

Chronic Obstructive Pulmonary Disease and exercise

COPD is a progressive long term disease of the lungs which causes shortness of breath(1) and includes emphysema, chronic bronchitis and chronic asthma. Despite there being no cure, it is treatable and largely preventable, and there are things people with COPD can do to breathe easier, keep out of hospital, and improve their quality of life (1).

How does exercise help?

Regular exercise creates benefits in physical conditioning and functional capacity, giving individuals with COPD better ability to participate in recreational or lifestyle activities, thus enhancing quality of life. The exercise and physical activity benefits can be seen in the following table;

Exercise increases (4)	Exercise decreases (3)
cardiovascular conditioning and endurance	breathlessness and the sensation of breathlessness
energy levels	ventilatory requirement at a given work rate (4)
immune strength	hyperinflation (4),
muscle strength and endurance	risk factors of heart and other diseases
ability to sleep and relax	blood pressure
bone density	side effects of medicine
self confidence, self esteem and body image	anxiety and depression

What exercise is best?

Exercise programming should include the following;

Type of exercise	Intensity	Frequency	Duration
Aerobic; Walking, cycling, swimming.	40 - 80% of maximal effort (Modified Borg 2-4)	1-2 sessions, 3-5 days per week	30minutes; broken into smaller durations if necessary due to symptoms
Strength training ; free weights, therabands, body weight exercises, inspiratory muscle training (7).	<ul style="list-style-type: none"> • 60 - 80% of maximal effort (Modified Borg 3-4) • IMT = > 30%, or respiratory muscle training in a controlled manner (7). 	2-3 days/week	<ul style="list-style-type: none"> • 1 set of 8-12 reps; additional sets added when strength improves. • 8-10 exercises, or 30-40minutes; depending on exercise capacity and any symptom limitations.
Flexibility; stretching, yoga, tai chi.	Low to moderate; depending on capability and function	3 or more days per week; preferably on all days that aerobic or strength exercise is performed (8)	30 seconds minimum for each static stretch.
Neuromuscular; tai chi, yoga, breathing exercises.	Low to moderate; depending on capability and function	In conjunction with other exercises on their program and taking into consideration their goals and capacity.	As tolerated.

References and further information

Exercise is Medicine Australia www.exerciseismedicine.org.au

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For more detailed information, please read the full version of this factsheet at www.exerciseismedicine.org.au

