

## Physically Active Lifestyle as an Approach to Confronting COVID-19

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The rapid, uncontrollable spread of the new coronavirus (SARS-CoV-2) throughout the world, in conjunction with its severity, led the Director-General of the World Health Organization (WHO) to characterize the situation as a pandemic on March 11, 2020.<sup>1</sup> It is currently possible to observe increasingly intense efforts on the part of health organizations and public authorities with the aim of containing the progress and spread of SARS-CoV-2. SARS-CoV-2 has emerged as a new subtype of human severe acute respiratory syndrome (SARS-CoV) characterized by high transmission capacity and induction of severe respiratory infection. Recent studies have demonstrated a high prevalence of hypertension and diabetes in elderly patients affected by COVID-19 who died in Wuhan, China,<sup>2,3</sup> which was the epicenter of the SARS-CoV-2 outbreak; this suggests that these comorbidities are important risk factors for deterioration and worse prognosis of complications associated with COVID-19.

Considering the recommendations for social isolation currently imposed in different countries, it is fundamental to encourage the population to maintain a physically active lifestyle routine as a preventative health measure during this period of confronting the spread of the virus. During periods of confinement at home, the population tends to adopt a sedentary routine, which favors increased body weight gain, as well as the emergence of comorbidities associated with greater cardiovascular risk, such as obesity, increased blood pressure, and glucose intolerance, in addition to psychosocial disorders such as anxiety and depression. Sedentary behavior, whether sitting, watching TV, or spending time in front of electronic devices, has in fact been associated with increased body weight in children, adolescents, adults and elderly<sup>6</sup> as well as with a marked increase in the risk of cardiovascular mortality.<sup>7</sup> It has, on the contrary, been shown that the risk of developing cardiovascular diseases and mortality is reduced in individuals with physically active life habits, such as going on moderately intense walks.<sup>8</sup> It has furthermore been demonstrated that the risk of upper respiratory tract infection due to coronavirus is potentially greater in the presence of

immune system deficiency.<sup>9</sup> In this sense, there is strong evidence in the literature that practicing physical exercise is a beneficial measure for improving immunity.<sup>10-12</sup> The American College of Sports Medicine has recently published a guide suggesting that moderately intense physical activity should be maintained during the period of quarantine due to SARS-CoV-2, emphasizing the importance of every minute of physical activity to health.<sup>13</sup>

It is worth remembering that, for healthy and asymptomatic individuals, the WHO recommends at least 150 minutes of physical activity per week for adults and 300 minutes per week for children and adolescents.<sup>14</sup> This time of physical activity should be accumulated during the days of the week; it may be divided according to individual routine, and it should preferably be composed of it may be divided according to individual routine, and it should preferably be composed of moderate- and vigorous-intensity activity. We emphasize the importance of advice from physical exercise professionals in order to adequately adapt practice of physical activities for the population. It is fundamental that individuals who regularly perform physical exercise maintain their practice, adapting them, however, to the current conditions of restricted movement. The importance of staying physically active should be even further emphasized for elderly individuals, who have been proven to present more comorbidities and greater cardiovascular risk, in addition to being more vulnerable to COVID-19. Populations with cardiovascular comorbidities should perform physical activities on a daily basis, maintaining pharmacological treatment and respecting their eventual physical limitations and the recommendations of healthcare professionals. Practice of physical exercise should be interrupted when symptoms related to COVID-19, such as fever, dry cough, and dyspnea, are present at rest.

It is important to emphasize that the home and family environment is also conducive to performing physical activity. In this manner, regardless of age range, the following behaviors and attitudes should be recommended, which will help the population stay physically active and maintain physical and mental health and which will be important for facing this moment of social isolation:

- Perform physical activities that are pleasurable, exploring spaces around the house and using equipment to move about;
- Perform daily activities, such as cleaning, maintaining, and organizing spaces around the house;
- Play and exercise with children, adolescents, and pets, using games that promote energy expenditure higher than resting;
- Avoid sedentary behavior, alternating time spent sitting or lying down with periods of physical activity, reducing time spent using electronic devices;

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- Set aside a few minutes for stretching, relaxation, and meditation activities.

In this manner, faced with the exponential growth of this pandemic in Brazil, healthcare professionals recommendations

that the population maintain a physically active lifestyle should be understood as an important approach to fighting COVID-19 and the eventual consequences of social confinement, in conjunction with other measures that are being adopting by global public health sectors.

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