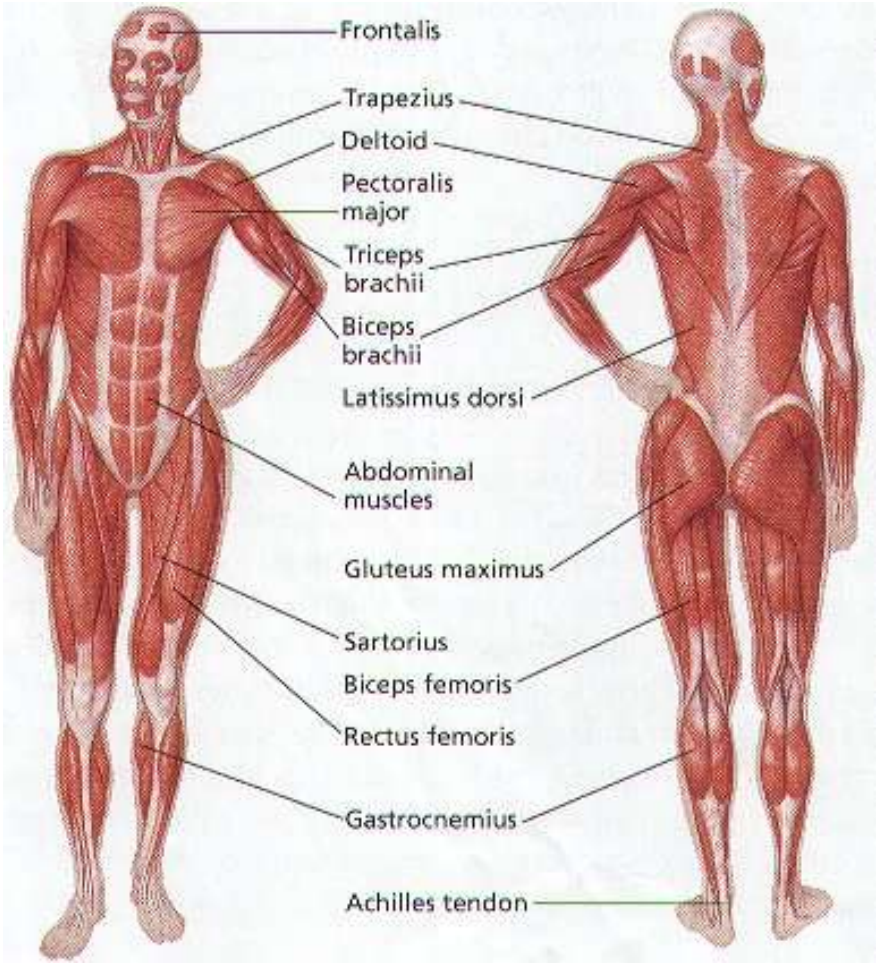
- Duration is inversely related to intensity of exercise
- Start with 10-30 minutes per session at low intensity.
- Gradually increase duration to 40 to 60 minutes per session (including 5-10 minutes of warm-up and cool-down)
- Minimum duration of overload phase is 20-30 minutes, not necessarily continuous.

What is Recommended for health?

- **Muscular Strength and Endurance Training**
  - F – 2-3 days per week
  - I – Stop 2-4 reps before fail
  - T – 1-3 sets of 3-20 reps
  - T – 8-10 exercises including all major muscle groups

Muscle Groups

- Legs
- Hips
- Back
- Abdomen
- Chest
- Shoulders
- Arms
  - According to the CDC.



Flexibility/Stretching Guidelines

- F – 3-7 days per week
- I – Stretch to tightness but no pain
- T – 15-30 sec per stretch, 2x per
- T – Static, all major muscle groups

- Dynamic flexibility is now accepted
- Focus on lower back and large muscles

Factors to Consider

- Initial level of fitness
- Current Health
- Individual Goal
- Individual preference for exercise
- Environment
- Equipment
- Cost
- Time
- Age
- Medications that might effect HR
- Risk of injury
- Needs to reach goals
- Knowledge
- Attitude
- Motivation
- Many More…….
- You must consider them all to prescribe exercise!