FACTSHEET

Standard Fresh Frozen Plasma (FFP)

Information for Healthcare Professionals

The indications for transfusing FFP are limited and specific. Transfusion of plasma-rich components is associated with an increased risk of adverse events compared to red blood cells.

Please transfuse appropriately.

Fresh Frozen Plasma (FFP)

FFP is leucodepleted plasma that has been obtained from whole blood or component donation from a donor who has previously given at least one fully tested donation. The plasma is sourced where possible from male donors to reduce the risk of Transfusion Related Acute Lung Injury (TRALI). The plasma has been rapidly frozen to below -25°C to maintain the integrity of labile coagulation factors.

Clinical indications for use of FFP (based on the National Blood Transfusion Committee (NBTC) Indication Codes for Transfusion – An Audit Tool – updated April 2013).

• Replacement of single inherited coagulation factor deficiencies where a specific or combined factor concentrate is unavailable eg factor V

• Acute Disseminated Intravascular Coagulation (DIC) in the presence of bleeding and abnormal coagulation results
• **Thrombotic Thrombocytopenic Purpura (TTP),** usually with plasma exchange where the use of Solvent Detergent FFP is recommended.

• **Replacement of coagulation factors due to major haemorrhage.** If emergency uncontrolled bleeding and massive haemorrhage is anticipated, early infusion of FFP (initially in a ratio of 0.5 to 1 unit of FFP for every unit of red cells) is recommended to treat coagulopathy. Local protocols should be followed, and subsequent use of FFP guided by timely tests of coagulation including near patient testing. Aim for a PT and APTT ratio of <1.5 and a fibrinogen level of >1.5g/L.

• **Immediate reversal of warfarin effect, in the presence of life threatening bleeding.** Prothrombin Complex Concentrate (PCC) is the treatment of choice. FFP only has a partial effect and is not the optimal treatment.

• **Liver disease;** there is no evidence of benefit from FFP in non-bleeding patients regardless of the PT ratio.

FFP should NEVER be used simply as circulating volume replacement.

**Dosage of FFP**
The recommended adult therapeutic dose is 15mL per kg of body weight. This equates to approximately 1L (four units) of FFP for an ‘average’ 70kg patient, heavier patients may require more units and lighter patients fewer. For more information go to: [http://hospital.blood.co.uk/safe_use/general_eduational_resources/index.asp](http://hospital.blood.co.uk/safe_use/general_eduational_resources/index.asp) and scroll down to ‘FFP dosage’.

**Practical instructions for use of FFP**
Once thawed, the component must not be refrozen and should be transfused as soon as possible using a standard blood administration set with a 170-200 micron filter. If delay is unavoidable, the component may be stored and used within four hours if maintained at 22°C±2°C or within 24 hours if stored at 4°C±2°C. Please note that extended post-thaw storage will result in a reduction of labile coagulation factors, especially Factors V and VIII.

**Compatibility**
FFP of the same ABO group as the patient should be given whenever possible. If this is not possible, FFP of a different group may be acceptable but this must be discussed with the hospital transfusion laboratory or haematologist. ABO compatibility for plasma components is different to that of red cells and Group O FFP MUST only be given to Group O recipients.

Group AB FFP contains no ABO antibodies and may be used if the patient’s blood group is unknown, but it is in short supply and should only be used for non AB recipients if absolutely essential.

If you are unsure about the compatibility of FFP for your patient always check with your hospital transfusion laboratory before starting the transfusion.

**Special requirements** – FFP has no cellular content and therefore, does not need to be irradiated or to be selected as CMV negative.

Solvent Detergent FFP (SDFFF) or Methylene Blue Treated FFP (MBFFF) should be given to those born after 1st January 1996.

The use of other frozen components produced by NHSBT is covered in a separate factsheet:

• Standard Cryoprecipitate and Methylene Blue treated Cryoprecipitate.

Further supplies of this factsheet can be ordered via [ww3.access-24.co.uk](http://ww3.access-24.co.uk).

For further information please consult your Hospitals Blood Transfusion Policy or contact a member of your Hospital Transfusion Team.
NHSBT is a Special Health Authority within the NHS, and provides the blood that patients receive.

The information in this factsheet has been sourced from NHSBT transfusion experts.

NHSBT Customer Services Patient Blood Management Team does not accept any legal liability for errors or omissions.

References:


British Committee for Standards in Haematology (2007) Amendment to Guidelines for the use of FFP, cryoprecipitate and cryosupernatant (clarification of storage after thawing) http://www.bcsghguidelines.com/ (last accessed 19.08.14)


NHS Blood and Transplant (2014) Portfolio of components and guidelines for their clinical use (specification SPN223/6) http://hospital.blood.co.uk/products/index.asp (last accessed 19.08.14)