




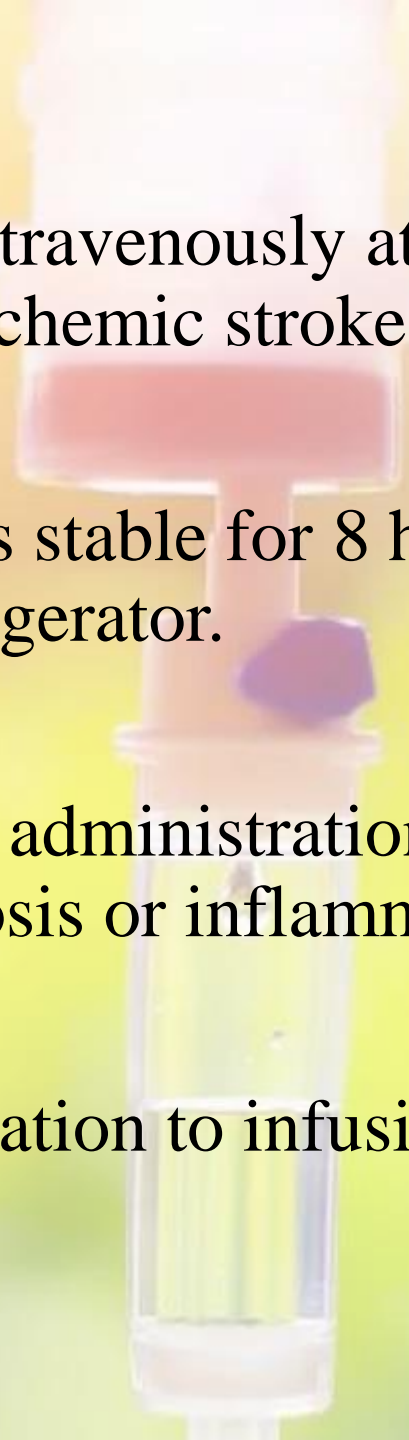
Alteplase administration & first 24h care

