

# Heart disease: symptoms, treatments and impacts on the population



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## **Abstract**

The purpose of this paper is to thoroughly analyze Heart disease in the world today and how it has and currently affecting adults. Heart disease in America kills around 610, 000 people each year nationwide as it is the leading cause of death in adults. But what is Heart disease? Coronary heart disease, which is often also called heart disease is the main form of heart disease. It is a disorder of the blood vessels within the heart that can lead to heart attack. When a heart attack occurs, the artery becomes blocked which prevents nutrients and oxygen from getting to the heart. Heart disease is just one of several cardiovascular diseases all of which are diseases of the blood vessel and heart system. There are other cardiovascular diseases including, high blood pressure, stroke, rheumatic heart disease, chest pain. Heart disease is a lifelong condition so unfortunately once an individual is diagnosed with it, they will have it forever in their system.

## **Anatomy of the Heart**

The heart in an individual is one of the body's most important organs. Essentially the heart is a pump and a muscle that is made up of four chambers separated by valves and divided into two halves. Each one of the half contains one chamber called a ventricle and one called an atrium. The atria collects the blood, and the ventricles contract in and out to push blood out of the heart. The right half of the heart pumps oxygen-poor blood which is blood that has a low amount of oxygen. This then travels to the lungs where the blood cells can obtain more oxygen. Therefore, the newly oxygenated blood travels from the lungs and into the left atrium, lastly

entering the left ventricle of the heart. The left ventricle pumps the now oxygen rich blood to the organs and tissues of the body. This oxygen provides the patient's body with energy and is essential to keep the body healthy. The general term used to determine the malfunctions of the heart is Heart Disease, or sometimes Cardiac Disease. Though there are multiple forms of heart disease, the two common forms of heart disease are a Heart Attack and Heart Failure. As both of these diseases are to some extent avoidable, there are ways and methods that an individual can take to decrease their chances of having to deal with heart disease, or to at least minimize the negative effects of existing heart disease. There are recent procedures that have been evolved such as bypass surgery and percutaneous coronary intervention this can help blood and oxygen flow to the heart more easily. But even with these procedures, the arteries still remain damaged. This most acceptably means that those individuals are more likely to have a heart attack. What's more, the condition of someone's blood vessels will steadily worsen unless they make changes in their daily habits. Many men and women in America have died of complications from heart disease and heart related problems and still to that day, the number is still growing. That's why it is so vital for this nation to take action to prevent and control this disease. According to the *US national Library of Medicine* , " Half of adults have at least one cardiovascular risk factor. Not even 1% of the population attains ideal cardiovascular health. Despite falling coronary death rates for decades, coronary heart disease (CHD) death rates in US women 35 to 54 years of age may now be increasing because of the obesity epidemic." People around the nation unfortunately has just become to accustom to the

standards around us that Adults are often putting a “ want” before a “ need” when it comes to their health.

### Symptoms of heart disease

Learning about how heart disease affects an individual has a high importance as different symptoms can relate to different heart related issues but knowing what to do in any heart situation is beneficial and valuable. Here are some of the symptoms an individual may notice if they have a heart related issue. The most common symptom of coronary artery disease is angina, or also known as chest pain. Angina is a medical term which can be described as a having discomfort, heaviness, aching, pressure, burning, squeezing, fullness, or painful feeling in a person’s chest. It can be mistaken for indigestion and or heartburn. Angina may also be felt in the shoulders, neck, arms, back throat, or jaw. Other symptoms of coronary artery disease include Shortness of breath, a faster heartbeat, palpitations, weakness or dizziness, sweating, and nausea. Unfortunately there is not much of a difference from the symptoms of heart disease, and the feeling of a heart attack. However; when a heart attack is occurring it typically will last 30 minutes or longer and have no sense of release of pain even when using oral medications. Initial symptoms may start as a mild discomfort in the chest and throat but will eventually progress to significant pain that can be described as unbearable. Some people have a heart attack without having any symptoms at all, which is known as a silent myocardial infarction. While this is not a very common interaction with the heart, more often than not it happens to people with diabetes.

## Heart Disease affecting the population

The United States population in particular, among the older age groups is continuing to expand daily at an alarming rate. Because of the incidence of heart failure increasing with age, largely due to the development of heart failure risk factors such as coronary artery disease and hypertension, the epidemic of heart failure is likely to grow further into the upcoming decades. While some assert that the life expectancy is approaching its natural limit and heart related mortality's are slowing life expectancy gains, the steady increase in Heart disease has been observed over the past century and yet in recent years it has not waived this increase in the aging population having implications with heart failure. According to *Impact on Heart Failure* , " Over the next two decades, the proportional increase in the generality of heart failure will likely exceed cardiovascular diseases and is likely going to be driven by the aging of the population nationally". Certain minority groups also face a greater risk than others. These differences have appeared to come from an increased amount of high blood pressure, obesity, and diabetes seen in some populations that are in contrast with that of Caucasian Americans. Still, Genetic differences do exist. But diversity within different ethnic and racial groups means that genetic traits common to some groups can't be rationalized to an entire race. For example, according to the *Office of Minority Health* , " while six percent of Caucasian American and African American adults are living with heart disease, African American men are thirty percent more likely to die from heart disease, as compared to Caucasian American men". Alaska Natives and American Indians, on average are more likely to be diagnosed with heart disease and heart failure than

their Caucasian counterparts. For people of all ethnicities, knowing and properly managing their biometric numbers such as cholesterol levels, blood pressure, and weight can prevent or delay heart disease and its complications in an individual.

