

# Tranexamic Acid (TXA)

## GENERIC NAME

Tranexamic Acid (TXA)

## TRADE NAME

Cyclokapron, Lysteda

## DESCRIPTION

Tranexamic Acid (TXA) is an antifibrinolytic agent that helps promote clot formation by preventing the breakdown of fibrin clots. It is used in cases of massive hemorrhage, particularly in trauma and postpartum hemorrhage, to reduce bleeding and improve patient outcomes.

## HOW SUPPLIED

1 gram in 10 ml vial

## PREPARATION

Mix 1 gram of TXA in 100 ml of Normal Saline (NS).

## INDICATIONS

- Hemorrhagic shock or cardiac arrest due to trauma less than three hours old
- Suspected need for massive blood transfusion due to significant internal or external bleeding, indicated by sustained heart rate  $\geq 110/\text{min}$  and SBP  $< 90$  mmHg
- Blood loss greater than 500 ml with continued bleeding in a postpartum situation

## CONTRAINDICATIONS

- Non-hemorrhagic shock
- Non-traumatic hemorrhagic shock
- Hemorrhagic shock stabilized with other hemostatic agents or measures
- Isolated traumatic brain injury

## MECHANISM OF ACTION

Tranexamic Acid inhibits the activation of plasminogen to plasmin, preventing the breakdown of fibrin clots (antifibrinolytic action). This helps stabilize formed clots and reduce ongoing bleeding.

## SPECIAL CONSIDERATIONS

- Obtain two blood pressure and heart rate measurements to confirm sustained HR  $\geq$  110/min and SBP  $<$  90 mmHg before administering TXA to patients likely to respond to fluid bolus(es). Do not delay TXA administration for patients with obvious signs of hemorrhagic shock.
- Prepare the solution just prior to administration. Discard if not used immediately.
- Although there is a theoretical concern, current evidence does not show a significant increase in deep venous thrombosis, pulmonary embolism, myocardial infarction, or stroke with TXA use in published trials.

## SIDE EFFECTS

- None known at this time

## AUTHORIZATION

**EMT:** Not authorized

**AEMT:** Not authorized

**Paramedic:** Standing order and Medical Control

## DOSAGE

Patient Type	Route	Dosage	Maximum Dosage
Adult ( $\geq$ 12 years)	IV infusion	1 gram IV over 10 minutes; mix 1 gram in 100 ml NS	1 gram total dose
Pediatric	IV/IO infusion	15 mg/kg IV/IO over 10 minutes; mix 15 mg/kg in 100 ml NS	Consult Medical Control for specific maximum dose

## Administration Notes:

- Infuse TXA over 10 minutes. For adult administration, use a 60 gtts tubing for a straight IV stream or a 10 gtts tubing at 100 drops/minute.
- Monitor the patient's vital signs and hemodynamic status closely during and after infusion.
- Do not delay administration in patients with clear signs of hemorrhagic shock, as early administration improves outcomes.

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