

Course: Designing Older Adult Exercise Programs

Session 1:

Exercise Recommendations and Guidelines for Apparently Healthy Older Adults

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Session Objectives

- Understand how to design exercise programs for preventive health (e.g., exercises to reduce risk of falling, diabetes, heart disease)
- Understand the current recommendations for aerobic exercise in apparently healthy older populations
- Understand the current recommendations for resistance exercise in apparently healthy older populations
- Understand the current recommendations for flexibility exercise in apparently healthy older populations
- Understand how to identify signs and symptoms suggestive of acute or chronic conditions and explain how to refer to appropriate medical professionals

Preventive Exercise Programming

- Multi-Dimensional
- Consistent
- Flexible
- Sustained
- Customized



Cardiovascular Exercise

ACSM Guidelines

“Accumulate 30 min or more of moderate-intensity aerobic exercise on most, preferably all, days of the week”

Target Heart Rate

Overall Intensity Range:

55-90% HR_{max}

40-85% HRR (heart rate reserve)

11-15 Rating of Perceived Exertion

Moderate Intensity:

65-75% HR max

50-60% HRR

12-13 RPE

Rating of Perceived Exertion (RPE)

6	No exertion at all
7	
	Extremely light
8	
9	Very light
10	
11	Light
12	
13	Somewhat hard
14	
15	Hard (heavy)
16	
17	Very hard
18	
19	Extremely hard
20	Maximal exertion

Cardiovascular Modes

Weight-Bearing

- Treadmill
- Elliptical Trainer
- Walking/Jogging
- Aerobics
- Dancing

Non-Weight-Bearing

- Biking
- Recumbent Stepper
- Swimming
- Rowing
- Arm Ergometer

Resistance Exercise

One set of 8-12 repetitions for 8-10 exercises that condition the major muscle groups 2-3 days per week is recommended.

Multiple-set regiments may provide greater benefit if time allows.

For older and more frail persons, 10-15 repetitions may be more appropriate.

Resistance Options

- Free weights
 - Dumbbells
 - Bars
 - Medicine/Core Balls
- Selectorized Weight Stack Machines
- Body weight
- Tubing/bands
- Pneumatic
- Hydraulic
- Water

Flexibility Exercise

Flexibility exercises should be incorporated into the overall fitness program sufficient to develop and maintain range of motion (ROM).

These exercises should stretch the major muscle groups and be performed a minimum of 2-3 days per week.

Stretching should include appropriate static and/or dynamic techniques.

Stretching Techniques

- Static
- Dynamic/Ballistic
- Proprioceptive Neuromuscular Facilitation (PNF)

Balance Exercise

- Somatosensory
- Gait Pattern Enhancement
- Center of Gravity Control
- Postural Strategy
- Strength, Flexibility, Endurance

Program Design

Cardiovascular	5-7 d/wk
Resistance	2-3 d/wk
Flexibility	5-7 d/wk
Balance	As needed

Alternative Program Options

- Tai Chi/Qi Gong
- Pilates
- Yoga
- Silver SneakersTM
- FallProofTM

Risk Factors for CVD

■ Unmodifiable

- Age
- Gender
- Family History

■ Modifiable

- Smoking
- **Inactivity**
- Hypertension
- High Cholesterol
- Diabetic

Signs and Symptoms of CVD

- Pain, discomfort in the chest, neck, jaw, arms or other areas
 - Women: back pain
 - Diabetics: no pain
- Shortness of breath (dyspnea) at rest or with mild exertion
- Dizziness or syncope
- Ankle edema
- Palpitations or tachycardia
- Intermittent claudication
- Known heart murmur
- Unusual fatigue with usual activities

Signs and Symptoms of Hypoglycemia

- Fainting
- Sweat
- Dizziness
- Excessive hunger
- Fatigue
- Irritability
- Unsteady Gait
- Blurred vision
- Confusion
- Loss of consciousness
- Headache
- Inability to concentrate
- Nervousness
- Slurred speech

Common Musculoskeletal Conditions

- Osteoarthritis/Rheumatoid Arthritis
- Joint replacement
- Fibromyalgia
- Radiculopathy (e.g. sciatica)
- Rotator cuff (RTC) injury
- Osteoporosis

When To Refer

- New condition that has not been properly evaluated by a physician
- Signs and symptoms suggestive of cardiovascular, metabolic or pulmonary disease
- Existing condition that has changed in nature
- Unstable cardiovascular or metabolic disorder
- Potential psychological or emotional problems
- Anything outside your scope of practice

How To Refer

- Instruct client to seek medical attention
- Discontinue training if necessary
- Send information regarding client's status directly to physician's office
- Follow-up with client
- Have client release medical information and have it sent to you
- Re-evaluate

Becoming Part of the Allied Health Team

- Communicate regularly with providers (MD, PA, PT, OT, ATC, RN, DO, ND)
- Keep Release of Medical Information form
- Refer appropriately
- Send follow-up information for client's medical files when pertinent
- Seek advice from providers for client's program

Thank you!!!