



## CHRONIC HEART FAILURE IN SURKHANDARYA REGION AND MODERN METHODS OF ITS TREATMENT.

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**Abstract:** Heart failure is a syndrome caused by deterioration of the pumping function of the heart. This condition causes the heart to not be able to supply the whole body with normal blood. Disruption of nutrient and oxygen circulation occurs and blood stagnation occurs. This pathology can be acute or chronic. This article provides information about chronic heart failure and modern methods of its treatment.

**Key words:** Heart failure, causes, treatment, Coronary artery, tachycardia, New York Heart Association (NYHA), hypertension.

With a healthy heart, oxygen-rich blood from the left ventricle is pumped throughout the body to the organs, supplying them with oxygen and nutrients. After delivery to the organs, blood with low oxygen content returns from the body to the right side of the heart, where it is delivered to the lungs. In the lungs, the blood is enriched with oxygen, so that it can be pumped through the left ventricle to the whole body.

In heart failure, the heart's pumping function is weakened. Acute heart failure can appear suddenly against the background of acute cardiovascular injury or decompensation of heart failure.

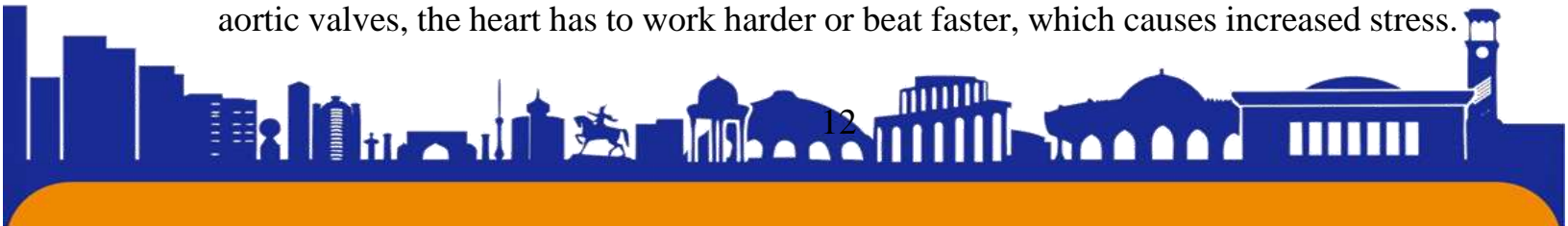
### Causes of heart failure

The most common cause of chronic heart failure is coronary artery disease.

Coronary artery disease occurs as a result of narrowing of the coronary vessels (coronary arteries), which are often narrowed by atherosclerosis. A gradual narrowing of the arteries (also called stenosis) leads to poor blood circulation in the heart muscle. Coronary artery disease is diagnosed when angina (chest pain and tightness) is present many times, but if there are no such symptoms, the disease goes unnoticed. A heart attack causes tissue death due to reduced oxygen-rich blood flow to the heart muscle. This damage affects the heart's pumping function and leads to heart failure.

High blood pressure (hypertension) is the sole cause of heart failure in nearly 20 percent of people and is the second most common cause of the condition. The heart can't work under the added stress for a long time and therefore deteriorates.

This effect can also be caused by heart valve problems. With narrowed or leaky aortic valves, the heart has to work harder or beat faster, which causes increased stress.





Bradycardia, an abnormal heart rhythm with a low heart rate, can also cause heart failure because too little blood is circulating. Very fast heartbeat (tachycardia) is associated with a decrease in the volume of blood vessels and therefore can lead to heart failure.

Hereditary diseases, pregnancy, autoimmune diseases, alcohol, drugs or drugs, overactive thyroid gland and metabolic diseases (diabetes) can cause heart failure.

#### Symptoms of heart failure

Each type of disease has different symptoms and can vary in intensity of symptom. Warning signs include sweating with light exertion, inability to lie flat, chest tightness, or leg swelling.

#### Types of heart failure

The disease is divided into the following types:

- Left-sided heart failure
- Right-sided heart failure
- Global heart failure
- Systolic heart failure
- Diastolic heart failure
- Chronic heart failure
- Acute heart failure

