REGIONAL ADULT PARENTERAL DRUG MONOGRAPH

GENERIC NAME

alteplase (pulmonary embolism)

HIGH ALERT DOUBLE CHECK

Effective Date: January 2024 **Revised Date:** June 2024	CLASSIFICATION **Thrombolytic**	OTHER NAMES **Rt-PA, tPA, ACTIVASE**	PAGE 1 of 3

ADMINISTRATION POLICY:

Refer to the Treatment and Referral Guidelines for High-Risk and Intermediate-Risk Pulmonary Embolism in Adult patients Provincial Clinical Guideline

IV Bolus – Administration restricted to nurses experienced in ED/CARDIAC ROOM/ICU/PACU
IV Intermittent - Administration restricted to nurses experienced in ED/CARDIAC ROOM/ICU/PACU
Subcutaneous – *Do not administer*
IM Injection – *Do not administer*

RECONSTITUTION/DILUTION/ADMINISTRATION:

Available as: 50 mg vial with 50 mL diluent (sterile water for injection).
100 mg vial with 100 mL diluent (sterile water for injection).

Drug	Diluent (Sterile water for injection)	Final Concentration
50 mg vial*	50 mL	1 mg/mL
100 mg vial**	100 mL	1 mg/mL

*add diluent using large bore needle ie. 18 gauge
**add diluent using plastic transfer device
Gently swirl to dissolve, *DO NOT SHAKE*

Let vial stand undisturbed to allow large bubbles to dissipate. Mix by gently swirling until completely dissolved. DO NOT SHAKE.

^ use provided transfer device for reconstitution

1. Using aseptic technique throughout, remove the protective flip caps from 100 mg vial of alteplase and 100 mL vial of sterile water for injection.
2. Peel paper label off the package of transfer device
3. Remove protective cap from one end of transfer device. Keeping vial of sterile water for injection upright, insert piercing pin of the transfer device vertically in to the center of the stopper of the vial of sterile water for injection.
4. Keeping vial for sterile water for injection upright, Remove protective cap from the other end of the transfer device.
5. Holding vial of alteplase upside down, position vial so the center of the stopper is directly over the exposed piercing pin of the transfer device.
6. Push the vial of alteplase down so the piercing pin is inserted through the center of the alteplase stopper.
7. Invert the two vials so the alteplase vial is upright and, on the bottom, with the sterile water for injection upside down and on top. Allow the entire contents of the sterile water for injection vial to flow down through the transfer device. This takes approximately 2 minutes.
8. Remove the transfer device with attached sterile water for injection vial from the alteplase vial. Safely discard the transfer device and empty sterile water for injection vial.
9. Swirl alteplase vial gently to dissolve powder. Do not shake.

Central venous access preferred. If administered peripherally, use the most proximal access.

Must vent tubing for glass vial

IV Bolus: Withdraw dose from reconstituted vial. Administer undiluted over 1 to 2 minutes.

IV intermittent: Administer undiluted over 1 to 2 hours (dependent on risk stratification).

REGIONAL ADULT PARENTERAL DRUG MONOGRAPH

GENERIC NAME

alteplase (pulmonary embolism)

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Pump Library: Choose the correct line entry in the pump based on diagnosis or per standard order set

Alteplase (PE) High Risk

Drug Library	**Dose Rate**	**Short Name**	**Care Unit**
Yes	mg/h	alteplas’	Critical Care
Drug	**Diluent**	**Final Volume (VTBI)**	**Final Concentration**
90 mg	90 mL	90 mL	1mg/mL
Clinical Advisory: High Alert			
Soft Low Dose Limit: 90 mg	Soft High Dose Limit: 90 mg		

alteplase (PE) Intermediate Risk

Drug Library	**Dose Rate**	**Short Name**	**Care Unit**
Yes	mg/h	altepla50	Critical Care
Drug	**Diluent**	**Final Volume (VTBI)**	**Final Concentration**
variable	variable	variable	1mg/mL
Clinical Advisory: High Alert			
Soft Low Dose Limit: 35 mg	Soft High Dose Limit: 50 mg		

alteplase (PE) Cardiac Arrest

Drug Library	**Dose Rate**	**Short Name**	**Care Unit**
Yes	mg/h	altepla’	Critical Care
Drug	**Diluent**	**Final Volume (VTBI)**	**Final Concentration**
50 mg	50 mL	50 mL	1 mg/mL
Clinical Advisory: High Alert			
Soft Low Dose Limit: 50 mg	Soft High Dose Limit: 50 mg		

Maximum Rate: 50 mg over 1 minute
Maximum Concentration: 1 mg/mL

DOSAGE:

High Risk: 10 mg IV bolus over 1 to 2 minutes, followed by 90 mg IV over 2 hours. Total dose: 100 mg

Intermediate Risk: Patient less than 50 kg: 1 mg/kg IV over 2 hours

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Patient 50 kg or greater: 50 mg IV over 2 hours

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Cardiac Arrest: 50 mg IV bolus
If Return of Spontaneous Circulation (ROSC) is not achieved in 10 to 15 minutes, administer a second bolus dose of 50 mg IV. Total dose: 100 mg
If ROSC is achieved after first IV bolus dose, administer an additional 50 mg IV over 1 hour. Total dose: 100 mg

Maximum single dose: 100 mg

STABILITY/COMPATIBILITY:

Stability of reconstituted solution: 8 hours at room temperature
Compatibility: Compatible with normal saline, D5W

PRECAUTIONS, POTENTIAL ADVERSE REACTIONS:

Cardiovascular: cardiac dysrhythmia, cardiac tamponade, myocardial rupture, pericardial effusion, pericarditis
Hematologic: hemorrhage
Immunologic: anaphylaxis, hypersensitivity reaction
Neurologic: cerebral herniation, cerebrovascular accident, intracranial hemorrhage, ischemic stroke, seizure
Respiratory: pleural effusion, pulmonary edema
Other: orolingual angioedema

Caution in patients with active internal bleeding; history of recent stroke; recent intracranial or intraspinal surgery or serious head trauma; presence of intracranial conditions that may increase the risk of bleeding (e.g., intracranial neoplasm, arteriovenous malformation, aneurysm); known bleeding diathesis; severe uncontrolled hypertension)

ADDITIONAL NOTES AND NURSING CONSIDERATIONS:

- Avoid unnecessary venous or arterial punctures, IM injections and non-compressible IV access sites.
- For patients receiving systemic anticoagulation with heparin, discontinue heparin infusion prior to alteplase administration. Reassessment by authorized prescriber required prior to restarting anticoagulation.
- For patients receiving oral anticoagulation, hold for at least 24 hours after alteplase administration. Reassessment by authorized prescriber required prior to restarting anticoagulation.
- REQUIRED MONITORING:
  - Signs of bleeding
  - Neurological checks
  - Continuous Cardiac
  - Frequent blood pressure during infusion (either continuous or non-invasive)
  - Continuous oxygen saturation

ELDER ALERT: Use with caution in patients greater than 75 years of age; increased risk of bleeding.