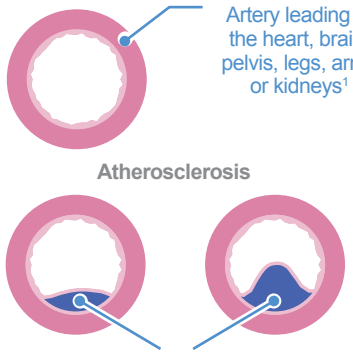
Atherosclerosis and Blood Clots

Atherosclerosis, or hardening of the arteries, is a major risk factor for many cardiovascular (CV) conditions involving blood flow[1]

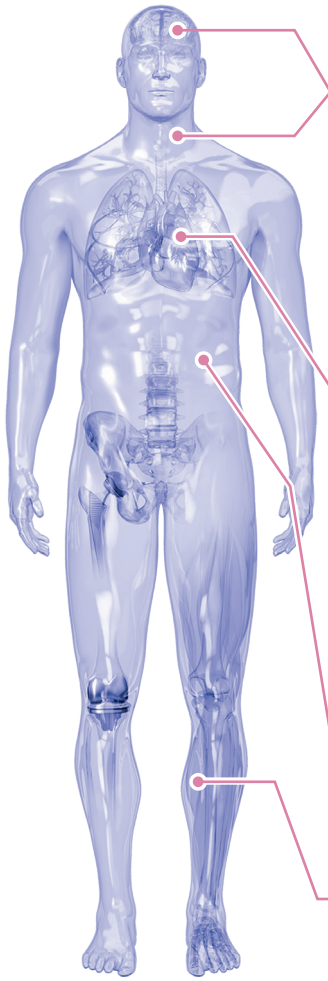


Two consequences of plaque build-up both of which may result in a heart attack or stroke:[1]

Plaque can sometimes rupture into the bloodstream

A blood clot may form on the plaque's surface

Some of the common conditions related to atherosclerosis:

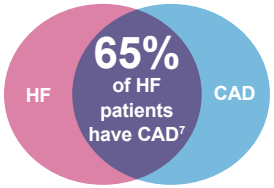


Carotid Artery Disease is the narrowing or blockage of arteries in the **neck** due to plaque build-up. If plaque or a blood clot breaks off from the wall of the carotid artery, it can block blood flow to the **brain** causing a stroke. More than half of strokes occur due to carotid artery disease[3]

Acute Coronary Syndrome (ACS) occurs when a coronary artery is blocked by a blood clot, thus reducing blood supply to the **heart**[4]

Coronary Artery Disease (CAD) is caused by plaque build-up in the coronary arteries[4]. In some cases, a blood clot may block the blood supply to the **heart muscle**, causing a heart attack. If a blood vessel to the brain is blocked by a blood clot, an ischaemic stroke can result[5]

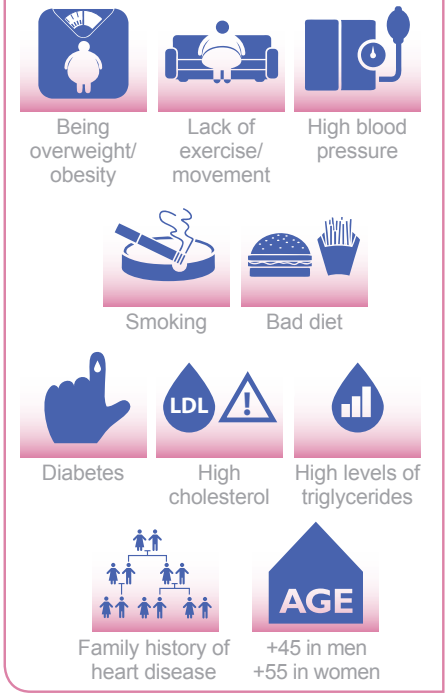
Heart Failure (HF) can develop after other conditions have damaged or weakened the **heart**[6]



Chronic Kidney Disease can result when plaque build-up slows blood flow from the arteries to the **kidneys**[8]

Peripheral Artery Disease (PAD) is caused by plaque build-up in the **outer regions of the body**, most commonly the **legs**. Plaque reduces the blood's flow through an artery, triggering a blood clot to form[9]

Risk Factors[10]



It is important doctors inform patients of lifestyle changes and all available treatment options that can help prevent or reverse the process of atherosclerosis related cardiovascular disease

References: 1) Heart.org. Atherosclerosis. Available at http://www.heart.org/HEARTORG/Conditions/Cholesterol/WhyCholesterolMatters/Atherosclerosis_UCM_305564_Article.jsp, Accessed January 2015 2) NHS Choices. Atherosclerosis. Available at http://www.nhs.uk/conditions/atherosclerosis/Pages/Introduction.aspx, Accessed January 2015 3) Circulation Foundation. Cardiod. Available at http://www.circulationfoundation.org.uk/help-advice/carotid/, Accessed January 2015 4) Patient UK. Acute Coronary Syndrome. Available at http://www. patient.co.uk/health/Acute-Coronary-Syndrome.htm, Accessed January 2015 5) WebMD. Coronary Artery Disease. Available at http://www.webmd.com/heart-disease/guide/heart-disease-coronary-artery-disease, Accessed January 2015 6) Mayo Clinic. Heart Failure. Available at http://www.mayoclinic.org/diseases-conditions/heart-failure/basics/causes/con-20029801, Accessed January 2015 7) Gheorghiade M, et al. Contemporary Reviews in Cardiovascular Medicine; Navigating the Crossroads of Coronary Artery Disease and Heart Failure. Circulation. 2006: 114: 1202-1213 8) WebMD. Heart Disease. Available at http://www.webmd.com/heart-disease/features/your-arterial-lifeline, Accessed January 2015 9) Patient UK. Peripheral Arterial Disease in Legs. Available at http://www.patient. co.uk/health/peripheral-arterial-disease-in-legs, Accessed January 2015 10) National Lung, Heart and Blood Institute. Atherosclerosis. Available at http://www.nhlbi.nih.gov/health/health-topics/topics/atherosclerosis/atrisk.html, Accessed January 2015