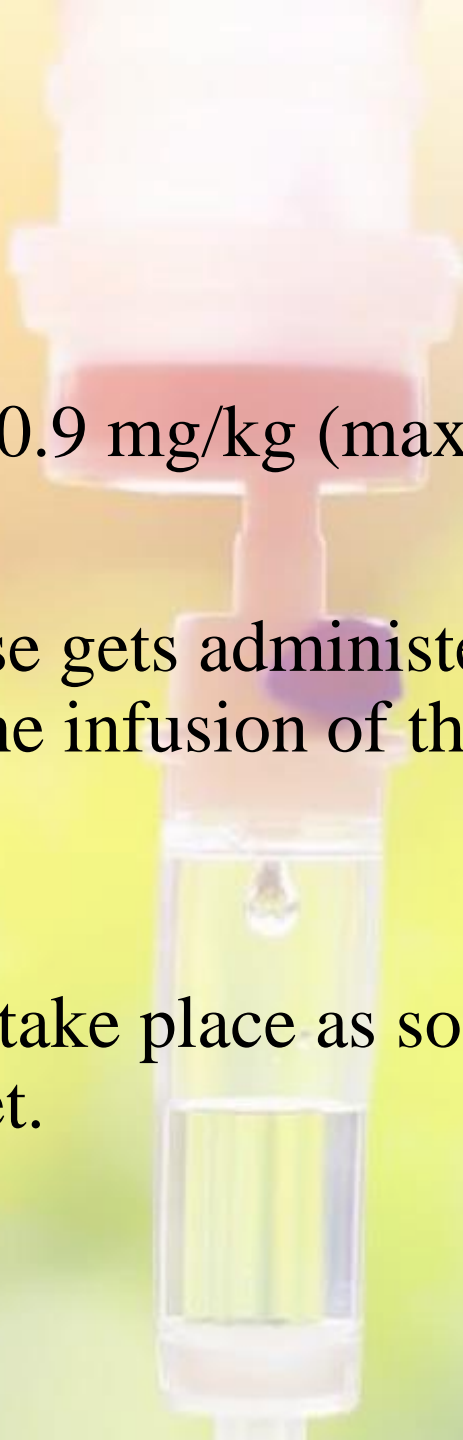
Nasim Tabrizi

Associate Professor of Neurology

Mazandaran University of Medical Sciences

- 
- Alteplase is available as a lyophilized powder in 50 mg and 100 mg vials.
 - Each vial gets packaged with diluent (sterile water for injection) for reconstitution.
 - It also is compatible with 0.9% sodium chloride (NS) and dextrose 5% water (D5W).

- 
- Alteplase is administered intravenously at a concentration of 1 mg/mL for the treatment of acute ischemic stroke.
 - The reconstituted solution is stable for 8 hours at room temperature and up to 24 hours in a refrigerator.
 - Alteplase is for intravenous administration only. Extravasation of infusion can cause ecchymosis or inflammation.
 - Do not add any other medication to infusion solutions containing alteplase.

- 
- The recommended dose is 0.9 mg/kg (max 90 mg).
 - Ten percent of the total dose gets administered as an intravenous (IV) bolus over 1 minute, and the infusion of the remainder occurs over 60 minutes.
 - The administration should take place as soon as possible and within 4.5 hours of symptom onset.

Instructions for reconstituting Alteplase

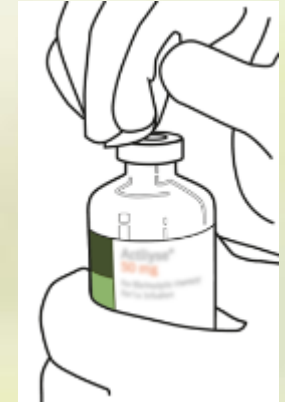
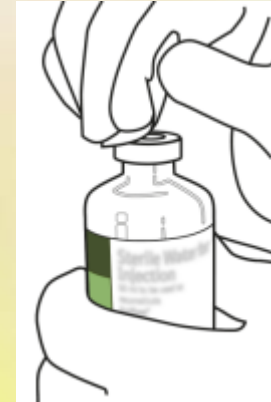
1. Reconstitute immediately before administration



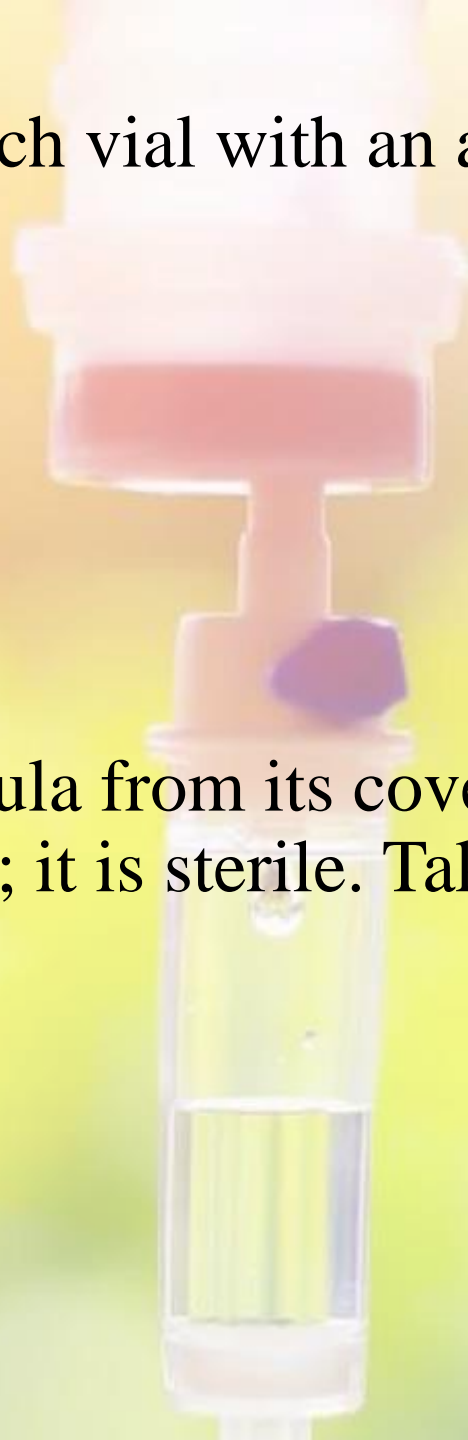
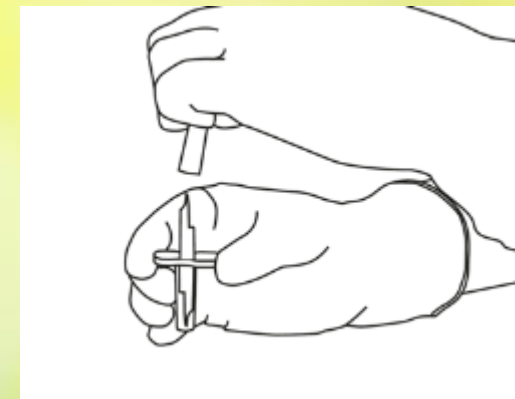
2. Remove the protective cap on the two vials containing the sterile water and Alteplase dry substance by flipping them up with a thumb.



