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Pulmonary Rehabilitation Exercise Prescription in COPD: Review of Selected Guidelines from a recent official statement from the American Association Of Cardiovascular And Pulmonary Rehabilitation (AACVPR)

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- A recent AACVPR statement compared three major national / international statements from ATS,¹ AACVPR,² and ACSM (American College of Sports Medicine)³ on exercise prescription for persons with COPD. The purpose of the statement was to offer pulmonary rehabilitation (PR) clinicians guidance in developing and modifying exercise prescriptions in COPD.
- All guidelines recommend aerobic and resistance training with exercise prescriptions that include exercise frequency, duration, and intensity. None make clear and specific recommendations for progression of endurance training.
- Peak work rate is a useful guide in determining initial exercise loads.

Areas of inconsistency include:

1. Recommendations for progression of resistance exercise.
2. Recommendations for flexibility training.
3. Specific recommendations for upper extremity training.

The core components of exercise training programs for COPD are endurance and resistance training; these should be included in all exercise prescriptions. Guidelines agree that endurance training at least 3 to 5 times weekly with ultimate targets > 60% of maximal peak exercise should be used in all programs.

While there is no consensus of initial workloads, pace of increasing the exercise load or session or program duration, it appears reasonable to provide exercise of at least 20 minutes in duration, if the patient is able, and a target program duration of up to 12 weeks.

Limitations of the three statements include lack of applicability for non-COPD patients. Readers are referred to The ATS/ERS Pulmonary Rehabilitation statement¹ for further description of considerations in non-COPD patients. In the absence of one optimal exercise prescription strategy for COPD, health care professionals should be familiar with all major, evidence-based PR guidelines.

US providers should note that insurers, including Medicare, may limit the number of sessions paid for by the patient's medical insurance. In the absence of one clear protocol to guide practice, clinicians should use clinical assessment and provide carefully monitored and supervised exercise and a collaborative, multidisciplinary team approach to individualized exercise training, prescription, and progression. A baseline and ongoing assessment that includes disease and symptom severity, comorbidities, and patient goals should be emphasized. This should include individual and aggregate measurement and analysis of patient-centered outcomes and exercise

capacity. Finally, PR should emphasize sustainable exercise that translates into long-term increased physical activity. Future research considerations include evaluating and comparing efficacy of various PR guidelines to aid clinicians in selecting optimal practice strategies.

References

1. Spruit MA , Singh SJ , Garvey C , et al. An official American Thoracic Society/European Respiratory Society statement: key concepts and advances in pulmonary rehabilitation. *Am J Respir Crit Care Med* . 2013 ; 188 (8): e13-e64 .
2. American Association of Cardiovascular and Pulmonary Rehabilitation. *American Association of Cardiovascular and Pulmonary Rehabilitation Guidelines for Pulmonary Rehabilitation Programs* . 4th ed. Champaign, IL : Human Kinetics ; 2011.
3. American College of Sports Medicine . *ACSM's Guidelines for Exercise Testing and Prescription*. 9th ed. Philadelphia, PA :Lippincott Williams and Wilkins ; 2013 : 334-338 .

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