



GVHD (Graft-Versus-Host Disease): A Guide for Patients and Families After Stem Cell Transplant

The immune system is the body's tool to fight infection and disease. It works by seeing harmful cells as “foreign” and attacking them.

When you receive a donor's stem cells (the “graft”), their job is to recreate the donor's immune system in your body (the “host”).

Graft versus host disease (GVHD) is the term used when this new immune system attacks your body. Your donor's cells see your body as “foreign” and attack it—causing damage. GVHD can be acute or chronic.

Acute GVHD usually occurs within the first 100 days after your transplant or infusion of T-cells (called a donor lymphocyte infusion, or DLI). Acute GVHD commonly affects:

- skin
- liver
- gastrointestinal (GI) tract

Chronic GVHD can happen 100 days after transplant, but it can occur as early as 60 days post-transplant.

Chronic GVHD can reoccur for several years after transplant.

What are the signs and symptoms of GVHD?

Skin GVHD

- red rash
- itching
- darkening of skin

Liver GVHD

- elevated liver tests determined through blood tests
- yellowing of the skin and whites of the eyes
- abdominal pain (later symptom)

Gastrointestinal (GI) GVHD

- watery diarrhea
- stomach cramps (especially before and during bowel movements and after eating)
- persistent nausea

Report all new or worsening symptoms to your NIH doctor.

Can I prevent GVHD?

There is nothing you can do to prevent GVHD. The medical team cannot predict whether you will have GVHD. But depending on the type of stem cell transplant you got, your doctor may give you medications to lessen GVHD. These medications suppress your new immune system so that it will not attack your body's cells.

You play an important role in helping the medical team prevent GVHD.

1. Take the medications prescribed for you after your transplant.

Medications such as cyclosporine, tacrolimus, and sirolimus, suppress your immune system to make GVHD less severe. You may need to take these medications for several months after your transplant. It is important to take these medications as prescribed and to report any side effects.

If you are unable to take your medications for any reason, report this to your medical team.

2. Report any changes in your skin or in your bowel movements.

3. Protect yourself from the sun.

Sun exposure can trigger GVHD or make it worse. When you go outside, wear a hat, long sleeves, long pants, and sunscreen. But the best protection is to avoid going out in the sun.

How is GVHD diagnosed?

Your doctor can diagnose GVHD from your symptoms, as well as from results of laboratory tests and tissue samples. Because early symptoms of GVHD are often the same as some side effects and complications after transplant, diagnosing GVHD can be hard. Before your doctor can make a diagnosis, your medical team will first make sure that there are other reasons for the symptoms. You can help your medical team by immediately reporting any changes in your skin or in your usual pattern of bowel movements.

How is GVHD treated?

GVHD treatment aims at lowering the graft's immune response against your body, so you will be given medication to do this. Steroids, such as prednisone and methylprednisolone, are first-line treatments.

You will be at greater risk for infection while you take steroids. So along with giving you medication for GVHD, your doctor may admit you to the hospital if you cannot manage diarrhea and other symptoms at home. While you are in the hospital, you may get intravenous (I.V.) fluids and nutrition to help your body heal.

How can I manage GVHD symptoms?

When your doctor makes your treatment plan, there will also be things you can do to help manage GVHD.

Skin care

- Avoid scratching.
- Use moisturizing lotion. Avoid perfumed lotions.
- Avoid hot showers.
- Use sunscreen with SPF 30 or greater.
- Avoid prolonged sun exposure.
- Wear long sleeves and pants.

Diarrhea

- Follow the diet prescribed by your doctor and dietitian to prevent worsening diarrhea.
- Avoid spicy foods.
- To avoid skin problems (such as irritation) around your rectal area, it is very important to keep this area clean. Cleanse this area well after each time you have diarrhea. Tell your nurse if this area gets red, cracked, painful, or infected.

Preventing infection

- Wash your hands often.
- Stay away from sick family members and friends.
- You may be asked to wear a mask.
- Notify your provider if you have fevers, chills, or redness/pain at your catheter site.

If you have any questions about GVHD, feel free to ask your nurse or doctor.



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This information is prepared specifically for patients participating in clinical research at the Clinical Center at the National Institutes of Health and is not necessarily applicable to individuals who are patients elsewhere. If you have questions about the information presented here, talk to a member of your healthcare team.

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