

## THE ROLE OF NUTRITION IN CARDIOVASCULAR HEALTH IN IMAM SADIQ'S WORDS. A REVIEW

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**ABSTRACT:** The cardiovascular system is responsible for circulating the blood and transporting nutrients. It transports oxygen and nutrients to different organs and tissues in the body and transports the deoxygenated blood back to the lungs. The heart is comprised of four chambers; the right and left atria are on the upper side of the heart which provide a slight pump for the two right and left ventricles below, which are in charge of creating the main pump. The heart circulates the blood through two interrelated circuits; the pulmonary circulation and the systemic circulation. The pulmonary circulation transports the de-oxygenated blood from the right ventricle of the heart to the lungs, and the systemic circulation transports the blood the body. Physical exercise has a lot of advantages for the body; namely the vasodilation of blood vessels and increase of blood flow, reducing the above-mentioned risk factors, improving the function of the autonomic nervous system, improving the endothelial function, improvement of myocardial ischemia and reduction in atherosclerosis, as well as increasing the cardio-respiratory capacity, improving fitness, preventing various diseases (cardiovascular diseases, diabetes, cancer, high blood pressure, obesity, depression, osteoporosis, etc.), and ultimately enhancing the quality of life. To gather the data, the Shia books of Hadith, relevant software and books were perused. Initially, the Hadiths by Imam Sadiq containing the word 'heart' were collected, and then, we broadened the sweep over to the ones containing words on the role of nutrition in cardiac health and mentioned them in the results section. The results offer glimpses onto the role of nutrition in cardiac health from the viewpoint of Imam Sadiq, the sixth Shia Imam. The paper is a first attempt, in a sense, and there are not many ventures like it. Other than the various comments made on heart, Imam Sadiq has, on many occasions, commented on heart, namely his words on the physiology and the anatomy of heart. Imam Sadiq's view of using fruits (pomegranates and quinces ...) and vegetables (basil, eggplant) on the side of other nutrition, further supports this view that these nutrition could be very important for the health of other body organs and for the treatment of many illnesses.

**Keyword:** Nutrition, Cardiovascular Health, Imam Sadiq's Words

### INTRODUCTION

The cardiovascular system circulates the blood in the body and transports oxygen and nutrients to the cells and removes the waste and de-oxygenated blood from them. The heart is a hollow muscular organ which circulates the entire blood (5.6 litres) across the body once and twice per minute during relaxation and physical exercise respectively. A network of veins and blood vessels carry the blood to all parts of the body.(1, 2). A vertical wall of muscle divides the heart into right and left halves. The right half deals with the venous blood and sends the de-oxygenated blood to the lungs, and the left half deals with the arterial blood which is fully oxygenated and is to be pumped through the

surrounding organs. Each of the right and left halves are split in chambers by a horizontal muscle, wherein the blood flows through one-way valves. The upper chambers, which are smaller and finer in size and tissue, are called the atriums which receive the blood. The lower chambers, which are bigger and thicker in size and tissue, are called the ventricles and pump the blood to other organs in the body. Thus, the heart is comprised of four chambers, two atria at the top (the right and left atria) which provide a slight initial pump for the blood to be sent to the two bigger chambers below (the right and left ventricles), which are responsible for the main pumping of the blood to the body (3).

Blood circulation in the heart means the pumping of blood into the two circulatory interrelated

systems; the pulmonary and systemic circulation. The pulmonary circulation takes the dark de-oxygenated blood from the right ventricle to the lungs where is absorbed by a capillary system and the carbon dioxide is released. Then the oxygenated blood is sent to the left ventricle through the pulmonary veins. The systemic circulation takes the blood to the body where it is absorbed by the capillary veins releases the oxygen and nutrition, and carbon dioxide, along with other waste, are absorbed in the blood and the de-oxygenated blood is returned to the heath. (2) (3)

Cardiac diseases are one of the leading causes of death in the developed and developing countries. More than 660000 Americans die of heart disease annually and an overall number of 5.2 are diagnosed with cardiac disease every year. In Iran, 19.4 percent of the population are inflicted with cardiovascular diseases, among whom 46 percent die eventually.

There are two sets of risk factors associated with cardiovascular diseases:

- 1- Unchangeable risk factors: age, ethnicity, masculine gender, menopause in women, genetics and family history
- 2- Changeable risk factors: high blood pressure, diabetes, obesity, psycho-social stress, physical inactivity and tobacco exposure (4-8).

Numerous research has revealed the role of inflammation in causing cardiac disease and the positive impact of losing weight on curbing the progression of infection. It was reported recently that High-sensitivity C-reactive Protein (HS-CRP) is the most sensitive inflammatory indicator of cardiovascular risks, and relevant studies have revealed that the plasma concentration of HS-CRP is related to obesity, metabolic syndrome and insulin resistance. The plasma concentration is observed to be higher in the elderly, postmenopausal women, overweight individuals than the youth, men and thin people (9).

