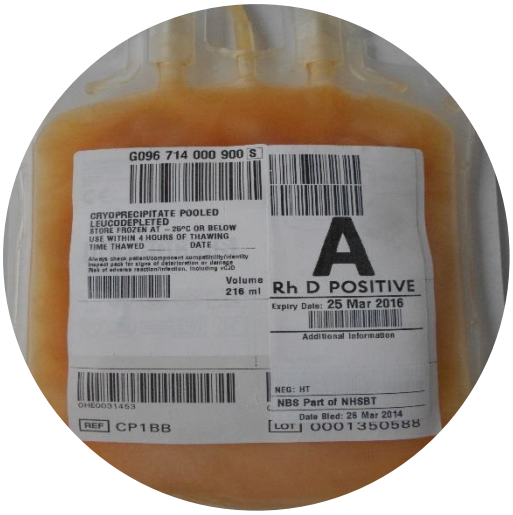
NHS
Blood and Transplant



Information for Healthcare Professionals

FACTSHEET
Cryoprecipitate

The indications for transfusing cryoprecipitate are limited and specific.
Please transfuse appropriately.

Cryoprecipitate

Cryoprecipitate contains concentrated Factor VIII:C, von Willebrand factor, fibrinogen, Factor XIII, and fibronectin and is produced by further processing of Fresh Frozen Plasma (FFP). Clinically it is used to replace fibrinogen.

As with FFP, the plasma from which the cryoprecipitate was produced has been leucodepleted and was obtained from a male donor to reduce the risk of transfusion-related acute lung injury (TRALI). Cryoprecipitate should be stored at a core temperature of -25°C or below for up to 36 months.

Clinical indications for use of cryoprecipitate in adults*

- **Clinically significant bleeding and a fibrinogen level <1.5g/L (<2g/L in obstetric bleeding)**
- **Fibrinogen level is <1g/L and pre-procedure**
- **Bleeding associated with thrombolytic therapy**
- **Inherited hypofibrinogenaemia where fibrinogen concentrate is not available**

**National Blood Transfusion Committee Indication Codes for Transfusion, 2020*

Presentation and dosage of cryoprecipitate

Cryoprecipitate is available as a single unit, or as a pooled product made up of five single units. Pooled units are more commonly used to treat adult patients.

The adult therapeutic dose is two pooled units, or one single unit per 5-10kg body weight, dependant on the degree of fibrinogen deficiency. Paediatric dosing is 5-10mL/kg.

Practical instructions for the use of Cryoprecipitate

Once thawed, Cryoprecipitate must not be refrozen and should be used immediately. If delay is unavoidable the component should be stored at ambient temperature (i.e. **not** in a fridge), to prevent re-precipitation, and must be transfused within four hours. Transfuse using a standard blood giving set with a 170-200 micron filter. The typical infusion rate is 10-20mL/ kg/hr (30-60 min per five pool unit).

Please note

Following a review of risk reduction measures for variant Creutzfeld-Jakob disease (vCJD), in September 2019 SaBTO reported that **individuals born on or after 1st January 1996 no longer require imported (Methylene Blue MB-pathogen inactivated) plasma or cryoprecipitate**. NHSBT no longer import plasma components, however due to its 36 month expiry, hospital blood banks may still fulfil clinical requests with either non-UK and/or UK cryoprecipitate until imported stocks of imported MB Cryoprecipitate are depleted.

Compatibility

ABO group identical Cryoprecipitate should be given whenever possible; if not possible Cryoprecipitate of a different ABO group may be acceptable as directed in the blood group selection table.

ABO compatibility for plasma components is different to that of red cells and **group O Cryoprecipitate MUST only be given to group O recipients.**

Blood group selection for Cryoprecipitate

Recipient Group	O	A	B	AB
1st Choice	O	A	B	[2]AB
2nd Choice	A	[1]B	[1]A	[1]A
3rd Choice	B	-	-	[1]B

[1]Suitable for use in adults if negative for high titre anti-A/anti-B (labelled HT-)
[2]Small numbers of Group AB cryo may be available on request but this item is not routinely stocked

Blood group selection for MB Cryoprecipitate

Recipient Group	O	A	B	AB
1st Choice	O	A	B	AB
2nd Choice	A	AB	AB	A[3]
3rd Choice	B	B[3]	A[3]	B[3]

MB Cryoprecipitate is not tested for HT anti-A/anti-B. Group compatible plasma should be used wherever possible
[3]Non-compatible groups should only be used in emergencies when compatible groups are not available.
Group AB MB cryoprecipitate is haemolysin free and suitable for patients of any ABO group but is in limited supply

D group

Cryoprecipitate does not need to be matched for D group. D positive plasma components may be given to D negative recipients without the need for anti-D Ig prophylaxis. The EU Blood Directive currently requires that the D group is stated on the label.

If you are unsure about the compatibility of Cryoprecipitate for your patient always check with your hospital transfusion laboratory staff before transfusing.

Specific requirements

Cryoprecipitate has no cellular content and therefore does not need to be irradiated or selected as Cytomegalovirus (CMV) sero-negative.

The use of other frozen components produced is covered in a separate factsheet ‘Fresh Frozen Plasma (FFP)’.

References

Green, L. et al on behalf of British Society of Haematology (2018) Guidelines on the spectrum of fresh frozen plasma and cryoprecipitate products: their handling and use in various patient groups in the absence of major bleeding. Available at: https://www.b-s-h.org.uk/guidelines/guidelines/spectrum-of-fresh-frozen-plasma-and-cryoprecipitate-products/

Hunt, B. et al on behalf of British Committee for Standards in Haematology Transfusion Task Force (2015) A practical guideline for the haematological management of major haemorrhage. Available at: https://b-s-h.org.uk/guidelines/guidelines/haematological-management-of-major-haemorrhage/

National Blood Transfusion Committee (2020) Indication Codes for Transfusion – An audit tool. Available at: https://www.transfusionguidelines.org/uk-transfusion-committees/national-blood-transfusion-committee/responses-and-recommendations

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Robinson, S. et al on behalf of the British Society for Haematology (BSH) (2017) Administration of Blood Components. Available at: https://www.b-s-h.org.uk/guidelines/guidelines/administration-of-blood-components/

Contact us

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This leaflet was prepared by NHS Blood and Transplant in collaboration with the National Blood Transfusion Committee. Further supplies can be obtained by accessing https://hospital.nhsbtleaflets.co.uk

Individual copies of this leaflet can be obtained by calling 01865 381010.

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