



## Class

Hemostatic Agent, Antifibrinolytic, Plasminogen Inactivator

## Pharmacologic Properties

Tranexamic Acid (TXA) is a synthetic derivative of the amino acid lysine that forms a reversible complex that displaces plasminogen from fibrin resulting in the inhibition of fibrinolysis leading to an improved homeostasis in the traumatic patient with significant hemorrhage. It also inhibits the proteolytic activity of plasmin, basically, TXA inhibits fibrin clots from being dissolved or degraded in the body by plasmin that aids in the reduction of mortality due to bleeding in the trauma patient.

## Indications

**TXA use should never supersede field bleeding control techniques and rapid transport to a Trauma Center.**

The following traumatic injuries **within one (1) hour** from time of injury:

- Patients meeting Trauma Alert Criteria with torso injuries and/or amputations (not controlled by tourniquets, hemostatic agents, and/or wound packing) resulting in:
  - Adults: a systolic blood pressure < 90 mmHg and/or sustained heart rate ≥ 120 (hemorrhagic shock) [Protocol 21](#)
  - Pediatrics: signs or symptoms to suggest shock, for [age-appropriate hypotension Protocol 21P](#)

**\*Note – Not indicated for pediatrics less than 5 years old.**

- Tactical Field Care for uncontrolled hemorrhage [Protocol 38](#).

## Contraindications

- More than one (1) hour from time of injury
- Hypersensitivity
- Suspected MI, Stroke, or Pulmonary Embolism
- Isolated head injuries
- Patients less than 5 years of age
- **Do not infuse concurrently in the same IV line with blood products or Hextend.**

## Side Effect/Adverse Reactions

TXA potentially can possess the risk of venous and arterial blood clots (thromboembolisms), therefore the use should be cautious and selective to meet the specific population of patients listed. Hypotension (with rapid IV injection), dizziness, allergic dermatitis, diarrhea, headache, nausea, vomiting, blurred vision.



## Dosage and Administration

### Adult

- 1 gm IV over 10 minutes
  - Mix 1 gm of TXA into a 50 mL bag of NS to yield 60 mL total volume
    - Attach a 10 gtt (macro) drip set run at 1 gtt/second
  - Pre-mixed infusion – 1 gm in 100 mL total volume
    - Attach a 10 gtt (macro) drip set run at 2 gtts/second

### Pediatric

- 15 mg/kg IV over 10 minutes
  - Mix 15mg/kg of TXA into a 50 mL bag of NS
    - Attach a 10 gtt (macro) drip set run over 10 min
  - Pre-mixed infusion – 1 gm in 100 mL total volume
    - Attach a 10 gtt (macro) drip set run at proper calculated dose

**\*Note – Not indicated for pediatrics less than 5 years old.**