

Role of Physical Activity in the Battle with Coronavirus Pandemic

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Abstract: Physical activity is one of the important tools for good health. It helps prevent and/or treat many physical and mental health conditions by improving functioning of numerous physiological systems. In this article we will discuss how physical activity could help ease the foreseen trauma of the coronavirus pandemic in many ways.

Keywords: COVID-19, Immune, Physical inactivity

1. Introduction

In our efforts to protect ourselves, our families, and our patients during the COVID-19 pandemic exercising is probably the last thing on our mind. Perhaps it should be, the top priority because physical activity plays important role in controlling COVID-19.

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WHO recommends 150 minutes of moderate or 75 minutes of vigorous physical activity including muscle strengthening exercises twice a week.

Underlying Physiology- how virus invades lungs:

This virus targets lung tissue. The immune system becomes activated and attacks the virus. The fight between the virus and immune cells results inflammation. That inflammation damage lung tissue that can become severe and require medical attentions, such as mechanical ventilators.

How physical activity helps?

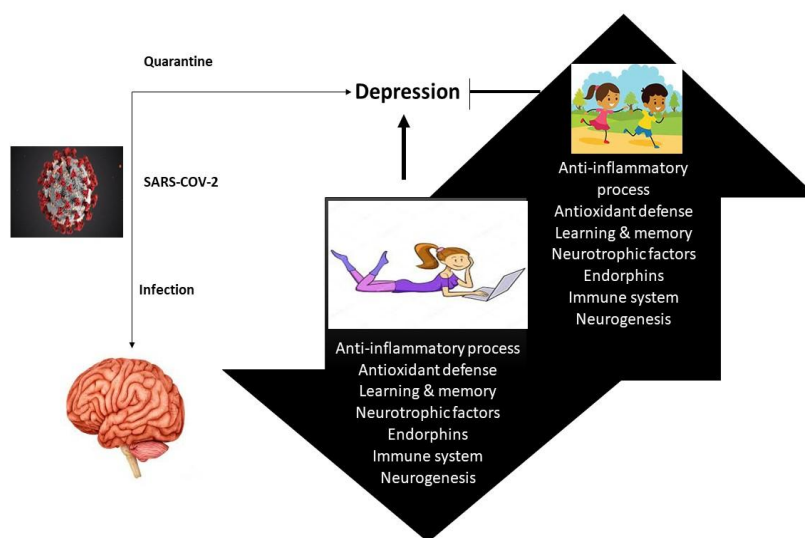
When we are active, muscles produce proinflammatory cytokines and anti-inflammatory cytokines that improve functioning of the immune system and reduce inflammation. Studies of the effects of exercise on immunity, inflammation, and viral respiratory infections are well documented. Because muscles make up 30-40% of body weight, they can be a powerful ally in fighting the impact of infection, but only when the muscles are being used. Moderate intensity exercise, like walking, has the best impact.

Role in preventing non communicable diseases

We all know comorbidities increases the severity of covid-19 infection. Physical activity is effective for both preventing and treating non communicable diseases like diabetes and hypertension which increase the risk of severe illness and death among those infected with the covid-19.

Mental health benefits

Partial antidote to fight stress of the pandemic can be being active every day. With each bout of physical activity anxiety reduces and mood lifts up. For people with anxiety, being active is psychotherapeutic. The most common form of physical activity is walking, which doesn't require any special equipment, easy to maintain social distancing.



SARS-CoV-2 can directly attack CNS. The quarantine has negative effects on CNS & immunity. Being physically active curbs these effects.

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Restoring cortisol balance

There are imbalances between cortisol and other hormones during stress that negatively affect the immune system and inflammation. Physical activity and stress management are recommended strategies for improving cortisol balance. Thus, is another mechanism by which physical activity benefits immunity and inflammation.

Due to multiple benefits of physical activity being active should be a key recommendation. Only one in four adolescents meet physical activity guidelines, so the majority are increasing their risk for many diseases. We need studies on the impact of regular physical activity on the severity of illness among people infected by the virus, but action does not need to wait for a study.

2. Conclusions

Physical activity is widely recommended, and there is much evidence that physical activity could contribute to both reducing the severity of COVID-19 illness and enhancing quality of life before and after infection.

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