

Respiratory Muscles are Important During Exercise

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Respiratory muscles are vital for humans, and are being important role during exercise [1,2]. Athletes breathe a thousand times in exercise, and, like the other skeletal muscles, respiratory muscles need adequate amount of O₂ [2]. Especially during high-intensity exercise, respiratory muscles are more active. Thus, respiratory muscles request more metabolic work [3]. Having strong and enduring respiratory muscles can increase to exercise capacity, because of they provide delayed respiratory muscle fatigue and regularly and adequately blood stream deviation to respiratory muscle tissues. In this way, pulmonary functions that requested from increased work load can done easily [4-7].

Respiratory muscle strength are important, because of the strength is considered as indicator or reason of a disease. Most significant of them are asthma, cystic fibrosis, neuromuscular diseases, and chronic obstructive pulmonary disease [8]. The increment in respiratory muscle strength can provide increased pulmonary capacity [9]. Skeletal muscles show hypertrophy after proper training and loads [2]. Respiratory muscle use same way [10]. Muscle strength is vital for exercise. Productivity of pulmonary system is important for exercise, especially aerobic exercises. But a research showed effect of respiratory work on anaerobic power [11].

Muscle fatigue has determined as losing power and speed production of muscles [12,13]. Inspiration muscle fatigue is decrement in contraction power. After respiratory fatigue, decrement in the alveolar ventilation, increment in arterial CO₂ occur, and then pulmonary works cannot make [14,15]. During high-intensity exercise, pulmonary load increases. This situation causes fatigue in respiratory muscles, and cannot be compensate to tissue O₂ demand. And then athlete feels respiratory fatigue. Fatigue in respiratory muscles causes relatively 15% decrement in exercise performance and energy efficiency [3,5,16-18]. A lot of research has shown prior respiratory contractions have positive effects on respiratory muscles. Via respiratory muscle training, respiratory muscle can be more strong in a few days, breathe frequency can reduce in three weeks, exercise performance can rise up in four weeks [19-23].

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