

**REMINDER: ALL MEDICATION ORDERS REQUIRE DOSE, ROUTE, FREQUENCY AND INDICATION
DO NOT USE ABBREVIATIONS**

DOCTORS ORDERS STROKE - ALTEPLASE / POST ALTEPLASE	CHECK OFF/ INITIALS
1. If Medication Reconciliation and/or Stroke-Alteplase/Post Alteplase order set incomplete, RN to contact physician.	
2. CALCULATION OF ALTEPLASE (ACTIVASE®) DOSE : a. Patient weight in kilograms _____ x 0.9 mg/kg = Total dose _____ mg. b. Maximum dose of 90 mg, regardless of weight. c. Give 10% of calculated dose as an Intravenous Bolus over 2 minutes. d. Infuse the remaining portion of the dose as a continuous infusion over one hour.	
3. Medications: HOLD HOME ANTIHYPERTENSIVE MEDICATIONS <ul style="list-style-type: none"> • Famotidine (Pepcid®) 20 mg every 12 hours by mouth/feeding tube; may give Intravenously if no oral intake or no feeding tube. • Docusate Sodium (Colace®) 100mg by mouth or feeding tube 2 times per day as needed for stool softening. • Acetaminophen (Tylenol®) 650 mg by mouth/feeding tube or suppository per rectum every 4 hours as needed for temperature greater than 100.5 or pain. • Enteric coated Aspirin (Ecotrin®) 325 mg by mouth daily if no contraindications OR Give Aspirin suppository 300 mg daily by rectum if patient has taken nothing by mouth. Start date: _____ (DO NOT initiate within 24 hours of thrombolytic therapy) • Order DVT prophylaxis after 24 hours if patient is nonambulatory: <u>DO NOT initiate pharmacological DVT prophylaxis within 24 hours of thrombolytic therapy.</u> Warfarin (Coumadin®) for patients with atrial fibrillation unless contraindication. <input type="checkbox"/> Warfarin (Coumadin®) _____ Start date: _____ (DO NOT initiate within 24 hours of thrombolytic therapy) <input type="checkbox"/> PT/INR _____ <input type="checkbox"/> Contraindication _____ 	
4. IF Systolic Blood Pressure greater than 180 mmHg and/or Diastolic Blood Pressure greater than 105 mmHg for two or more readings 5-10 minutes apart - administer antihypertensive medications to maintain Systolic Blood Pressure less than or equal to 180 mmHg or Diastolic Blood Pressure less than or equal to 105 mmHg: <input type="checkbox"/> Labetalol (Normodyne®) 10mg Intravenously over 1-2 minutes, may repeat every 10 minutes as needed times 3 (total of 4 doses). If the Blood Pressure remains elevated above given parameters, call the physician for further orders. Maximum dose of Labetalol (Normodyne®) 300mg / 24 hours. Do not give if pulse is less than 60. <input type="checkbox"/> Enalapril Maleate (Vasotec®) 0.625 mg in 50mL of Dextrose 5% in Water or 0.9% Sodium Chloride over 5 minutes. May repeat every 15 minutes as needed times 3 doses (total of 4 doses). If Blood Pressure remains elevated above given parameters, call physician for further orders.	
5. <input type="checkbox"/> Speech therapist for screen / evaluation. Speech therapist to write orders for diet consistencies, altered diets and modified barium swallow as per their recommendation.	
6. Admit PCU	
7. STAT one pheresed Platelet dose to maintain on hold times 24 hours.	

