

Health Monitor GMON

„INDICATE health risks – RATE professionally – REACT prohyllactally“

Explanations to Register Laboratory



Cholesterol (total, [LDL](#), [HDL](#)) is one of the basic substances of the human organism. Cholesterol is a fat molecule (lipids), which plays an important role as a component of the cell walls, and as a component of many hormones. Most of the cholesterol is produced by the body itself.

Triglycerides (including triglycerides) are quantity terms most important storage lipids in the diet and in the body. A connection of the measured values of cholesterol and triglycerides is explained by the [Friedwald formula](#) that allows a practicable estimate of triglycerides below 400 mg / dl:

Total cholesterol = LDL + HDL + Triglycerides/5.

Blood fats are measured in [mg/dl or mmol/l](#).



If the cholesterol supply is bigger than the capacity of the cell, LDL can be stored in the vessel walls. In the course of time, the vessel narrows the result is [atherosclerosis](#). A high HDL protects against atherosclerosis. HDL can even dissolve away already bounded cholesterol from the vascular walls.



Therefore the **LDL**- cholesterol concentration in the blood should be as low as possible, and it holds the principle, **The higher the HDL levels, the better.**



For determining the levels of cholesterol, a blood test is required. Since after a meal, the blood lipids may be elevated, you should have not eaten about twelve hours before the blood test, because these results receive a more detailed [assessment](#).



Friedwald, W.T.; Levy, R.I.; Fredrickson, D.S.: Estimation of the concentration of low-density lipoprotein cholesterol in plasma, without use of the preparative ultracentrifuge. Clin Chem. 1972;18(6):499-502.



atherosclerosis (hardening of the arteries): Narrowing of the arteries due to deposits on the vessel wall. The consequences are poor circulation, which can lead to infarction in the worst case.

LDL (<engl.> Low Density Lipoprotein) brings cholesterol to the various organs of the body where it is introduced via special reception centers, the so-called receptors in the cells.

HDL (<eng.> High Density Lipoprotein) absorbs surplus cholesterol from the body's cells, the vascular walls and the blood and brings it back to the liver.



[Overview about GMON-modules](#)

general operating instructions, using goals values, other health-related parameters

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conversion

1 mg/dl	• 0.055 =	1 mmol/l
1 mmol/l	• 18.02 =	1 mg/dl

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range of evaluation

assessment	good	increased	high
traffic light colour	green	yellow	red
cholesterol	< 160 mg/dl	160 ... 240 mg/dl	> 240 mg/dl
LDL	< 120 mg/dl	120 ... 180 mg/dl	> 180 mg/dl
HDL	> 35 mg/dl	20 ... 35 mg/dl	< 20 mg/dl
triglycerides	< 140 mg/dl	140 ... 180 mg/dl	> 180 mg/dl

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