Cardiopulmonary Program Overview

Cardiopulmonary Impairments

Critical care doctors know that the longer a patient remains in the ICU, the more likely they are to suffer long-term physical, cognitive and emotional effects of sedation and immobility; therefore, the goal is to transition those who are medically stable to facilities that can provide necessary treatment and therapies in order to regain functional abilities. We are prepared to address the resulting cardiopulmonary impairments for those recovering from respiratory illnesses including COVID-19.

Benefits of Cardiopulmonary Exercise

Cardiopulmonary programs are a part of rehabilitation that help decrease shortness of breath, improve lung capacity, and improve quality of life as patients recover from illness. Research supports that the cardiopulmonary exercises often utilized in therapy can improve lung capacity over time. Cardiopulmonary programs may not only reduce symptoms in patients through proper breathing and airway clearance techniques, but with patient-specific, carefully prescribed, and gradually progressing exercises and education, they can improve the patient's quality of life significantly.

Elements of a Cardiopulmonary Program

- Warm-up exercises
- Stretching
- Aerobic exercises (e.g., stationary bike, walking)
- Resistance exercises
- Airway clearing techniques
- Breathing exercises
- Cognitive re-education (to address management of risk factors)

*Therapists may monitor heart rate, oxygen levels, blood pressure, level of exertion, and shortness of breath throughout exercises, and record levels during each session to track the patient's progress.

Therapeutic Approach to Recovery

Various therapies may be involved in program implementation including **physical, occupational and/or speech** therapies. The discipline-specific evaluation of the patient's current aerobic endurance, muscle strength, balance, flexibility, and cognitive status is used to formulate an individualized and progressive cardiopulmonary program. The program

- encompasses a variety of exercises and educational sessions, including **safety education, work simplification and energy conservation** to expedite return to home and/or community.
- is designed to **minimize progression of debilitating symptoms to the lungs and heart** through cardiopulmonary rehab, education, and cognitive retraining.
- provides patients/caregivers with **skills to complete exercises on their own** prior to discharge to promote continued success.
- combined with traditional skilled therapy, allows patients to not only address cardiopulmonary deficits, but to also address deficits in all other functional areas in order to achieve their personal goals!

Tools for Success

***Cardiopulmonary Patient Recovery Guide*:** This handout provides patients and their families insight into strategies that will aid in recovering from COVID-19.

***Breathing Exercises handout*:** This exercise guide is an excellent tool for all patients whose treatment plan indicates a need for improved lung function to increase endurance and promote energy conservation.