

Brain Attack Orders

for use only in the Emergency Department

Draw a line through, initial and date all changes.
If generically equivalent medication is not acceptable, then write "brand necessary."

<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Circles: mark one and only one.
Squares: mark one, many or none.

Patient Weight (kg):

One IV, ≥18 gauge, R arm preferred, NS at KVO

O2 2 lpm nasal; increase as needed to keep oxygen saturation > 95%

Reported

Continuous pulse oximetry and cardiac monitor

Estimated

EKG, Stat portable CXR, non-contrast head CT scan

Measured

VS Q5min x 15 min, then Q15min while in ED; and PRN

(in and out catheterize if unable to void within 20') Bedside Urinalysis, UCG if ♀ < 50, Bedside Glucose; Urine Tox Screen; PT / PTT, CBC, BMP (Chem-7), Fibrinogen Level, Type and Screen

aspirin suppression assay if on aspirin or AGGRENOX (aspirin/dipyridamole)
Plavix (clopidogrel) suppression assay if on Plavix (clopidogrel)

Use **DEM NIH Stroke Scale Worksheet** graphics for testing patient

Level of Consciousness	<input type="checkbox"/>	0-alert	1-easy to arouse	2-hard to arouse	3-reflexes/unresponsive
LOC Questions	<input type="checkbox"/>	0-month/age right	1-one right	2-neither right	
LOC Commands	<input type="checkbox"/>	0-eye-opening/handrip both right	1-one right	3-neither right	
Best Gaze	<input type="checkbox"/>	0-normal	1-partial palsy	2-forced deviation	
Visual	<input type="checkbox"/>	0-normal	1-partial one eye	2-partial both eyes	3-blind
Facial Palsy	<input type="checkbox"/>	0-normal	1-minor	2-partial	3-complete
Motor Arm, Left	<input type="checkbox"/>	0-no drift	1-drift	2-some effort	3-no effort 4-no movement UN-cannot
Motor Arm, Right	<input type="checkbox"/>	0-no drift	1-drift	2-some effort	3-no effort 4-no movement UN-cannot
Motor Leg, Left	<input type="checkbox"/>	0-no drift	1-drift	2-some effort	3-no effort 4-no movement UN-cannot
Motor Leg, Right	<input type="checkbox"/>	0-no drift	1-drift	2-some effort	3-no effort 4-no movement UN-cannot
Limb Ataxia	<input type="checkbox"/>	0-normal	1-one limb	2-two limbs	UN-cannot
Sensory	<input type="checkbox"/>	0-normal	1-mild/moderate	2-severe/total	
Best Language	<input type="checkbox"/>	0-normal	1-mild/moderate aphasia	2-severe	3-mute
Dysarthria	<input type="checkbox"/>	0-normal	1-mild-moderate	2-severe	UN-intubated
Extinction and Inattention	<input type="checkbox"/>	0-normal	1-inattention/extinction	2-profound hemi-inattention/extinction	

NIH Stroke Scale:

Continue Next Page

Resident/PA/CRNP

ED Attending physician (required):

Print Last Name:

Print Last Name:

Order Start

Order Start

Date:

Sign:

Date:

Sign:

Time:

Time:

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Are patient's neuro symptoms from an intracranial bleed?

Yes Skip to † **Intracranial Bleed**, page 6
No

Does patient need a **stat** CT angio head/neck?

Indication: NIHSS ≥ 4 , sx < 8 hrs Yes →
Contraindications: No
· Anaphylactic dye allergy
If history of non-anaphylactic dye reaction (e.g., flushing, vomiting) order dye reaction prophylaxis prior to CTA

Does patient need a **stat** MRI/MRA head/neck?

Indications: Yes →
· NIHSS ≥ 4 , sx < 8 hrs and anaphylactic dye allergy
Contraindications: No
· Implanted metal

Does patient need an **urgent** CT angio head/neck?

Indication: Yes →
· NIHSS 1-3, or sx > 8 hrs
Contraindications: No
· Anaphylactic dye allergy
· ^BUN/Cr: check prior to ordering

Does patient need an **urgent** MRI/MRA head/neck?

Indication: NIHSS 1-3, or sx > 8 hrs Yes →
Contraindications: No
· Implanted metal

Dye reaction protocol:
famotidine (Pepcid) 20 mg IV
+ diphenhydramine (Benadryl) 50 mg
+ methylprednisolone (Solumedrol) 125 mg IV

Stat CT angio head/neck, stroke protocol (don't wait for creatinine)

Stat MRI/MRA (MR angiogram) head/neck, stroke protocol

CT angio head/neck, stroke protocol (wait for creatinine)

MRI/MRA (MR angiogram) head/neck, stroke protocol



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Does patient need an insulin drip?
 Indication: bedside or lab glucose >200 mg/dL
 Yes →
 No

Does patient need fever management?
 Indication: temperature >38° C
 Yes →
 No

Does patient need hypertension management?
 Indications:
 · sustained systolic BP >180
 · sustained diastolic BP >110
 Goal: SBP 20% below baseline
 Yes →
 No

Insulin infusion units/hr

Usual is 2 units/hr, more if glucose is very high

- Glycemic goal is 120-200: alert physician if <120 or > 200.
- While on insulin drip, check Q 1 hour fingerstick blood sugar.
- Regular human insulin, 250 units in 500 mL of normal saline (1 unit = 2 mL).
- Flush 50 mL through IV line before connecting to patient.
- May piggyback only at Y injection port below pump.
- If piggybacking, use dual IV pump.

