



## FFPRD

Fresh Frozen Plasma



**Storage:** < -20 °C

**Shelf life:** 1 year

FFP is stored in a frozen state until clinical use when it is thawed at 37°C back to a liquid state. FFP once thawed has a shelf life of only 24 hours when stored at 4°C, with progressive deterioration of coagulation factors. Transfuse immediately on receipt.

Product prepared from step-wise centrifugation of a unit of whole blood, separation of the plasma component and blast freezing to preserve labile constituents.

Contains all soluble coagulation factors suspended in plasma and anti-coagulant solution (CPD) to a final volume of 250-300 ml

### Indications

- ⊕ Correction of depleted coagulation factors in massive bleeding or bleeding associated with DIC
- ⊕ Management of warfarin reversal in bleeding or at risk of bleeding patients (if prothrombin complex concentrate unavailable)
- ⊕ Treatment of congenital coagulation factor deficiencies where there are no specific factor concentrate available (e.g. FXI, FV)
- ⊕ Therapeutic plasma exchange



### Contraindications

- ⊕ Do not use when coagulopathy can be corrected with specific therapy, such as vitamin K, or specific factor replacement
- ⊕ Do not use for volume replacement
- ⊕ Use with extreme caution in patients at risk of volume overload

## Pre-transfusion testing requirements

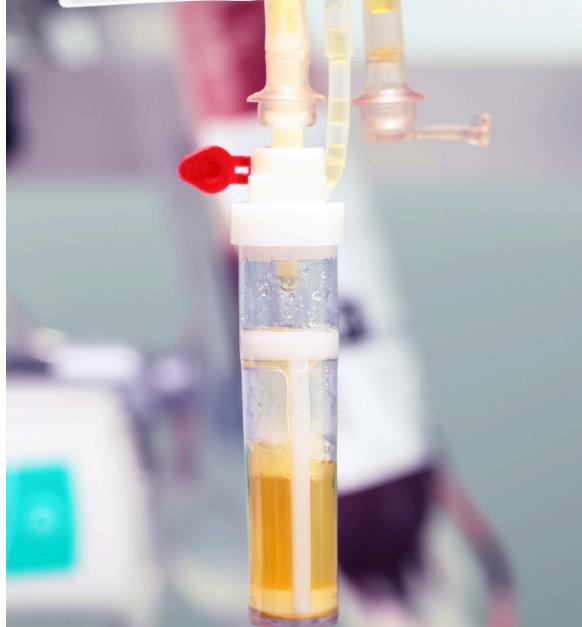
All patients planned for plasma transfusions must have a correct ABO type on record. Transfused plasma should preferably be ABO matched to the patient. In the event of non-availability of ABO-matched plasma, the next best match would be provided.

RhD matching is not required as plasma does not contain any cells and therefore does not pose risk of red cell or leucocyte sensitization.

### Minimum sample required (with first request only)

Child (>1 year) and adults: 3 ml in one EDTA tube

Infant (0-12 months): 1 ml in one EDTA microtainer tube

Dosage		Administration
<ul style="list-style-type: none"> <li>⊕ Volume transfused will depend on clinical situation and patient size</li> <li>⊕ Suggested dosing is 10-15 ml/kg</li> </ul>		<ul style="list-style-type: none"> <li>⊕ Use standard blood transfusion set (170-260 µm) and change every 8 hours</li> <li>⊕ Infuse slowly at 2 ml/min for first 15 min</li> <li>⊕ Remainder of transfusion not to exceed 300 ml/hour, except in massive transfusions</li> <li>⊕ Typical transfusion is over 1-2 hours</li> <li>⊕ Transfusion of each unit not to exceed 4 hours</li> </ul>

## Nursing observations

	Pre-transfusion vital signs (V/S)?	Stay at patient bedside?			Vital signs during transfusion		Post-transfusion monitoring
		First 5 min	First 10 min	First 15 min	After 15 min	Remainder of transfusion	
Adults (inpatients)	Yes	Yes	No, but must be immediately available		Yes	Every 15 mins for 1 <sup>st</sup> hour, then hourly	V/S on completion then monitor as needed
Adults (outpatients)	Yes	Yes	No, but must be immediately available		Yes	Every 15 mins for 1 <sup>st</sup> hour, then hourly	V/S at completion then monitor for at least 15 min post*
Paediatrics and Neonates	Yes	Yes			Yes	1 <sup>st</sup> hr – every 15 mins 2 <sup>nd</sup> and 3 <sup>rd</sup> hr – every 30 mins then hourly until completion	V/S for 30-60 min post

## Adverse reactions

All units are tested negative by serology and nucleic acid technology for HBV, HCV and HIV I/II. Nonetheless, there is a remote risk of transfusion-transmitted infections if the donated unit happens to be within a window period of testing. There is also a risk of infection from non-tested viruses or emerging infections.

Due to the large volumes transfused with FFP, there is risk of transfusion associated cardiac overload (TACO) in cardiac decompensated patients. Plasma proteins present in FFP may contribute to anaphylaxis and allergic reactions while anti-neutrophil antibodies, if present can lead to transfusion related acute lung injury (TRALI).

Please refer to relevant info-sheets for further information on recognition and management of these adverse events.