



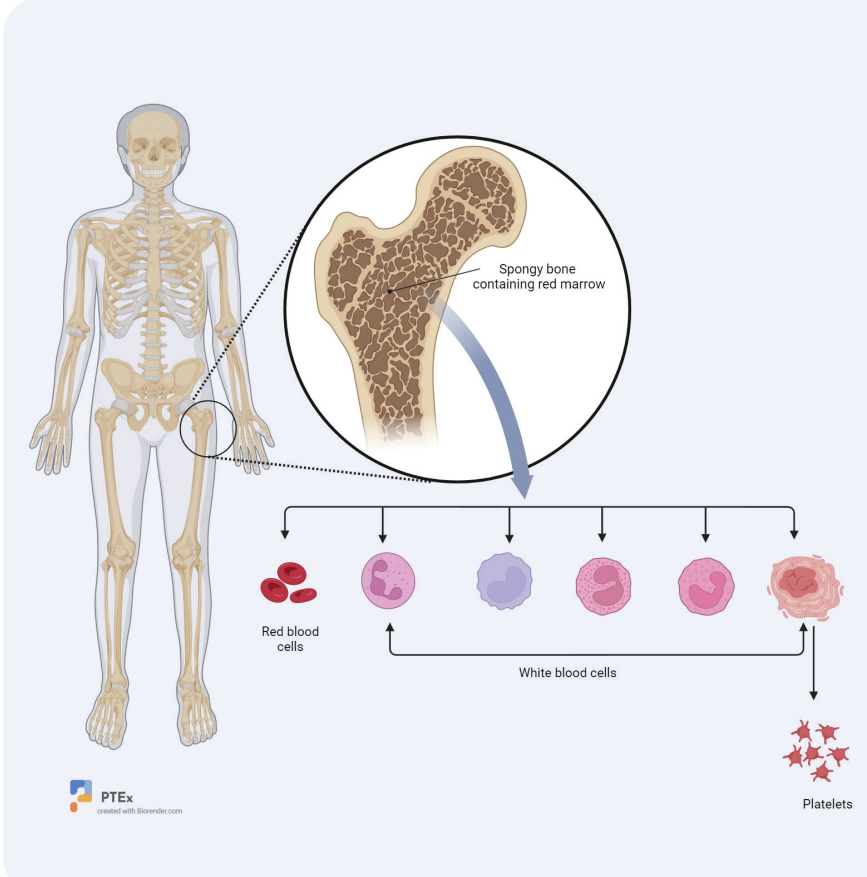
PATHOLOGY TESTS EXPLAINED

Information about pathology tests to help everyone take control of their health and make the right decisions about their care.

WHAT YOU SHOULD KNOW ABOUT **HAVING A BONE MARROW BIOPSY & ASPIRATION**

Bone marrow biopsy and aspiration are techniques used to collect and examine a sample of your bone marrow. This is the red and yellow spongy tissue that can be found inside some of your bones. It is where nearly all the components of your blood are made.

Testing a sample of marrow can be useful in diagnosing and monitoring a range of conditions including disorders that affect blood cell production and some types of cancer, and to investigate a fever when the cause is unknown. Some changes to blood cells can be detected in the marrow before they are seen in blood samples.



Bone marrow testing is used to:

- diagnose and monitor blood disorders such as when blood cells are poorly formed or don't work properly or too many or too few of certain types of blood cells are produced (myelodysplastic syndrome, myeloproliferative neoplasm, and aplastic anaemia),
- diagnose and manage amyloidosis,
- assess iron storage levels,
- diagnose and monitor blood cancers such as leukaemia, lymphoma and myeloma as well as assess the extent of the disease,
- investigate other types of cancer that may have travelled to the bone marrow from elsewhere in the body,
- monitor the effects of chemotherapy,
- identify any chromosomal abnormalities,
- look for inherited and acquired gene changes,
- detect infections such as fungi, bacteria, or mycobacteria (TB),
- diagnose hemochromatosis,
- investigate fevers where the cause is unknown.



