**Plasmapheresis: What to Expect**

<https://www.healthline.com/health/plasmapheresis>

**What is plasmapheresis?**

Plasmapheresis is a process in which the liquid part of the blood, or plasma, is separated from the blood cells. Typically, the plasma is replaced with another solution such as saline or albumin, or the plasma is treated and then returned to your body.

If you’re sick, your plasma can contain antibodies that attack the immune system. A machine can be used to remove the affected plasma and replace it with good plasma or a plasma substitute. This is also known as plasma exchange. The process is similar to kidney [dialysis](https://www.healthline.com/health/dialysis).

Plasmapheresis also can refer to the plasma donation process, where the plasma is removed and the blood cells are returned to your body.

**What’s the purpose of plasmapheresis?**

Plasmapheresis can be used to treat a variety of autoimmune disorders including:

* [myasthenia gravis](https://www.healthline.com/health/myasthenia-gravis)
* [Guillain-Barre syndrome](https://www.healthline.com/health/guillain-barre-syndrome)
* chronic inflammatory demyelinating polyneuropathy
* [Lambert-Eaton myasthenic syndrome](https://www.healthline.com/health/lambert-eaton-syndrome)

It can also be used to treat certain complications of [sickle cell disease](https://www.healthline.com/health/sickle-cell-anemia), as well as certain forms of [neuropathy](https://www.healthline.com/health/type-2-diabetes/diabetic-neuropathy).

In each of these disorders, the body has developed proteins called antibodies that are programmed to identify cells and destroy them. These antibodies are in plasma. Normally, these antibodies are directed at foreign cells that may harm the body, such as a virus.

In people with an autoimmune disease, however, antibodies will respond to cells inside the body that carry out important functions. For example, in multiple sclerosis, the body’s antibodies and immune cells will attack the protective covering of nerves. That eventually leads to impaired function of muscles. Plasmapheresis can stop this process by removing the plasma that contains antibodies and replacing it with new plasma.

In recent years, the therapy has increasingly been used to treat people who are critically ill with infections and other problems such as [Wilson’s disease](https://www.healthline.com/health/wilsons-disease) and [thrombotic thrombocytopenic purpura](https://www.healthline.com/health/thrombotic-thrombocytopenic-purpura). It has also been used to help people who have received an organ transplant to counter the effect of the body’s natural rejection process.

**How is plasmapheresis administered?**

During plasmapheresis donation, you will rest on a cot. Then a needle or catheter will be placed into a vein in the crux of whichever arm has the most robust artery. In some cases, a catheter is placed in the groin or shoulder.

Replacement or returned plasma flows into your body through a second tube that is placed in the arm or foot.

According to federal regulations, a person can donate plasma up to twice a week. Donation sessions usually take about 90 minutes.

If you’re receiving plasmapheresis as treatment, the procedure can last between one and three hours. You may need as many as five treatments per week. Treatment frequency can vary widely from condition to condition, and also depend on your overall health.

Sometimes hospitalization is required. Other times outpatient treatment is possible.

**How should I prepare for plasmapheresis?**

You can optimize the success and minimize the symptoms and risks of plasmapheresis by taking these steps:

* Make sure you have a nutritious meal before treatment or donation.
* Have a good night’s sleep the night before your procedure.
* Drink plenty of fluids.
* Get up to date with vaccinations for common infections. Work with your doctor to find out which vaccines you need.
* Avoid smoking and tobacco use.
* Eat a diet high in protein and low in phosphorous, sodium, and potassium in the days leading up to plasmapheresis.

**What are the benefits of plasmapheresis?**

If you’re receiving plasmapheresis as a treatment for weakness or an autoimmune disorder, you may begin to feel relief in as little as a few days. For other conditions, it may take a few weeks before you notice any changes in your symptoms.

Plasmapheresis will only provide short-term relief. Often the process will need to be repeated. The frequency and length of results are highly dependent on your condition and its severity. Your doctor or nurse can give you a general idea of how long plasmapheresis will be effective for and how frequently you need to use it.

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**What are the risks of plasmapheresis?**

Plasmapheresis does carry a risk of side effects. Usually, they are rare and generally mild. The most common symptom is a drop in blood pressure. This is often accompanied by:

* faintness
* blurry vision
* dizziness
* feeling cold
* stomach cramps

Plasmapheresis can also carry the following risks:

* Infection: Most procedures involving transfer of blood into or out of the body carry a risk of infection.
* Blood clotting: Your doctor may prescribe an anti-coagulant to help reduce your risk for blood clots.
* Allergic reaction: This is typically a reaction to the solutions used to replace plasma.

More serious but uncommon risks include bleeding, which results from anti-clotting medications. Other more serious risks include seizures, abdominal cramps, and tingling in the limbs.

Plasmapheresis may not be an appropriate treatment for some people, including:

* people who are hemodynamically unstable
* people who can’t tolerate central line placement
* people with allergies to heparin
* people with [hypocalcemia](https://www.healthline.com/health/calcium-deficiency-disease)
* people with allergies to frozen albumin or plasma

**Is plasmapheresis covered by insurance?**

Plasmapheresis is generally covered by insurers for most conditions. It’s important to check with your insurer to understand how much and under what conditions the procedure will be covered. For example, different insurance plans will cover different amounts of a procedure. Additionally, insurers may only cover plasmapheresis in certain cases, such as a last resort for rheumatoid vasculitis.

To learn more about your coverage, call your insurance provider. If you have any concerns about cost, talk to your doctor. They can help you understand your options and provide you with any information you need to share with your insurance provider.

**What is the outlook after plasmapheresis?**

Some people report feeling tired after the procedure, but most tolerate it well. For the best outcome, remember to prepare for the procedure and follow your doctor’s orders after the procedure.

Consider doing the following to make sure your appointment goes as smoothly as possible:

* Get enough sleep.
* Arrive to the appointment at least 10 minutes ahead of time.
* Wear comfortable clothing.
* Bring a book or something else to entertain you during the procedure.