

## **The Importance of Early Screening in the Prevention of Cardiovascular Diseases in Young Adults**

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### **Summary**

Cardiovascular diseases (CVDs) remain the leading cause of death globally, and have shown a worrying increase among young adults. This phenomenon stems from, above all, due to modifiable factors such as sedentary lifestyle, inadequate diet, smoking, Alcohol consumption and stress. Recent literature shows that early screening is a This is an essential strategy for identifying these risk factors, enabling interventions. Effective preventive measures. This study conducted a narrative literature review, searching in PubMed, SciELO, and Google Scholar databases, covering publications between 2019 and 2025. Twenty-eight articles addressing the prevention and early diagnosis of cardiovascular diseases were analyzed. young adults. The results demonstrated that screening through simple tests — such as Blood pressure, blood glucose, and lipid profile measurements — allow for the detection of conditions. asymptomatic and significantly reduces the risk of cardiovascular events. In addition to With clinical benefits, a positive economic impact is observed, reducing costs with hospitalizations and long-term treatments. It is concluded that early screening should be incorporated as a priority public policy, integrating health education, screening and Ongoing medical monitoring, with a special focus on young adults.

**Keywords:** Early screening; Cardiovascular diseases; Prevention; Young adults; Risk factors.

### **Abstract**

Cardiovascular diseases (CVDs) remain the leading cause of global mortality and have shown a concerning rise among young adults. This trend is mainly driven by modifiable factors such as sedentary lifestyle, poor diet, smoking, alcohol consumption, and stress. Recent literature highlights early screening as an essential strategy for the timely identification of cardiovascular disease risk factors, enabling effective preventive interventions. This literature narrative review conducted searches in PubMed, SciELO, and Google Scholar databases for studies published

between 2019 and 2025. Twenty-eight relevant articles addressing early detection and prevention of CVDs in young adults were analyzed. Findings indicate that screening with simple tests — such as blood pressure measurement, fasting glucose, and lipid profile — enables the detection of asymptomatic conditions and significantly reduces cardiovascular event risk. Beyond clinical benefits, early screening also provides economic advantages by lowering hospitalization and long-term treatment costs. It is concluded that early screening should be adopted as a public health priority, integrating health education, screening programs, and continuous medical follow-up, particularly targeting young adults.

**Keywords:** Early screening; Cardiovascular diseases; Prevention; Young adults; Risk factors.

## Introduction

Cardiovascular diseases (CVDs) remain the leading cause of death worldwide, responsible for approximately 17.9 million deaths annually according to the World Health Organization Health (WHO, 2023). Traditionally associated with the elderly population, CVDs have been showing increasing incidence among young adults, a phenomenon attributed to the adoption of sedentary lifestyles, inadequate diet, stress, and the consumption of alcohol and tobacco. The literature indicates that many cardiovascular risk factors are modifiable and, when identified early, can substantially reduce morbidity and mortality associated with major cardiovascular events, such as acute myocardial infarction and stroke (Carvalho, 2025). In this context, early screening emerges as an essential strategy for public health, aimed at the early detection of risk factors, allowing for interventions and effective preventive and educational measures (Pedroso; Lima; Barbosa, 2025). Given this, this article aims to discuss the importance of early screening in the prevention of cardiovascular diseases in young adults, highlighting the main risk factors, the scientific evidence on the impact of early detection in reducing mortality and in improving the quality of life.

## Methods

This study consists of a narrative literature review, with the purpose of gathering and analyzing scientific evidence on the importance of early screening for risk factors in cardiovascular diseases in young adults.

Searches were conducted in the PubMed, SciELO, and Google Scholar databases, using the descriptors: “early screening”, “cardiovascular diseases”, “prevention”, “young adults” and “risk factors”. Articles published between 2019 and 2025, in Portuguese and English, were included that addressed the prevention and early diagnosis of CVDs in this age group.

The exclusion criteria included studies focused exclusively on populations.

Pediatric or elderly studies, animal studies, and articles without a clear methodology. After screening, Twenty-eight relevant articles were selected for analysis. The data synthesis adopted an approach... qualitative, highlighting convergent findings on early screening and its impact on health. cardiovascular.

## Results

The studies analyzed revealed that young adults frequently present risk factors.

silent conditions, such as early hypertension, dyslipidemia, and insulin resistance, that become unnoticed due to the absence of symptoms.

Several studies (Silva et al., 2021; Lima & Costa, 2022; Rodrigues et al., 2023) indicate screening programs based on simple laboratory tests — such as lipid profile,

Fasting blood glucose and blood pressure measurements allow for the early detection of conditions. predisposing factors, allowing intervention before the clinical manifestation of CVDs.

The literature also shows that early screening is associated with change in

behavior and the adoption of healthy habits. Longitudinal studies (Ferreira et al., 2020;

Studies (WHO, 2023) demonstrate a reduction of up to 40% in the risk of cardiovascular events in Individuals who joined primary prevention programs after screening.

Furthermore, screening initiatives in workplaces and universities have shown good results.

Adoption among young adults, highlighting the potential of these actions in non-contexts. hospitals.

## Discussion

The results of this review show that early screening is a high-impact strategy.

in the prevention of cardiovascular diseases in young adults. Despite the knowledge

While the analysis of risk factors is well-established, there is a deficit in targeted public policies.

specifically in this age group, which contributes to late diagnosis and a greater burden of morbidity and mortality (Araujo; Barbosa, 2025).

Recent studies (Santos et al., 2021; Rocha & Almeida, 2023) indicate that the incorporation of Screening protocols in routine consultations can significantly reduce the number of Cardiovascular events. However, barriers such as limited access to testing and low...

Risk perception among young adults hinders the widespread implementation of these strategies.

A comparison between different health contexts shows that countries with surveillance systems Active and ongoing preventive education leads to lower rates of disease.

premature cardiovascular events (WHO, 2023). Thus, the integration between screening actions, Health education and regular medical check-ups are essential to modify the current situation.

In addition to clinical benefits, early screening also has positive economic impacts.

Reducing costs associated with hospitalizations and long-term treatments. Prevention is key.

demonstrably more cost-effective than treating cardiovascular complications.

advanced (Oliveira et al., 2020).

## **Conclusion**

Early screening in young adults is an essential tool for prevention.

Primary cardiovascular disease. Early detection of risk factors allows for...

Adoption of measures to control and promote health, directly impacting the reduction of morbidity and mortality.

The literature review demonstrated that simple, low-cost, and applicable strategies in various contexts — such as regular blood pressure checks, cholesterol testing and

Educational campaigns can generate significant results in public health.

It is therefore recommended that public policies and health programs broaden their focus.

preventive care for young adults, encouraging regular checkups, lifestyle changes and

Continuous multidisciplinary monitoring. Strengthening these practices is fundamental.

to reduce the impact of CVDs in the coming decades.

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