Some general information for patients about blood tests

There are many different types of blood test that can be performed.

There are also many things that cannot be easily tested for in the blood e.g. there are no "blood tests for cancer" or "blood tests to find out what a person is allergic to".

Here is some information about some of the most common blood tests we do:

Full blood count-
lots of things are measured but doctors are most interested in:
Haemoglobin-the level of the red pigment in the blood that carries oxygen around the body. A low level is called **anaemia**.
White cell count-white cells are involved in inflammation and fighting infections
Platelets-smaller cells involved in forming blood clots e.g. in response to injury

Kidney function (or urea and electrolytes)-
The kidneys filter waste products out of the blood and make urine to get rid of them from the body. They aim to keep the chemical composition of the blood healthy.
Kidney function often deteriorates as a normal part of ageing.
Kidney function blood tests are only a rough guide to how well the kidneys are working. Many patients who have kidney disease may have normal kidney function tests.

Liver function tests-
The liver is vital for the body's metabolism to function normally. A variety of enzymes and substances that the liver makes can be measured in the bloodstream.
If liver tissue is being damaged e.g. by certain viral infections or drinking alcohol to excess these tests can be abnormal. One of the commonest reasons for mildly abnormal liver function tests is so-called **Non-alcoholic fatty liver disease**, which is usually related to obesity.

HbA1c (or glycated haemoglobin)-
This test measures how much of a person's haemoglobin in the blood has glucose (sugar) attached to it. In healthy people, the body keeps the level of glucose in the blood very stable. In people with diabetes, the body loses the ability to control the glucose level in the blood, causing it to rise. The more it rises over time, the more glucose molecules stick to haemoglobin molecules and the higher the HbA1c goes. Therefore, this test can be used to tell how well-controlled a person's diabetes has been over the preceding 3 months. It can also be used as a screening test to detect people who may have developed diabetes without knowing it, or be at high risk of doing so in the future.

Cholesterol-
The body requires some cholesterol to be healthy. Most of the body's cholesterol is made within the body rather than coming from food and drink. High levels of cholesterol in the blood

are associated with an increased risk of developing “plaques” of cholesterol-containing material inside the arteries (major blood vessels). This causes arteries to narrow over time and limit the blood getting through to important organs. This is termed **“vascular disease”** and is the cause of **heart attacks** (narrowed arteries supplying the heart) and **strokes** (narrowed arteries supplying the brain). For people with diabetes or a previous heart attack or stroke, it is a general rule that “the lower the blood cholesterol, the better”.
In otherwise healthy people, a high cholesterol by itself is not usually a problem. However, it can be used along with other “vascular risk factors” to calculate a percentage risk of developing vascular disease in the next 10 years. This is what forms the *NHS Health Check* that people aged between 40 and 74 are invited to have.

Thyroid function tests-
The thyroid is a gland in the front of the neck that produces thyroid hormones in the body. These are essential for all cells to carry out their chemical processes (metabolism). Thyroid function tests can show if the thyroid gland is functioning normally or if it has become underactive or overactive. Abnormal thyroid function can cause harm to the body over time and so treatment is required to correct it. The aim of treatment is to send the thyroid function blood tests back into the normal range.

For more detailed information see:

http://patient.info/health/blood-test-general-points