**Apheresis-Related Safety Information**
Adverse events of apheresis procedures can include anxiety, headache, lightheadedness, digital and/or facial paresthesia, fever, chills, hematoma, hyperventilation, nausea and vomiting, syncope (fainting), urticaria, hypotension, allergic reactions, infection, hemolysis, thrombosis in patient and device, hypocalcemia, hypokalemia, thrombocytopenia, hypoalbuminemia, anemia, coagulopathy, fatigue, hypomagnesemia, hypogammaglobulinemia, adverse tissue reaction, device failure/disposable set failure, air embolism, blood loss/anemia, electrical shock, fluid imbalance and inadequate separation of blood components.[5]

Reactions to blood products transfused during procedures can include hemolytic transfusion reaction, immune-mediated platelet destruction, fever, allergic reactions, anaphylaxis, transfusion-related acute lung injury (TRALI), alloimmunization, posttransfusion purpura (PTP), transfusion-associated graft-versus-host disease (TA-GVHD), circulatory overload, hypothermia, metabolic complications and transmission of infectious diseases and bacteria.[6-7]

Restricted to prescription use only. Operators must be familiar with the system's operating instructions. Procedures must be performed by qualified medical personnel.


1. Mörtzell Henriksson M, Newman E, Witt V, et al. Adverse events in apheresis: An update of the WAA registry data. *Transfus Apher Sci.* 2016;54(1):2-15.
2. Vrielink H, Le Poole K, Stegmayr B, et al. The world apheresis association registry, 2023 update. *Transfus Apher Sci.* 2023;62(6):103831.
3. Connelly-Smith L, Alquist CR, Aqui NA, et al. Guidelines on the use of therapeutic apheresis in clinical practice – evidence-based approach from the writing committee of the American Society for Apheresis: the ninth special issue. *J Clin Apher.* 2023;38(2):77-278.
4. Worel N, Mansouri Taleghani B, Strasser E. Recommendations for therapeutic apheresis by the section "Preparative and Therapeutic Hemapheresis" of the German Society for Transfusion Medicine and Immunohematology. *Transfus Med Hemother.* 2019;46(6):394-406.
5. Crookston KP. *Therapeutic Apheresis: A Physician's Handbook.* 5th ed. Bethesda, MD; AABB; 2017.
6. AABB. Circular of Information for the Use of Human Blood and Blood Components. Bethesda, MD: AABB; 2017.
7. European Directorate for the Quality of Medicines & HealthCare (EDQM). Guide to the Preparation, Use and Quality Assurance of Blood Components. 20th edition. Strasbourg, France: EDQM Council of Europe; 2020.


Terumo Blood and Cell Technologies is a medical technology company. Our products, software, and services enable customers to collect and prepare blood and cells to help treat challenging diseases and conditions. Our employees around the world believe in the potential of blood and cells to do even more for patients than they do today. **TerumoBCT.com**

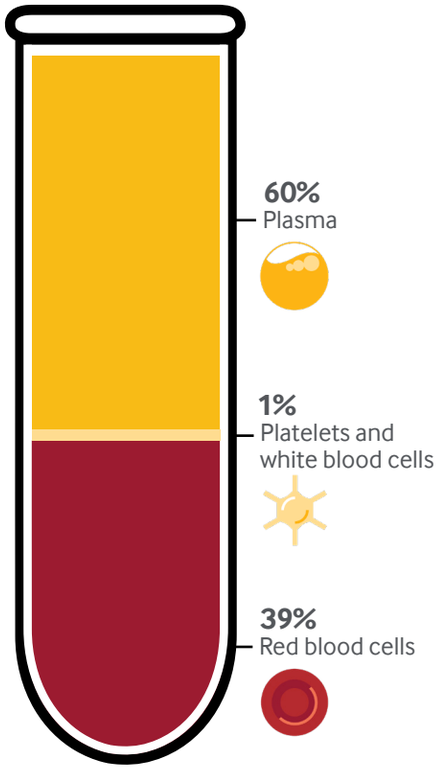
Material is intended for patient education only. Ask your doctor for further guidance.
Product availability is subject to regulatory approval in each country.



TERUMO BLOOD AND CELL TECHNOLOGIES

# Patient Guide: Therapeutic Plasma Exchange

TERUMO BLOOD AND CELL TECHNOLOGIES




## What is plasma?

Plasma is the liquid part of the blood that carries red blood cells and white blood cells through the body. When plasma is separated from the other parts of blood, it is yellow in color.