3. Swab the rubber top of each vial with an alcohol wipe.



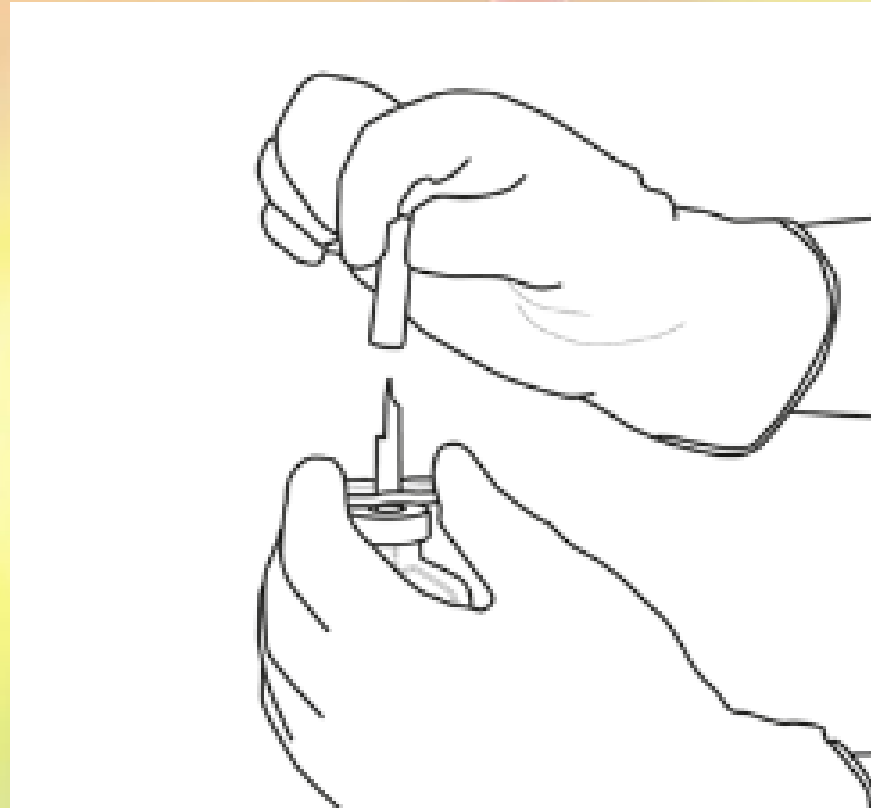
4. Remove the transfer cannula from its cover. Do not disinfect or sterilize the transfer cannula; it is sterile. Take one cap off.



