

Cardiovascular Health

Assessment and Intervention
Among Patients with Physical
and/or Cognitive Disabilities

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Learning Objectives

Following the lecture, the learner will be able to:

- Recognize the impact of disability on overall health status.
- Identify the benefits of physical activity for improving overall health among patients with physical and/or cognitive disabilities.
- Demonstrate the ability to appropriately assess cardiovascular fitness for patients with disabilities.
- Select appropriate interventions for improving cardiovascular fitness among patients with physical and/or cognitive disabilities.

Disability Increases Risk of Inactivity¹⁻⁴

- Guatemala: 12-14% prevalence of disability²
- Impact of disability on overall health
 - Nearly half of all adults with disabilities get no leisure time aerobic physical activity¹
 - Higher risk of inactivity → secondary health problems¹

Benefits of Physical Activity⁵⁻⁸

- Reduces risk of comorbidities and further impairment
- Supports development and maintenance of bone density, strength, and endurance
- Promotes psychological well-being
 - Improves self image, sleep quality, stress management and self-efficacy
- Contributes to normal childhood development

WHO Recommendations for Physical Activity⁸

- Physical activity for EVERY body
- Children 5-17 years old:
 - GOAL: 60+ minutes of moderate to vigorous aerobic activity daily
 - Applies to children/youth with disabilities as well
 - Focus on progression



WHO Recommendations for Physical Activity⁸

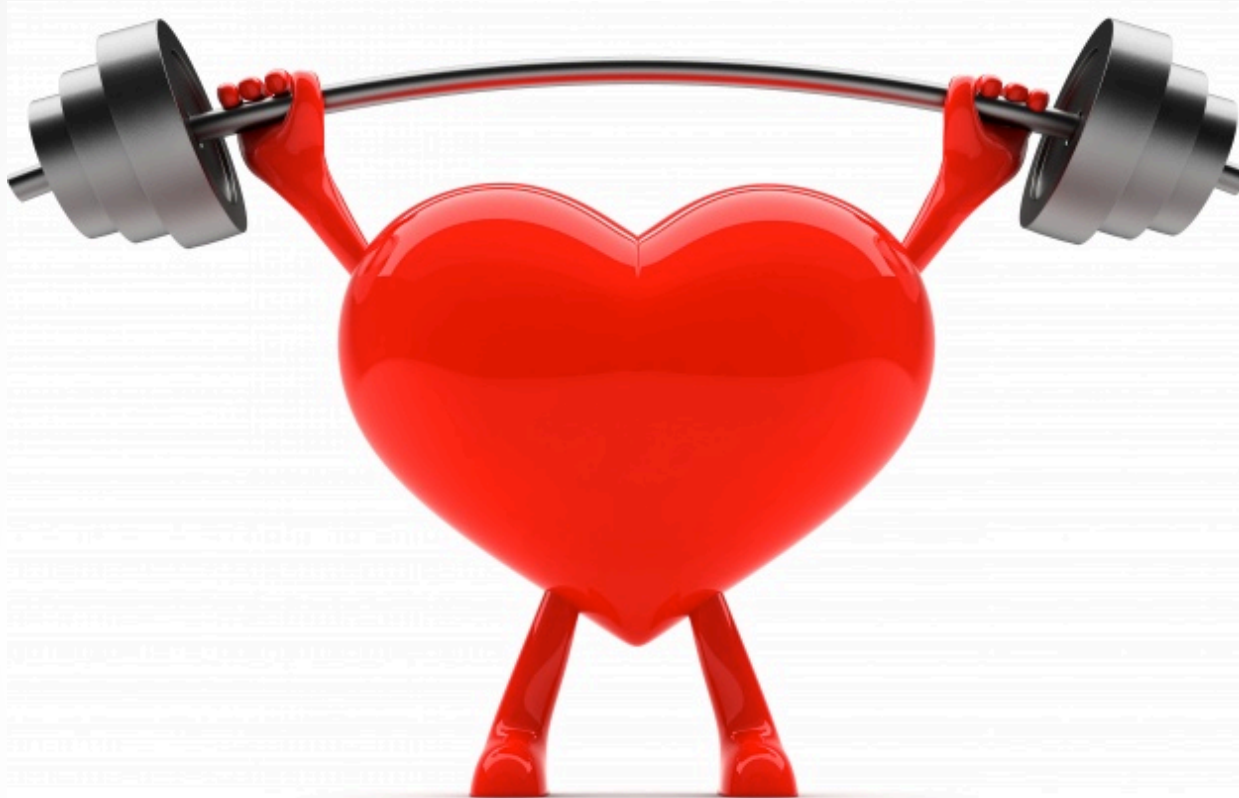
- Adults:
 - GOAL: 150 minutes of moderate-intensity aerobic activity per week
- All patients should be as physically active as their abilities and conditions allow

Physical Therapy Plan of Care⁹

- Consider all components:
 - Strengthening
 - Stretching
 - Physical activity



*To promote general health
and well-being for all patients!*



Cardiovascular Assessment

Heart Rate and Blood Pressure Monitoring¹⁰⁻¹⁵



Rate of Perceived Exertion^{16,17}

New RPE scale	
0	Nothing at all
0.5	Very, very weak
1	Very weak
2	Weak
3	Moderate
4	Somewhat strong
5	Strong
6	
7	Very strong
8	
9	
10	Very, very strong Maximal

Six Minute Walk Test¹⁸⁻²⁴



6-Minute Wheelchair Push Test^{25,26}



Maintaining Patient Safety²⁷

- Refer to the “How to Decide if it’s safe...” handout
- Always keep a close eye on your patients when performing physical activity!
 - Allow for rest breaks if activity is too intense
 - STOP activity should “red flags” arise

Contraindications for Physical Activity²⁸



Absolute Contraindications

- Recent heart attack
- Chest pain
- Unstable heart disease

Relative Contraindications:

- Extremely high blood pressure
- Abnormal heart rate
- Diagnosed heart issues

Intervention Options

...

Walking or Wheelchair Propulsion²⁹



Treadmill Training/Bike Ergometry^{30,31}



Aquatics³²⁻³⁵



Adapted Sports^{36,37}



Dancing³⁸



Interventions for Improving Fitness³⁹

- Gradually increase the frequency, intensity, and duration of activity when first beginning an aerobic exercise program
- Consider the patient's disability, endurance, and any precautions/contraindications to exercise
- **Make it enjoyable!**

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Questions?

Now, let's practice!

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