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Mini Review

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[Physical activity can change the physiological and psychological circumstances during COVID-19 pandemic: A narrative review](#)

Background: With the outbreak of Coronavirus disease 2019 (COVID-19), many studies' attention to this world's complexity increased dramatically. Different views on sports and physical activities have been presented, which have addressed the advantages and disadvantages of sports activities in this period differently. The purpose of this review was to investigate the physiological and psychological effects of physical activity during the COVID-19 pandemic.

Methods: Using PubMed, Science Direct, Medline, and Web of Science electronic databases, this review summarizes the current knowledge of direct and indirect effects of physical activity during the COVID-19 pandemic, evaluating the advantages and drawbacks of specific exercise physiology conditions. All types of studies were assessed, including systematic reviews, case-studies, and clinical guidelines. The literature search identified 40 articles that discussed COVID-19, immune system, the relation between immune system and exercise or diet, and psychological impacts of physical activity.

Results: Forty articles review showed that the immune system depends on the type, frequency, intensity, and duration of the exercise.

Intense or prolonged exercise with short recovery periods can progressively weaken the immune system and increase the risk of COVID-19. One of the acute responses after moderate-intensity training is improved immune function and a decrease in inflammatory cytokines. Paying attention to dietary intakes of micro-and macronutrients in conjunction with exercise can strengthen the condition to fight against coronavirus. Exercise can also affect the psychological dimensions of the COVID-19 pandemic, including depression, anxiety, and stress, which improve community mental health during the quarantine.

Conclusion: Setting appropriate physical activity based on individuals' properties and proper diet plan may enhance the physiological and psychological body's condition to fight against coronavirus.