5. Stand the sterile water vial upright on a stable surface. From directly above, puncture the rubber stopper vertically in the stopper center with the transfer cannula, by pressing gently but firmly, without twisting



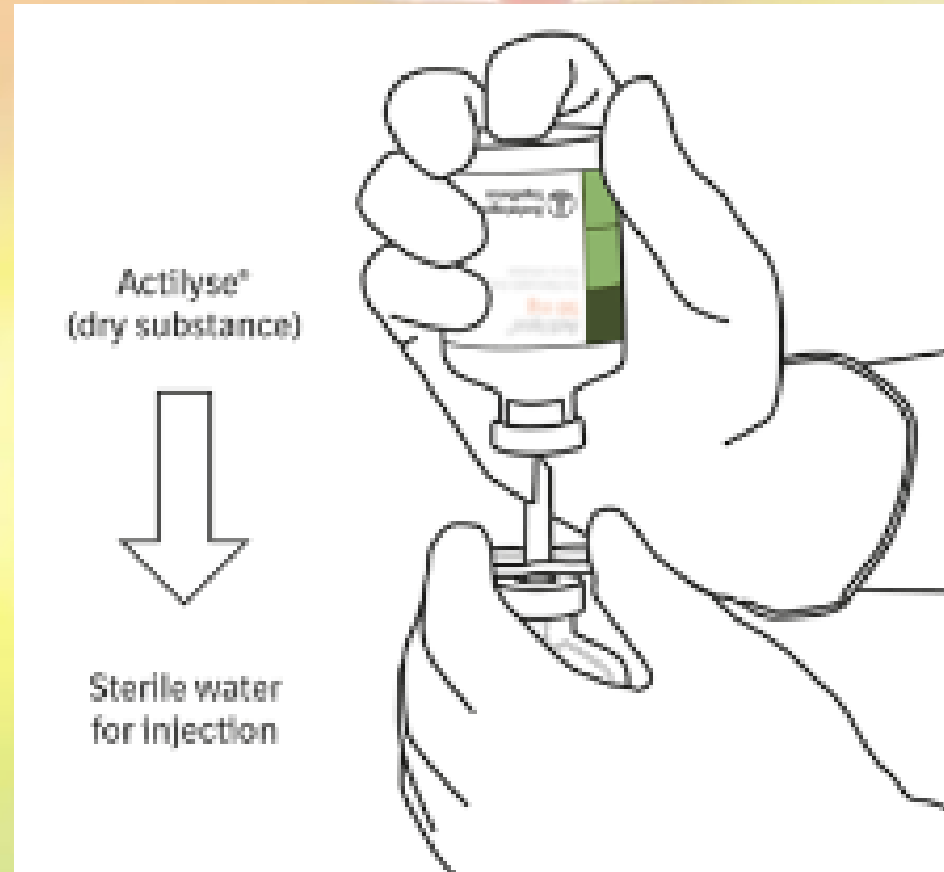
6. Hold the sterile water vial and the transfer cannula steady with one hand using the two side flaps. Remove the remaining cap on top of the transfer cannula.



