

Women Older than 55 Years of Age

Woman with Greater-than (5) Hand (5) Hand

As patients age, the risk for hypercholesterolemia increases. Women over 55 years old have increased risk for disease. The difference in age for risk of disease between men and women is thought to be related to the protective effects of the hormone estrogen.

Signs and Symptoms

Atheromas

Artery-masses

Atheromas, also known as atherosclerotic plaques, are collections of lipid-containing macrophages that collect along blood vessel walls. As atheromas enlarge, vessel lumens narrow, decreasing the delivery of oxygen-rich blood to tissues and causing tissue ischemia. If atheromas are disrupted and endothelial damage occurs, thrombus formation begins and may eventually lead to total occlusion of a blood vessel or possible embolization.

Plaques in Blood Vessel Walls

Blood Vessels with Plaques

Atherosclerotic plaques form due to accumulations of inflammatory cells, cholesterol, and triglycerides. This leads to cascading damage and the signaling of further inflammatory mechanisms.

Tissue Ischemia

Tissues with an Ice-ischemia

Tissue ischemia is a restriction in blood supply to tissues. As atheromas enlarge, vessel lumens narrow, preventing the flow of blood and delivery of oxygen to vital organs and tissues.

Xanthomas

Zen-master

Xanthomas manifest cutaneously as yellowish papules and represent deposits of cholesterol-containing macrophages seen in patients with hypercholesterolemia. They commonly occur on tendons and extensor surfaces, and when found along the eyelids are known as xanthelasmas.

Lipemia Retinalis

Red-tin eyes with Lips

This physical exam finding seen on fundoscopic exam is described as milky white retinal blood vessels. It is very rare, as it is seen in patients with triglyceride levels >1000 mg/dL, which is usually due to inborn errors of cholesterol metabolism.