

# Visualizing and Predicting Heart Diseases with an Interactive Dash Board

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## Serum Cholesterol Levels Vs Age

Serum cholesterol level was studied in normal subjects in Kasakake Village. The serum cholesterol levels increased significantly with age, from the third to the fifth decade in males and from the third to the seventh decade in females. Thereafter, the levels were maintained in males while declined in females. The mean peak values ( $\pm$  SD) were 178  $\pm$  31 mg/100 ml in males and 207  $\pm$  37 mg/100 ml in females. The presumptive values of the zero-year-old obtained from the regression lines calculated from the plot of serum cholesterol values against age were 129 mg/100 ml and 112 mg/100 ml in males and females respectively. Throughout the age-range examined in females, the serum cholesterol level was well correlated with the relative body weight determined with modified Broca's method. A similar, but less obvious correlation was demonstrated in males. However, there was not comparable change in the relative body weight against the trend of the serum cholesterol level in both sexes. In the babies normally delivered with full term, the mean cholesterol level ( $\pm$  SD) in the umbilical cord blood serum was 65  $\pm$  13 mg/100 ml and it increased to 150  $\pm$  46 mg/100 ml during one to three months after birth which was very close to the presumptive values obtained from the regression lines in the adults. There also was significant correlation between the cholesterol value and the body weight. It is concluded that in normal people, age and relative body weight are major and independent determinants of serum cholesterol level from the start of their life.

## **Cholesterol in adults**

Sex and gender exist on spectrums. This article will use the terms “men,” “women,” or both to refer to sex assigned at birth.

Your total cholesterol level is the overall amount of cholesterol found in your blood. It consists of:

- low-density lipoproteins (LDLs)
- high-density lipoproteins (HDLs)
- triglycerides

LDL is also called “bad” cholesterol because it blocks your blood vessels and increases your risk for heart disease. HDL is considered “good” cholesterol because it helps protect you from heart disease. The higher your HDL, the better.

Total cholesterol also includes a triglyceride count. These are another type of fat that can build up in the body and are considered the “building blocks” of cholesterol.

High levels of triglycerides and low levels of HDL raise your risk for heart disease.

The American Heart Association Trusted Source recommends that all adults have their cholesterol checked every 4 to 6 years, starting at age 20, which is when cholesterol levels can start to rise.

As we age, cholesterol levels tend to climb. Men are generally at a higher risk than women for higher cholesterol. However, a woman’s risk goes up after she enters menopause.

For those with high cholesterol and other cardiac risk factors, such as diabetes, more frequent testing is recommended.

## **Cholesterol in children**

Children who are physically active, eat a nutrient-dense diet, are not overweight, and do not have a family history of high cholesterol are at a lower risk for having high cholesterol.

Current guidelines<sup>Trusted Source</sup> recommend that all children have their cholesterol checked between ages 9 and 11 years, and then again between ages 17 and 21 years.

Children with more risk factors, such as having diabetes, obesity, or a family history of high cholesterol, should be checked between ages 2 and 8 years, and again between ages 12 and 16 years.