acetaminophen mg PO

Usual is ≈15 mg/kg PO; 1000 mg for 70 kg adult; best in multiples of 325 or 500 mg

or, if patient fails bedside swallowing screen, acetaminophen mg PR

Usual is ≈30 mg/kg PO; 2000 mg for 70 kg adult; best in multiples of 120 or 650 mg

labetalol (caution if asthma) 5 mg IV over 2 minutes then, 10 mg IV Q 10 minutes PRN
 titrate to systolic BP 160-180, diastolic BP 90-100
 hold if HR < 60

nicardipine 0.25 mg IV push, then, 0.25 mg IV Q 5 minutes PRN
 titrate to systolic BP 160-180, diastolic BP 90-100

nicardipine drip
 start at 5 mg/hr (usual dose: 1-15 mg/hr)
 titrate to systolic BP 160-180, diastolic BP 90-100



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Does the patient have an ischemic CVA, clearly defined onset within the past 3 hours?

- Yes 1. Place call to vascular neurologist through TACC (radio or phone x5678) to discuss treatment options.
2. Start tPA checklists, this page. →
- No Skip to **§ no tPA**, next page

Thrombolysis Checklist: Absolute Criteria

All must be checked to give IV tPA.
If unable to check any box, IV tPA is not appropriate, skip to **§ no tPA**, next page

- Acute ischemic CVA
- Age ≥ 18 years
- No seizure at onset/reason to suspect SAH
- No known bleeding diathesis
- No LMWH or heparin with increased PTT
- No neurosurgery/major head trauma in 3 mo.
- Never any CNS aneurysm, AVM, bleed or neoplasm
- No major surgery or trauma within 14 days
- No LP within 7 days
- No active GI/GU bleeding within 21 days
- BP ≤ 185/110 now
- Platelets > 100,000
- INR < 1.8
- No hemorrhage on CT read by neuroradiologist

Thrombolysis Checklist: Relative Criteria

If cannot check all, relative contraindication to systemic thrombolysis

- No rapidly improving neurological status
- Glucose 50-400
- Not pregnant
- No early signs of infarct (edema, sulcal effacement) on CT read by neuroradiologist



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Able to contact vascular neurologist, and vascular neurologist wishes to take patient for intra-arterial procedure?

- Yes Send patient to vascular neurology lab
- No Discuss with patient/alternate decision-maker →

Risks/benefits discussed with patient who gives verbal informed consent for IV tPA

Risks/benefits discussed with alternate decision-maker who gives verbal informed consent for IV tPA

Implied consent: patient incapacitated, no other decision-maker immediately available

Patient/alternate decision-maker makes informed refusal of IV tPA

Alternate decision-maker name and relationship:

Are you ordering tPA for this patient?

- Unable to reach vascular neurologist in reasonable time, meets criteria, consented.
- Vascular neurologist and emergency physician both agree systemic alteplase (tPA) is best option.

- Yes Order tPA →
- No

alteplase (ACTIVASE, tPA) mg

0.9 mg/kg, actual body weight, max. dose 90 mg.

- Start peripheral IVs to total 3 IVs
- Record infusion start/stop time in nurses' notes
- VS/Limited NIH Stroke Scale q15min during infusion and for 2 hours post-infusion
- No arterial puncture or venous puncture at non-compressible site

give mg over 1-2 minutes

bolus: 10% of total dose

give mg over 1 hour

infusion: 90% of total dose

§ No tPA

Patient with likely ischemic CVA within 8 hours of onset?

- Yes Discuss with on-call vascular neurologist through TACC (radio or phone x5678) for possible treatment options.
- No Antiplatelet therapy. → Arrange appropriate admission.

perform bedside swallowing screening; if passes, give aspirin 325 mg PO, if fails, give aspirin 300 mg PR

Check here if discussed with vascular neurologist anyway.

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† Intracranial Bleed

Dysfunctional platelets?

- uremia
- platelet function disorder
- aspirin/clopidogrel (PLAVIX), ticlopidine (TICLID), aspirin/dipyridamole (AGGRENOX)

Yes Order DDAVP →
 No

DDAVP mcg IV push

usual dose 0.3 mcg/kg; 21 mcg for 70 kg adult

Does patient need platelets?

- Platelet count < 100,000: 2 units
- Aspirin response test < 550: 6 units
- Coumadin & aspirin: 10 units

Yes Order platelets →
 No

Transfuse platelets 2 units
 Transfuse platelets 6 units
 Transfuse platelets 10 units

Does patient need Coumadin reversed?

- Elevated bedside PT/INR

Yes Reverse Coumadin →
 No

Vitamin K 10 mg IV STAT at 1 mg/min infusion

Fresh Frozen Plasma units over 90 minutes

- Usual adult dose 3-4 units. • obtain FFP STAT
- FFP dosage ≈ 10 ml/kg • start infusion STAT
- Approximately 200 mL/unit.
- Order in units rather than mL

Is patient a neurosurgical candidate?

- Discuss with neurosurgery if needed
- 0800 - 1600 M-F: Notify Neurosurgical PAs
- Weekends/nights call neurosurgery answering service

Yes Prepare for OR →
 No Arrange for admission

Triple lumen central line kit with extra drapes and ultrasound cover to bedside

Type and cross 4 units pRBC

Page anesthesia STAT to see patient in ED

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