

Bone marrow transplant

A bone marrow transplant is a procedure that infuses healthy blood-forming stem cells into your body to replace bone marrow that's not producing enough healthy blood cells. A bone marrow transplant is also called a stem cell transplant.

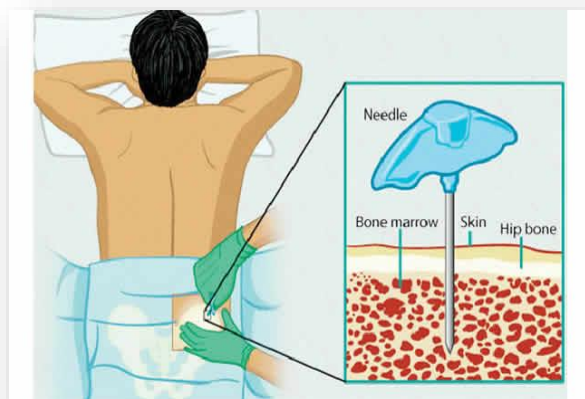
You might need a bone marrow transplant if your bone marrow stops working and does not produce enough healthy blood cells.

Bone marrow transplants may use cells from your own body (autologous transplant) or from a donor (allogeneic transplant).

Types

Allogeneic stem cell transplant

Autologous stem cell transplant



Why it's done

A bone marrow transplant may be used to:

- Safely allow treatment with high doses of chemotherapy or radiation by replacing or rescuing the bone marrow damaged by the treatment
- Replace bone marrow that's not working properly with new stem cells
- Provide new stem cells, which can help kill cancer cells directly

Bone marrow transplants can benefit people with a variety of both cancerous and noncancerous diseases, including:

- Acute leukemia
- Adrenoleukodystrophy
- Aplastic anemia
- Bone marrow failure syndromes
- Chronic leukemia
- Hemoglobinopathies
- Hodgkin's lymphoma
- Immune deficiencies
- Inborn errors of metabolism
- Multiple myeloma
- Myelodysplastic syndromes
- Neuroblastoma
- Non-Hodgkin's lymphoma
- Plasma cell disorders
- POEMS syndrome
- Primary amyloidosis

Risks

A bone marrow transplant can pose numerous risks. Some people experience minimal problems with a bone marrow transplant, while others can have serious complications that require treatment or hospitalization. Sometimes complications are life-threatening.

Your risks depend on many factors, including the disease or condition that caused you to need a transplant, the type of transplant, your age and your overall health.

Possible complications from a bone marrow transplant include:

- Graft-versus-host disease (a complication of allogeneic transplant only)
- Stem cell (graft) failure
- Organ damage
- Infections
- Cataracts
- Infertility
- New cancers
- Death

Your health care provider can explain your risk of complications from a bone marrow transplant. Together you can weigh the risks and benefits to decide whether a bone marrow transplant is right for you.



After completing the pretransplant tests and procedures, you'll begin a process known as conditioning. During conditioning, you'll undergo chemotherapy and possibly radiation to:

- Destroy cancer cells if you're being treated for cancer that may spread to other parts of the body
- Suppress your immune system
- Prepare your bone marrow for the new stem cells

The type of conditioning process you receive depends on several factors, including the disease being treated, your overall health and the type of transplant planned. You may have both chemotherapy and radiation or just one of these treatments as part of your conditioning treatment.

Side effects of the conditioning process can include:

- Nausea and vomiting
- Diarrhea
- Hair loss
- Mouth sores or ulcers
- Infection
- Bleeding
- Infertility or sterility
- Anemia
- Fatigue
- Cataracts
- Organ complications, such as heart, liver or lung failure

You may be able to take medications or other measures to reduce such side effects.

What you can expect

During your bone marrow transplant

Your bone marrow transplant occurs after you complete the conditioning process. On the day of your transplant, stem cells are infused into your body through your central line.

The transplant infusion is painless. You'll be awake during the procedure.

After your bone marrow transplant

When the new stem cells enter your body, they travel through your blood to your bone marrow. In time, they multiply and begin to make new, healthy blood cells. This is called engraftment. It usually takes several weeks before the number of blood cells in your body starts to return to the standard range. In some people, it may take longer.

In the days and weeks after your bone marrow transplant, you'll have blood tests and other tests to monitor your condition. You may need medicine to manage complications, such as nausea and diarrhea.

After your bone marrow transplant, you'll remain under close medical care. If you're experiencing infections or other complications, you may need to stay in the hospital for several days or longer. Depending on the type of transplant and the risk of complications, you'll need to remain near the hospital for several weeks to months to allow close monitoring.

You may also need periodic transfusions of red blood cells and platelets until your bone marrow begins producing enough of those cells on its own. You may be at greater risk of infections or other complications for months to years after your transplant. For the rest of your life, you'll meet regularly with your health care provider to check for late complications.



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