

# Major haemorrhage in adults

Pulse > 110, RR > 30

Urine < 20mls/h

Hypotensive in trauma, systolic BP < 90mmHg

≥ 40% loss of total blood volume

4 litres in 24 hours

2 litres in 3 hours

## GET SENIOR HELP

Initiate major haemorrhage protocol by contacting relevant staff members and teams e.g. resus

Contact Transfusion Laboratory

Important phone numbers and prompts to tell the laboratory

## Assess ABC

## IV Access

Check patient identification – ID / Wristbands  
**2 large cannula**

- Send blood samples: cross match, FBC, coagulation, biochemistry
- Consider arterial blood gas measurement
- Give tranexamic acid for trauma and obstetric patients and consider for others. Dose: 1g IV over 10 minutes then 1g over 8 hours

## Resuscitate

Warm IV fluids as per local policy  
Give oxygen

## Give Blood

**Give up to 4 units via blood warmer**

Aim for Hb > 80g/L

Give Group O if immediate need and/or blood group unknown

## Prevent Coagulopathy

Anticipate need for platelets and FFP after 4 units blood replacement & continued bleeding

- If you use TEG/ROTEM please follow local policy
- Give Primary Major Haemorrhage (MH) Pack
- Order Secondary Major Haemorrhage Pack
- Correct hypothermia
- Correct hypocalcaemia (keep ionised Ca > 1.13mmol/l)
- **Send FBC & coagulation samples after every 3 – 5 units of blood given**
- **Contact Haematologist**
- **If bleeding continues repeat secondary pack**

### Secondary MH Pack

- Maintain FFP:RBC ratios as per primary packs
- 2 units Cryoprecipitate
- Platelets

### Non-Trauma Primary MH Pack

- RBC 4 units
  - FFP 4 units
- Alternate FFP & RBC  
Aim for FFP:RBC ratio 1:2

### Trauma MH Pack

- RBC 4 units
  - FFP 4 units
  - Platelets 1 unit
- Aim for FFP:RBC 1:1

### When lab results available:

IF	GIVE
APTT and/or PT ratio > 1.5	FFP 15-20 ml/kg
Fibrinogen < 1.5g/L & Obstetrics < 2g/L	Cryoprecipitate (2 pools)
Platelets < 50 x 10 <sup>9</sup> /l	Platelets 1 unit.

**Get help to stop bleeding**