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ROLE OF DIET, EXERCISE AND HOLY SOURCES IN PREVENTION OF CARDIOVASCULAR DISORDERS

Javed A. Ansari*¹, Misbah B. Ansari²

1. Department of Pharmacology, MESCO College of Pharmacy, Mustaidpura, Hyderabad-500006, India

2. Department of Islamic Studies, Burhani College of Commerce & Arts, Nesbit Road, Mazgaon, Mumbai-400010, India

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For Correspondence:

Javed A. Ansari

Department of Pharmacology,
MESCO College of Pharmacy,
Mustaidpura, Hyderabad-
500006, India

E-mail:

javed.ansari47@gmail.com

ABSTRACT

Diet, lifestyle interventions and spirituality are essential for the prevention of cardiovascular disease (CVD). Inhibiting dyslipidemia, overweight/obesity, hypertension, and increasing physical activity have beneficial importance on these risk factors. The present review aims to discuss the role of diet, exercise; and comments & commentaries made regarding prevention of CVD from *Qur'an* and *Hadeeth*.

INTRODUCTION

The heart is widely explained as both an organ of psyche, intelligence, and emotion, as well as an important body of the organ that can be harmed such as exhibiting thrombi^[1]. burden of cardiovascular disease (CVD) and mortality is increasing worldwide; and with demographic shifts, urbanization and changing lifestyles, the number of people with high blood pressure, diabetes, obesity or dyslipidemia may grow larger, signifying a further increase in CVD in the future^[2].

DIET AND CARDIOVASCULAR DISEASE PREVENTION

Dietary modification is a primary involvement in treating established CVD and has conventionally focused on decreasing dietary fat. Numerous long-term studies, including the Lyon Heart study^[3] and Seven Countries study^[4], demonstrate that the lipid-lowering effects of diet rival the effects of statins.

Mediterranean Diet

The Mediterranean diet is illustrated by high intakes of fish, fruits and vegetables, whole grains, olive and canola oils, and relatively lower intakes of meat and refined flours. The key fat is olive oil, primary dairy foods are yogurt and cheeses, and intakes of red meat and poultry are limited. As compared to other CVD interventions, the Mediterranean diet is remarkable as a tool for CVD prevention. In a study of 180 men and women followed for 2 years, the diet resulted in decreased body weight, blood pressure, blood glucose, insulin levels, triglycerides (Tgs), and total cholesterol (TC), increased high density lipoprotein (HDL) cholesterol, and it actually reversed the metabolic syndrome in 56% of participants versus 13% on the AHA (American Heart Association) prudent diet^[5]. As a conclusion of these observation, it is advisable patients to follow a Mediterranean-style diet is a leading strategy in preventing CVD.

Dietary Strategies to Stop Hypertension

Hypertension is the most important risk factor for CHD. Among CHD patients, 80% to 90% have one of the 4 major risk factors for CHD, one of which is hypertension^[6]. More or less 50 million adults in the United States and about 1 billion worldwide have hypertension or prehypertension^[7].

Increased blood pressure damages the endothelial lining of the arteries, which allows LDL cholesterol to enter in enhanced amounts. Moreover, it stiffens the arteries and increases the risk of MI or stroke and can also affect the kidneys eventually leading to end-stage renal disease if

not treated. Authors of various study reported that the effect was attributable to increased vegetable and fiber consumption, subsequent increased mineral intake, and decreased intake of saturated fat and sodium. An inverse relationship has been established between fruit and vegetable consumption and cardiovascular disease risk^[8]. Vegetarian diets have been reported to decrease risk for dying of heart disease by 24% in epidemiologic studies^[9].

Diet with Low-Carbohydrate

To some extent, cardiovascular disease occurs from inflammation in the arterial lining. Meals having high glycemic content have been shown to increase inflammation through insulin release and subsequent activation of the insulin-signaling pathway and release of proinflammatory mediators^[10]. Insulin has been hypothesized not only as a culprit in causing obesity and but also in chronic CVD^[11]. Such research has provided a theoretic basis for the popular high protein/low carbohydrate diets, though the anti-inflammatory benefits of high protein/low carbohydrate diets has not been substantiated in clinical studies.

