

Traumatic Shock

Shock is defined as impaired tissue perfusion and may be manifested by any of the following:

- Altered mental status
- Tachycardia
- Poor skin perfusion
- Low blood pressure

Maintain a high index of suspicion. Traditional signs of shock may be absent early in the process.

Routine Trauma Care

Is patient hypotensive for age or showing other signs of shock?

Hypotension for Age	
Age	Systolic Blood Pressure
> 10 years	< 90 mmHg
1-10 years	< 70 + (2 x age in years)
< 1 year	< 70 mmHg

Treat reversible causes of shock (if not done already):

- Control hemorrhage, if not done already
- Perform needle decompression for tension ptx
- Place pelvic binder for suspected unstable fracture

Tachycardia for Age	
Age	Heart Rate
> 12 years	> 100 bpm
5-12 years	> 120 bpm
2-5 years	> 140 bpm
1-2 years	> 150 bpm
< 1 year	> 160 bpm

Minimal SBP with Head Injury

Age	SBP
>10 years	= 110 mmHg
1-10 years	> 70 + (2 x age in years)
1-12 months	>70 mmHg
< 1 month	> 60 mmHg

If patient is still in shock:

Does patient meet criteria for transfusion of Whole Blood?

Yes

No

Transfuse Blood Product:

Low Titer O+ Whole Blood (LTOWB)

500 ml (2 units) IV/IO

- or -

Packed Red Blood Cells (pRBCs)

500 ml (2 units) IV/IO

- or -

Fresh Frozen Plasma (FFP)

500 ml (2 units) IV/IO

- Calcium Chloride 1g IV/IO
- Tranexamic Acid (TXA) 1g IV/IO over 10 min, if available (may give IM as a last resort)

Blood Transfusion should occur while in route to the hospital and should not delay transport

Contact Trauma Center Medical Control for consultation or additional orders

Fluid Resuscitation:

- Give **Crystalloid Fluid** bolus of NS/LR (500 ml for adults, 20ml/kg for peds)
- If patient is still in shock, continue small Crystalloid Fluid boluses of 250 ml (20ml/kg for peds) until the return of peripheral (radial) pulses
- Once pulses are maintained, lock IV and repeat boluses only as needed for SBP <90 mmHg

Blood Inclusion Criteria

1. Blood Product is available
2. **SHOCK** is due to **HEMORRHAGE**
3. 5 years of age or older -- **ages 5 - 10 = 1 unit / ages 10 above = 2 units**
4. Pt has **no religious objections** to blood products [**obtain verbal consent if patient is capable**]
5. Pt has **ONE** of the following criteria:
 - SBP < 70 mmHg
 - SBP < 90 mmHg with HR ≥ 110 bpm
 - Age ≥ 65 yo with SBP < 100 mmHg and HR ≥ 110 bpm

*If criteria is not met and the Blood Medic feels blood is indicated, contact on-call Medical Control / Medical Director prior to initiating.