



Course Title: **Respiratory Rescue: Understanding the Pulmonary Dysfunctional Client**

Produced by: **Fitness Learning Systems**
1012 Harrison Ave #3 Harrison OH 45030
www.fitnesslearningsystems.com 1-888-221-1612

Course Type: **e-Learning Home Study**

Credit hours: IACET (International Association for Continuing Education and Training) 0.3 (3 Hours) Approved and Accepted by several additional organizations.

Author:

Soraya Cates Parr, BS CPT

Soraya Cates Parr has been serving the fitness and health industry for thirty-two years, Soraya is a certified group exercise instructor and personal trainer. Her certifications include AEA, ACE, AFAA, ISSA, NETA and NSCA-CPT.

After working as fitness coordinator at Baptist Hospital in Nashville Tennessee, she became State Health Educator for Dickson, Houston, and Humphries Counties in Tennessee. This position allowed her the honor of working with the impoverished, the incarcerated, and people with chronic conditions.

She was appointed (2005) and re-elected (2009-2013) to serve on the board of the Governor's Council on Fitness and Health for the State of Tennessee for this work.

Soraya is the creator of BellyTone® fitness programs.

She graduated with a Bachelor's of Science degree from Tennessee Technological University, Cookeville, Tennessee, in Plant and Soil Science. She worked several years as Cheekwood Botanical Garden's Orchid Horticulturist in Nashville Tennessee.

She considers herself an avid life-long learner. Her hobbies include music, dance, folklore, botany and amateur radio for emergency communications.

Course Summary:

It is important for the health-fitness professional to have a clear understanding of the anatomy and physiology of the respiratory system. Knowledge of the respiratory system and pulmonary function is fundamental for training the client with chronic conditions known as pulmonary disorders. These disorders are characterized by airflow obstruction, cardiovascular and muscular impairments, abnormalities of gas exchange, and psychological issues. Exercise can improve musculoskeletal and psychosocial factors that limit clients with pulmonary disease.

The purpose of this course is to help you understand the basic structure and function of the respiratory system and the muscles that control the respiratory system, with guidelines and recommendations provided for working with the client with a dysfunctional pulmonary system.

Objectives:

After completing this course you will be able to:

1. Identify 17 terms and definitions pertaining to pulmonary function and disease.
2. Briefly describe the role of oxygen in the human body.
3. Discuss the role of exercise training in pulmonary function.
4. Identify the divisions and basic anatomy of the respiratory system, and the muscles involved with inspiration and expiration.
5. Describe pulmonary circulation and air flow/gas exchange in the human body.
6. Describe 4 breathing exercises for clients with pulmonary dysfunction.
7. Discuss 12 recommendations for working with clients with chronic pulmonary dysfunctions.
8. Discuss 3 general categories of medication for pulmonary dysfunction, including side effects and effects on exercise.
9. Discuss contraindications and symptoms for exercise termination for clients with pulmonary dysfunction.
10. Describe symptoms and causes of asthma and the ACSM FITT-VP recommendations for individuals with asthma.
11. Describe symptoms, 3 forms, causes, and 8 special considerations for clients with COPD and the ACSM FITT-VP recommendations for individuals with COPD.
12. Discuss four other conditions that can affect the function of the respiratory system.
13. Describe the affects of submersion and hydrostatic pressure, general recommendations, and 8 considerations for aquatic exercise for clients with pulmonary dysfunction.

Outline:

Learning Outcome 1 Identify 17 terms and definitions pertaining to pulmonary function and disease.	
# Pages: 4	Videos: 0
Audio: 0	Interactive Material: 0
Subtopics: 1.1 Respiratory Facts 1.2 Respiratory Terminology	
Assessment Questions: 3	
Learning Outcome 2 Briefly describe the role of oxygen in the human body.	
Pages: 2	Videos: 0
Audio: 0	Interactive Material: 0
Subtopics:	