Diet with Low-Saturated Fat

Diets with low in saturated fat have been shown to protect against CVD and result in lowered caloric consumption and weight loss^[12]. The AHA advises a low-fat diet for people at risk for heart disease. One randomized controlled trial examined CVD risk in patients following a low-fat/high-fruit, -vegetable, and -grain diet for 8.1 years and provided no change in risk for coronary heart disease (CHD), stroke, or CVD in postmenopausal women. A simple reduction in dietary fat may not be the answer in dietary modification of CVD risk factors^[13]. It can be concluded that total fat intake may be less important than type of fat consumed when talking CVD prevention.

Diet with Low Calorie

Caloric restriction is known to prolong life expectancy and reduce occurrence of chronic disease in humans and involves a reduction in total calories while maintaining nutritional adequacy by eating predominantly nutrient-dense foods. One small study compared 18 people currently following caloric restriction (<1500 or <2000 calories daily for women and men, respectively) with 18 age- and sex-matched people eating the typical diet^[14]. The study shows average blood pressure in the experimental group of 100/60 versus 130/80 in the control group. Significantly lower body mass index and cholesterol were also observed in the experimental group and total reductions in CVD risk were showed to be attributable to significant reductions in carotid intima-

media thickness and atherosclerotic lesions. A randomized controlled trial reported increases in glucose tolerance and insulin activity with implementation of caloric restriction compared with the typical western diet^[15]. Evident benefits of caloric restriction include weight loss and decreased intake of saturated fat, both independently reported to decrease CVD risk. More research is required on the long-term effects of caloric restriction and to elucidate possible other mechanisms for its efficacy in relation to CVD prevention.

EXERCISE AND CARDIOVASCULAR DISEASE PREVENTION

Numerous observational studies have shown the benefit of exercise. The distance walked per day was found to be inversely linked with mortality in elderly. The Honolulu Heart Program was a cohort prospective trial of 707 elderly (61–81 years of age) men, that reported that the mortality rate among men who walked less than 1 mile per day was 1.8 times that among those who walked more than 2 miles per day (40.5% versus 23.8%, $P < .001$)^[16]. Brisk walking for 3 or more hours a week was linked with lower coronary events^[17]. Observational studies have shown the beneficial effects of exercise in subjects who have preexisting CAD (coronary artery disease)^[18].

The role of physical activity on CVD risk reduction are due, in part, to favorable effects on blood pressure, TG levels, HDL cholesterol levels, insulin sensitivity, glucose tolerance, and body weight. Physical activity and weight loss reduce LDL cholesterol levels and decrease the reduction in HDL cholesterol that often occurs with a diet that is low in total fat and SFA (saturated fatty acid)^[19]. A number of observational cohort studies reported that physical activity was connected with a reduction in CHD and CVD in healthy subjects^[20, 21].

HOLY SOURCES AND CARDIOVASCULAR DISEASE PREVENTION

According to the Qur'an and Hadeeth, God created disease and God also created a treatment for each disease. There is a prophetic tradition where Mohammad has been reported to have said that for each disease there is a remedy, and when the remedy is made apparent, the disease is cured by the permission of God^[1]. As a result, people are encouraged to pray, but also seek out treatments. Whatever thing that harms the body, mind and soul must be treated. That's why the physicians were highly valued members of the community and Mohammad called upon them to treat illnesses. This shows that Islam was compatible with medicine; the need for medical treatment was accepted and required. In the Qur'an and Hadeeth, two different forms of treatment can be found—spiritual healing and physical healing^[1]. A comprehensive analysis of the

contribution of Islamic medicine in anatomy, physiology, and health is rigorously lacking in the West and, if conducted, would uncover that discoveries made by European scientists were actually made centuries prior, within the vast Islamic empire. Islam, a complete system of life provides mankind with the best forms of balance between the mundane and the spiritual. Islamic lifestyle includes several major elements such as tension control and contentment; moderate diet; physical labor; abstention from forbidden acts, foods and drinks; and adoption of certain recommended acts, habits and eatables. Forgiving others, control of wrath and anger, and elimination of selfishness, greediness and jealousy substantiate the idea of a stress-free and pleasant life that Islam has much-admired to adopt. Overeating has been powerfully condemned and forbidden in the Qur'an and Sunnah, whereas white meat (of fish and birds) has been encouraged to be consumed^[22].

CONCLUSION

This article has reviewed the current evidence reporting the importance of diet, physical activity and practice from holy Quran for reducing risk of CVD via major risk factor alterations.

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