

# What About Me?

Stroke: The Other 95%

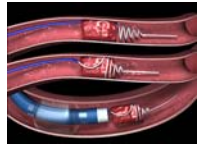
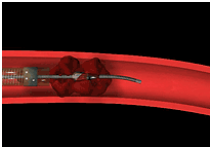

Sandy Dancer, RN, ANP

- ## Objectives
- Will be able to describe
    - How to save brain
    - Monitoring for complications
    - Preventing complications
    - Stroke work up
    - Getting to optimum outcomes
    - Preventing future strokes

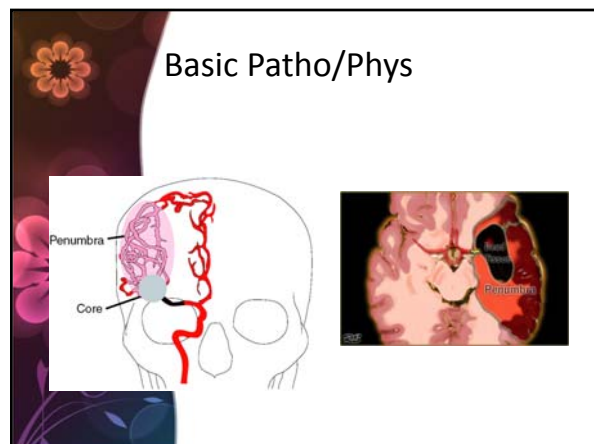
- ## Just the Facts
- tPA treatment rate
    - Stroke centers 4.8%
    - Non-designated centers 1.7%
  - tPA + Intervention 39%
  - Strokes untreated 61-95%
- Rymer, 2011  
Fang, Cutler, Rosen 2010

## Just the Facts

- IV tPA
- Cath lab intervention
- Study treatments

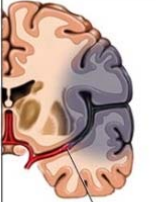


- ## Improving Outcomes
- Solid nursing care
  - Solid physician care
  - Early rehabilitation



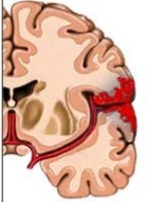
## Ischemic Stroke

Ischemic stroke

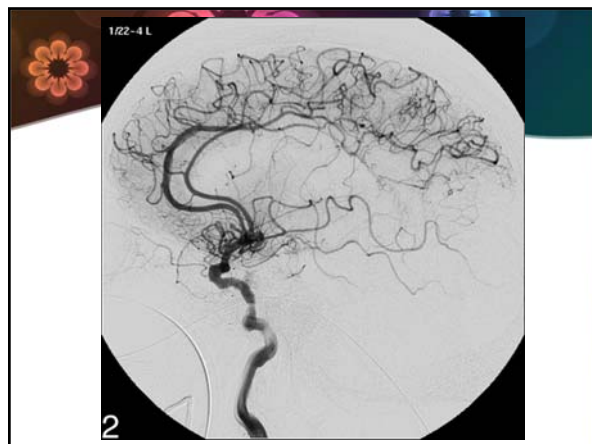


A clot blocks blood flow to an area of the brain

Hemorrhagic stroke



Bleeding occurs inside or around brain tissue



## Saving Brain

Day 1-5  
Day 1-14

## Penumbra Care



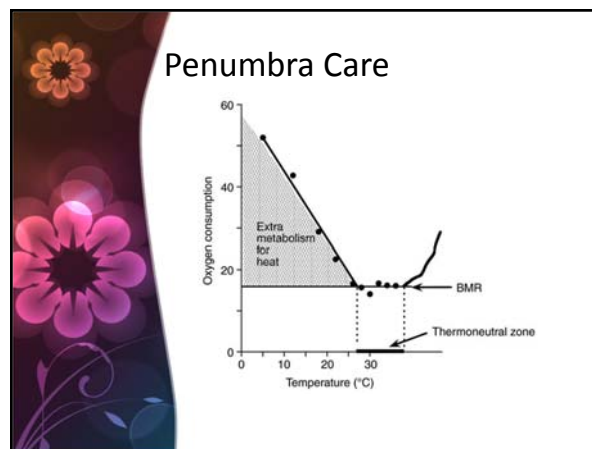
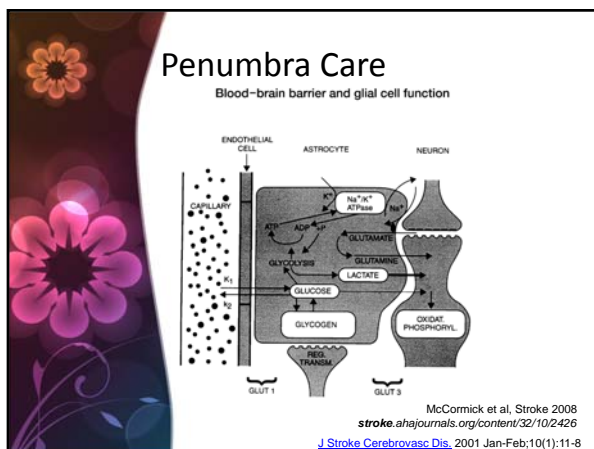
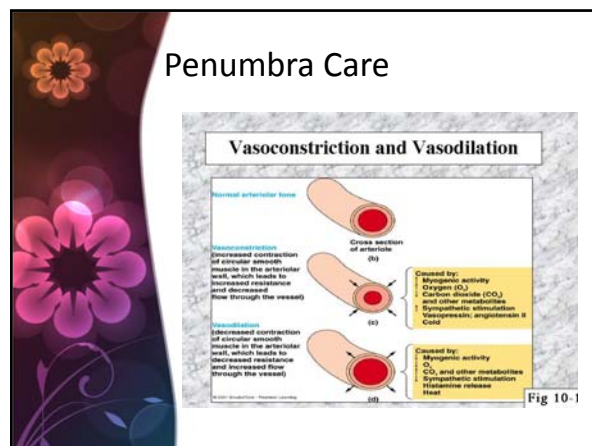
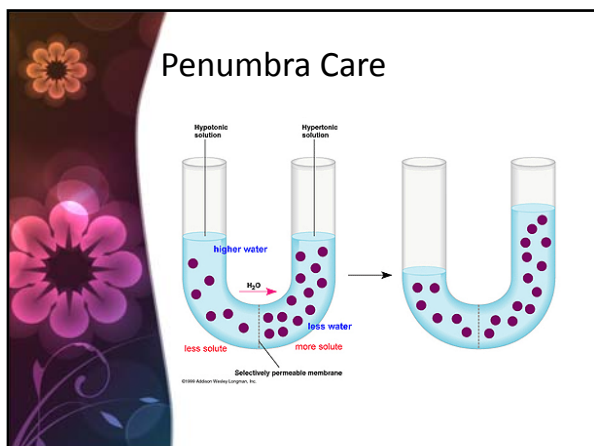
Ischemic 140-180  
Hemorrhagic 140-160



