



## **INFORMATION ON PLASMA EXCHANGE**

### **Introduction**

This information leaflet has been written to give patients and their families' general information about plasma exchange – sometimes called Plasmapheresis or Therapeutic Plasma Exchange (TPE). If you would like any more information or have any questions, please ask the staff in the Clinical Apheresis Unit who are familiar with your individual treatment.

### **What is plasma?**

Plasma is the liquid portion of blood that helps the flow of red blood cells, white blood cells and platelets.

It also carries minerals, hormones, vitamins and proteins around the body.

Normal plasma has a yellow colour, this can be seen when the blood has been separated.

### **What is plasma exchange?**

Plasma exchange is part of a speciality called Apheresis. The staff carrying out your procedure are called Apheresis nurses.

Plasma exchange is performed using a machine called a cell separator which can separate blood into its various parts using a centrifuge.

The machine separates and removes the plasma portion of your blood and gives you back replacement plasma. Simply stated the old plasma is removed and replaced by the new plasma. The replacement plasma will usually be processed donor plasma and an artificial plasma product. However, fresh plasma will occasionally be used.

Your red cells, white cells and platelets are returned to you during the treatment.

### **Why is plasma exchange necessary?**

Plasma exchange is normally carried out when there is a problem caused by abnormal antibodies or proteins circulating in your plasma.

Antibodies, which normally help to protect you from infection, can begin to attack your own healthy cells. An over production of proteins can cause your blood to become thicker and slow down the blood flow throughout your body.



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The plasma can be separated from the rest of your blood, removed and replaced. This process is called plasma exchange.

Plasma exchange may help with your symptoms although this may not happen immediately. It will not normally cure your condition as it does not switch off the production of the harmful antibodies or proteins.

It is likely that this procedure will form only one part of your treatment.

### **What actually happens during plasma exchange?**

Plasma exchange is performed using a machine called a cell separator which can separate blood into its various parts.

As mentioned before, the machine will remove the plasma portion of your blood, using a centrifuge and give you back replacement plasma and the remaining parts of your blood.

In order to carry out a plasma exchange; a needle will be put into a large vein in each arm. It is essential that there is a steady flow of blood through the machine. To ensure this we need to use healthy, good sized veins. The blood is removed using the needle in one arm and returned through the needle in the other arm.

If the veins in your arms are not suitable you may need to have a special tube inserted into a larger vein in your neck or groin under a local anaesthetic. We can then remove and return the blood through this line. If this is necessary you will be given more information about the type of tube to be used, why it is needed and how it would be inserted.

We recommend that you wear loose fitting sleeves to ensure your comfort and allow staff to access the larger veins in your arms.

### **Possible side-effects**

An anticoagulant solution is added to your blood to prevent it from clotting in the machine. This may cause nausea and/or tingling in your lips, nose or fingers. These side-effects are caused by the solution temporarily lowering the body's calcium levels.

Some people experience a 'heavy' feeling in the arm as their blood is removed. You may also feel some vibration around the site of the needle.

Occasionally people can feel light headed or faint while having a plasma exchange.



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If you experience any of these symptoms or anything else that causes you concern, please let the nurse know immediately so that we can deal with them. Most side effects are simple to treat.

All of these symptoms should stop once the procedure is finished.

During a plasma exchange you may receive a number of plasma products in a relatively short time. Even though blood components are matched to your blood group, they may still cause side-effects. Most side-effects are mild and easily treated.

Severe reactions are extremely rare and staff are trained to recognise them.

It is essential that you tell us of any symptoms you experience as soon as they occur. If you have had a reaction to a blood product in the past, then you should inform the staff before your treatment starts.

### **How should I prepare for the plasma exchange?**

It is important to let us know what medicines you are taking, especially any drugs for controlling blood pressure or a heart problem. We will let you know if you need to miss or delay taking a dose until after the procedure.

You can eat normally during a plasma exchange but please ensure you have something to eat before the procedure. If possible this should include milk, yoghurt or cheese as these foods are rich in calcium that can help to minimise the risk of side effects.

### **What is it like being on the machine?**

The procedure will take place while you rest on a reclining chair or bed.

You are welcome to have a friend or relative sit with you during the plasma exchange. We have to restrict this number to one to two people due to the size of our unit.

Plasma exchange takes between one and a half to three hours. We provide Wi-Fi, so please feel free to bring a tablet, smartphone or a book to read if you wish.

It is difficult though not impossible to go to the toilet while you are having your exchange, so please go just before you are attached to the machine.



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Many people feel quite tired after the procedure. We recommend that you have a friend or relative to take you home afterwards. **We do not advise that you drive yourself home.** We may be able to arrange transport for you if this is a problem, please let us know in advance if this is required.

We hope this information has been helpful. Please feel free to ask the Apheresis staff any further questions about your treatment.

### **Contact details**

#### **Glasgow Clinical Apheresis Unit**

Consultant: **Dr Kenny Douglas**  
Senior Charge Nurse: **Lorna Jackson**

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#### **Edinburgh Clinical Apheresis Unit**

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#### **Aberdeen Clinical Apheresis Unit**

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