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PRACTICE AND PUBLIC HEALTH POLICIES

Physical distancing ≠ physical inactivity

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Abstract

During this time of global health crisis, physical distancing, along with mask wearing, has emerged as the sine qua non social practice to protect ourselves and others from COVID-19. But as physical distancing ensues and all eyes remain fixed on the novel coronavirus, another, albeit careworn, pandemic rages on. Physical inactivity, the world's fourth leading cause of death, may indeed be exacerbated by physical distancing measures, such as sheltering at home and closing or limiting access to recreation and exercise facilities. The purpose of this paper is to urge public health and medical professionals not to forget the importance of physical activity to whole-person health, recognize the importance of physical activity as a potential COVID-19 mitigation strategy and to serve as advocates for promoting active lifestyles. It is imperative that the national call for physical distancing not be interpreted as a call for physical inactivity.

Keywords

Physical activity, COVID-19, Social distancing, Clinician, Sedentary behavior, Chronic disease

Implications

Practice: Public health and medical professionals are called to provide opportunities and credible guidance for physical activity in response to the COVID-19 pandemic and for promoting the necessity of physical activity for overall health.

Policy: Policymakers can promote the health of the nation by including physical activity and health considerations in all policies.

Research: Future research is needed to assess and evaluate health professional practice changes to use physical activity as a means to prevent and treat disease.

Medical and public health professionals have long known that physically activity (PA) decreases cardiovascular and other chronic disease risk and associated mortality [1–4], regardless of body weight. Likewise, sedentary behaviors increase the risks for chronic illnesses [5–8]. Research on PA continues to demonstrate additional health benefits which includes reducing anxiety and depression and improving sleep and quality of life [9, 10].

Substantial evidence shows that physical inactivity and sedentary behaviors increase the risk for chronic inflammatory diseases [11, 12]. Nearly half of Americans hospitalized with COVID-19 are obese, a quarter of those have diabetes, and nearly a third have cardiovascular disease [13]. A common trigger for systemic chronic inflammation is physical inactivity [14], and it is thought that underlying systemic inflammation may worsen COVID-19 infection [15]. Because PA has immediate positive effects on immune functioning [16] and inflammation [14], persons most vulnerable to COVID-19, such as those with pre-existing chronic conditions, would especially benefit from frequent, moderately intense PA [17].

However, much like the COVID-19 pandemic, physical inactivity is a global health problem, and has been identified as the fourth leading cause of death worldwide [18]. The Physical Activity Guidelines for Americans [10] recommends that all Americans move more and sit less throughout the day so that all adults achieve at least 150 min per week of moderate-intensity activity with more benefits achieved by engaging in more PA. The guideline for school-aged children (ages 6–17) is to participate in at least 60 min per day of mostly moderate or vigorous PA, while for children ages 3–5, a target of 3 hr per day of light, moderate, and vigorous activity is recommended. Additionally, muscle-strengthening activities are recommended for both children and adults at least twice every week, and bone-strengthening activities are also highlighted for children and adolescents. These guidelines were designed as a *minimum* set of recommendations.

Americans are less active than residents of other developed countries [19]. Recent data show that only 26% of men, 19% of women, and 20% of adolescents achieve enough PA each week to meet nationally recommended guidelines [10]. According to a recent study of step counts, there has been a marked decrease in steps across the globe since the pandemic was declared [20]. Over the past several years, there have been many national campaigns to keep PA and environments promoting PA in the forefront of public attention [21–24]. Most recently, the Centers for Disease Control and Prevention created the campaign Active

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People, Healthy Nation to accelerate Americans becoming more physically active [25], and the 2016 National Physical Activity Plan laid out a comprehensive, multisector set of policies, programs, and initiatives designed to increase PA across all segments of the U.S. population [23]. However, much work remains to increase PA in the United States.

In light of the pandemic and in efforts to attenuate the spread of the virus, government leaders have recommended individuals stay in their homes and only venture out for essential activities while maintaining appropriate physical distance [26]. Further efforts have resulted in the temporary closure of exercise facilities and gyms, the suspension of sport activities and leagues, and the recommendation to avoid public recreational spaces [27, 28]. Early school closures and postponement of reopening have also resulted in loss of opportunities for sufficient PA for children and adolescents [29]. There has been an effort to promote the use of platforms such as Zoom and Facebook to encourage and provide PA opportunities from organizations such as the American Heart Association. Emerging data suggest that in an effort to contain the spread of COVID-19, there has been an acute decrease in PA [30]. This is alarming as previous research suggests that even brief periods of sustained physical inactivity can have deleterious effects [31]. The authors of this paper are concerned that the new normal of "social distancing" and "sheltering in place" directives will increase sedentary behavior and decrease PA to levels that yield both short- and long-term impacts on chronic disease risk, emotional health and mortality risk [32].

