

# Tranexamic Acid (TXA)

Formulary

Douglas County Kansas EMS System

November 2022

**Approved Provider:** Paramedic

**Referenced Protocols:** [Childbirth](#), [General Trauma](#), [OB GYN Emergencies](#)

Dosing and Administration	
<u>ADULT Medications:</u> <ul style="list-style-type: none"><li>• <b>Bolus:</b> 2g IV slow or IO given as soon as possible after injury but not after 3 hours</li></ul>	<u>PEDIATRIC Medications:</u> <ul style="list-style-type: none"><li>• Not Recommended</li></ul>

## **Pharmacology and Actions:**

- Used to treat or prevent excessive blood loss from trauma, surgery, and in various medical conditions. Tranexamic acid is a synthetic analog of the amino acid lysine. It serves as an antifibrinolytic by reversibly binding four to five lysine receptor sites on plasminogen or plasmin. This prevents plasmin from binding to and degrading fibrin and preserves the framework of fibrin's matrix structure.

## **Indications:** *All must be less than 3 hours old*

- Penetrating trauma to torso or abdomen
- Hemorrhagic shock
- Sustained HR >120 BPM secondary to trauma
- One or more major amputations
- Evidence of severe bleeding
- Post-partum hemorrhage, Can give concurrently with Pitocin
- Signs of moderate to severe traumatic brain injury with a GCS above 9 ***without*** signs of skull FX

## **Contraindications:**

- Active intravascular clotting (DVT, PE)
- Hypersensitivity to TXA or any of its ingredients
- Trauma greater than 3 hours old
- When TXA is administered for TBI GCS less than 9
- When TXA is administered for TBI signs of skull FX (CSF from ears/nose, exposed brain matter, or obvious skull FX)

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### **Precautions:**

- TXA crosses the blood-brain barrier, penetrates the eye and results in cerebrospinal fluid concentrations roughly 10 percent of plasma levels. Seizures have been reported from TXA, as have visual defects consisting of color blindness and visual loss. Cardiac surgery studies suggest that moderate to high TXA doses significantly increase the risk of seizures. Visual defects, when reported, occurred in patients treated with TXA for several days or longer.

### **Side Effects:**

- Uncommon but include gastrointestinal effects, dizziness, fatigue, headache, and Hypersensitivity reactions. This medication needs to be used cautiously in people with kidney disease and who are at a high risk for blood clots.