



You or your loved one has been diagnosed with graft-versus-host disease (GvHD) as the result of a stem cell transplant from a donor (known as an allogeneic stem cell transplant). What are the treatments and side effects?

This fact sheet will help you:

Discover GvHD treatment options

Understand the side effects of treatments

Learn ways to take care of yourself or your loved one with GvHD



What is graft-versus-host disease (GvHD)?

GvHD is a serious complication that can result from an allogeneic stem cell transplant. It can happen when donor cells (graft) mistakenly attack the recipient's (host) tissue and cells.

There are two main types of GVHD: acute GvHD which usually develops within 100 days of the transplant, and chronic GvHD (cGvHD), which develops more than 100 days after the transplant.

Treatment for GvHD and potential side effects

There are various treatments, depending on whether you have acute or chronic GvHD. You may experience side effects. If so, let your doctor know. Your doctor will try to find the lowest dose to control GvHD while limiting the side effects. Most side effects improve or go away after treatment ends.

Common GvHD treatments and possible side effects include:

Steroids

A first line of treatment commonly used for both acute GvHD and cGvHD is corticosteroids, an anti-inflammatory medicine (also known as steroids). Steroids lower your immune system's response and its ability to fight infections and diseases. These steroids are often combined with other immunosuppressive medications.

The type of steroids used in your treatment depends on whether you have acute GvHD or cGvHD, how severe the symptoms are, and if complications are a concern.

- **Systemic steroids** are steroids given by mouth or directly into a vein (IV) or muscle injection. Most people with more severe GvHD (acute or chronic) will receive systemic steroids.
- Topical steroid cream is used for mild cGvHD and for acute GvHD that is mild and has only a skin rash as a symptom.
- Steroid eye drops are used for cGvHD of the eye, which means you have dry, painful, or itchy eyes as a symptom.

Potential side effects: Depending on the treatment, you may experience weight gain, insomnia, bone loss (osteoporosis), high blood sugar, high blood pressure, cataracts, mood swings, and depression from long-term use of corticosteroids.

Immunotherapies

If steroids do not improve or resolve your GvHD, your doctor may add immunotherapies, such as:

- JAK inhibitors, taken orally or by IV, target T cells to lower your immune response
- Photopheresis, a form of cellular immunotherapy, removes some lymphocytes from your blood, exposes them to light, and returns them to your body
- · ROCK2 inhibitors (belumosudil)
- CSFR1 inhibitors (axatilimab)
- BTK inhibitors (ibrutinib)
- mTOR inhibitors (sirolimus)
- Calcineurin inhibitors (tacrolimus or cyclosporine)
- B-cell depleting therapies (rituximab)
- · Other therapies, such as methotrexate, hydroxychloroquine, and imatinib, have also shown some effectiveness

Potential side effects: There are many different types of immunotherapies, each with different potential side effects. Some common side effects include rashes, diarrhea, fatigue, nausea, vomiting, and decreased thyroid hormone levels.

Supportive therapies

Other types of therapies may also be used for your GvHD. Known as supportive therapies, they can include:

- Total parenteral nutrition (TPN) or intravenous feeding. This is used for acute GvHD of the bowel to help you from getting weaker when you cannot get enough nutrients by mouth.
 - Potential side effects: infection, blood clots, GI atrophy (decline), glucose imbalance, liver reactions or disease, gallbladder problems, fluid overload, hunger pangs, and bone demineralization
- Antimicrobials, which are medicines used to fight bacteria, viruses, and fungi.
 - Potential side effects: Diarrhea, nausea, vomiting, rash, yeast infection, and dizziness
- Bone-strengthening agents prevent bone loss from steroid use.

- Potential side effects: upset stomach, heartburn, bone and muscle or joint pain

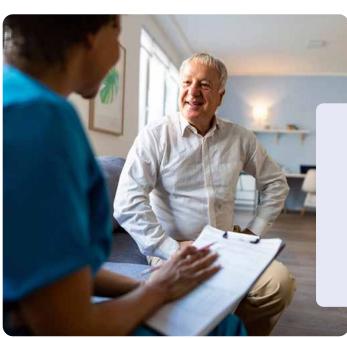
Clinical trials are research studies that aim to improve the care and treatment of people living with cancer.

Ask your doctor about clinical trials for your type of GvHD.

Taking care of yourself or your loved one with **GvHD**

You can reduce the complications of GvHD by doing the following:

- Take your prescribed medications even if you start to feel better. Stopping too soon can cause symptoms to flare up or worsen and cause permanent damage.
- Wash your hands often and ask friends and family to visit only if they are healthy. This will help you reduce your risk of infection.
- Avoid the sun. Wear a hat, long-sleeved shirt, long pants, and sunglasses with UV protection, and use a high-SPF sunscreen.
- Keep your skin moist. Take short showers and use a mild soap-free body cleanser, moisturizing lotion, and prescribed steroid creams. Avoid scratching.
- Brush and floss your teeth regularly. Go for frequent dental check-ups.
- Follow the diet prescribed by your doctor. Avoid spicy foods.
- Exercise and stretch regularly.
- Get any vaccinations offered by your transplant team unless you have an allergy or a severe contraindication (reason not to get the vaccine).



Living with GvHD can be overwhelming. Seek medical help if you are feeling "down" or "blue" or do not want to do anything – and your mood does not improve over time. These could be signs of depression, an illness that should be treated even when you are undergoing treatment for GvHD. Treatment for depression has important benefits for people living with cancer.

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