The COVID-19 pandemic has exacerbated the health inequalities that exist in the United States [33]. There is increasing evidence that some racial and ethnic minority groups as well as those of lower socioeconomic status are disproportionately affected by this coronavirus [34, 35]. As these populations also experience greater rates of preexisting chronic conditions, more attention needs to be given to promoting PA in vulnerable populations at the highest risk for COVID-19. Lower rates of PA are associated with communities of color and lower-income populations living within neighborhoods with greater inequalities in the built environment including fewer PA facilities, sidewalks, connected streets, multiuse paths, and outdoor spaces perceived as safe [36–39]. Such communities may be disproportionately impacted by physical distancing restrictions and decreased access to public spaces, resulting in even fewer opportunities for PA during the pandemic.

In the pandemic era, it is more important than ever to provide credible guidance about the necessity of PA and to provide opportunities and support for PA. All sectors have a role to play in promoting PA. This is a call to action for the nation to prioritize and engage in PA promotion.

- Clinicians have a crucial role to play in promoting PA among their patients, particularly in the COVID-19 pandemic era where a multitude of factors are resulting in even lower PA levels. The U.S. Preventive Services Task Force recommends PA behavioral counseling for those with cardiovascular risk factors [40]. We know education alone does not automatically translate to behavior change, but, a clinician recommendation carries a much stronger likelihood of follow-through circumstance [41].
- Health systems need to change organizational practices and health policy needs to support PA through the use of PA as a vital sign, using exercise referrals, insurance coverage of lifestyle treatment, and working with community-based PA partners to provide safe opportunities for PA [41].
- Workplaces need to support safe PA breaks and healthy work-life balance. Clinicians should advocate for employee wellness programs that include PA opportunities, and empower patients to be advocates by suggesting evidence-based strategies that patients can share with their employers and colleagues. Where possible, wellness programming should extend to the home environment for employees who need to telecommute and work from home.
- At home PA including using household items such as chairs for squats, push-ups against a wall, or step-ups on stairs should not be overlooked [42]. Using small items such as resistance bands and online exercise videos within the home can be used for people who are at increased risk such as older adults and those with compromised immune systems.
- Community recreation access challenges need to be addressed. Outdoor activities, such as walking, biking, and playing outside, should be highly encouraged and fully accessible. These activities are more important now than ever before due to the increased risk of indoor gathering. Such activities have never been contraindicated and clinicians can work with their patients to identify appropriate options.
- Priority should be given to our education systems. Clinicians can be a resource to P-12 schools, which should be places of health and safety for children and adolescents. These institutions must prioritize the promotion of students' PA through multicomponent approaches, such as a comprehensive school PA program, which encompasses physical education, recess, classroom PA breaks, PA integrated with academics, PA opportunities before and after school, and the support of all teachers, school administrators, families, and communities in PA promotion.
- Public health and allied health professionals should use their voice to speak out on media platforms in support of PA. The mass media and social media channels need champions to focus on highlighting safe ways to be physically active. In addition, medical professionals who serve small towns and rural communities have a responsibility to be an advocate for health which includes active transportation and working with local

public health units to help in communicating messages of health that are best for the population.

The current pandemic has given light to many other issues that are being exacerbated by the social and physical distancing guidelines. Recognizing that health inequities have structural causes warranting policy-level solutions, public health, and medical communities must acknowledge the everyday barriers that marginalized communities must overcome when promoting PA. Now, more than ever, our nation needs to heed the call for healthy behaviors, especially PA, and in a systematic way so as to not put the burden on individual behaviors alone.

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Compliance with Ethical Standards

Conflicts of Interest: All authors declare that they have no conflicts of interest.

Human Rights: This article does not contain any studies with human participants performed by any of the authors.

Informed Consent: This study does not involve human participants and informed consent was therefore not required.

Welfare of Animals: This article does not contain any studies with animals performed by any of the authors.

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