

# Visualizing and Predicting Heart Diseases with an Interactive Dash Board

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## **Exploration Of Cholesterol By Age And Gender :**

Cholesterol is a waxy, fat-like substance that plays many roles in the body, including synthesizing hormones and vitamin D. It also assists in the transporting of lipids. Cholesterol is found in the foods you eat, but it is also made by the liver.

Cholesterol circulating in the blood is carried by special particles called lipoproteins. The two major cholesterol-carrying lipoproteins are low-density lipoprotein (LDL) and high-density lipoprotein (HDL):

- **LDL cholesterol (LDL-C)** is often referred to as "bad" cholesterol because too much of it can build up in your arteries and form plaques, which increases the risk of heart disease.
- **HDL cholesterol (HDL-C)** is often referred to as "good" cholesterol as it carries cholesterol to the liver to be broken down and excreted.

## LDL Cholesterol Range by Age and Assigned Sex

Age/Sex	Classification	LDL
Males 19 and younger	Normal	Less than 110mg/dL
	Borderline	110-129mg/dL
	High	Greater than or equal to 130mg/dL
Males 20 and older	Normal	Less than 100 mg/dL
	Borderline	130-159 mg/dL
	High	160-189mg/dL
Females 19 and younger	Normal	Less than 110mg/dL
	Borderline	110-129mg/dL
	High	Greater than or equal to 130mg/dL
Females 20 and older	Normal	Less than 100 mg/dL
	Borderline	130-159 mg/dL
	High	160-189mg/dL

## HDL Cholesterol Range by Age and Assigned Sex

Age/Sex	Classification	HDL
Males 19 and younger	Optimal	More than 45 mg/dL
Males 20 and older	Optimal	More than 40 mg/dL
Females 19 and younger	Optimal	More than 45 mg/dL
Females 20 and older	Optimal	More than 50 mg/dL