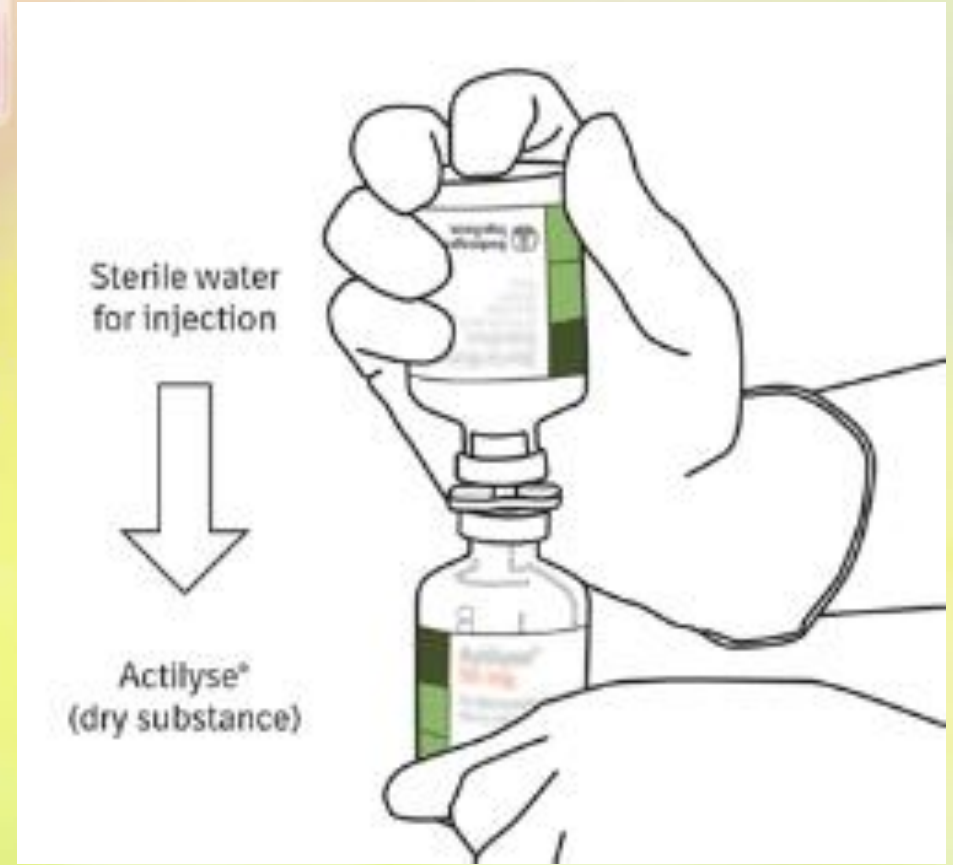
7. Hold the sterile water vial and the transfer cannula steady with one hand using the two side flaps. Hold the vial with Alteplase dry substance above the transfer cannula and position the tip of the transfer cannula right in the center of the stopper.



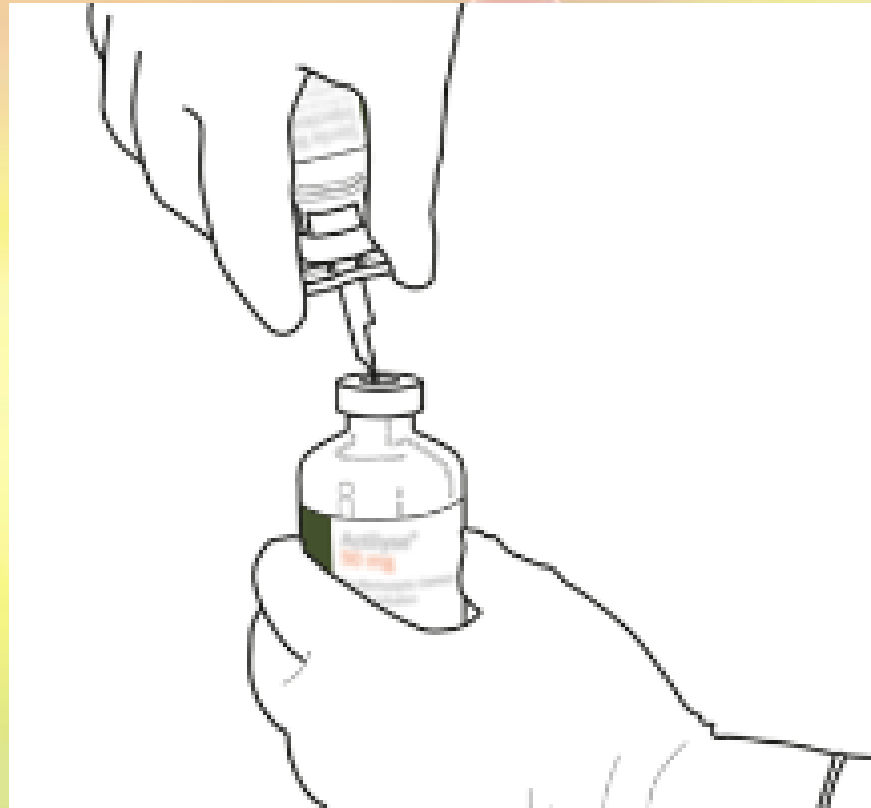
Push down the vial with the dry substance onto the transfer cannula from directly above, puncturing the rubber stopper vertically and gently but firmly without twisting