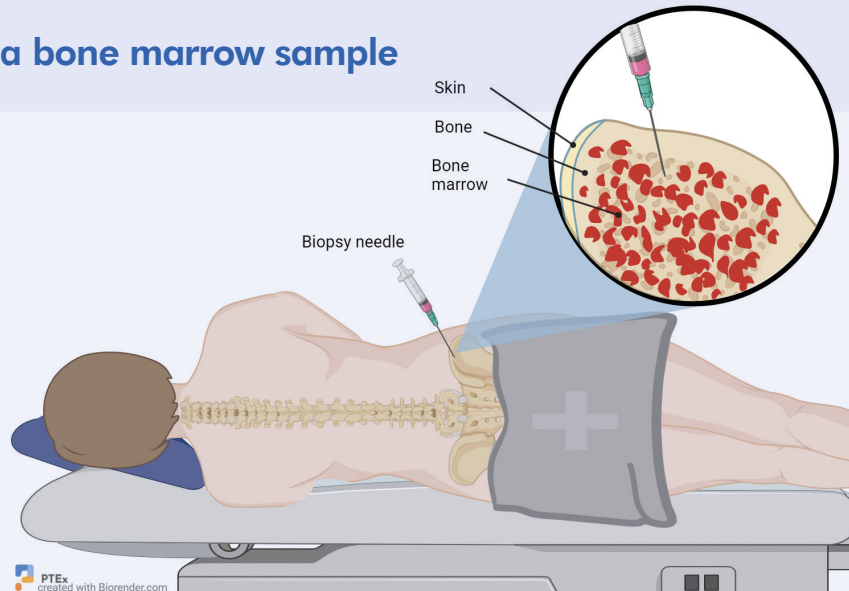
Blood cells are made in the bone marrow

You may be asked to have a bone marrow test if you have unexplained anaemia or iron deficiency, or if previous test results show you have abnormal numbers of blood cells – red blood cells, white blood cells, or platelets. Bone marrow testing can help decide whether severe anaemia is due to decreased red blood cell production, greater red blood cell loss, or a vitamin or mineral deficiency.

A full blood count (FBC) and a blood test to measure the number of immature red blood cells, called reticulocytes, are often ordered along with the bone marrow test. The results are used to help assess cell production in the marrow and compare it to cell populations circulating in the blood.



Taking a bone marrow sample



To collect samples for testing, a procedure called a bone marrow biopsy and aspiration is performed. Bone marrow is part solid and part fluid. A thin needle is used to draw up a small sample of fluid – aspirate. This is usually taken from the marrow in the pelvic bone, but sometimes from the breastbone. A biopsy is done with another type of needle, and this removes a small piece of bone with the marrow inside. You will usually have a local anaesthetic and may have a mild sedative.

The bone marrow samples are sent to a laboratory where specialist pathologists examine them. The aim is to find out whether cells are normal and present in typical quantities, and to decide whether there are cells present that shouldn't be there, such as abnormal cells that are characteristic of specific cancers or disorders. In most cases, this information can confirm or rule out a diagnosis and bone marrow involvement, but it can also point out the need for further investigation. The information gained from the marrow assessment will be used together with information from a clinical examination, blood tests and a variety of other tests, such as imaging scans and X-rays, to reach a final diagnosis.



Having a medical test

The choice of tests your doctor makes will be based on your medical history and symptoms. Make sure you tell them everything you think might help. You play a central role in making sure your test results are accurate. Do everything you can to make sure the information you provide is correct and follow instructions closely. Talk to your doctor about any medication you are taking. Find out if you need to fast or stop any particular foods or supplements. These may affect your results.



Questions to ask your doctor

- Why does this test need to be done?
- Do I need to prepare (such as fast or avoid medications) for the sample collection?
- Will an abnormal result mean I need further tests?
- How could it change the course of my care?
- What will happen next, after the test?

For more detailed information on these and many other tests go to pathologytestsexplained.org.au



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www.pathologytestsexplained.org.au

Pathology Tests Explained is the primary national source of consumer information on pathology testing. Information is written and edited by practising pathologists and scientists, including leading experts. This ensures integrity and accuracy.

Pathology Tests Explained is managed by a consortium of medical and scientific organisations representing pathology practice in Australia. More details at:
www.pathologytestsexplained.org.au/about

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My Health Record

You'll find a direct link to the Pathology Tests Explained website embedded in the pathology results pages of your My Health Record.

Click on the link to find information about what your tests are investigating or measuring and what your results can tell your doctor.