

## STUDY OF PSYCHOLOGICAL STRESS AND ITS IMPACT ON THE HUMAN HEART

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**Abstract:** Cardiovascular diseases (CVD) are currently the leading cause of death worldwide. Millions of people die or become disabled from these diseases every year. Recent epidemiological studies have shown that although CVD develops earlier in men, its incidence increases in women after menopause. This is likely due to hormonal differences, lifestyle factors, stress levels, and access to health care.

The article analyzes heart diseases, their types, causes of development and symptoms. Extensive information on the risk factors of these diseases and methods of their prevention is presented. Methods of treating heart diseases, modern approaches to medicine are also presented.

According to the World Health Organization (WHO), more than 18 million people die from cardiovascular diseases every year. This is approximately 32% of the total number of deaths. About 85% of them occur as a result of a heart attack or stroke.

**Keywords:** tachycardia, bradycardia, fibrillation, hypertension (high blood pressure), arrhythmia (irregular heartbeat).

**Introduction:** The heart is one of the central organs of the human body, its continuous activity ensures the balanced functioning of all vital systems. The heart plays a key role not only as a mechanical pump. Its complex structure, consisting of muscle tissue, sensitivity to bioelectric impulses and the rhythm of vegetative regulation are the basis for recognizing it as the main one for human health. Heart dysfunction in most cases develops unnoticed, gradually and without any special clinical symptoms. Therefore, the issue of heart health should be approached not only after the disease is detected, but also at the stage of prevention. Factors affecting heart function are extensive and include such aspects as hereditary predisposition, environmental impact, psychoemotional state, nutritional status, level of physical activity and lifestyle.

### Main Part

1. **Structure and Function of the Heart:** The heart has four chambers: two atria (top) and two ventricles (bottom). Blood enters the heart through the veins, where it is cleaned and distributed throughout the body through the arteries. The heart is made of muscle tissue and constantly contracts and relaxes - this process is called "contraction".

**Clinic:** Heart disease is widespread in modern life. Heart disease is often caused by poor diet, stress, a sedentary lifestyle, smoking, and alcohol consumption. Therefore, it is useful to follow the following advice.

Moderate and healthy eating

- ★ Engage in physical activity every day
- ★ Avoid stress and take time to relax
- ★ Quitting smoking and harmful habits

1. **Diseases:** The most common major diseases .
2. Ischemic heart disease (IHD) is caused by narrowing or blockage of the blood vessels (coronary arteries) that supply oxygen and nutrients to the heart.

**Symptoms:**

3. -Chest pain
4. -Shortness of breath
5. -Fatigue
6. -Heart rhythm disturbances
7. If this condition continues, a heart attack, the death of the heart muscle, can occur.

**Heart attack (myocardial infarction)**

If blood flow to the heart muscle is suddenly stopped, the heart tissue is deprived of oxygen and dies.

**Symptoms:**

..Severe chest pain (on the left side, spreading to the neck, shoulder or arm.

-Cold sweat

-Shortness of breath or fainting may occur..

**3. Heart failure:** When the heart is unable to pump enough blood throughout the body, it is called heart failure.

**Symptoms:**

..Shortness of breath, especially when lying down.

-Swelling of the legs.

-Fatigue

-Rapid heartbeat

**Heart rhythm disturbances.** Severe stress can disrupt the normal rhythm of the heart, causing arrhythmia, or irregular heartbeat. Sometimes these conditions can feel like the heart has stopped or is beating too fast. This is especially dangerous for people with heart disease. Chronic stress can lead to high blood pressure, which can cause the heart muscle to thicken.

As a result, the heart does not receive enough oxygen, increasing the risk of heart attack and stroke.

#### **Diseases caused by stress:**

Hypertension—high blood pressure.

Arrhythmia—irregular heartbeat.

Coronary—heart disease.

**Statistics---**According to the World Health Organization (WHO), cardiovascular diseases cause the death of more than 17 million people every year.

#### **Arrhythmia (irregular heartbeat)**

The heart can beat too fast or too slow and irregularly.

There are different types:

-tachycardia—the heart beats too fast

-bradycardia—the heart beats too slow

-fibrillation—the heart beats irregularly, as if quivering.

These conditions disrupt the heart's function and can lead to fainting or even cardiac arrest.

**Hypertension (high blood pressure).** When blood vessels are constantly under high pressure, the heart works harder and this tires the heart. If it continues for a long time, the risk of heart attack or stroke increases. In modern life, people are constantly exposed to various psychological pressures - stress. Although stress is a natural reaction of the body, if it is constant and strong, it can have a negative effect on heart function.

**How does stress affect the heart?** Blood pressure increases; during stress, the body releases the hormones adrenaline and cortisol. They constrict blood vessels and increase blood pressure. This puts an extra strain on the heart. The types of stress and their effects on the heart are listed in Table 1 below.

1-Table

| Types of stress          | Heart effects                                        |
|--------------------------|------------------------------------------------------|
| Psychological stress     | Accelerates the heart rate, increases blood pressure |
| Physical stress          | Heart muscle fatigue                                 |
| Social stress            | Depression, anxiety, isolation lead to arrhythmia    |
| Chronic long-term stress | Increases heart disease                              |

- People who live under stress have a 65% increased risk of heart disease.
  - Women are generally more sensitive to stress than men, but the symptoms of a heart attack may be unusual for them (for example, instead of pain, weakness, shortness of breath, and similar symptoms and impressions occur).
- In order to prevent the above diseases, the following exercises are recommended for healthy contraction and relaxation of the heart at home.
- Take 3 deep breaths in a calm state and exhale slowly, repeating this for 1 minute.
  - In a standing position, move your arms, neck and shoulder areas according to certain exercises for 1 minute with light movements.
  - In a calm state, close your eyes for 2 minutes and imagine yourself in a positive situation. Such an exercise also relieves stress and is effective.
  - Walk outdoors for 10 minutes during the day, and the heart reflects not only physical condition, but also emotional stability, as well as spiritual and cultural relaxation by going to mountainous areas and It also greatly improves the circulatory system of the heart. This is expressed in a circulatory system rich in pure oxygen, far removed from stress.

#### **Anti-stress products that are beneficial for the heart**

2-Table

| <b>Products</b>     | <b>Benefits</b>                                     |
|---------------------|-----------------------------------------------------|
| Avocado             | Omega-3 fatty acids protect the heart               |
| Fish                | It has a positive effect on heart attack.           |
| Banana              | Potassium source – increases the risk of arrhythmia |
| Black chocolate 70% | Reduces cortisol levels and improves mood.          |

#### **Conclusion**

The heart is the foundation of human life. Its healthy functioning ensures the balance of the whole body. By protecting the heart from negative factors affecting it, preventing it, and choosing the right lifestyle, each person can maintain a healthy heart through healthy nutrition and stress management. Prevention of heart diseases, early detection and treatment are of particular importance in medicine. The development of many heart diseases is an age-related process, but it is also associated with changes in lifestyle, that is, healthy eating. Therefore, maintaining heart health is not only a medical task, but also a responsibility for creating a healthy living environment in personal culture, lifestyle, and society. The theory, analysis, and considerations presented in the article show that a serious approach to heart health plays an important role in ensuring the harmonious life of future generations.

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