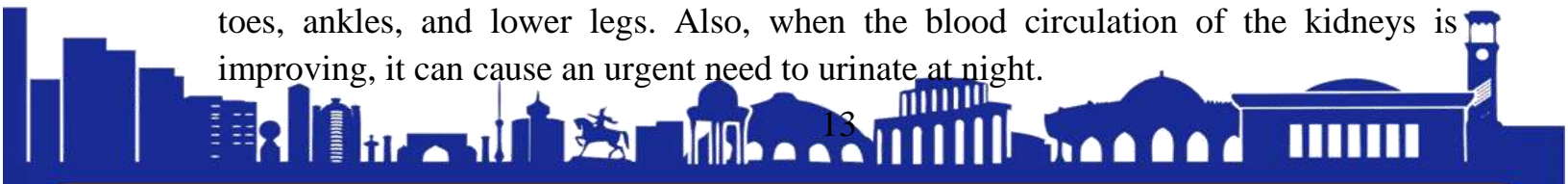
#### Left-sided heart failure

The left side of the heart is responsible for pumping oxygen-rich blood to the body's organs. In left-sided insufficiency, the pumping function of the left ventricle is limited, as a result, oxygenated blood does not reach the whole body. Instead, blood stays in the pulmonary circulation, which can lead to fluid build-up in the lungs (pneumonia), difficulty breathing, sore throat, and wheezing sounds, may cause weakness or dizziness. This condition is often caused by coronary artery disease (high blood pressure or heart attack), and less often by heart muscle or heart valve disorders.

Left-sided heart failure can be acute or develop over time. Usually, shortness of breath is felt first during physical activity. In severe cases, it can even cause hypotension (low blood pressure).

#### Right-sided heart failure

The right side of the heart is responsible for returning low-oxygenated blood to the lungs. In right-sided heart failure, the right ventricle does not work properly. This leads to increased pressure in the veins. This causes swelling, especially in the feet, toes, ankles, and lower legs. Also, when the blood circulation of the kidneys is improving, it can cause an urgent need to urinate at night.





### Global heart failure

When both the left and right sides of the heart are affected, it is called global heart failure. In this case, there are signs of left and right heart failure.

### Systolic and diastolic heart failure

Systolic heart failure is associated with loss of normal function of heart muscle cells or external pump dysfunctions. Blood enters the lungs and the organs do not receive enough oxygen.

In diastolic heart failure, the elasticity of the ventricle is lost, which prevents it from relaxing and filling properly. One of the most common causes of diastolic dysfunction is high blood pressure. Due to the increased resistance in the veins, the heart has to work harder. The elasticity of the heart muscle decreases, and less blood can be pumped from the ventricles to the body during contraction intervals. This causes the body to not receive enough blood and nutrients. Valvular heart disease can also cause thickening of the heart muscle. Due to the accumulation of proteins, the heart muscle hardens and becomes less elastic. Symptoms of this disease range from coughing to shortness of breath.

### Chronic and acute heart failure

Chronic heart failure is a progressive disease that develops over months or years and is more common than acute heart failure. In this type of heart failure, the symptoms are often not taken seriously because the body can hide the condition for a long time, or the symptoms are associated with advancing age. Symptoms reflect left or right heart failure. Acute heart failure occurs suddenly, minutes or hours after a heart attack, when the body can no longer replace it. Symptoms include:

Difficulty breathing or coughing;

- Rattle sound during breathing;
- Violation of heart rhythm;
- Paleness;
- Cold sweat.

### Classification of heart failure

According to the functional classification of the New York Heart Association (NYHA), heart failure is divided into four classes based on the severity of symptoms:

NYHA I: Heart disease that does not limit any physical activity. Normal activity does not cause increased fatigue, palpitations and breathing difficulties.

NYHA II: Heart disease causing mild limitations in daily activities. There are no symptoms during rest.





NYHA III: Heart disease causing significant limitations in daily activities. Simple exercises like brushing your teeth, eating, or talking can cause fatigue, palpitations, or difficulty breathing. There are no symptoms during rest.

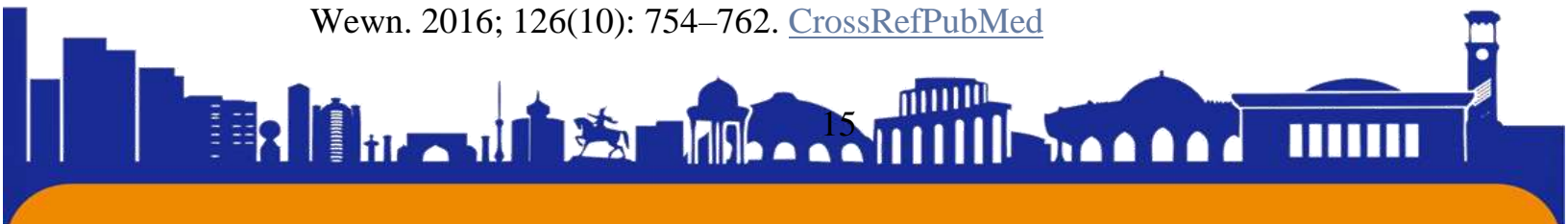
NYHA IV: Heart disease with symptoms at rest (and with any light physical activity).

#### Diagnosis of heart failure

Diagnosis begins with a comprehensive assessment of a person's medical history, paying attention to symptoms (onset, duration, manifestation). This helps categorize the severity of the symptom. The heart and lungs are examined. If a heart attack or arrhythmia is suspected, an EKG is performed. In addition, an echocardiograph and a complete blood analysis are prescribed. The need for catheterization is determined individually.

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