

Obesity, Physical Activity and Covid-19: Current Condition

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ARTICLE INFO

Received: 📅 August 22, 2020

Published: 📅 September 04, 2020

Citation: Carmine Finelli. Obesity, Physical Activity and Covid-19: Current Condition. Biomed J Sci & Tech Res 30(1)-2020. BJSTR. MS.ID.004886.

Keywords: Obesity; Physical Activity; Covid 19

ABSTRACT

The COVID-19 has since spread around the globe to many countries and is now a global pandemic which affects many countries. COVID-19 tends to be a condition in which the incidence for obese persons is higher. The emergency COVID-19 has significantly changed our everyday life. During this period, there are likely to be very limited opportunities for outdoor physical activity, with most people being forced to stay at home or adopting isolation protocols to prevent virus transmission. It is also advised that citizens remain healthy by performing home exercises. Obesity has increased worldwide in prevalence, and severe obesity is associated with a double risk of diabetes and a tenfold risk of cardiovascular death compared to non-obesity. Nevertheless, in this population both baseline and excess mortality due to COVID-19 can occur in patients that already have two or more other medical conditions. Therefore, to reduce this risk of death, these other diseases must provide due treatment, prevention measures, early diagnosis and careful monitoring. This point is significant in light of the fact that coping with a pandemic will drive other chronic and less urgent problems away from health care initiatives.

Introduction

The coronavirus disease 2019 (COVID-19) is a modern virus that triggers outbreaks of respiratory disease [1]. COVID-19 has since spread around the globe to many countries and is now a global pandemic which affects many countries. COVID-19 tends to be a condition in which the incidence for obese persons is higher. As the COVID-19 pandemic continues to evolve in almost all territories and areas, the authorities have adopted numerous preventive steps, including the closure of schools and universities, and restrictions on transportation, cultural and sporting activities, and social gatherings [2]. Citizens have been told or recommended to sit at home, and for a fourth night all returning passengers have been instructed by some countries to self-isolate. Both of these steps were meant as an important method to deter the transmission of the virus and to treat those that contract the virus. The positive benefits of daily physical exercise are well known for multiple health outcomes [3].

Evidence has demonstrated common advantages such as better physical and physiological fitness criteria and favorable emotional wellbeing and wellness effects [4]. COVID-19 impacts cells of the immune system [5]. Though evidence accumulate in obesity-based inflammation and associated diseases impact a disordered individual immune system, more studies are desperately required to establish novel prevention and care strategies for disorders related to obesity, such as COVID-19 [5]. Evidence suggests a combination of both immunotherapy- and lifestyle-based treatments can reduce prevalence and improve obesity-related malignancy outcomes [6]. People nowadays adopt methods to boost immune function i.e. diet and physical activity. Many studies are ongoing into the impact of dietary supplements on immune cells and inflammation in obesity [7,8]. Recently, it has shown that by growing immune cells, physical exercise will boost the immune function [9]. Therefore, it is recommended that the immune system will be improved before

the illness by sufficient physical exercise which will strengthen the body against the infection. There are various impacts on the immune system from physical exercises with specific intensities [9]. For these considerations, it would reduce the detrimental physiological and psychological effects of sedentary activities by introducing an adjusted physical exercise regimen at home during the pandemic phase, which could well stretch from weeks to months. waiting for the reopening of gyms and/or parks to practice sports activities.

Trainings Considerations on Strength and Frequency

In terms of strength and frequency, various physical behaviors have specific effects on the immune system and the inflammation [9]. Several researches have shown that workout of high intensity has beneficial effects on inflammatory factors under obesity conditions [10,11]. For example, Shanaki et al. found that high intensity interval training (HIIT) in rat adipose tissue reversed increased serum biochemical parameters (glucose, triglycerides, cholesterol, Homeostatic Model Assessment of Insulin Resistance, and hsCRP) and circulating plasma interleukin-6 (IL-6), tumor necrosis factor-alpha (TNF- α) and adipose-tissue mRNA expression of IL6, TNF α and inducible nitric oxide synthase (iNOS) [12]. Any reports contrasted the inflammatory factors with those of high intensity and low intensity exercise. It found that high-intensity interval training (HIIT) or moderate-intensity continuous training (MICT) differentially influenced IL6 feature with proof of IL6 anti-inflammatory capacity reduction with HIIT [13]. Neither HIIT nor MICT altered circulating levels of IL10, IL6, or TNF α [13]. The short-term influence of HIIT and MICT contributed to differential effects on the role of anti-inflammatory cytokines [13].

