

Avicenna's View of Cardiovascular Disease

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Annotation

Avicenna, also known as Ibn Sina (980-1037), was an eminent scientist, philosopher, and physician who had a significant impact on medicine and science in general. Avicenna's works, particularly his renowned Canon of Medicine, have become integral to numerous areas of medicine, including cardiovascular disease (CVD). This article explores Avicenna's contributions to health promotion in more depth, examining his approaches to preventing and treating CVDs and how his ideas interact with modern medical concepts, based on available research and sources.

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Introduction. Avicenna lived in an era when the knowledge of ancient medicine was being accumulated and adapted to new conditions. This tradition of medical and mathematical approach was characterized by a high level of systematization and empirical approach. In the 11th century, the medical system represented by Avicenna was based on observation, which relied heavily on philosophical and experimental paradigms. To understand Avicenna's contributions, it is important to consider the state of medical practice in his time. At the turn of the first millennium, Arab medicine was highly developed, and Avicenna was one of the leading figures who systematised and summarised the knowledge of his predecessors, such as Galen and Hippocrates.

Results and discussion. According to a source analysis, Avicenna believed that heart health and disease depended on a person's physical, emotional and spiritual state. In the Canon, he emphasised the importance of diagnosing and understanding the various symptoms associated with heart disease. Avicenna also described innovative techniques for measuring the pulse (Afnan, 1958).

In the Canon of Medicine, Avicenna described the heart as the central organ of the circulatory system. He believed that cardiovascular diseases arise from an imbalance between the various jugular and heat forces, making this approach a precursor to modern concepts about hemodynamics and pathophysiology. Conditions such as heart failure, arrhythmia, and angina pectoris are mentioned in his writings.

There are instances where he describes situations where the heart cannot pump blood efficiently, resulting in swelling and fatigue - indicating heart failure. Also, Avicenna highlighted differences in pulse, indicating rhythm irregularities. He associated the occurrence of pain in the heart area with insufficient

blood flow, today in modern medicine diagnosed as - angina pectoris.

Avicenna emphasized the importance of preventing cardiovascular disease. He recommended a balanced diet, exercise and adherence to a daily regimen as a means of maintaining a healthy heart. Such recommendations are supported by current research on the impact of lifestyle on cardiovascular disease risk (WHO, 2020). Avicenna emphasized several key aspects to prevent cardiovascular disease. He emphasized a varied diet and avoiding excessive consumption of meat and fatty foods. A study has shown that following a diet rich in fruits, vegetables, and whole grains can significantly reduce the risk of cardiovascular disease (Mozaffarian et al., 2012). Also, he recommended a balanced daily regimen, which is consistent with current evidence that physical activity reduces the risks of many diseases, including CVDs (Pedersen & Hoffman-Goetz, 2000). Avicenna's teachings on the relationship between emotional state and heart health foreshadowed modern science on stress and its effects on the cardiovascular system (Kavousi et al., 2018).

Avicenna used a variety of medicines to treat cardiovascular disease. His pharmacological arsenal included plants such as valerian, peppermint and garlic, which he hypothesized helped strengthen the heart muscle and improve circulation (Nasr, 2008). Current research shows that some of these plants do have cardioprotective properties (Khan et al., 2019). Avicenna believed that the treatment of CVDs combined pharmacologic and nonpharmacologic approaches. In his pharmacopoeia, he described the use of various herbal substances and remedies. Avicenna used valerian to calm the nervous system and improve heart rate, peppermint to reduce anxiety, and garlic to improve circulation. These assumptions regarding the use of plants in cardiology are supported by modern research (Khan et al., 2019).

Avicenna, in his famous work “Canon of Medicine”, described many plants and methods of treatment of cardiovascular diseases. Let's look at some examples:

Garlic (*Allium sativum*): Avicenna considered garlic to be one of the most important remedies for improving cardiovascular function. He believed that it helped to improve blood circulation, and that it also had antiseptic and anti-inflammatory properties. Modern research supports the cardioprotective properties of garlic, including its ability to lower cholesterol and blood pressure. (Ried et al., 2016).

Valerian (*Valeriana officinalis*): Avicenna recommended valerian to alleviate anxiety and normalise heart rhythm. It has a calming effect on the nervous system and can be used to treat neuroses and stress-related issues which may negatively impact cardiovascular health. (Gromotka et al., 2019).

Melissa (*Melissa officinalis*) - is also cited for its cardiovascular health benefits. It has a calming and relaxing effect, which can help reduce stress levels, which is one of the risk factors for cardiovascular disease (Trombini et al., 2001).

Lavender (*Lavandula angustifolia*) - Avicenna used lavender to relieve nervous tension and improve mood. Lavender essential oil has anti-stress properties and promotes relaxation, which can help reduce stress on the heart (Holmes et al., 2002).

Avicenna did not limit himself to phytotherapy alone. His medical practice included nutritional therapy, where he emphasized a balanced diet, the elimination of heavy, fatty and spicy foods, and an emphasis on fresh fruits, vegetables and whole grains. Recommendations about regular exercise as a way to maintain adequate cardiovascular health. Avicenna emphasized the importance of mental comfort and minimizing stress as a factor affecting heart health.

Modern research confirms that many of Avicenna's methods and approaches still have a place in medicine today. For instance, studies by the World Health Organization emphasise the importance of a healthy lifestyle in preventing cardiovascular disease. Medical schools today are experiencing a return to integrative medicine, where traditional practices such as phytotherapy are considered complementary to evidence-based medicine. (WHO, 2020).

Avicenna's ideas about a holistic approach to health care and the interrelationship of physiological,

emotional and spiritual health can be useful for today's physicians and patients. Recognizing that stress, emotions and lifestyle can significantly affect the cardiovascular system helps to develop a more comprehensive view of health.

Today we are seeing innovations in the field of cardiology, which opens new horizons for the treatment of CVDs. The scientific research now being conducted in the field of pharmacology supports a holistic approach that utilizes traditional remedies with modern drugs. This also resonates with Avicenna's view on the importance of holistic treatment, where not only medications but also lifestyle, environment and psychology play an important role.

Conclusion

Avicenna's contribution to the study, prevention and treatment of cardiovascular disease still has its relevance to 21st century medicine. His approaches to diagnosis and treatment, based on observation, systematization of knowledge and scientific research, continue to serve as the basis for new discoveries and developments in the field of cardiology. The study of Avicenna's legacy can be useful for medical professionals and researchers seeking to create more effective methods of treating and preventing cardiovascular disease.

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