

Bone marrow

Bone marrow is the spongy tissue in the cavities of the bones. It is the blood cell 'factory'. Healthy bone marrow releases blood cells into the blood stream when they are mature and when required.

Blood cells

The different blood cells made inside bone marrow are:

- **Red blood cells** that carry oxygen around the body
- **White blood cells** that make up the body's immune system
- **Platelets** which are needed for clotting.

An indicator of disease

Bone marrow will indicate blood-related diseases like leukaemia. Using a small needle, bone marrow can be drawn from a bone and examined.

Some diseases of bone marrow

Reticulum cell sarcoma of bone

- A cancerous tumour of the bone marrow
- More males than females develop this tumour
- Symptoms include pain and swelling
- Treatment includes irradiation therapy.

Leukaemia

- Cancer of the blood, which starts in the bone marrow
- The exact cause is unknown,
- Symptoms include anaemia, bruising and nose bleeds
- Treatment includes chemotherapy (drugs) and radiotherapy, and may include bone marrow transplantation.

Aplastic anaemia

- The bone marrow stops making enough blood cells
- People between the ages of 15 and 30 are most at risk
- Can be present at birth or may be caused by certain drugs, chemicals or radiation.
- The cause is unknown for around half of all cases.
- Symptoms include weakness, fever, skin haemorrhages
- Treatment can include blood transfusions or a bone marrow transplant.

Bone marrow transplants

For a successful bone marrow transplant, the donor needs to have the same tissue type. If the donated marrow isn't a close match, the donor's marrow will reject the recipient's body. A person's tissue type can be checked with a simple blood test. In a transplant operation, the recipient's marrow is treated with drugs and x-rays. Then the donor marrow is injected into the recipient's blood. The donor marrow finds the bones and settles into the cavities.

Where to get help

- See your doctor for information and referral.

Things to remember

- Blood cells are made inside bone marrow.
- Diseases of bone marrow affect the production of blood cells.
- Bone marrow transplants involve the matching of tissue types of the donor and the recipient.

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