## Plasma exchange basics

### Why consider plasma exchange?

Some medical conditions can cause the body to create harmful antibodies or excess proteins. These substances circulate throughout the body in the plasma and may harm healthy cells or tissues.

### Therapeutic plasma exchange (TPE)

- Removes a portion of the plasma that contains potentially harmful substances while replacing it with beneficial fluids
- Calms down an overactive immune system
- Is an exchange transfusion performed on a medical device
- Takes one to four hours to complete

**TPE is:**

- Well-tolerated[1]
- Performed all over the world[2]
- Recommended by professional medical organizations[3-4]

# TPE: What to expect

## Before the procedure

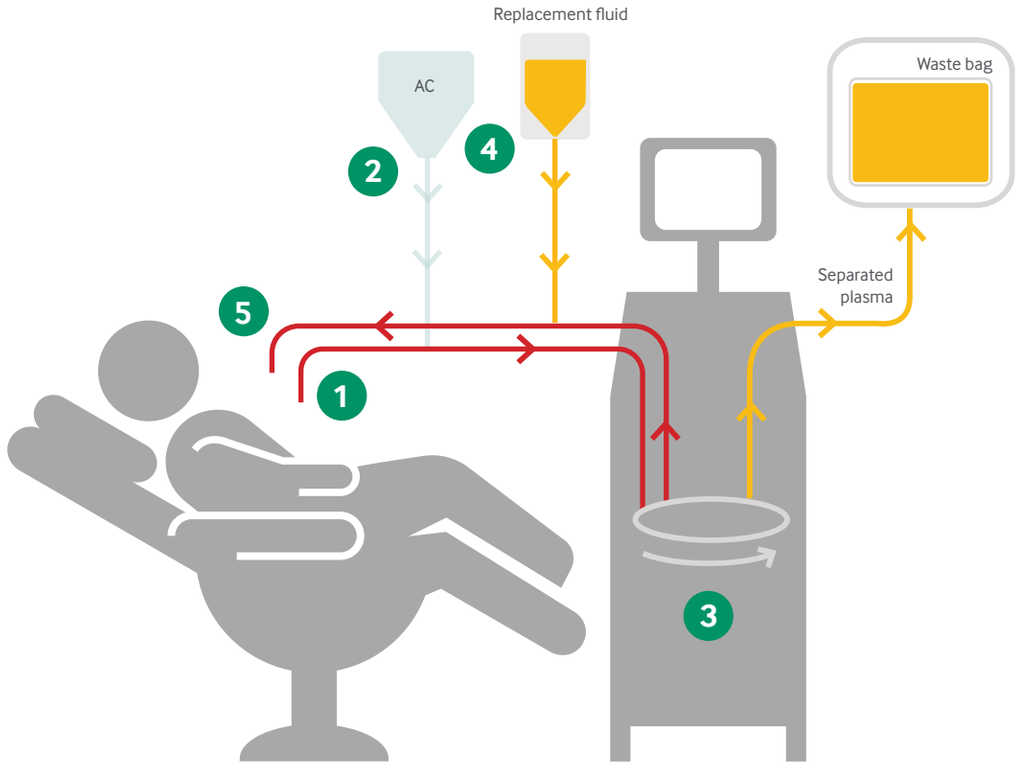
A single-use sterile tubing set is connected to one or both arms with a needle. Depending on the length of treatment, more permanent access options may be considered.

## During the procedure

1. A small portion of the blood is cycled through the device. Less than a cup of blood is outside of the body at any time.
2. The blood is then mixed with a fluid that prevents it from clotting.
3. The system spins the blood in a centrifuge, separating it into plasma and other blood components.
4. As plasma is removed, it is replaced with a fluid recommended by a doctor.
5. The remaining parts of the blood are mixed with the new fluid, then returned to the body.

## After the procedure

The tubing set and the removed plasma are safely discarded.



## Prepare for your procedure

Inform your doctor about your current medications.

Ask your doctor or nurse if you can have company during the procedure.

Ask your doctor how to take proper care of the veins in your arm.

To help your procedure go smoothly, drink water and consume foods high in calcium, such as cheese or milk.

Plan how you will pass the time, such as by reading, listening to music, or watching a video.

### Blood draw basics

- Plasma exchange requires drawing the blood.
- A clinician will look at the veins to determine the best way to draw the blood.
- The procedure requires blood to be drawn with a needle in one or both arms.

# Consult your physician with any additional questions