8. Invert the two vials and allow the water to drain completely into the dry substance



9. Remove the empty water vial together with the transfer cannula.
They can be disposed of.



10. Take the vial with reconstituted Alteplase and swirl gently to dissolve any remaining powder, but do not shake, as this will produce foam.



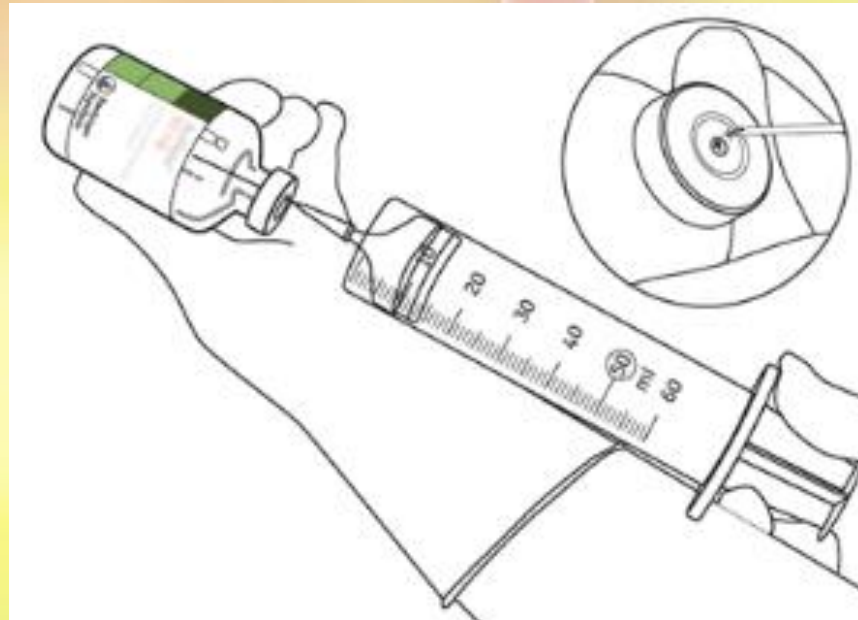
If there are bubbles, let the solution stand undisturbed for a few minutes to allow them to disappear.



11. The solution consists of 1mg/mL Alteplase. It should be clear and colourless to pale yellow and it should not contain any particles.

12. Remove the amount required using a needle and a syringe.

Do not use the puncture location from the transfer cannula to avoid leakage.



13. Use immediately. Dispose of any unused solution.



Patients should be monitored and managed during and after Alteplase administration

When Alteplase is administered, the first 24 hours are critical.

Observe and frequently monitor patients for neurologic changes, any signs and symptoms of intracranial hemorrhage and adverse drug reactions, during patient recovery.

