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The Role of Buteyko Breathing Technique in Enhancing Aerobic Capacity: A Narrative Review

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ABSTRACT

Buteyko Breathing (BB) is one of popular complementary alternative medicine approach that emphasises nasal breathing, breathing control and relaxation to regulate carbon dioxide (CO^2) levels and promote diaphragmatic breathing while minimising the use of accessory muscles, offering potential therapeutic benefits for enhancing aerobic capacity (VO^2 max) and respiratory health. VO^2 max is a quantitative measure of an individual ability to transport oxygen and indicate the overall efficiency of cardiopulmonary function. The current narrative review aims on exploring the effects of BB in enhancing aerobic capacity among young adults. The databases probed were Scopus, PubMed, Physiotherapy Evidence Database (PEDro) and Ovid from 2016-2025. The studies with both male and female adults, above age of 18 years using BB as a breathing technique were included. The selected studies were segregated and analysed further. From 2039 initial studies, 18 relevant ones were selected after duplicate removal. Among them, three studies focussed on adults' population; all collectively indicating a significant positive impact of BB on aerobic capacity. The BB lowers the pulmonary ventilation, which raises the body's CO^2 levels.Raising CO^2 levels can lower blood pH and promote the production of ATP as well as the synthesis of proteins, peptides, nucleic acids, lipids, and carbohydrates. The oxygen-haemoglobin dissociation curve shifts to the right when blood pH drops, decreasing haemoglobin's affinity for oxygen and allowing more oxygen to enter the tissue. This review concludes that BB can be an effective intervention to improve aerobic capacity.

Keywords: Adult, Breathing exercises, Carbon dioxide, Pulmonary ventilation