

# Safe Physical Conditioning



Jeffrey A. Kline, ATC, NASM-PES  
June 24, 2010

# What Is Sports Medicine?



- A branch of medicine that specializes in the medical and therapeutic aspect of injuries resulting from participation in sports or physical activity.
- Community Outreach
- Education and Health Promotion
- Early access to specialists

# Before You Start

- Physician clearance
  - Men > 40
  - Women > 50
  - “Yes” response on PAR-Q
- Cardiac history questions
- Known cardiac conditions
- Recent surgery, orthopedic conditions
- Metastatic disease of the bone
- Pregnancy, kidney dysfunction, diabetes, BP, sedentary lifestyle

# Guidelines For Healthy (Older) Adults > 65

- Least physically active age group
- Generate higher medical costs
- Most rapidly growing age group
- Potential for improvement on all fronts

## Activity Plan

- Include each type of activity
- Gradual or step approach using multiple bouts ( $\geq 10$ )
- Self-monitoring is okay

# Guidelines For Healthy (Older) Adults ≥ 65

## Muscle Strengthening

- Progressive plan
- 2 days/week
- Major muscle groups
- Use a weight that allows for 10-15 reps
- 5-6 / 10 (moderate)
- 7-8 / 10 (vigorous)

## Aerobic Activity

- 5 days/week for 30 (moderate)
- 3 days/week for 20 (vigorous)
- Vigorous intensity
  - 7 or 8 / 10
- Moderate-intensity
  - 5 or 6 / 10

# Guidelines For Healthy (Older) Adults > 65

## Balance Exercise

- To reduce risk of injury from falls, perform activities that maintain or improve balance
- Older adults should exceed the minimum provided they have no conditions that preclude higher amounts of physical activity.

## Flexibility

- 2 days/week
- 10 min per day

# Guidelines For Adults 50-64

Significant chronic conditions or functional limitations

- Impairments
- Functional limitations
- Disability

## Aerobic activity

- Accumulate 5 days/week
- 30 min/day (moderate)
- 20 min/day (vigorous)
- Combinations of moderate and vigorous intensity okay to meet recommendations

# Guidelines For Adults 50-64

## Muscle Strengthening

- At least 2 day/week
- 8-10 exercises
- Major muscle groups
- 8-12 reps
- Progressive program
- Weight bearing calisthenics



- Multi joint exercise
- Multi planar exercise
- Upper and lower
- Leg press
- Lunges
- Bench press
- Rowing
- Combined movements

# Performance Continuum



# References

- **Physical Activity and Public Health in Older Adults: Recommendation from the American College of Sports Medicine and the American Heart Association, 2007.**
- **AMERICAN COLLEGE OF SPORTS MEDICINE POSITION STAND.** The recommended quantity and quality of exercise for developing and maintaining cardiorespiratory and muscular fitness, and flexibility in healthy adults. *Med. Sci. Sports Exerc.* 30:975–991, 1998.
- **BORG, G.** Psychophysical bases of perceived exertion. *Med. Sci.Sports Exerc.* 14:377–381, 1982.
- **CENTERS FOR DISEASE CONTROL AND PREVENTION.** Prevalence of physical activity, including lifestyle activities among adults -United States, 2000–2001. *MMWR* 52:764–769, 2003.
- **FRANKLIN, B., M. WHALEY, and E. HOWLEY.** *ACSM's Guidelines for Exercise Testing and Prescription.* 6th edition. 137–164, 2000.
- **HASKELLW. L., I. M. LEE, R. R. PATE, K. E. POWELL, S. N. BLAIR, B. A. FRANKLIN, C. A.MACERA, G. W. HEATH, P. D. THOMPSON, and A. BAUMAN.** Physical activity and public health: updated recommendation for adults from the American College of Sports Medicine and the American Heart Association. *Med. Sci. Sports Exerc.* 39:1423–1434, 2007.