

POTENTIAL BENEFITS OF CHIA SEEDS IN PREVENTION OF CARDIOVASCULAR DISEASES

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Cardiovascular diseases (CVDs) are mainly caused by atherosclerosis which occurs when artery walls become thickened due to accumulation of fatty deposits, smooth muscle cells and fibrous connective tissues collectively termed plaque. Plaque may promote thrombosis within the artery which in turn narrows the lumen of arteries obstructing blood flow leading to heart attack and stroke. Low density lipoprotein cholesterol, decreased high density lipoprotein cholesterol, elevated triglycerides and excess calories are among of the risk factors that can promote atherosclerosis in the body. Modern diets are mostly low in omega-3 fatty acids and high in omega-6 fatty acids and saturated fatty acids (SFA). Such imbalance is associated with increased risks of heart disease and support chronic inflammation. Chia seed (*Salvia hispanica L.*) is becoming among the popular foods of plant origin that contains the greatest amount of omega-3 fatty acid, *α-linolenic* acid. Omega-3 fatty acids have been associated with potential physiological functions in human body. Additionally the seeds are rich in proteins, dietary fiber, minerals and phytochemicals such as myricetin, quercetin, kaempferol, chlorogenic acid and caffeic acid which exhibit cardio-protective, antioxidant and lipid-lowering properties. This review expounds the prevalence of cardiovascular diseases and the importance of chia seed in counteracting CVDs risk factors as evidenced by various *in vivo* and animal studies.

Key words: Cardiovascular disease, chia seed, omega-3 fatty acids, risk factor and phytochemicals

BIOGRAPHY

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