Pre-eminence of Moderate to Robust Physical Activity in Battling COVID-19: A Narrative Review

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ABSTRACT

In January 2020, we met with COVID-19 (aka SARS-Co-V-2 and/or Coronavirus) on our news channels all the way from China. Little did we know that it would shake up our lives in such a manner that we had heard only in a movie or read in history books. Currently, we are all in some sort of lockdown, be it in hospital/home or in our minds. Being there, most of us are facing certain kinds of misery, be it emotional, mental, physical or social. To be expansive the most common stresses that have been addressed by people on mass media platforms are feeling depression and isolation caused by being away from family and friends, some are complaining of losing their enthusiasm, some of gaining weight, some of losing it and many more. Going through a pandemic is also helping people in some or the other way, one of which is being concerned about their health and habits to keep themselves fit and away from serious comorbidities which can stem out from physical inactivity and heightened stress levels. There are many ways to stay fit at home without any complex gym equipment, but far less is known about it. Thus, an understanding of methods through which one can become physically active with least complexity, easy availability, and appropriate utilization is need of the hour.

INTRODUCTION

Novel Corona Virus disease (COVID-19) outbreak was declared as pandemic on 11 March 2020 by WHO which reiterated the call for countries to take immediate actions and scale up response to detect, manage and decrease transmission to salvage lives of people all over the globe. As of 3 August 2020, the following cases have been reported exclusively in India (Table 1). (Coronavirus, 2020) COVID is considered the world's unparalleled pandemic (Shah and Naqvi, 2020).

With active assistance of India's populace, we have been able to contain the spread of the virus. A critical factor in reducing the COVID-19 spread locally is by providing the population with right information and adopting preventive measures as given by the Ministry of Health & Family Welfare advisories. (WHO Coronavirus Disease, 2020) The COVID 19 situation created unnecessary panic and caused hindrance in the fight against the disease (Dutta et al., 2020).

Staying at home is a simple safety measure which aids in limiting infection spread. Nevertheless, prolonged stays at home might increase risk of chronic health problems, depression and anxiety. Such habits include inactivity; decreased enthusiasm and motivation to work; leading to a sedentary lifestyle (Srivastava et al., 2020). An effective healthy living strategy during this catastrophe is to...
maintain daily physical activity in a secure house setting (Simpson et al., 2020). Helping older adults to inculcate early and healthy ways to stay physically active in limited space is extremely crucial (Goethals et al., 2020).

MATERIALS AND METHODS

Restriction of physical activity arose due to COVID-19 pandemic, but maintaining exercise could decrease infection risk and alleviate the consequences of lock down. (Fallon, 2020) Almost every country affected has imposed massive restrictions on public and private life (Sahu and Naqvi, 2020), here the population’s opportunities for physical activity have been severely hampered; hence, providing joint contribution of sports science and sports medicine to provide scientifically based recommendations for exercise in times of COVID-19 lockdown is vital. (Frühauf et al., 2020) To avoid arbitrary conclusions, a reasonable exercise planning must be proposed by scientific research society. (Li, 2020) It’s proven that structured workout plans helps sustain physical activity performances and VO₂ max and avoid deconditioning. VO₂ max also possesses the capability to be used as a clinically appropriate tool for triage through COVID-19 pandemic (Ahmed, 2020).

Physical activity forestalls infection, improves the immunity, aids with stress reduction, increase psychological well-being etcetera. The outcomes are even more beneficial if the activities are outdoor (Frühauf et al., 2020). Among the steps taken to combat the pandemic is the shutting down of gyms, prohibition of open space use for exercising, thus disrupting fitness of athletes and others. This interruption leads practitioners to undergo a readjustment of the entire body’s biological system, a process known as detraining (Simpson et al., 2020).

This review article is given behind the purpose to emphasise the importance of moderate to robust physical activity during the lockdown, firstly to maintain physical and mental well-being, secondly as a measure of limiting the noncommunicable diseases such as diabetes mellitus, coronary artery disease, osteoarthritis etcetera, although it is unlikely that several weeks of inactivity will result in the onset of severe diseases, the consequences of inactivity should not be ignored, and thirdly to increase the immunity of the body which is required to fight against various infections.

With each bout of moderate to robust intensity exercise, frequent exchange of immune cells between the blood and the tissues occur which contributes to increased immune surveillance, higher productivity and overall healthier lifestyles (Campos and Miguel, 2020).

RESULTS AND DISCUSSION

Exercise Programs

At least 2.5 hours of moderate intensity physical activity every week is advocated by the World Health Organization (WHO) to maintain physical and mental health in adults. For children and adolescents, these recommendations are as high as 60 minutes per day. In addition to a strong need for movement, these age groups shows correlation between motor development and cognitive abilities. (Sibley and Etnier, 2003) In the scenario of worldwide lockdown there are numerous ways to fulfill the need to be physically involved, starting with.

Least home equipment exercises

These include climbing stairs, walking in/out of the house as appropriate, leg lunges, lifting and carrying groceries, chair squats, stand-to-sit and sit-to-stand from the floor or using a chair, push ups, sit-ups etcetera. Furthermore, traditional Qigong exercises, Tai Ji Quan and yoga can be viewed as they are least equipment requiring and lesser space occupying (Chen et al., 2020).

Aerobics at home

These include dancing, jogging, skipping etcetera. These help the regular strenuous exercisers to keep up with their endurance, power and strength even after a long period of not performing their regular routine.

Elastic resistance training

Elastic resistance have low cost in acquisition, use of implements, easy applicability, needs small physical spaces, easy adaptation for the individuality and specificity of the practitioner etcetera.

Two different ways of carrying out this methodology is: Hybrid elastic resistance, where elastic resistance (bands or tubes) is used along with standard weights, and simply the elastic resistance where just the elastic tubes and/or bands are utilized. Different levels of resistance can be distinguished by colours, which makes it possible to use them with the desired degree of resistance. This possibility allows it to be effective for any age-group. Planning the program can be by defining the band/tube to be used (based on grade and/or colour), next the intensity and frequency of performance (Simpson et al., 2020).

Jogging and hiking

jogging and hiking practiced by non-risk groups on wide forest roads and easy forest trails, where keeping adequate safe distance is possible, poses a low
### Table 1: Number of COVID cases encountered in India

| Number of cases at till date | 18,22,112 |
|-------------------------------|-----------|
| Number of cases recovered till date | 12,00,303 (97%) |
| Number of deaths occurred | 38,400 (3%) |

risk of injury as well as contagion/spread of disease. On the contrary, there are numerous positive effects on physical and mental health, which far outweigh the low risks associated with injuries (Frühauf et al., 2020).

**Telerehabilitation**

Using exercise videos and eHealth technologies which can help with encouragement and delivering workout programs via mobiles, television and internet are other effective ways to preserve exercise capacity, physical function and mental well-being. (Chen et al., 2020) People with limited mobility due to quarantine/lockdown must be benefited to decrease the risk of sarcopenia, frailty, depression and cognitive decline (Ceravolo et al., 2020).

**CONCLUSIONS**

Staying active during this global pandemic is of utmost importance for every age group. This lessen their sedentary lifestyle, increases immunity, helps with betterment of their metal and physical health.

Some of the modes of physical activity which can be done at confined spaces have been summarised such as, Home exercises - walking, jogging, stair climbing, lunges, squats, dancing, skipping, weightlifting, elastic resistance band strengthening, stretching etc. Outdoor exercises (under absolute government obligated precautions): jogging, brisk walking, hiking etc. Tele-programs including series of youtube workouts or simply a conference call with a professional.

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**Conflict of Interest**

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