During therapy with Alteplase

- Perform neurologic assessment every 15 minutes during the 1-hour infusion
- Check for major and/or minor **bleeding**
- Monitor blood pressure every 15 minutes during the 1-hour infusion
- Monitor for signs of intracranial hemorrhage
- Monitor for signs of orolingual angioedema



During therapy with Alteplase

- Discontinue infusion and obtain an emergency CT scan if the patient develops:
 - Severe headache
 - Acute hypertension
 - Nausea/vomiting
 - A worsening neurologic examination



After therapy with Alteplase



- Continue to monitor for neurologic deterioration
 - every 15 minutes for the first hours after cessation of infusion
 - every 30 minutes for the next 6 hours
 - every hour from the eighth post-infusion hour until 24 hours after infusion is stopped

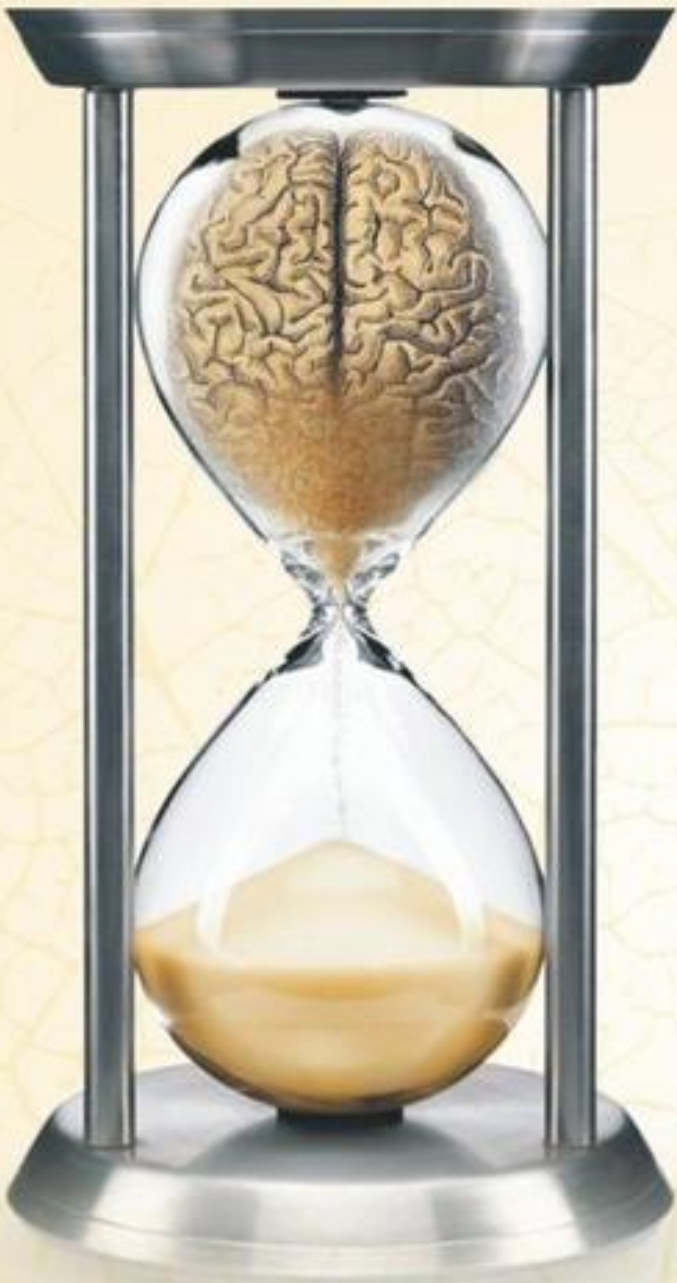
After therapy with Alteplase



- Continue to monitor and control blood pressure
 - every 15 minutes for the first hours after cessation of infusion
 - every 30 minutes for the next 6 hours
 - every hour from the eighth post-infusion hour until 24 hours after infusion is stopped

After therapy with Alteplase

- Continue to check for major and/or minor bleeding
- Obtain a follow-up CT scan or magnetic resonance imaging (MRI) at 24 hours before starting anticoagulants or antiplatelet agents
- Continue to monitor for signs of hypersensitivity



TIME IS BRAIN



Treatment within 1 hour

of symptoms ensures the best chances of a full recovery



Treatment within 3 hours

of symptoms improves chances of recovery with little or no disability

Thank you