

# Genetic risk factors

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Case study- Disease Causation Lecturer's To complete this assignment, I will be using my late father who died at age 58. My father had a coronary artery diseases also referred to as atherosclerosis. A simple definition of the condition would be, the clogging of artery walls by residues from cholesterol, fats, and any other substances. There is a significant reason to deduce that disease was genetically acquired following his family history. His mother had a history of coronary bypass surgery and at 54 years, my father also had the same surgery. Atherosclerosis has been implicated to various genetic factors as well as the environment and my father's condition relates to both factors (Kovacic, & Bakran, 2012). On family history, his mother had a myocardial infarction due to high cholesterol value that lead to formation of atherosclerotic plaque on the coronary vessels occluding the lower cardiac muscle from getting oxygen. This necessitated a surgical procedure of coronary artery revascularization by using a bypass graft but died because of severe complication of dysrhythmias.

Considering environmental factors, my father had a history of smoking. He takes one packet of cigarettes per day. He was constantly exposed to fumes on the road following his career as a driver and spending most of the time on the road. He does not perform aerobic exercise other than the natural work that he does. The food he takes is usually sugary with high cholesterol values. The recent test of the cholesterol value indicated that he had high values of low density lipoproteins (LDL) at 146 mg/dl, the high density lipoproteins (HDL) were at 30 mg/dl and triglycerides were at 156 mg/dl. According to Ondrus and Kanovsky (2013), coronary artery diseases disease is brought by formation of occlusion on coronary vessels that supply oxygen

and nutrients to the cardiac muscles. It is a disease that runs down the families because it is genetic predisposition. Condition such as inactivity due to lack or inadequate exercise and taking high cholesterol foods especially the low density lipoprotein and triglycerides predisposes one to having the condition due to formation of atherosclerotic plaque (Velasco & Rojas, 2013). Smoking may precipitate the formation of the plaque (Kakouros & Kokkinos, 2014). This limits oxygenation of the cardiac muscles hence procedure such as coronary artery bypass grafts are needed. Boles (2013) age has also shown relationship of advancing of disease enhanced with inactivity or to long sitting such as drivers. This lead to stasis of blood hence embolism becomes easy (Ferraro, 2013).

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