

# The Impact of Physical Activity on Public Health

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## ABSTRACT

Physical exercise is an important factor in public health, affecting both physical and emotional well-being. Despite the well-documented benefits, global levels of physical inactivity remain disturbingly high, contributing to rising healthcare expenses and the burden of chronic diseases such as obesity, cardiovascular disease, and mental health issues. This paper investigates the diverse impact of physical activity on public health, participation barriers, and effective community-based initiatives to encourage physical activity. It also looks at developing research trends, the impact of technology, and future potential for increasing population-wide physical activity.

**Keywords:** physical activity, public health, chronic diseases, mental health, healthcare costs.

## INTRODUCTION

Physical activity has been consistently recognized as an important determinant of health across populations, making it a critical public health issue in its own right. More than half of the global population does not meet minimum physical activity guidelines, including an estimated 80% of adolescents and adults in many developed countries. Increasing levels of physical activity can present considerable health benefits in terms of reducing the risk of multiple chronic diseases, unhealthy weight gain, and all-cause mortality. The impact of physical inactivity on health and the associated global healthcare costs makes it critical to address the necessary conditions for promoting it at a population level [1, 2]. Recommendations on the minimum amount of regular physical activity required for health have been established by various organizations. These organizations emphasize that, beyond simply encouraging individuals to be physically active, the entire community must be engaged in developing and implementing policies, initiatives, and programs that result in these increases in physical activity. For these guidelines to be relevant and, ideally, effective, special attention must be given to identifying and addressing disparities in physical activity levels that may exist within various demographic groups. This includes minimizing barriers to improving physical activity, particularly for people with medical conditions. Population health approaches to increase physical activity prioritize environments and systems changes to help all people be more active. This perspective provides an introduction to the state of the field of physical activity more broadly to convey the larger public health implications and the necessity of action [3, 4].

### Benefits of Physical Activity on Public Health

Engaging in regular physical activity has additionally been found to reduce the risk of developing chronic diseases like obesity, diabetes, certain cancers, metabolic and cardiovascular diseases, and cognitive decline, making it key to public health outcomes. In addition to promoting physical health, physical activity has also been shown to improve mental health and reduce symptoms of depression and anxiety. Finally, engaging in exercise in social or group settings has been found to lead to social interaction and other social and emotional benefits in adults and children. In 2017, it was noted that social contributions from community and indigenous sports participants are often categorized into two central themes: enhanced social connectedness and improved quality of life [1, 5]. People who report higher levels of physical activity experience longer life expectancy and improved quality of life. A Melbourne-based study showed that physically active people have far better functional capacity and physical health. In addition, regular physical activity has the potential to reduce public healthcare costs; the potential annual savings to the health system from increased participation in physical activity have been estimated to be in the

hundreds of millions. The benefits do not stop there. Physically active children have improved childhood development and educational outcomes by increasing school readiness and engagement in later life. So not only is physical activity good for your body, it helps us socialize within the community more and reduces negative symptoms, but it can also reduce the strain on our public health system, saving money in the long term [6, 7].

### **Barriers to Physical Activity and Public Health Interventions**

Physical activity can be defined as any body movement produced by skeletal muscles requiring expenditure of energy. According to this definition, physical activity might be categorized into occupational, sports, conditioning, household activity, and other activities. In other words, if one purposefully engages in an activity that elevates heart rate, as well as body temperature, and is also beneficial to health in any other way, that activity can be termed exercise [8]. While time constraints and lack of motivation are key personal factors in addition to unpleasant physiological sensations such as shortness of breath during exercise other personal, environmental, and policy-level factors have been identified as being associated with physical activity levels. Environmental factors including access to facilities and natural/social cues and psychological factors both appear to be as, if not more, automatically related to regular physical activity as socioeconomic status. In other words, people who have better access to recreational and sports facilities might be more active, as well as understanding at the beginning that wealthy people can join fitness and sports facilities of their own choice. Thus, to substantially bring all people to the level of body movement recommended, simply making available sports facilities and starting public health campaigns can be futile; thus, populations with different needs might be reached using multiple public health intervention strategies. Campaigns and interventions on health-related issues related to physical inactivity may also benefit from thinking about the barriers to physical activity to successfully encourage exercise. For instance, several successful interventions have tried to remove personal and environmental obstacles to exercise [3, 9].

