

Study concludes face masks can be safely worn during exercise

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Face masks worn to reduce the transmission of COVID-19 are safe to wear during exercise, including in rehabilitation activity for patients recovering from the virus, a new study has shown.



The report, co-authored by Dr. Mark Faghy, Respiratory Physiologist and Senior Lecturer at the University of Derby, also concludes that the benefits of wearing surgical-type masks during activity outweigh the risks, and that frequent masking invokes adaptive responses that make it more tolerable.

The study reviewed evidence of the impact of <u>face masks</u> on cardiac and pulmonary physiological parameters. The data was extrapolated to examine the practical adaptations to masks that would be needed for people with underlying heart and lung conditions.

The physiological effects of wearing a mask during exercise and at rest were "negligible," according to the research team, who have had their article published in the Journal of Cardiopulmonary Rehabilitation and Prevention.

Dr. Faghy said: "Face mask wearing has become compulsory for many activities and locations across the world to reduce the transmission of the viral particles that cause the coronavirus infection. However, non-compliance with requirements to wear a mask has also been an issue during the pandemic. Difficulty with breathing during physical activity, anxiety, humidity under the mask, and ability to communicate have all been cited as reasons why some people have chosen not to adhere to recommendations or requirements to wear a mask. There is minimal evidence that masking significantly inhibits oxygen uptake or exhalation of carbon dioxide. However, there is clearly a psychological element. Some people feel anxious about mask wearing, which heightens the perception that the effect of the mask on their breathing is greater than it actually is when the physical impact is measured."

The study makes a series of recommendations for mask-wearing by patients undergoing pulmonary and cardiac rehabilitation, and advises that triple-layered surgical masks are more suitable than respirator masks



and particularly cotton <u>masks</u>, which have a much higher rate of droplet transmission.

It also suggests that those with anxiety about mask-wearing should wear them more frequently to overcome their concerns.

Dr. Faghy said: "Given the impact that COVID-19 has on our respiratory system, the need for rehabilitation services for patients to fully recover will inevitably grow. Wearing a mask during <u>rehabilitation</u> activity will not affect their <u>physical ability</u> to undertake those exercises and will also support public health efforts by helping to reduce the <u>transmission</u> of the virus."

More information: Rebecca H. Haraf et al. The Physiological Impact of Masking Is Insignificant and Should Not Preclude Routine Use During Daily Activities, Exercise, and Rehabilitation, *Journal of Cardiopulmonary Rehabilitation and Prevention* (2020). DOI: 10.1097/HCR.00000000000000577

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