Physician/Date/Time: _____

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8. Avoid : a. Nasogastric tubes - avoid for 24 hours post Alteplase (Activase®) if possible. b. Indwelling Foley catheters c. Central venous and intra-arterial punctures/catheters - during Alteplase (Activase®) infusion and for 24 hours after infusion ends.	
9. Neurology consult	
10. Vital Signs and Neuro Checks: Every 15 minutes times 2 hours after start of Alteplase, then every 30 minutes times 6 hours, every hour times 16 hours, then routine if stable. NIH Stroke Scale on arrival to ED and then daily with a.m. assessment. NOTIFY PHYSICIAN IMMEDIATELY if vital signs outside of the following parameters or ANY change in neurological status: <ul style="list-style-type: none"> • Pulse greater than 120 or less than 50 • Respirations greater than 30 or less than 12 • Temperature greater than 100.5 • Oxygen saturation less than 95% • Systolic Blood Pressure greater than 180 or less than 110 • Diastolic Blood Pressure greater than 105 or less than 60 Orthostatic Blood Pressure 2 times a day when activity out of bed	
11. Second Intravenous Access: Saline lock with 0.9% Sodium Chloride flush of 1 mL every 8 hours. Avoid affected arm.	
12. STAT weight	
13. If HEMORRHAGE is suspected : <ul style="list-style-type: none"> • Discontinue Alteplase (Activase®) • STAT CT scan of head without contrast • Notify Neurologist • STAT PT/INR, APTT, Hgb and Hct, Platelet Count, Fibrinogen, Type and Screen for hold (if not already done) • Increase monitoring of vital signs and neurostatus to every 15 minutes 	
14. Bleeding Precautions: CALL PHYSICIAN IMMEDIATELY for evidence of bleeding <ul style="list-style-type: none"> • One Hemoccult stool sample daily for 48 hours. 	
15. Activity: Bedrest times 24 hours with head of bed elevated 30 degrees, then up in chair 3 times a day if stable.	
16. Nothing by mouth including meds until swallowing screen or evaluation by speech therapy or physician. Physicians to use the Thrombolytic Therapy Physician Documentation Tool. Physician to write for medical nutrition order.	
17. Blood glucose by Accu-check every 6 hours if patient has taken nothing by mouth; 4 times a day before meals and at bedtime if oral intake. Notify physician if less than 80 or greater than 140.	
18. Bilateral pneumatic compression devices to lower extremities. Discontinue when ambulating without assistance.	
19. Consult: <ul style="list-style-type: none"> • Stroke Care Manager □ Physical Therapy • Social Work • Dietitian for nutritional assessment and dietary risk factor modification education □ Rehab Nurse Liaison □ Occupational Therapy 	
20. Labs: <ul style="list-style-type: none"> • Urinalysis • Basic Metabolic Panel daily times 3 • In AM day one; Fasting lipid panel, Hemoglobin A1c, Liver Function Test, ESR, Homocystine 	
21. CT scan head without contrast 24 hours after tPA	

Physician/Date/Time:

Nurse/Date/Time:

Secretary/Date/Time:

Full page of orders requires only one physician, one nurse and one clerical signature



Original to Patient's Chart

Fax to Pharmacy

Recommendations: Indications and Dosage of Blood Product in Acute Hemorrhage in Stroke Patients Receiving TPA

NORMAL RANGES:

PT = 10.9 - 13.1 Seconds

APTT = 22.8 - 32.8 Seconds

FIBRINOGEN = 150 - 400 mg/dL

PLATELETS = 150,000 - 450,000

- **Fibrinogen less than 80 – 100 mg/dL:**
 - Transfuse **Cryoprecipitate** per dosage: 1 unit of cryoprecipitate per 7 – 10 kg of body weight

- **Platelet Count less than 100,000 or abnormal platelet function** (ie.- drugs such as Clopidogrel (Plavix®), Aspirin, etc):
 - Transfuse **Platelets**: 1 unit of pheresed Platelets,
OR 6 units of platelet concentrate
OR 1 unit platelet concentrate per 10 kg of body weight

- **PT greater than or equal to 18 and/or APTT greater than or equal to 47 (or 1.5 times the normal means of the PT/APTT tests):**
 - Transfuse **FFP** per dosage: 1 unit FFP per 18.3 – 27.5 kg of body weight. ¹

- **Hgb less than 8 (asymptomatic) or Hgb 8 – 10 (symptomatic or Coronary/Cerebral ASCVD):**
 - Transfuse **RBC** units (1 unit per gm of Hgb under 10).

¹Based on dosage of 10 – 15 mL per kg; Average volume of FFP is 275 mL.

References:

AABB Technical Manual, 15th Ed, 2005.

Transfusion Therapy, Clinical Principles and Practice, 2nd Ed, 2005.

Circular of Information for the use of Human Blood and Blood Components, July 2002

Guidelines for Blood Utilization Review, AABB, 2001

Practice Guidelines for Blood Transfusion: A Compilation from Recent Peer-Reviewed Literature, ARC, May 2002.

Blood Banking and Transfusion Medicine Basic Principles & Practice, 2nd Ed, 2007.

Reviewed and Approved by Transfusion Medical Director:

_____Signature on file_____ Date:_____

M / Indications – Dosage for TPA pts with acute bleed

4/16/07

NOT A PERMANENT PART OF PATIENT RECORD



Consent for Thrombolytic Therapy in Acute Ischemic Stroke

By history and physical exam, you are most likely having an acute stroke. This is most often caused by a blood clot in one of the blood vessels in the brain. In some cases, the symptoms can resolve spontaneously without specific treatment. In many cases it will lead to permanent disability such as paralysis, slurred speech, blindness, numbness or even death.

