

Cholesterol – the silent killer

What is known about cholesterol? From years of study, research has shown that people with high occurrence rates of atherosclerosis and coronary heart disease have high levels of cholesterol in their blood and those with low blood levels of cholesterol have low occurrence rates of atherosclerosis and coronary heart disease. One study determined a frequency of disease seven times greater in persons with cholesterol values above 259 mg/deciliter than among those with values below 200 mg/deciliter. Cholesterol is the chief fatty constituent of the fibrous fatty plaques on the interior of coronary vessels.

Atherosclerosis:

Atherosclerosis is the term for the disease process which starts with soft swelling (athero) and then progresses to hardening (sclerosis). In a normal artery, a smooth lining of flattened cells acts as a barrier to keep the blood and its contents flowing through the artery. Surrounding this lining, a thin sheath of muscle cells contracts or relaxes to control the artery diameter and help regulate the rate of blood flow.

When atherosclerosis begins, there will be thin, slightly raised, yellowish lines in the lining of the artery; these streaks are made up primarily of cholesterol and cholesterol

compounds. As the disease progresses, the lining becomes thickened by soft deposits of fatty and cellular material called atheromatous plaque. The artery bore is narrowed by the growing plaques and scar tissue, and blood flow is impaired. At some point,

High cholesterol increases your chances of heart disease by over seven times when your cholesterol level is above 259 mg/deciliter versus having a cholesterol of under 200.



when blood flow is shut off, the area of heart muscle or other tissue normally nourished by the artery suffers injury or death. The arteries most often

affected by atherosclerosis are the larger vessels serving the heart, brain, legs, and kidneys.

Blood flow usually becomes seriously impeded only when there is more than

75% narrowing of a vessel. The process begins in childhood and goes on slowly for years; it reaches an advanced stage in middle life or later and is manifested as heart attacks and/or strokes.

Value Of Cholesterol

Although cholesterol has a bad reputation because of its association with atherosclerosis, it is a vital material. It is contained in most cells in the body and may play a part in regulating the passage of nutrient materials into and out of cells. It is found in high concentration in the brain and is a material from which many other important body materials are manufactured; for example, hormones of the adrenal gland (cortisone) are derived from cholesterol. And sex hormones are derived from the sterol nucleus of cholesterol.

Cholesterol is also changed by the body to bile acids, which are excreted in bile that flows into the intestine to help in the digestion of fats. So, some cholesterol is essential. Also, the body produces its own as well as deriving some from food.

HDL & LDL

Since cholesterol is a fatty substance, it does not mix with water; blood cannot transport it as such. The body attaches fats to proteins, which are able to dissolve in blood and be transported. These fat-protein combinations are called lipoproteins. There are two main types of lipoproteins: high density lipoproteins (HDL) and low density lipoproteins (LDL).

HDLs are the “good” lipoproteins (remember the H = hooray!) or the ones that tend to remove cholesterol deposits from the interior of arteries. LDLs are the “bad” lipoproteins (remember the L= lousy!) or the ones that transport cholesterol and deposit it in tissues, including blood vessel walls. It is best to have high levels of HDLs and low levels of LDLs as well as moderate to low levels of overall cholesterol.

Some types of cholesterol are essential to good health and wellness. The best advise is to limit high fat foods and increase the foods that improve your HDL levels and exercise regularly.

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Anyone interested in becoming involved in increased physical activity or changes to their dietary habits should consult their physician prior to making any change