What is cholesterol?

Cholesterol is a fatty substance carried in our blood by proteins. When cholesterol and proteins combine, they are called lipoproteins. Everyone has cholesterol and we need a certain amount to stay healthy.

Where does cholesterol come from?	Cholesterol comes from two different places.
1. Blood cholesterol. The majority of the cholesterol in our body, c.70-80%, is naturally produced in the liver.	2. Dietary cholesterol. Just a small proportion of the cholesterol comes from the food we eat.

Why do we need cholesterol? Cholesterol serves four main purposes:

1. It aids in the production of sex hormones, such as estrogen and testosterone.
2. It is a building block for human cells.
3. It assists in bile production in the liver (digestion and absorption of fats).
4. It is a carrier of fat-soluble vitamins: A,D,E, K.

High-density lipoproteins (HDL) scavenge cholesterol from the bloodstream, from LDL, and from artery walls and ferry it back to the liver for disposal. Think of HDL as the garbage trucks of the bloodstream. HDL cholesterol is often referred to as good, or protective, cholesterol. High levels of HDL cholesterol can reduce your risk of heart disease and stroke.

Low-density lipoproteins (LDL) carry cholesterol from the liver to the rest of the body. Cells latch onto these particles and extract fat and cholesterol from them. When there is too much LDL cholesterol in the blood, these particles can form deposits in the walls of the arteries. Such deposits, called plaque, can narrow arteries, limit blood flow and lead to heart attack or stroke. LDL cholesterol is often referred to as bad, or harmful, cholesterol.

Triglycerides are a type of fat in our blood that our body uses for energy, though high levels of triglycerides can be unhealthy.

What are desired cholesterol levels?

In general, the lower our LDL and the higher your HDL, the better our chances of preventing heart disease and other chronic conditions.

The National Health Service (NHS) in the UK gives the following helathy parameters: [Cholesterol is measured in mmol/L, whic stands for millimoles per liter]				
Total cholesterol – 5 or below	HDL – 1 or above	LDL – 3 or below	Non-HDL – 4 or below	Triglycerides – 2.3 or below

Diet and lifestyle support for high cholesterol

Foods that increase cholesterol:

- Excessive intake of saturated fats (cheese, butter, cream, ribeye, bacon, pork chops)
- Excessive intake of calories (notably sugars, carbohydrates)

Foods that lower cholesterol:

- Unsaturated fats (olive oils, avocado, fatty fish, e.g. salmon, mackerel, sardines; flaxseeds, chia seeds, walnuts, almonds, Omega-3 fish capsules)
- fiber (oat, barley, beans, wholegrains, eggplant, okra, nuts, apples, grapes, strawberries, citrus fruits, soya, fiber supplements)
- Regular exercises can significantly lower our cholesterol levels