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**PHYSICAL ACTIVITY AND THE PREVENTION OF CARDIOVASCULAR
DISEASES**

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EXPANDED ABSTRACT

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ABSTRACT

Cardiovascular diseases are among the main causes of morbidity and mortality worldwide and are strongly associated with modifiable lifestyle factors. Physical inactivity, unhealthy eating habits, obesity and hypertension can increase cardiovascular risk over time. Regular physical activity can help prevent and control several of these factors. This expanded abstract discusses the role of physical activity in cardiovascular disease prevention, focusing on blood pressure, body weight, metabolic health and overall cardiovascular risk. Evidence indicates that regular physical activity is associated with lower cardiovascular risk and can provide benefits even for individuals who already have risk factors. Physical activity should also be combined with healthy eating and other lifestyle changes. Even small increases in daily activity can provide meaningful health benefits.

Keywords: physical activity; cardiovascular diseases; exercise; prevention; cardiovascular risk.

INTRODUCTION

Cardiovascular diseases are an important public health problem and represent one of the major causes of death worldwide. Although genetic factors and aging influence cardiovascular risk, many important factors are related to lifestyle and can be modified. Physical inactivity, unhealthy eating habits, obesity, hypertension, smoking and metabolic disorders are particularly relevant.¹

Changes in diet and regular physical activity can improve several cardiovascular risk factors and may contribute to reducing cardiovascular events. Rique et al. emphasized that nutrition and exercise should be considered together as important components of lifestyle modification for cardiovascular prevention and control.¹

Physical activity is especially relevant because it can be incorporated into daily life without requiring complex resources. Walking, cycling, recreational activities and structured exercise can all increase an individual's activity level. Current evidence indicates that regular physical activity is associated with lower cardiovascular risk and a reduced risk of hypertension.²

PHYSICAL ACTIVITY AND CARDIOVASCULAR RISK

Cardiovascular risk is influenced by several factors that may interact with each other. High blood pressure, excess body weight, diabetes, abnormal lipid levels and physical inactivity can all increase the probability of cardiovascular disease. Because several of these factors can be improved through lifestyle changes, prevention is an important part of cardiovascular health.¹

Regular exercise can contribute to better blood pressure control, improved body composition, increased physical fitness and better metabolic health. Evidence from systematic reviews supports an inverse relationship between physical activity and the development of hypertension. More physically active individuals tend to have a lower risk of developing high blood pressure than those with low activity levels.³

Physical activity can also be beneficial when a person does not reach the recommended amount of exercise. Current recommendations emphasize that doing some physical activity is better than remaining completely inactive.²

EFFECTS ON BLOOD PRESSURE

Hypertension is one of the most common cardiovascular risk factors and may remain asymptomatic for years while increasing the risk of cardiovascular complications. Therefore, strategies that help prevent and control high blood pressure are important for cardiovascular prevention.

Regular physical activity has beneficial effects on blood pressure. A systematic review found strong evidence that physical activity can reduce blood pressure and the risk of developing hypertension.³ Exercise can also be used as a complementary strategy for people who already have hypertension. A systematic review and meta-analysis of randomized controlled trials found reductions in ambulatory systolic and diastolic blood pressure among hypertensive patients who exercised.⁴

These benefits are related to physiological adaptations produced by regular exercise, including improvements in cardiovascular efficiency and blood pressure regulation.

PHYSICAL ACTIVITY, BODY WEIGHT AND METABOLIC HEALTH

Excess body weight is associated with several cardiovascular risk factors, including hypertension, insulin resistance and unfavorable lipid profiles. Regular physical activity increases energy expenditure and can help with weight management. However, its importance goes beyond weight loss because exercise can improve cardiovascular and metabolic health even without major changes in body weight.

The World Health Organization recommends that adults perform 150–300 minutes of moderate-intensity aerobic physical activity per week, or 75–150 minutes of vigorous-intensity activity, or an equivalent combination. Muscle-strengthening activities involving the major muscle groups are also recommended on at least two days per week.²

These recommendations demonstrate that cardiovascular prevention does not depend on high-intensity training. Brisk walking, cycling, swimming and other moderate activities can already provide meaningful health benefits.

SEDENTARY BEHAVIOR AND LIFESTYLE

Physical inactivity should also be considered together with sedentary behavior. Spending long periods sitting or lying down while awake is associated with worse health outcomes, including cardiovascular disease and cardiovascular mortality.² For this reason, prevention should not focus only on planned exercise sessions. Walking more, using stairs, cycling when possible and taking breaks from prolonged sitting are simple ways to increase daily movement.

Physical activity should also be combined with other healthy lifestyle habits, particularly adequate nutrition, smoking cessation and control of blood pressure, glucose and lipid levels. Rique et al. highlighted the importance of combining exercise with healthy eating in the prevention and control of cardiovascular diseases.¹

PRACTICAL IMPORTANCE

Physical activity can be adapted to different individuals because people have different physical capacities, preferences, schedules and access to exercise facilities. Prevention strategies should therefore encourage realistic and sustainable changes.

The World Health Organization recommends that adults who are not currently meeting activity targets start with small amounts and gradually increase frequency, duration and intensity.² Consistency is more important than occasional intense efforts. Healthcare professionals can also encourage patients to become more active and help them identify practical ways to include movement in daily life.

CONCLUSION

Physical activity is an important component of cardiovascular disease prevention. Regular exercise can contribute to blood pressure control, metabolic health, healthy body weight and lower overall cardiovascular risk. Evidence also indicates that higher levels of physical activity are associated with lower risks of cardiovascular disease and hypertension.^{2,3}

Physical activity does not need to be extreme to be beneficial. Moderate activities performed regularly can provide significant health benefits, and even individuals who are initially inactive can benefit from gradually increasing their activity. However, exercise should be combined with healthy nutrition and control of other cardiovascular risk factors.¹

Overall, encouraging people to become more physically active is a practical and evidence-based approach to reducing cardiovascular risk and promoting long-term health.

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