



# Drug Therapy Protocols: Tranexamic acid

<b>Policy code</b>	DTP_TRXA_0722
<b>Date</b>	July, 2022
<b>Purpose</b>	To ensure a consistent procedural approach to tranexamic acid administration.
<b>Scope</b>	Applies to all Queensland Ambulance Service (QAS) clinical staff.
<b>Health care setting</b>	Pre-hospital assessment and treatment.
<b>Population</b>	Applies to all ages unless specifically mentioned.
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# Tranexamic acid

July, 2022

## Drug class

Antifibrinolytic<sup>[1,2]</sup>

## Pharmacology

Tranexamic acid (TxA) is a competitive inhibitor of plasminogen activation through the formation of a reversible complex displacing plasminogen from fibrin. This inhibits the process of fibrinolysis in addition to the protein breakdown caused by plasmin.<sup>[1,2]</sup>

## Metabolism

Hepatic metabolism with renal excretion.<sup>[1]</sup>

## Indications

- **Recent traumatic injuries**<sup>[3]</sup> (3 hours or less) with a COAST score of 3 or greater
- **Management of uncontrolled primary post-partum haemorrhage** (3 hours or less)<sup>[4]</sup>

## Contraindications

- Allergy AND/OR Adverse Drug Reaction

## Precautions

- Nil

## Side effects<sup>[1,2]</sup>

- Headache
- Hypotension
- Nausea and/or vomiting
- Seizures

## Presentation

- Ampoule, 1 g/10 mL *tranexamic acid*

## Onset

Minutes

## Duration

Serum 7–8 hours

## Half-life

2 hours

## Schedule

- S4 (Restricted drugs)

### Special notes

- The **coagulopathy of severe trauma (COAST) score** is a highly specific predictor of acute traumatic coagulopathy (ATC) in adult blunt trauma.<sup>[4]</sup> A score (0–7) is calculated by determining a collective value of each of the five variables.

COAST SCORE		
Variable	Value	Score
Entrapment (e.g. in vehicle)	Yes	1
	No	0
Systolic blood pressure (mmHg)	> 100	0
	90 – 100	1
	< 90	2
Temperature (°C)	> 35	0
	32 – 35	1
	< 32	2
Major chest injury likely to require intervention (e.g. decompression, chest tube)	Yes	1
	No	0
Likely intra-abdominal or pelvic injury	Yes	1
	No	0

### Special notes (cont.)

- Ambulance officers must only administer medications for the listed indications and dosing range. Any consideration for treatment outside the listed scope of practice requires mandatory approval via the *QAS Clinical Consultation and Advice Line*.
- All cannulae and IV lines must be flushed thoroughly with sodium chloride 0.9% following each medication administration.
- The use of tranexamic acid in trauma and obstetric cases is consistent with national guidelines.
- There is no role for the use of tranexamic acid during traumatic cardiac arrest.

## Adult dosages <sup>[1-4]</sup>

- **Recent traumatic injuries** ( $\leq 3$  hours) with a COAST score  $\geq 3$
- **Management of uncontrolled primary post-partum haemorrhage** ( $\leq 3$  hours)

ACP2 CCP	IV	<p><b>1 g</b> Slow push over 10 minutes. <b>Single dose only.</b></p>
ACP2 CCP	IV INF	<p><b>1 g over 10 minutes.</b> <b>Single dose only.</b></p> <p><i>Infusion preparation: Mix 1 g of tranexamic acid in a 100 mL bag of sodium chloride 0.9%. Ensure bag is appropriately labelled. Administer over 10 minutes (approx. 3 drops /second).</i></p>
CCP	IO	<p><b>1 g</b> Slow push over 10 minutes. <b>Single dose only.</b></p>
CCP	IO INF	<p><b>1 g over 10 minutes.</b> <b>Single dose only.</b></p> <p><i>Infusion preparation: Draw up 1 g (10 mL) of tranexamic acid in a 30 mL SPRINGFUSOR<sup>®</sup> syringe. Ensure the syringe is appropriately labelled. Administer the infusion via the SPRINGFUSOR<sup>®</sup> at a rate of 60 mL/hr (over 10 minutes).</i></p>

## Paediatric dosages <sup>[1-3]</sup>

- **Recent traumatic injuries** ( $\leq 3$  hours) with a COAST score  $\geq 3$

ACP2 CCP	IV	<p><i>QAS Clinical Consultation and Advice Line approval required in all situations.</i></p> <p><b>15 mg/kg</b> Slow push over 10 minutes. <b>Single dose only. Total maximum dose 1 g.</b></p>
CCP	IO	<p><i>QAS Clinical Consultation and Advice Line approval required in all situations.</i></p> <p><b>15 mg/kg</b> Slow push over 10 minutes. <b>Single dose only. Total maximum dose 1 g.</b></p>