### **Effective Strategies for Promoting Physical Activity in The Community**

Many communities have developed and implemented successful strategies to encourage physical activity. In general, a community-based social-ecological approach is important in (1) having an emphasis on community engagement where resources of the community are used and residents are involved in decision-making regarding the development of both the process and the public policy about what is needed and wanted in the community to support physical activity; (2) using a collaborative approach where stakeholders from all different aspects of the community, including public health and health care sectors, work together; and (3) developing supportive environments where people can safely walk or bicycle to where they need to go. In Pacific Park in Greenville, a program partnership was established to open the athletic fields to the community during hours when they are not used for school sports practices [10, 4]. Campaigns such as the One Million Pound Challenge and the renovation of Victoria Park are examples of some innovative strategies to increase physical activity by increasing perceived community-level social support, creating a supportive environment, and communicating a strong message campaign. Of primary importance is based on the practices and programs that have been used in communities. This work has demonstrated that using a team approach can support changes in physical activity, although individuals can be overwhelmed with their responsibilities to change. Hence, it is important to provide the social support to help individuals develop the belief that they can engage in physical activity even when their energy is low. Campaigns are also underway to market physical activity to various segments of the population in multiple ways. In a series of print ads, a program is marketing physical activity only during spring, summer, and fall months when each ad is tied to an activity fair in the next 60 days because individuals are more likely to be physically active when temperatures are not freezing [11, 12].

### **Future Directions and Research Opportunities**

There is much work that remains to complete the field of physical activity and public health. We have identified several research and practice trends emerging with specific areas of focus for future directions. The first of these is the long-term effects of acute physical activity on various health indicators. Future research should aim to study these long-term impacts across the lifespan, as there is currently a paucity of research available in this area. Research is also needed on the prevalence of specific physical activity behaviors, such as the various forms of increasing sedentary behavior, in an expanding technological society. Determining the extent of physical activity and sedentary time spent on virtual interactional behaviors, both positive and negative, is essential, particularly concerning those with physical activity needs to test sociability [13, 14]. There is an additional burden to use technology as a medium to measure and promote physical activity. The common notion is that we use technology to promote health, but the onset has not been recently explored as a means. Research from clinical physical activity or medicine has shown that there is a significant need for a policy in the interest of protecting against

sedentary time, and building a case supporting a policy priority in physical activity use is essential. A final area of potential impact is in advocacy for physical activity. Interdisciplinary research-data teamwork is not likely to result in practical health improvements for those who are sedentary. Academics and practitioners will need to work more intentionally with policymakers, planners, and administrative offices to prioritize the effective, efficient modes of impact that are captured from the data communicated herein and are best for the public. Emerging issues are in social reliance on technology for promoting physical activity. Whether or not virtual fitness results in the same impact on social reliance is yet to be determined. Research is underway to better understand the utility of virtual fitness in promoting social engagement within physical activity by linking people through the internet, and we anticipate results within the upcoming years. Lastly, nearly every researcher we polled identified the need for the implementation and evaluation of strategies that tried to weave the information, which would be highly effective to know about virtually engaged physical activity and, indeed, the most effective way to promote it for those who still are not getting sufficient physical activity. Given anticipated changes in technology and societal needs, there is likely to be no stopping in the quest to use new paths to old remedies, and these need to be explored [15, 16].

### CONCLUSION

The relationship between physical activity and public health is clear: regular exercise significantly reduces the risk of chronic diseases, improves mental health, and enhances overall quality of life. While individual motivation is important, effective public health strategies must involve multi-level interventions, including policy changes and environmental supports that encourage active living. Community-driven approaches, coupled with advancements in technology, hold the potential to address disparities in physical activity participation. Future research should focus on long-term impacts, novel strategies to overcome barriers, and the integration of digital tools to promote a physically active lifestyle, ultimately reducing healthcare costs and improving population health outcomes.

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**CITE AS: Kibibi Wairimu H. (2024). The Impact of Physical Activity on Public Health. EURASIAN EXPERIMENT JOURNAL OF BIOLOGICAL SCIENCES 5(2):1-4**