2.1 The Role of Oxygen	
Assessment Questions: 1	
Learning Outcome 3 Discuss the role of exercise training in pulmonary function.	
Pages: 2	Videos: 0
Audio: 1	Interactive Material: 0
Subtopics: 3.1 The Role of exercise Training	
Assessment Questions: 2	
Learning Outcome 4 Identify the divisions and basic anatomy of the respiratory system, and the muscles involved with inspiration and expiration.	
Pages: 15	Videos: 0
Audio: 0	Interactive Material: 2 flipping pictures
Subtopics: 4.1 The Respiratory System 1.1 Divisions of the Respiratory System 1.2 Anatomy of the Respiratory System 1.3 Muscles of the Respiratory system Inspiratory Expiratory	
Assessment Questions: 4	
Learning Outcome 5 Describe pulmonary circulation and air flow/gas exchange in the human body.	
Pages: 7	Videos: 0
Audio: 0	Interactive Material: 0
Subtopics: 5.1 The Respiratory System • Pulmonary Circulation • Air Flow and gas Exchange	

Assessment Questions: 4	
Learning Outcome 6 Describe 4 breathing exercises for clients with pulmonary dysfunction.	
Pages: 5	Videos: 4
Audio: 1 and with Videos	Interactive Material: 0
Subtopics: 6.1 Breathing exercises <ul style="list-style-type: none"> • Diaphragmatic Breathing Technique • Pursed-lip Breathing • Side to Side • Chest Expansion 	
Assessment Questions: 4	
Learning Outcome 7 Discuss 12 recommendations for working with clients with chronic pulmonary dysfunctions.	
Pages: 1	Videos: 0
Audio: 0	Interactive Material: 0
Subtopics: 7.1 General Recommendations	
Assessment Questions: 1	
Learning Outcome 8 Discuss 3 general categories of medication for pulmonary dysfunction, including side effects and effects on exercise.	
Pages: 3	Videos: 0
Audio: 1	Interactive Material: 0
Subtopics: 8.1 Medications and Supplements	
Assessment Questions: 2	

<p>Learning Outcome 9</p> <p>Discuss contraindications and symptoms for exercise termination for clients with pulmonary dysfunction.</p>	
Pages: 3	Videos: 0
Audio: 0	Interactive Material: 0
<p>Subtopics:</p> <p>9.1 Exercise and Pulmonary Conditions</p> <ul style="list-style-type: none"> • Contraindications 	
Assessment Questions: 1	
<p>Learning Outcome 10</p> <p>Describe symptoms and causes of asthma and the ACSM FITT-VP recommendations for individuals with asthma.</p>	
Pages: 7	Videos: 0
Audio: 0	Interactive Material: 0
<p>Subtopics:</p> <p>10.1 Exercise and Pulmonary Conditions</p> <ul style="list-style-type: none"> • Asthma 	
Assessment Questions: 3	
<p>Learning Outcome 11</p> <p>Describe symptoms, 3 forms, causes, and 8 special considerations for clients with COPD and the ACSM FITT-VP recommendations for individuals with COPD.</p>	
Pages: 8	Videos: 0
Audio: 2	Interactive Material:
<p>Subtopics:</p> <p>Body Systems</p> <p>11.1 Exercise and Pulmonary Conditions</p> <ul style="list-style-type: none"> • COPD 	

Assessment Questions: 3	
Learning Outcome 12 Discuss four other conditions that can affect the function of the respiratory system.	
Pages: 2	Videos: 0
Audio: 2	Interactive Material: 0
Subtopics: 12.1 Exercise and Pulmonary Conditions <ul style="list-style-type: none"> • Other Conditions 	
Assessment Questions: 1	
Learning Outcome 13 Describe the affects of submersion and hydrostatic pressure, general recommendations, and 8 considerations for aquatic exercise for clients with pulmonary dysfunction.	
Pages: 7	Videos: 0
Audio: 0	Interactive Material: 0
Subtopics: 13.1 Aquatic Exercise and Pulmonary Dysfunction	
Assessment Questions: 3	

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- American College of Sports Medicine. (2006) ACSM's Certification Review. 2nd ed. Philadelphia: Lippincott, Williams and Wilkins. www.acsm.org.
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Resources:

- Aerobics and Fitness Association of America <http://www.afa.com>
- Alpha-1 Foundation. <http://alpha-1foundation.org>
- American College of Sports Medicine www.acsm.org
- American Council on Exercise. www.acefitness.org
- American Alliance for Health, Physical Education, Recreation and Dance. www.aahperd.org
- Aquatic Exercise Association. www.aeawave.com
- Arthritis Foundation. www.arthritis.org/

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- National Strength and Conditioning Association. www.nasca.org
- Powerbreathe UK. <http://www.powerbreathe.com/>