



The Cincinnati Prehospital Stroke Scale

Facial Droop

(have patient show teeth or smile)

NORMAL →



● Both sides of face move equally.

← **ABNORMAL**



● One side of face does not move as well as the other side.

Arm Drift

(patient closes eyes and extends both arms straight out, with palms up for 10 seconds)

NORMAL →



● Both arms move the same or both arms do not move at all.

← **ABNORMAL**



● One arm does not move or one arm drifts down compared with the other.

Abnormal Speech

(have the patient say “you can’t teach an old dog new tricks”)

● Normal — Patient uses correct words with no slurring.

● Abnormal — Patient slurs words, uses the wrong words, or is unable to speak.

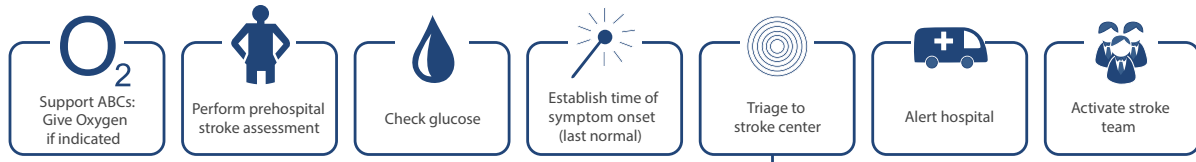
If any 1 of these 3 signs is abnormal, the probability of a stroke is 72%.

Suspected Stroke Algorithm: Goals for Management of Stroke



Identify Signs and Symptoms of Possible Stroke Active Emergency Response

Critical EMS assessments and actions



NINDS TIME GOALS

Within 10 min of ED Arrival



Within 25 min of ED Arrival



Within 45 min of ED Arrival



Immediate general assessment and stabilization*

- Assess ABCs, vital signs
- Provide **oxygen** if O₂ sat <90% unless short of breath
- Obtain IV access and perform laboratory assessments
- Check glucose; treat if indicated
- Obtain 12-lead ECG
- Perform neurologic screening assessment
- Order emergent CT without contrast

Immediate neurologic assessment by stroke team or designee

- Review patient history
- Establish time of symptom onset or last known normal
- Perform neurologic examination (NIH Stroke Scale or Canadian Neurological Scale)

Does CT Scan Show Hemorrhage?

No hemorrhage

Probably acute ischemic stroke; consider fibrinolytic therapy

- Check fibrinolytic exclusions
- Repeat neurologic exam: are deficits rapidly improving to normal?

Patient remains candidate for fibrinolytic therapy?

Candidate*

- Review risks/benefits with patient & family. If acceptable:
- Give rTPA**
 - No anticoagulants or antiplatelet treatment for 24 hours

Hemorrhage

Consult neurologist or neurosurgeon; consider transfer if not available.

- Begin stroke or hemorrhage pathway
- Admit to stroke unit or intensive care unit

Administer aspirin

Not a candidate

- Begin post-rTPA stroke pathway
- Aggressively monitor:
 - BP per protocol
 - For neurologic deterioration
- Emergent admission to stroke unit or intensive care unit

Within 60 min of ED Arrival



Stroke Admission within 3 hours



* Jauch EC, Cucchiara B, Adeoye O, Meurer W, Brice J, Chan Y-F, Gentile N, Hazinski MF. "Part 11: adult stroke: 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care". *Circulation*. 2010;122(suppl 3):S818-S828. http://circ.ahajournals.org/content/122/18_suppl_3/S818
 ** Tissue Plasminogen Activator for Acute Ischemic Stroke. *N Engl J Med*. 1995;333(24):1581-1587