

# 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  
Extension 2905/2905

## 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

IV warm fluids – crystalloid or colloid  
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

### Primary MH Pack

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

### Trauma Primary MH pack

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

### Secondary MH Pack

- RBC 4 units
- FFP 4 units
- Platelets
- Cryoprecipitate

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