It suggested that long-term HIIT (90 percent maximum heart rate, 3 days a week) improved TNF- α while regular moderate intensity exercise (70 percent maximum heart rate, 5 days a week) reduced TNF- α in overweight/obese adults [14]. The findings of one analysis article found that intense long exercise can contribute to higher rates of inflammatory mediators, thereby raising the risk of injury and chronic inflammation, whereas moderate or vigorous exercise with sufficient rest periods may achieve full benefits [15].

Physical activity Staying at Home

During this period, there are likely to be very limited opportunities for outdoor physical activity, with most people being forced to stay at home or adopting isolation protocols to prevent virus transmission. It is also advised that citizens remain healthy by performing home exercises. Taking short constructive breaks during daytime. Quick physical exercise outages add up to the guidelines of the week. The proposed activities below can be used as encouragement to be involved every day. Dancing, interacting with kids and doing household tasks such as washing, and planting are other ways of remaining busy at home. Different fitness types may be used with this reason like cardiovascular activity with

stationary bikes or rowing ergometers, body weight strength training, dance-based workout and competitive gaming. Training in aerobic exercise is characterized as training that generates a small, moderate or high cardiovascular strain. These fitness exercises are widely advised and can be done on stationary cycles, rowing ergometers and treadmills, or as many forms of dance and gymnastics. The WHO recommends 60 minutes of daily physical activity with moderate to vigorous aerobic intensity for children and youth (5–17yrs), with muscle and bone strengthening three times a week [16]. For young adults and the elderly (> 17years old), WHO suggests physical activity for 75min/wk of intense aerobic exercise intensity or 150 min / wk with mild aerobic intensity, including twice monthly muscle and bone building [16].

Discussion

The emergency COVID-19 has significantly changed our everyday life [17]. But this does not mean we should quit being physically embroiled, nor should we withdraw from the personal trainers, teammates, coaches and friends who not only help us remain physically healthy but still socially engaged. The COVID-19 pandemic is increasing at an unprecedented pace to more nations, territories and regions of the world and physical and social distancing activities are becoming widespread to avoid the epidemic increasing. The closing of gyms, athletic fields and parks, public swimming pools, dance classes, and playgrounds implies that all of us are unable to participate actively in individual or social athletic or physical activity, nor attend live sporting events. As a consequence, the global sports environment confronts significant obstacles as a consequence of policies being implemented in various countries worldwide. Anyway, it should be told to all COVID-19 patients, whether obese or of average weight, that a balanced diet has benefits beyond weight loss.

They will be recommended to reduce saturated / trans-fat, and to raise polyunsaturated fat with special focus on n-3 fatty acids. They will reduce added sugar, strive and stop sugar-containing soft drinks (including fruit juices that include tons of fructose), and improve fiber intake [18]. Less meat and decreased fish consumption should be suggested for the heavy meat eaters, especially those of red and processed meats. Minimizing fast food consumption can also help maintain the eating safe [18]. Physical activity can be incorporated into COVID-19 symptomatic pauci behavioral treatment, as only minor changes in physical activity and wellness will provide substantial health benefits. This takes a blend of clinical, behavioural and motivational approaches to help patients promote lifestyle change. It is always important to keep eating healthily and keeping hydrated for optimum health. It suggests consuming tea, rather than sugar-sweetened drinks. Restrict or prohibit adult alcoholic drinks and specifically prevent them in young adults, including women who are pregnant including breastfeeding, or for any safety purposes. Make sure you have

enough of fruits and vegetables and restrict salt, sugar and fat consumption. Prefer natural wheat, instead of processed products.

We should note that modifiable lifestyle variables such as diet and physical activity will not be marginalised before more breakthroughs occur [19]. Decades of observational findings endorse both wellness and health as primary variables [19]. As planned, daily physical activity during lockdown may provide protection against this excess mortality. Obesity has increased worldwide in prevalence, and severe obesity is associated with a double risk of diabetes and a tenfold risk of cardiovascular death compared to non-obesity. Nevertheless, in this population both baseline and excess mortality due to COVID-19 can occur in patients that already have two or more other medical conditions [20]. Therefore, to reduce this risk of death, these other diseases must provide due treatment, prevention measures, early diagnosis and careful monitoring. This point is significant in light of the fact that coping with a pandemic will drive other chronic and less urgent problems away from health care initiatives. It should be avoided by allocating a higher priority for these measures in particular. Sport has the ability to transform the world; it is a human right, a strong instrument for improving social relations and fostering sustainable growth and unity and harmony and respect. Through our particular interpersonal abilities and collective strength, through exercise and physical activity, we will come together to explore new ways to enhance our health and well-being – right from the limits of our own homes.

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ISSN: 2574-1241

DOI: 10.26717/BJSTR.2020.30.004886

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