About plasma exchange
Plasma Exchange Service
If you would like this document in another language or format, or require the services of an interpreter, contact us on 020 3448 4718. We will do our best to meet your needs.

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Introduction

This booklet has been written by the Plasma Exchange Team at the National Hospital for Neurology and Neurosurgery. The aim of the booklet is to provide information about Plasma Exchange. It is intended for use by patients (or their family or carers) who are undergoing treatment at this hospital or who may be offered this service.

It is not intended to replace discussion with your consultant.

Please do not hesitate to contact a member of the team caring for you if you have any questions, they will be happy to answer them for you.

What is plasma?

Plasma is the straw coloured liquid part of the blood. It contains minerals, proteins, clotting factors (agents which help the blood to clot) and antibodies. Plasma consists mainly of water. In an average adult the volume of plasma in the body is about three litres.
What is plasma exchange?

Plasma exchange involves separating and removing the plasma from the rest of the blood by spinning it through a centrifugal machine (see picture on page 5). The removed plasma is then replaced with a solution (human albumin solution) made from donated human blood.

Plasma exchange takes place through an intravenous line (drip) called a ‘Vas-cath’. A Vas-cath is bigger than a normal drip or cannula and is usually inserted into the large vein in the groin. This is connected to the plasma exchange machine by tubing.

Plasma exchange is an inpatient treatment, this means you will be in hospital for the duration of the course of treatment. Plasma exchange is usually undertaken every day for five days; you will be admitted to hospital the day before your first treatment and discharged from hospital the day after your last treatment. You should expect to be in hospital for a total of seven days.

The treatment takes about three hours each day, but this will depend on the volume of plasma that is replaced and how well you tolerate the treatment.
Why is plasma exchange necessary?

Some diseases including a number of neurological conditions (diseases that affect the nervous system) can also cause the production of antibodies. These antibodies are produced by a fault in the body’s immune system and can cause damage to the nerves and muscles. Plasma exchange works by removing these damaging antibodies.
What alternative treatments are available?

Alternative treatments will depend on the type of condition being treated. In most cases plasma exchange is offered when there is no alternative treatment. Your consultant will discuss all your treatment options, as well as their risks and benefits with you.

What are the possible risks and side-effects of plasma exchange?

All treatments and procedures have risks and we will explain all the risks and benefits of plasma exchange to you. The most common risks include:

- **Infection**: There is a very small risk of infection from the intravenous line. The risk of infection is less than one percent.

- **Bleeding**: There is a small risk of bleeding from the line after removal. For this reason, we will ask you to stay resting in bed for several hours after the intravenous line has been removed and to go home the day after you have completed your course of plasma exchange. The risk of bleeding after line removal is five percent.
Damage to the blood vessel: In a very small number of cases, insertion of the line can cause damage to the blood vessel. The risk of damage to a blood vessel is two percent.

During plasma exchange some patients may experience:

- low blood pressure
- feeling cold
- nausea
- tingling in the hands and feet.

If you experience any of these problems please tell your nurse immediately. They will slow the rate of exchange which will usually resolve this. It is very common to feel tired during plasma exchange and for a few days after.

**Asking for your consent**

We want to involve you in all decisions about your care and treatment. If you decide to go ahead with this procedure, by law we must ask for your consent and will ask you to sign a consent form. This confirms that you agree to have the procedure and understand what it involves. Staff will explain all the risks, benefits and alternatives before they ask you to sign a consent form. If you are unsure about any aspect of your proposed treatment, please don’t hesitate to speak to a senior member of staff again.
How should I prepare for plasma exchange?

There is no special preparation for undergoing plasma exchange. You will be able to eat and drink normally prior to treatment. You will receive a letter telling you which ward you will be admitted to and a booklet about the hospital. If you do not receive a booklet please contact the admissions officer.

How is plasma exchange done?

Plasma exchange is carried out in a room adjacent to the Medical Intensive Therapy Unit (MITU). Only nurses who have had training in plasma exchange will perform this procedure.

You will be transferred from your ward each day for your treatment and return to the ward once the treatment is completed for the day.

A doctor will insert the Vas-cath. Local anaesthetic is used beforehand to numb the area. Most patients will have the Vas-cath inserted on the day before commencing their plasma exchange. The Vas-cath will stay in for the length of your treatment and be removed after the last treatment.
**What happens during the plasma exchange?**

On arrival on the MITU the nurse performing the plasma exchange will connect you to a heart monitor and take a sample of blood from the Vas-cath.

The nurse will then connect the tubing from the plasma exchange machine to the Vas-cath. During the procedure the nurse will monitor you closely and take regular blood pressure recordings.

You will need to remain in bed whilst the plasma exchange is in progress. You will be able to eat and drink normally and have visitors while you are having the procedure.

**Will I need repeat exchanges?**

Some neurological conditions only improve after a number of courses of plasma exchange. Your neurologist will discuss this with you when he talks about plasma exchange as a treatment for your condition.

**What should I expect after plasma exchange?**

The plasma exchange nurse will give tell you how to care for the wound site where the Vas-cath was inserted. You should
not take baths in the first 48 hours after discharge from hospital however showering is allowed.

If you notice any redness, pain at the wound site, bleeding or oozing please go to your GP or GP out of hours service or if necessary your local Accident and Emergency Department.

**How to contact us**

The Plasma Exchange service in this hospital is supervised by the Neuro-anaesthetic Consultant on the Medical Intensive Care Unit. If you have any questions about plasma exchange, please contact the Plasma Exchange Team on 020 3448 4718.

If you have a question about the date for your admission to hospital, please contact the Admissions Office via switchboard on 0845 155 5000 or 020 3456 7890.
Space for notes and questions