

### PERSPECTIVE 3 Open Access

## **Prevention and Management of Cardiovascular Diseases**

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# Description

Congestive Heart Failure (CHF), usually referred to as Heart Failure (HF), is a complex illness with a number of symptoms, most frequently shortness of breath, extreme fatigue, and limb edoema. When exercising or lying down, it can make one feel out of breath, which could wake them up in the middle of the night. Notably, heart failure does not normally produce chest discomfort, including angina, but it can if the heart failure was brought on by a heart attack. The intensity of symptoms during activity serves as a gauge for the degree of heart failure. Obesity, kidney failure, liver issues, anaemia, and thyroid disease are among the other illnesses that could present with symptoms comparable to heart failure.

Symptoms, physical examination results, and echocardiogram are used to make the diagnosis. To identify the underlying reason, blood testing and chest radiography may be helpful. Treatment is based on the severity and underlying cause. Treatment for persons with chronic stable moderate heart failure frequently includes medication as well as dietary and lifestyle adjustments like quitting smoking.

### **Prevention**

The amount of physical activity a person engages in is inversely connected to their chance of having heart failure. When compared to people who did not report working out during their free time, those who achieved at least 500 MET-minutes/week (the minimum amount recommended by U.S. guidelines) had a lower risk of developing heart failure; the reduction in risk was even greater in people who engaged in more physical activity than the minimum amount. Additionally, heart failure can be avoided by reducing excessive blood pressure,

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high cholesterol, and managing diabetes. Keeping a healthy weight while consuming less sodium, alcohol, and sugar may be beneficial. Additionally, it has been demonstrated that quitting smoking reduces the chance of heart failure.

There are a few techniques to assist prevent a cardiac episode, according to Johns Hopkins and the American Heart Association. According to Johns Hopkins, quitting smoking, controlling high blood pressure, engaging in physical activity, and changing your diet can significantly reduce your risk of developing heart disease. The majority of cardiovascular deaths are caused by high blood pressure. Making dietary changes, such as ingesting less salt, can help lower high blood pressure into the normal range. Exercise also lowers blood pressure. Encourage healthier eating practices, such as consuming more fruits, vegetables, whole grains, and lean protein, as one of the greatest strategies to help prevent heart failure.

### Management

The goal of treatment is to reduce the severity of the symptoms and stop the condition from getting worse. Heart failure's reversible causes must also be addressed. The use of various types of device therapy is occasionally used, in addition to pharmaceutical and lifestyle interventions. Rarely, when heart failure has progressed to its last stage, is cardiac transplantation utilized as an effective treatment.

**Acute decompensation:** The primary objective in acute decompensated heart failure is to restore adequate perfusion and oxygen delivery to the end organs. Making sure the airway, breathing, and circulation are all functioning properly is required. Vasodilators like nitroglycerin, diuretics like furo-

semide, and possibly noninvasive positive pressure ventilation are common immediate treatments. While it is not advised for those with normal oxygen levels in a typical atmosphere, more oxygen is needed in cases where oxygen saturation levels are below 90%.

**Chronic management:** Treatment for persons with chronic heart failure aims to extend life, stop acute decompensation, and reduce symptoms so they don't interfere with activity. There are many dif-ferent conditions that can lead to heart failure. Ex-cluding reversible factors, such as thyroid illness, anaemia, chronic tachycardia, alcohol use

disorder, hypertension, and failure of one or more cardi-ac valves, is crucial when considering therapeutic choices. The primary line of treatment for heart failure is typically addressing the underlying cause. However, in most instances, either no underlying reason is identified or the fundamental cause is treated, but normal cardiac function is not recov-ered. In these circumstances, there are behavioural, medicinal, and technological therapy options that can significantly improve results, including symp-tom relief, exercise tolerance, and a decreased risk of hospitalization or death.