

# THROMBOLYTIC AGENTS

## INDICATIONS AND REGIMENS

AGENT	PRE-MEDICATION	INDICATION			
		DVT	PULMONARY EMBOLISM	PERIPHERAL ARTERIAL OCCLUSION	CORONARY ARTERY THROMBOSIS (MYOCARDIAL INFARCTION)
Urokinase*	Optional to avoid allergic reactions.	IV loading dose (4000 units/kg over 10–30 min), followed by 4000 units/kg/h for 24–72 h. Local or systemic infusion.	As with DVT for 12–24h. No advantage of 24-h vs. 12-h infusion or local vs. systemic infusion.	As with DVT for systemic infusion for 12–72 h. Local infusion preferred at 4000 U/min until blood flow re-established and then 1000–2000 U/min until thrombus is totally dissolved over 12–18 h.	Up to 3 million units over 1 h for systemic administration; 10000 units/min for up to 2 h for intracoronary infusion.
rt-PA	None necessary.	No proven efficacy.	100 mg IV over 2 h.	Treatment regimens being evaluated.	100 mg over 3 hours with 6 mg bolus, 54 mg over 1 hour, and 40 mg over 2 hours. Systemic infusion preferred.

Drug	Acute Ischemic Stroke
Urokinase*	Not recommended.
rt-PA	0.9 mg/kg (maximum 90 mg) with 10% of the total dose administered as a bolus and the remainder infused over 60 minutes – assuming treatment initiated within 3 hours of clearly defined symptom onset and no "extensive" territory. (Grade IA)

\*Urokinase is not readily available at this time.

References: [Albers GW, et al. Chest 2008;133:630S–669S](#); [Goodman SW, et al. Chest 2008;708S–775S](#).

## CONTRAINDICATIONS TO THROMBOLYTIC THERAPY

### ABSOLUTE CONTRAINDICATIONS

- Recent or active internal bleeding
- History of recent CNS hemorrhagic stroke, trauma, or surgery
- Intracranial or intraspinal neoplasm

### RELATIVE CONTRAINDICATIONS

- Major surgery or trauma within past 14 days
- Biopsy/invasive arterial procedure in area inaccessible to external compression in past 10 days
- History of genitourinary or gastrointestinal bleeding secondary to anticoagulant therapy (excluding aspirin)
- Congenital coagulopathies, including thrombocytopenia (platelets less than  $100 \times 10^9/L$ )
- Subacute bacterial endocarditis or left ventricular mural thrombus
- Uncontrolled severe hypertension
- Pregnancy or delivery within past 10 days
- Concurrent anticoagulation with PTT elevated (heparin), INR greater than 1.7 (warfarin), or LMWH.