Physical exercise has a lot of advantages for the body. It improves the vasodilatation and enhances the blood flow, reduces the abovementioned risk factors, improves the function of the autonomic nervous system and the endothelial function, enhances myocardial ischemia and causes reduction in atherosclerosis, as well as increasing the cardio-respiratory capacity, improving fitness, preventing various diseases (cardiovascular diseases, diabetes, cancer, high blood pressure, obesity, depression, osteoporosis, etc.), and ultimately enhancing the quality of life (4, 9-11).

## **METHODOLOGY**

To gather the data, the Shia books of Hadith, relevant software and books were perused. Initially, the Hadiths by Imam Sadiq containing the word 'heart' were collected, and then, we broadened the sweep over to the ones containing words on the role of nutrition in cardiac health and mentioned them in the results section.

## **RESULTS**

- 1- Fruits
  - Pomegranate: on eating pomegranates and its conditions, Imam Sadiq said: 'Anyone who breaks his fast with pomegranates in the morning, his heart will lighten up for forty days' (12).
  - Quince: on quinces Imam Sadiq has commented that this fruit beautifies the face and strengthens the heart (13). On eating quince he has also remarked that: "any person who breaks his fast with quinces in the morning, will create healthy semen and a beautiful offspring' (13). On another occasion he has said that: 'Eating quince will bring strength to the heart and shrewdness to the inner self' (13).
  - Apple: and on apple, Imam Sadiq has remarked that if people knew what's inside an apple, they would resort to nothing else for treatment of their illnesses. Beware that apple is specifically beneficial to the heart and cleans it (14).
- 2- Végétales
  - a) On basil Imam Sadiq remarks that: basil is the prophets' favorite vegetable in which lies eight characteristics: facilitates food digestion, dilates the blood vessels, freshens the mouth, is an appetizer, purifies the blood, brings immunity against leprosy, and since it goes through the inner parts of the body, it will uproot all diseases, and those who dwell in paradise decorate their meals with it (15).
  - b) Eggplant: Imam Sadiq says during the season of picking date from palm trees, partake of plenty of eggplant; because the cure of all pain lies in it, brightens the face, softens the veins and strengthens the loins (increases sexual appeal) (16).

- c) Mountain basil is the prophets' vegetable. Beware there are eight characteristics in it: is a digestive, removes any clogging in the vessels, creates a fragrant burp, freshens the mouth, makes the food more likable, removes the pain and illness from the body and makes humans immune against leprosy and since it goes inside the body, it will vanquish all disease(17).

3- Beans

On compassion and sympathy, Imam Sadiq relates an anecdote where Prophet Muhammad remarks on the issue. Once upon a time, Prophet Muhammad was sitting in his prayers cloths when he was approached by a man, the man said: I have sat multiple times in your speeches and listen intently to what you say, however I fail to develop sympathy and grow compassionate and cannot shed a tear. The prophet suggested that he eat lentil because it creates sympathy in heart and facilitates the flow of tears, in which 70 prophets have sought blessings (15).

- 4- Liquids: on heart Imam Sadiq certifies that vinegar brings light to the heart (14).

- 5- Meat: it has been quoted from Imam Sadiq that whoever has a weak heart or body must partake of lamb meat with milk (18).

- 6- Nutritional ingredients

- a) Cumin, salt, oregano and walnuts

In this regard, Imam Sadiq says that there are four things which brighten the eyes and are beneficial with no harm. People inquired about the four, and Imam said: these four are the cumin, salt, oregano and walnuts, if they are eaten together combined. They asked why they should be eaten together. He said that cumin and walnut cure the hemorrhoids and reduce flatulence, give desirable color to the skin, makes the stomach tough and warm up the kidneys. Oregano and salt remove the gases from the heart and dilate the vessels and burn the phlegm, amplify the urine, freshen the mouth and softens the stomach, takes the cunning evils gases away from the mouth and increase the sexual strength (15).

- 7- Meals

Never skip a dinner, even as small as three morsels of bread and salt. A vein dies eternally in the body of the one who doesn't eat dinner (14).

## DISCUSSION

What was discussed in the results, is a glimpse of the role of nutrition in cardiac health from Imam

Sadiq's point of view, which is a first attempt in its own right the likes of which are not numerous.

As well as the remarks mentioned earlier, Imam Sadiq has commented on the heart on numerous occasions, among which are his words on cardiac physiology and the anatomy of heart. To him, the heart is the most important organ in the body which assumes a leadership role. He also declares: Do you not see that all other organs in the body are the agents of the heart and translate its desires? (19)

In an address made to an Indian physician he says: the heart has the shape of a spruce seed, and since it is upside-down and tapered on one side, it can creep into the lungs and cool itself with the lungs, lest the brain burn by its heat (20).

Generally speaking, the words of Imam Sadiq on the mentioned nutrition reveals, more than ever, that the food of which humans partake play a decisive role in the health of heart as a vital organ. Imam Sadiq's view of eating fruits (pomegranates, quince,...) and vegetables (basil, eggplant,...) on the side of the main course further supports the view that these nutrition are decisively important for the health of other body organs and the treatment of a score of other diseases.

Another point worth mentioning is that, the words of religious figures retain validity and are authentic in themselves and it is of utmost importance to note that the contradictory findings of other research carried as opposed to the comments of the Imams, cannot refute their ideas whatsoever, because they are of primordial validity.

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