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CHRONIC DISEASES

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ABSTRACT:

This text provides an overview of chronic diseases, focusing on three major conditions: diabetes mellitus, asthma, and arthritis. It explains their causes, types, symptoms, complications, and methods of treatment and prevention. Special attention is given to the long-term nature of these diseases and their impact on human health and daily life. The text also highlights the importance of early diagnosis, proper management, and maintaining a healthy lifestyle to control these conditions effectively.

Chronic diseases are conditions that last for a long time, usually 3 months or more, develop gradually, and often cannot be completely cured. Such diseases require continuous

management, and controlling them is more important than completely eliminating them. They typically begin slowly, may worsen over time, and are often characterized by periods of exacerbation (flare-ups) and remission (improvement).

They can affect different systems of the body. For example, metabolic diseases include Diabetes mellitus, in which blood sugar levels remain consistently high. Cardiovascular diseases include Hypertension and Coronary artery disease, which significantly affect heart function. In the respiratory system, Asthma is common; in this condition, the airways narrow and breathing becomes difficult. Among musculoskeletal disorders, Arthritis causes pain and inflammation in the joints.

Chronic diseases develop due to a combination of factors such as genetic predisposition, unhealthy diet, physical inactivity, chronic stress, harmful habits (such as smoking and alcohol use), and environmental influences. Because they persist for a long time, these diseases can significantly impact a person's daily life, work capacity, and overall health.

Treatment is usually комплекс (comprehensive) and includes regular use of medications, maintaining a healthy diet, increasing physical activity, reducing stress, and staying under medical supervision. With the right approach, chronic diseases can be controlled and complications can be prevented. If left unmanaged, they may lead to serious consequences such as heart attack, stroke, damage to internal organs, or disability.

Diabetes mellitus is a disease caused by insulin deficiency in the body and disruption of metabolism. Diabetes has been known since ancient times in Eastern traditional medicine. Abu Ali ibn Sina paid special attention to this disease. He wrote: "Water exits the body in the same way it is consumed." The patient drinks a lot of water, which can lead to other complications, and the patient loses a lot of weight. Speaking about treatment, the scholar said: "Give the patient cold-natured liquids, keep them cool, give sour ayran, fruits, and mint infusion — in other words, moisten and cool the patient." This indicates that the disease was thought to arise from excess heat in the body. According to historical medical sources, diabetes can also be hereditary.

In diabetes, the amount of sugar in the blood increases sharply and is excreted in the urine. Symptoms include excessive thirst, dry mouth, weight loss, weakness, itching, and others. There are hereditary and acquired forms of the disease, as well as insulin-dependent (type 1) and non-insulin-dependent (type 2) diabetes. Type 1 diabetes usually occurs in adolescence. In this case, the pancreas cannot produce insulin, so insulin therapy is required to reduce blood sugar levels. In type 2 diabetes, insulin production is preserved, and its level in the blood may be normal or slightly elevated. However, due to reduced sensitivity of tissues to insulin,

glucose is not properly absorbed and accumulates in the blood. As a result, blood sugar rises and is excreted in urine, and the patient may become overweight. This type mainly affects middle-aged and elderly people. It develops gradually and often without obvious symptoms at first. Patients mainly complain of fatigue, weakness, and thirst. Despite high glucose levels, acetone in blood and urine is rarely observed. These patients can live without insulin therapy; diet, physical activity, and sugar-lowering medications are effective.

Diabetes is a lifelong disease that requires continuous treatment. If not properly controlled, long-term high blood sugar leads to vascular complications (angiopathies), affecting capillaries in various organs such as skin, muscles, and nerves. Microangiopathies are especially common in the kidneys, eyes, and feet. Diabetes also contributes to atherosclerosis, which can lead to coronary heart disease (angina, myocardial infarction) and cerebrovascular disorders (stroke, dizziness).

Asthma (from the Greek word meaning “shortness of breath” or “suffocation”) is a condition characterized by sudden narrowing of the bronchi (bronchial asthma) or attacks caused by heart disease (cardiac asthma). During an asthma attack, immediate medical assistance is required. Regardless of the cause, the patient should be seated with legs down and provided with fresh air. Medication should only be given with a doctor’s approval. Bronchial asthma is a chronic disease of the respiratory system in which narrowing of the bronchial passages reduces airflow. Common symptoms of asthma include bronchospasm, coughing, wheezing, and difficulty breathing. Attacks often occur at night or early in the morning. With proper treatment, symptoms can partially or completely disappear. Asthma attacks can be triggered by allergens (dust, pollen, animal hair, certain foods), physical exertion, cold air, or respiratory infections. People prone to asthma may complain of chest tightness, excessive mucus production, disturbed sleep, and rapid breathing. It is important to avoid triggers such as allergens and cold air. Treatment mainly includes anti-inflammatory medications, bronchodilators (such as steroids), physiotherapy, and breathing exercises.

Asthma is characterized by recurrent episodes of wheezing, shortness of breath, chest tightness, and coughing. Sputum may be produced but is often difficult to expel. During recovery from an attack, sputum may appear pus-like due to increased eosinophils. Symptoms often worsen at night, early in the morning, or in response to exercise or cold air. Some patients experience symptoms rarely, while others have frequent and persistent symptoms. Asthma is caused by a complex interaction of environmental and genetic factors, which also influence its severity and response to treatment. The increase in asthma cases in recent years

may be related to environmental changes and epigenetic factors. Asthma before age 12 is more likely genetic, while after 12 it is often linked to environmental factors.

Spirometry is recommended for diagnosis and monitoring. It is the best test for asthma. If lung function improves significantly after bronchodilator use, it supports the diagnosis. However, results may be normal in mild cases. Caffeine may affect test results. Regular spirometry every 1–2 years is recommended.

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