

Plasma exchange or plasmapheresis is a procedure that involves removing blood from your body, separating the plasma (the liquid part of the blood) from the other components, and then replacing the plasma with a substitute. This process can help treat certain medical conditions that involve abnormal or harmful substances in the blood.

Plasma exchange can be used to treat several conditions. In particular in neurology:

- **Antibody-mediated disorders:** In some autoimmune disorders, such as Guillain-Barre syndrome and myasthenia gravis, the immune system attacks healthy tissues in the body. Plasma exchange can remove the harmful antibodies from the blood and reduce the symptoms of these conditions.
- **Immune-mediated disorders:** Some neurological conditions, such as multiple sclerosis and chronic inflammatory demyelinating polyneuropathy, involve inflammation that damages the nerves. Plasma exchange can help remove the substances that cause the inflammation and improve the symptoms.

During plasma exchange, a needle is inserted into a vein in your arm or a catheter may be inserted into a vein in your neck or groin. Blood is then drawn from your body and passed through a machine that separates the plasma from the other blood components. The other components of your blood, such as red and white blood cells and platelets, are then returned to your body along with a replacement fluid, such as albumin or saline.

The procedure typically takes a few hours to complete and can be performed on an outpatient or inpatient basis. You will typically require several sessions of plasma exchange, depending on your condition and how well you respond to the treatment.

Plasma exchange is generally safe, but like any medical procedure, it carries some risks. Some possible risks and side effects of plasma exchange include:

- **Bleeding:** There is a small risk of bleeding at the site where the needle is inserted or removed.
- **Infection:** There is a small risk of infection where the needle is inserted or from contaminated equipment.

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- Allergic reaction: Some people may experience an allergic reaction to the replacement fluid used during plasma exchange.
- Low blood pressure: Plasma exchange can cause a drop in blood pressure, which can cause dizziness or fainting.
- Electrolyte imbalances: The replacement fluid used during plasma exchange may affect the balance of electrolytes in your body, which can cause muscle weakness or other symptoms.

Your doctor should discuss the risks and benefits of plasma exchange with you before the procedure.

Plasma exchange can be an effective treatment for certain medical conditions, such as autoimmune and neurological disorders. It involves removing plasma from the blood and replacing it with a substitute fluid. The procedure is generally safe, but it carries some risks and side effects that your doctor should discuss with you if they are recommending it.

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