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## ROLE OF GARLIC IN TREATMENT OF ATHEROSCLEROSIS

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**Abstract:** Life style diseases are defined as diseases, linked with the way people live their life. Atherosclerosis is a common type of life-style disorder where the fatty deposits partially clog or totally block blood flow in large, important vessels of the body such as aorta and the blood vessels to the heart and head. The allium family is a star when it comes to fighting atherosclerosis. Garlic and even onions have been clinically proved to reduce the “bad” LDL (low density lipo-protein) cholesterol and increase the “good” HDL (high density lipo-protein) cholesterol. Garlic indirectly effects atherosclerosis by reduction of hyper lipidemia, hyper tension, and prevents thrombus formation. It has both anti-atherogenic and anti-atherosclerotic effects at the level of artery wall. So garlic seems to be a promising drug for the atherosclerosis-related diseases in the present era.

**Keywords:** life style disorder, allium family, atherosclerosis, hyper lipidemia, thrombus.

**Introduction:** It is a disease in which plaque builds up inside arteries. Arteries are blood vessels that carry oxygen rich blood to our heart and other parts of our body. Plaque is made up of fat, cholesterol, calcium and other substances found in the blood. Over time, plaque hardens and narrows the arteries. This limits the flow of oxygen rich blood to our organs and other parts of our body<sup>[1]</sup>.

**Causes of Atherosclerosis:** Arteries are blood vessels that carry blood from the heart throughout the body. They are lined by a thin layer of cells called the endothelium. The endothelium works to keep the inside of arteries toned and smooth, which keeps blood flowing. Atherosclerosis begins with damage to the endothelium. It is caused by high blood pressure, smoking or high cholesterol. That damage leads to the formation of plaque. When bad cholesterol or LDL crosses the damaged endothelium, the cholesterol enters the wall of the artery. That causes our WBC to stream into digest the LDL. Over years, cholesterol and cells become plaque in the wall of the artery. When amount of plaque increases, it can create a blockage. Atherosclerosis usually doesnot cause symptoms until middle or older age. But as narrowing becomes severe, it can choke off blood flow and cause pain. Blockages can also rupture suddenly.

That will cause blood to clot inside an artery at the side of rupture<sup>[2]</sup>.

**People Prone to Atherosclerosis:** It starts early. Today, a large no. of young people without symptoms have evidence of atherosclerosis. A 2001 study of 262 apparently healthy people’s hearts is as follows-

- 52% had some atherosclerosis.
- It was present in 85% of other persons older than 50.
- 17% of teenagers had it.
- No one had symptoms, and very few had severe narrowing in any arteries. This was very early disease, detectable only by special tests. Rates of death from atherosclerosis have fallen by 25% in the past three decades<sup>[2]</sup>.

**Prevention:** Atherosclerosis can get worse with time, but it’s also preventable. 9 risk factors for it are-1. Smoking, 2. High cholesterol, 3. High blood pressure, 4. Diabetes, 5. Abdominal obesity, 6. Stress, 7. Not eating fruits and vegetables, 8. Excess alcohol intake, 9. Not exercising regularly. So avoiding all these factors reduce the cause of atherosclerosis<sup>[2]</sup>.

**Botanical Description of Garlic:** Allium is genus of monocotyledons flowering plants that includes cultivated onion, garlic, scallion, shallot

and leek as well as chives and hundreds of other wild species.

The generic name ALLIUM is the Latin word for garlic. Garlic is used for many conditions include high blood pressure, high cholesterol, inherited high cholesterol, CHD, heart attack, reduced blood flow due to narrowed arteries and “hardening of the arteries” (atherosclerosis) [3].

**Garlic in Atherosclerosis:** A study suggests garlic should be recognized for its life saving attributes. Aged garlic extract reduces dangerous plaque build-up in arteries. It has an anti-platelet and anti-aggregation properties that inhibit the plaque formation. Garlic juice reduced serum cholesterol and tri glycerides in human and help in preventing the rise of cholesterol, thus indicating a cholesterol lowering property. Reduction of serum lipids by ingestion of fresh

garlic preparations may decrease the atherosclerotic process [3].

**Conclusion:** Taking a specific garlic powder supplement twice daily for 24 months seems to reduce hardening of arteries. Garlic indirectly effects atherosclerosis by reduction of hyperlipidemia, hypertension and prevents thrombus formation. It has both anti-atherogenic and anti-atherosclerotic effects at the level of artery wall. So garlic seems to be promising drug for the atherosclerosis related diseases in the present era [3].

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