

High Blood Cholesterol

- Lipids are the building blocks of any of the fats or fatty substances composed mainly of cholesterol, triglycerides and lipoproteins. They are stored in the body as potential sources of energy. It is found in animal cells, but not in plant cells. Made from fats in the liver and released into the blood.
- Cholesterol also assists in cell membrane repair, manufacturing of vitamin D on the skin's surface, production of hormones, such as estrogen and testosterone, and possibly important in cell connections in the brain that are important for learning and memory.
- Cholesterol is a fat like substance in the blood that sticks to the walls of arteries and some is deposited under the lining of artery walls particularly at bends and artery divisions causing inflammation
- Over time this build up causes hardening of the arteries and slows down blood flow to the heart and other vital organs such as the brain and kidneys.
- This then leads to heart and kidney disease.
- There are no specific symptoms.

Influencing factors:

- ❑ Diet high in saturated fat and cholesterol
- ❑ Overweight
- ❑ Sedentary lifestyle
- ❑ Age and heredity
- ❑ High blood pressure
- ❑ Thyroid disorders

Measurements:

- ❑ Total cholesterol
 - < 200 is desirable
 - 200-239 is borderline high—the damage begins above this is risky
- ❑ Low density lipoprotein (LDL) THE “BAD CHOLESTEROL”
 - Less than 100 in good
 - 100-129 is considered near normal—Start more frequent checks
 - 130-159 is borderline high, above this is high (gets deposited under lining of artery walls)
- ❑ High density protein (HDL) Protects against heart disease (removes the bad cholesterol)
 - The higher the numbers the better
 - Less than 40 is a significant risk factor
 - 60 and above lowers risk
- ❑ Triglycerides (can raise risk) fats found in the blood produced from the food you eat
 - 150-199 borderline high
 - 200 and above doubles the risk
- ❑ LDL/HDL ratio--below three is ideal, 3-5 borderline and >5 risky
- ❑ Total HDL ratio is below 4.5, 4.5-5.5 borderline, anything higher risky
- ❑ C- Reactive Protein (CRP)
 - Study is a good risk indicator but is usually not done routinely, indicates inflammation in the body (is thought to be an accurate predictor of future heart problems)
 - Normal (average) level is up to 4.9mg/l Optimal would be under 2mg/l
- ❑ Homocysteine levels are influenced by what you DO NOT EAT
 - Responsible for up to 10% of coronary deaths, this is an abnormal protein
 - High levels caused by lack of specific nutrients such as B vitamins (necessary to remove this protein and keep the levels low) REMEDY: Folic Acid (vitamin B9) B6 and B 12
 - High levels damage arteries (high over 15, optimal under 7)

Treatment includes: Reducing the intake of fat in the diet, especially saturated or animal fats and other lifestyle changes. Medications may be necessary.