### Recent Advancements in Heart Disease

With Heart disease as one of the leading deaths in America researchers are always looking for recent advancements and ways to continue to better prevent heart disease in adults. Recently, Physicians and Researchers have created remarkable advancements in treating heart disease. The future has not become even more positive for adults with 200 new heart disease and stroke medications in development. Among, these medicines is a treatment for patients with coronary heart disease and low levels of high density lipoprotein. This medicine is an inhibitor of the bromodomain an extra terminal protein. It is thought the protein can reproduce specific biological effects than will be able to provide health benefits to these patients and reduce the prevalence of adverse cardiac events. Another possible treatment is a non-viral gene therapy that targets tissue repair and regeneration in the body. So many adults rely on the multiple forms of medications in the market of the nation today, this is including Beta blockers such as, Bisoprolol as well as, angiotensin-converting enzyme inhibitors Captopril and Enalapril. The majority of these medications work by blocking the effects of hormones that are released by the body during heart failure. These medications happen to work relatively well in the early to mid-stages of heart failure, but unfortunately once the patient reaches the later stages of heart failure, the effectiveness of the drops significantly. They also come <https://assignbuster.com/heart-disease-symptoms-treatments-and-impacts-on-the-population/>

with serious side effects of which includes worsening kidney function and hypotension. There are however Pacemakers, which are also known as cardiac resynchronization therapy, these devices have been around for more than half a century. These small devices consist of electrodes that are implanted into the heart and deliver electrical impulses to regulate the heartbeat within the individual. Two other main classes of devices are implantable cardiac defibrillators and ventricular assistance devices. Both of which work similar to pacemakers, using electricity to correct irregular heartbeats and supply supplementary pumps of pressure that help the heart pump blood in and out of the ventricles. Within the past decade there have been major breakthroughs in sensor and nanotechnology have made cardiac resynchronization therapy and implantable cardiac defibrillators. Now most patients now have a single device that does both the job of a CRT and ICD safer and more reliable for the patient. Previously, these devices were imprecise, occasionally causing violent hiccups. Doctors are now able to position multiple sensors more precisely on different chambers of the heart this allows for more coordination. Physicians are able to take patients who had poor responses to cardiac resynchronization therapy and allow them to have positive responses, this is all due to miniaturization technology which is the trend to manufacture smaller electronic, optical and mechanical products and devices.

### Social and economic factors

Heart disease is a compound condition that is a leading cause of death worldwide. It is often seen as a disease of overflow, yet is strongly associated with a socio-economic status. It's highly complex causality means that many <https://assignbuster.com/heart-disease-symptoms-treatments-and-impacts-on-the-population/>

different factors of social and economic life are compromised in its cause of disease, these factors are determined through such as workplace hierarchy and agricultural policy combined with other factors to together result in a pass for an individual lifestyle. The untangling of causes for heart disease thus automatically raises moral, political, and, social issues. These include the accepted role of the individual and of larger social efforts in its prevention's and treatment. The construction of risk factors for heart disease likewise is embedded with questions of organized justice in the responsible direction of those at risk for heart disease, a debate within the medical literature that has received much attention, but less intriguing within the ethical literature. For example, prevention strategies may raise composite issues of responsibility and of judgements of what it is to exactly live well. After all if there was a true way to live well, who is to say what that definition entails? More than twenty three million adults worldwide have heart failure, an astounding number to a millennial such as myself. Even though over time the survival of life after the diagnosis of heart disease or heart related issues has improved, ephemerality from heart failure still remains high today. Approximately fifty percent of people diagnosed with heart failure will die within five years. Many of these patients will progress to advanced heart failure, this is characterized by symptoms at leisure despite the maximum medical therapy. These patients are considered obstinate, both the patient and the physician upon reaching this form of state are faced with ethical issues that can be very difficult to determine what is best for the patient. There has been consideration over advanced therapies including, left ventricular assist devices or a transplant, involvement of palliative care, transitioning into hospice care, as well as end of life issues such as advance <https://assignbuster.com/heart-disease-symptoms-treatments-and-impacts-on-the-population/>



directives and implantable cardioverter-defibrillator deactivation that have the need to be conveyed. Now, many advanced therapies such as LVADs and cardiac resynchronization therapy have become more readily available to patients who are older as well as more obstinate. Expanding the indications for device therapy in heart failure are based on expert opinion regarding their effects and clinical trials in a beneficial way. However, careful consideration must come into perspective and be given to the cost to the general public, the potential to reduce the quality of life, the possibility of doing harm to the individual, and disparities in the care of acute heart failure patients.

## Conclusion

Heart disease in America is a topic that is very commonly discussed in doctors' offices everywhere in the nation and I believe needs to continue to be adamantly researched to hopefully find a prevention for this disease. There are many preventions I believe people would take part in to prevent heart disease but unfortunately just do not have the resources available to them or the knowledge and means to be able to find a cure. Factors including Race, ethical issues, financial relations, and overall health are all contributing to the number one cause of Death nationally. But as a nation, particularly America; will Adults have the drive to come together to help fight this disease one heart at a time? We can only hope so and for a cure, which starts within the everyday individual taking strides to better their overall heart health.

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