

# **How Does Fitness Level Impact Cardiovascular Disease on Children and Young Adults?**

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## **ABSTRACT:**

### *Background*

Cardiovascular disease is a serious health problem that can affect children and young adults. Being active and playing sports may help keep the heart healthy and lower the risk of heart disease.

### *Methods*

This paper is a narrative review using PubMed to find studies about cardiovascular disease in student athletes under 30 years old. Studies about physical activity and heart health were included, while reviews, case reports, and editorials were not used.

### *Results*

The studies showed that young people who exercised regularly had healthier hearts than those who were less active. They had better blood pressure, healthier cholesterol levels, and a lower risk of developing cardiovascular disease later in life.

### *Discussion*

Overall, the research shows that staying active is important for heart health. These findings suggest that exercising and playing sports at a young age can help reduce the risk of cardiovascular disease and lead to a healthier future.

## **INTRODUCTION:**

Cardiovascular disease is a serious health problem that can affect people from all ages including children and young adults [1,2,4]. Even though younger athletes are healthier than older athletes, it does not mean that they cannot get cardiovascular disease [1,2,]. Exercising a lot will help keep the heart healthy and lower the risk of future heart problems [1].

Research shows that playing sports and exercising regularly can improve cardiovascular health [2,4]. One study found that young men who continued playing sports like tennis had a lower chance of developing heart disease later in life [1]. Another study found that teenagers who attended a sports-focused school had lower blood pressure and healthier cholesterol levels than students who did not [2]. College students with better fitness levels were also less likely to have other health problems linked to cardiovascular disease [3].

Cardiovascular disease can also affect student athletes by making it harder to exercise, lowering performance, and increasing health risks during sports [3,4]. This is why it is important for young athletes to stay active and build good fitness habits early in life. Having the knowledge about cardiovascular health will give you a bigger advantage when doing any athleticism or exercise.

## **METHODS:**

This study is a narrative review using the PubMed to identify articles about cardiovascular disease in student athletes. The inclusion criteria for selection were study participants under the age of 30 years old who were involved in any type of sport. The included articles were related to physical activity, cardiovascular health and student activity. Key search terms were student athletes AND cardiovascular disease. Study designs of reviews, case reports, and editorials were excluded.

## **RESULTS:**

The studies found that children and young adults with higher fitness levels generally had better cardiovascular health than those who were less active [1–4] . Across all four studies, regular physical activity and participation in sports were linked to a lower risk of cardiovascular disease and other related health problems [1–4]. Participants who exercised more often also tended to have healthier blood pressure, cholesterol levels, better cholesterol profiles, and stronger overall heart health than those who were less physically active [1–4]. These findings were consistent across the different studies, even though the participants were from different age groups and backgrounds[1–4].

The research also showed that the benefits of staying active should begin at a young age and continue into adulthood[2,4]. Teenagers and college students with better cardiovascular fitness had fewer risk factors for heart disease, including a lower chance of developing metabolic syndrome and other conditions linked to cardiovascular disease [4]. In addition, students who regularly participated in sports often had healthier measurements related to heart health than those who were less active [2]. Overall, the studies consistently showed that maintaining a good fitness level through regular exercise and sports is associated with better cardiovascular health and a lower risk of developing cardiovascular disease in children and young adults [1–4].

## **DISCUSSION:**

The results of this research show that being physically active can help children and young adults have healthier hearts. All four studies found that regular exercise and playing sports were linked to better cardiovascular health and a lower risk of heart disease [1-4]. This answers the research question by showing that a higher fitness level can have a positive effect on heart health.

These results were not surprising because exercise helps make the heart stronger and improves blood flow. The studies all had similar findings, even though they looked at different groups of young people [1-4]. This makes the results more trustworthy because more than one study reached the same conclusion [1-4].

One limitation of this review is that only four studies were included. More research with larger groups of children and young adults could provide more information. Overall, this review shows that staying active and exercising regularly are important ways to keep the heart healthy. These findings can encourage students, parents, coaches, and schools to support healthy exercise habits at a young age.

## REFERENCES:

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