Pathology laboratories often have a code preventing them from giving the results to anyone other than the doctor or nurse who asked for them. This is for your protection, but means that the laboratory will be unable to tell you your results either over the telephone or in person. You should make any enquiries regarding your results to your doctor.

How long does it take?

This varies according to which tests have to be performed. The vast majority are completed on the same day the sample is received or by the following day. More complicated tests may take a few days, especially if the sample has to be sent to a specialist laboratory in another part of the country, which adds to the time required.

Finding out more

Lab Tests Online **(www.labtestsonline.org.uk)** is a website developed by professionals who work in clinical laboratories. Whether you are a patient or a carer, it will show how lab tests are used in healthcare. It provides:

- Detailed descriptions of tests.
- Descriptions of illness, cross-referenced to relevant tests.
- News on advances in laboratory testing.
- Links to other internet services that can help answer questions about your health and treatment.

Further information

The Association for Clinical Biochemistry

130-132 Tooley Street, London SE1 2TU
Website: http://www.ACB.org.uk

What Happens To My Blood Sample?

Clinical Science Serving Health

What happens to my blood sample?

When a doctor, nurse or phlebotomist (blood collector) collects a blood sample from you, it is the first step in a process that will involve several hospital departments, many skilled scientists and the use of advanced diagnostic testing technology. Blood samples are sent to Pathology laboratories to help your doctor make a diagnosis and/or to check how your treatment is progressing. Increasingly, blood tests are also carried out to promote health and wellbeing, and disease prevention.

Blood collection

Blood samples are usually taken from a vein in your arm or by thumb/finger prick if only a small amount is needed. The procedure is almost painless apart from a slight prick at the beginning and you cannot catch anything by giving a blood sample under modern sterile conditions.

The blood is collected into one or more tubes depending on how many tests your doctor has requested and which laboratories are involved. The reason the tubes are different colours is that they contain different chemicals and preservatives, to keep the sample fresh or to stop the blood clotting. Your doctor will fill in a request form that includes information on why the tests are needed and the sample and form are then taken to the Pathology Laboratory.

Blood Testing

When they arrive in **Pathology** the samples are first sorted and sent to the correct laboratory.

Haematology

These laboratories carry out measurements on the blood cells such as red blood cells, white blood cells and platelets eg to see if you are anaemic or have signs of an infection. Automated haematology analysers count the numbers of cells, and measure their size and make up. Sometimes a small amount of blood is smeared on to a thin glass slide so that the laboratory staff can examine the cells more closely under the microscope.

Clinical Biochemistry (Chemical Pathology)

When your blood tube is spun in a centrifuge, the cells sink to the base of the tube leaving behind a clear plasma. It is this plasma which the Clinical Biochemistry laboratory uses for much of its testing. The chemical composition of plasma can provide a lot of information about many conditions and diseases e.g. kidney disease, liver function and hormone inbalances. The laboratory may look for twenty or more different chemicals and substances in a single blood sample, using both large automated analysers and specialist manual techniques carried out by skilled scientists.

Microbiology (Bacteriology)

These laboratories are particularly concerned with detecting infectious diseases and do specialist tests on blood or plasma to discover if bacteria or viruses are present. The results of the tests can then help in deciding what treatment may be needed.

All the laboratories have very strict quality control procedures to prevent mix-up of specimens and ensure that results of tests are correct.

Occasionally you may be asked to provide a second sample. There is no cause for alarm if this happens. It may be because there was not quite enough blood to do all the tests required or that the laboratory wants to confirms the results before they are sent back to your doctor.

Reporting

Once the tests have been completed all the results are checked by a trained scientist or doctor.

This is another part of the strict quality control process. Comments may also be added to the results to explain their meaning. The results will then be reported – sometimes this may need to be done over the telephone, sometimes by post but more and more results are reported by direct electronic links to a computer in the GP surgery or hospital ward.