There are medications called thrombolytics (clot-busting drugs) that can dissolve the clot and improve your symptoms. In order to be effective, **they must be given in the first three hours after the onset of symptoms.** Research studies have shown that you are 30% more likely to improve by taking this medication but there are no guarantees.

However, the same studies have shown a significant risk of bleeding that can make your stroke worse by bleeding into the brain. Research studies have shown that these medications can increase your risk of bleeding into the brain from 0.6% to 6.4% and can also increase your risk of dying from the treatment from 0.3% to 3%, both a tenfold increase.

By signing this consent, you agree to the thrombolytic treatment and understand the risks involved, including the increased risk of bleeding and death. You understand that this treatment does not guarantee an improvement in your clinical outcome.

Comments: _____

Signature of Patient or Surrogate Decision Maker

Date/Time

Printed Name of Patient

Witness

Printed Name of Surrogate Decision Maker, if applicable



Thrombolytic Therapy Physician Documentation Tool

Date/Time of last known normal: _____

Date/Time of symptom discovery _____

Reason for NOT administering tPA at this facility:

- Intravenous or Intra-arterial tPA given at outside hospital
 - Seizure at onset with postictal residual neurological impairments
 - Care team unable to determine eligibility
 - Stroke severity- too mild, or rapidly improving symptoms
 - Glucose less than 50 or greater than 400 mg/dl
 - No intravenous access
 - Stroke severity- too severe (NIHSS greater than 22)
 - Life expectancy of less than 1 year or severe comorbid illness
 - Septic thrombophlebitis or occluded AV cannula at infected site
 - Recent arterial puncture at noncompressible site (less than 7 days)
 - Hemostatic defects including those secondary to renal or hepatic disease
 - History of intracranial hemorrhage, brain aneurysm, vascular malformation or brain tumor
 - Platelets less than 100,000, APTT greater than 40 seconds after heparin use, or current use of oral anticoagulants with PT greater 15 or INR greater than 1.7, or unknown bleeding diathesis
 - Within 3 months of intracranial surgery, serious head trauma or stroke
 - Within 15 days of major surgery or serious trauma
 - Other identified contraindication/reasons/comments (please list)
- Onset of symptoms more than 3 hours
 - Active internal bleeding (less than 22 days)
 - Advanced age
 - Left heart thrombus
 - Recent surgery/ trauma (less than 15 days)
 - Patient/family refused
 - Acute pericarditis
 - Pregnancy, lactation or delivery within 30 days
 - Lumbar puncture within 7 days
 - Myocardial infarction within last 3 months
 - Evidence of active bleeding or acute trauma/fracture on exam
 - CT findings- Intracerebral hemorrhage, Subarachnoid hemorrhage or major infarct signs
 - Diabetic hemorrhagic retinopathy or other ophthalmic bleeding
 - Systolic blood pressure greater than 185 mmHg or Diastolic blood pressure greater than 110 mmHg requiring aggressive treatment to reduce blood pressure within these limits
 - Other known bleeding tendency or disposition
 - High clinical suspicion of Subarachnoid hemorrhage (sudden onset severe headache, neck stiffness, nausea, vomiting)

If NO contraindication to giving tPA indicated above:

Is patient 18 years of age or older?	YES	NO
Is time of symptom onset well established and less than 180 minutes before treatment would begin?	YES	NO
Is there a clinical diagnosis of ischemic stroke causing measurable neurologic deficit(s)?	YES	NO

Relative Contraindications: Ticlodipine (Ticlid®) Clopidogrel (Plavix®)

*For women of childbearing age, consider obtaining a pregnancy test

DYSPHAGIA SCREENING

Is patient alert?	YES	NO
Is patient able to handle their own secretions?	YES	NO

If the answer to either question is "NO", order NPO, including meds and order speech therapy consult.

*Dysphagia screening not required because: Pt has complete recovery of all symptoms and neurological deficits
 Pt has a PEG tube and does not receive oral intake

Consider: Diet of Pureed, Level III (pudding) with crushed meds **-OR-**

- Diet consistency:**
- Nothing by mouth
 - Regular
 - Soft
 - Mechanical Soft (chopped meats)
 - Mechanical soft (ground meats)
 - Pureed

- LIQUID LEVELS:**
- None
 - Thin
 - Level I (nectar)
 - Level II (honey)
 - Level III (pudding)

Please order Medical Nutrition Diet as needed:

Renal ADA _____ calorie 2gram sodium lo fat, lo cholesterol

Date/TIME _____

Physician/NP/PA Signature _____

