

## Traditional Persian Medicine for the Management of Hypertension

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### Abstract

Hypertension is a major risk factor for the cardiovascular diseases. One of the factors contributing to blood pressure is peripheral vascular resistance. Vascular stiffness plays a key role in developing the hypertension, leading to increased systolic blood pressure and pulse pressure. from Avicenna's perspective, the blood pressure caused by 1- Increased blood volume 2- Warm heart dystemperament which leads to the hyperactivity of heart pump and increased cardiac output 3- A vascular disorder called "Tasallob Sharaeen" "atherosclerosis". So, one of Avicennachr's recommendations for the prevention and treatment of hypertension is the consumption of Moisturizing foods and beverages and fruits. One of these moisturizing products which are very useful is "whey Protein". It seems that by studying ancient Iranian medicine's general books, new and effective solutions can be provided in the prevention and treatment of diseases.

**Keywords:** Traditional Medicine; Hypertension; High blood pressure

**Highlights**

From Avicenna's perspective, the blood pressure caused by:

- 1- Increased blood volume
- 2- Warm heart dystemperament which leads to the hyperactivity of heart pump and increased cardiac output
- 3- A vascular disorder called "Tasallob Sharaeen" "atherosclerosis".

The importance of assessing the cause of high blood pressure from Avicenna's perspective is useful for providing new treatment strategies due to Persian Traditional medicine.

**Statement**

Cardiovascular diseases are the main cause of death and disability around the world, leading about 17 million deaths per year (1). Also, hypertension is a major risk factor for the cardiovascular diseases (2). One of the factors contributing to blood pressure is peripheral vascular resistance. A decrease in vascular lumen contributes to increased resistance. Vascular stiffness plays a key role in developing the hypertension, leading to increased systolic blood pressure and pulse pressure. Increased thickness in the media layer in the vessel wall relative to the lumen diameter of vessel is the main sign of vascular deformation caused by hypertension in small and large arteries. By reducing the lumen's diameter in the peripheral blood vessels, the process of internal regeneration increases vascular resistance which is the main hemodynamic indicator of diastolic blood pressure. Therefore, antihypertensive treatment is possible only if the above process is reversed, and the endothelial function improves (3). From Avicenna's point of view, any disease can be caused by direct tissue damage or several organs' involvement. Avicenna, the most famous Iranian physician (4), is the father of modern and clinical pharmacology (5). His masterpiece, The Medical Book (Qanon of Medicine), was

taught for centuries as an encyclopedia of medical education in Islamic and European lands (6). from Avicenna's perspective, the blood pressure caused by 1- Increased blood volume 2- Warm heart dystemperament which leads to the hyperactivity of heart pump and increased cardiac output 3- A vascular disorder called "Tasallob Sharaeen" "atherosclerosis" (7). "Tasallob" means sclerosis and "Sharaeen" mean arteries. In fact, in his view, the deposition of abnormal black bile in the artery wall causes "Atherosclerosis" (5). The importance of assessing the cause of high blood pressure from Avicenna's perspective is useful for providing new treatment strategies due to Persian Traditional medicine. In modern medicine, the vascular calcification is a prominent feature in atherosclerosis leading to increased peripheral vascular resistance. According to Qanon, the vascular calcification is the deposition of abnormal black bile in the vessel wall (8) that destroys the natural elasticity of blood vessels which causes stiffness and atherosclerosis, and hypertension (5). Therefore, according to Avicenna, there are several specific ways to prevent and treat abnormal black bile, leading to new methods of prevention and treatment (8). So, one of Avicenna's recommendations for the prevention and treatment of abnormal black bile is the consumption of Moisturizing foods and beverages and fruits. One of these moisturizing products which are very useful in eliminating the abnormal black bile is "whey Protein" (9, 10)." whey Protein" appears to have angiotensin-converting enzymes Inhibitor (ACE-Inhibitor), is useful in lowering systolic and diastolic blood pressure (11, 12). Cheese production (13), these include beta-lactogenic (14), a beta-lactoferrin derived from beta-lactoglobulin, and alpha-endorphin, derived from Alpha-L-

which appears to be effective in treating hypertension (15). The above findings indicate that by studying ancient Iranian medicine's general books, new and effective solutions can be provided in the prevention and treatment of diseases.

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