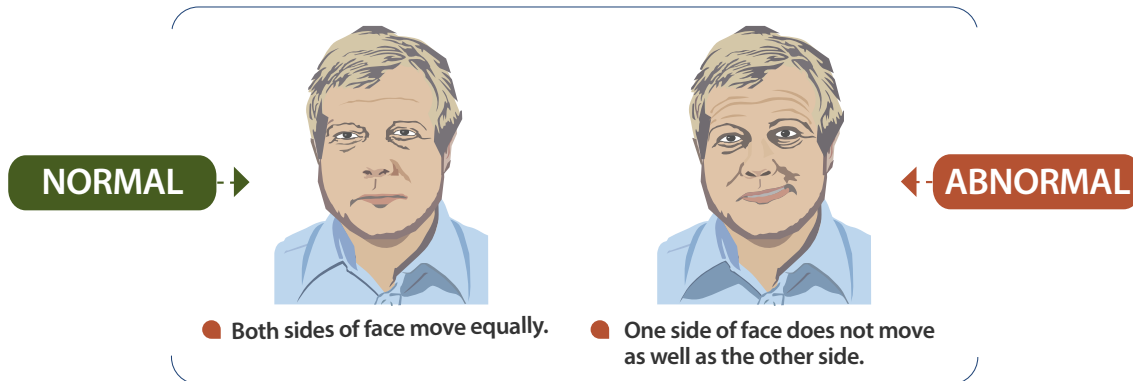




## The Cincinnati Prehospital Stroke Scale

### Facial Droop

(have patient show teeth or smile)

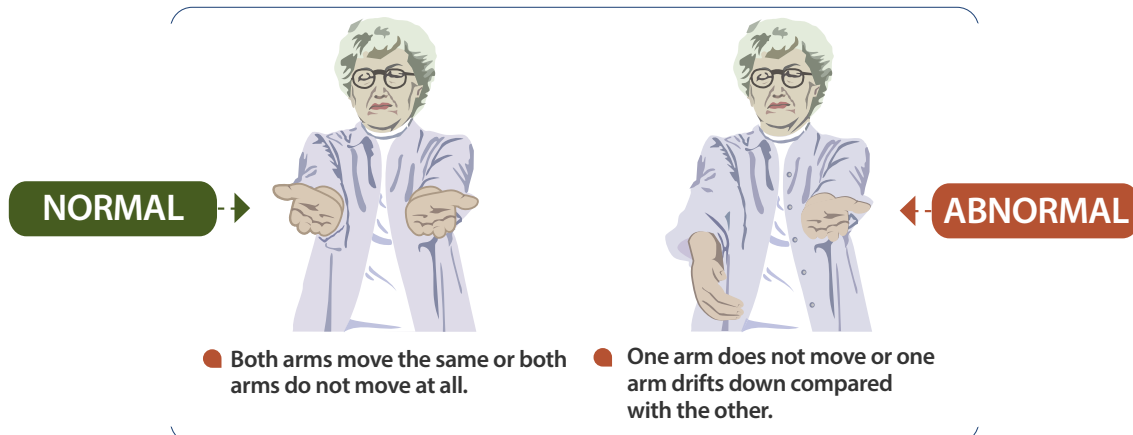




**NORMAL** →   **← ABNORMAL**

- Both sides of face move equally.
- 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** →   **← ABNORMAL**

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

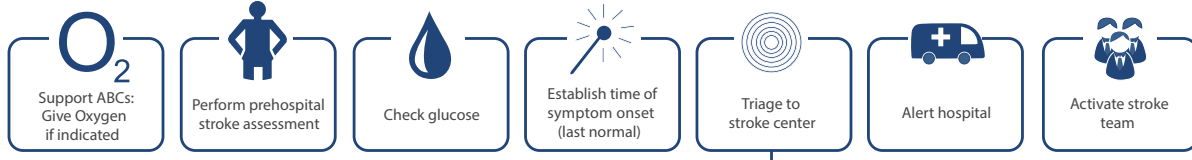
**If any 1 of these 3 signs is abnormal, the probability of a stroke is 72%**

# Suspected Stroke Algorithm: Goals for Management of Stroke



## Identify Signs and Symptoms of Possible Stroke Active Emergency Response

### Critical EMS assessments and actions



If onset >3 hours consider triage to hospital with interventional capabilities for stroke.

#### NINDS TIME GOALS

Within 10 min of ED Arrival



Within 25 min of ED Arrival



Within 45 min of ED Arrival



Within 60 min of ED Arrival



Stroke Admission within 3 hours



#### Immediate general assessment and stabilization\*

- Assess ABCs, vital signs
- Provide oxygen if O. sat <94%
- 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

\* 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](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