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Med Hypotheses. 2020 Nov;144:110002. doi: 10.1016/j.mehy.2020.110002. Epub 2020 Jun 22.

"Exercise with facemask; Are we handling a devil's sword?" – A physiological hypothesis

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Abstract

Straying away from a sedentary lifestyle is essential, especially in these troubled times of a global pandemic to reverse the ill effects associated with the health risks as mentioned earlier. In the view of anticipated effects on immune system and prevention against influenza and Covid-19, globally moderate to vigorous exercises are advocated wearing protective equipment such as facemasks. Though WHO supports facemasks only for Covid-19 patients, healthy "social exercisers" too exercise strenuously with customized facemasks or N95 which hypothesized to pose more significant health risks and tax various physiological systems especially pulmonary, circulatory and immune systems. Exercising with facemasks may reduce available Oxygen and increase air trapping preventing substantial carbon dioxide exchange. The hypercapnic hypoxia may potentially increase acidic environment, cardiac overload, anaerobic metabolism and renal overload, which may substantially aggravate the underlying pathology of established chronic diseases. Further contrary to the earlier thought, no evidence exists to claim the facemasks during exercise offer additional protection from the droplet transfer of the virus. Hence, we recommend social distancing is better than facemasks during exercise and optimal utilization rather than exploitation of facemasks during exercise.

Keywords: Cardiometabolic risk; Complication; Exercise; Facemask; Immunity; Physiology.

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Figures

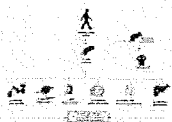


Fig.1 Pathophysiological changes associated during exercise with...

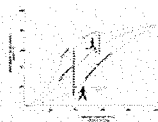


Fig.2 Bohr's oxyhemoglobin dissociation curve is

Comment in

Exercising and face masks: An important hypothesis buried in a selective review.

Greenhalgh T, Dijkstra P, Jones N, Bowley J.

Med Hypotheses. 2020 Nov;144:110255. doi: 10.1016/j.mehy.2020.110255. Epub 2020 Sep 17.

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