## Penumbra Care

Solution	Effect of adding one liter	
	Change in <i>E<sub>CF</sub></i>	Change in <i>I<sub>CF</sub></i>
D5W	333 mL	667 mL
2/3D & 1/3S	556 mL	444 mL
Half-normal saline	667 mL	333 mL
Normal saline	1000 mL	0 mL
Ringer's lactate	900 mL	100 mL

[www.finlay-online.com/.../Introduction\\_to\\_IV\\_Therapy\[1\].ppt](http://www.finlay-online.com/.../Introduction_to_IV_Therapy[1].ppt)



- ### Patient Getting Worse
- Lay them flat
  - Turn up the IV
  - Call an RRT
  - Check their blood pressure
  - Check their blood sugar
  - Do a neuro assessment

- ### Magnesium
- Inhibits release of Glutamine
    - Excitatory neurotransmitter
  - Neuroprotective?
    - Fast Mag

### Phosphate

- Phos to make ATP
- ATP for RBC to transport O2

### Nicotine

- Causes vasoconstriction
- No nicotine patches
- Time to quit?

Circulation Research. 1988;62:891-895

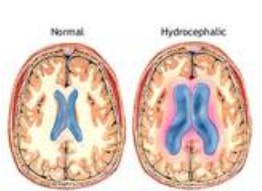
## Treating Complications

### Seizures

- May be subtle
- Burns up oxygen / nutrition

### Hydrocephalus

- Headache
- Decreased LOC
- Change in neuro deficit



### Sodium Salt Wasting

- Huge output
- Low serum sodium
- Inappropriate ADH
- Decreased LOC
- Seizures
- Death

<b>Serum Na</b>	<b>SIADH</b>	<b>DI</b>	<b>CSW</b>
<b>Serum Osmo</b>	low	elevated	low
<b>Urine Osmo</b>	high	low	low
<b>Urine Na</b>	elevated	low	elevated
<b>Volume status</b>	euvoolemia	depleted	depleted
<b>Urine output</b>	low to normal	high	high
<b>Therapies</b>	H2O restrictions Demeclocycline, Urea, lasix, rarely 3% NaCl	Liquids IVF(D5W,hyper) DDAVP vasopressin	3%, 6% NaCl Florinef

## Preventing Complications

### Bedside Swallow Screen

**BEDSIDE SWALLOW SCREEN**

Please initial the line to indicate patient's endpoint and chart results in electronic record. If an electronic record place mark on patient's chart.

If diet order and/or referral to Speech Therapy (Speech-Language Pathology (SLP)) is needed, please request SLP to order.

**Assist the patient with oral care prior to performing the swallow screen.**

Is patient able to swallow oral secretions?  
(Mark in blue circles on each screen to see how long!)  YES  NO

**POOR SWALLOW**

- ... No attempt to swallow
- ... Water runs out of mouth
- ... Coughing
- ... Choking/straining
- ... Wet gurgly voice
- ... Fat weakness (obedient appearance)
- ... Change in lung sounds
- ... Change in breathing
- ... Reddening of face
- ... Excessive
- ... Any other concern was not noted.

**POOR SWALLOW**

... Patient NPO  
... Refer to SLP

**ADAPTIVE SWALLOW**

... Good 1 teaspoon water

**ADAPTIVE SWALLOW**

... Good 2nd teaspoon water

**ADAPTIVE SWALLOW**

... Good half glass of water (at least 1.5oz)  
... Ask patient to "drink tomorrow"

**ADAPTIVE SWALLOW**

... Order "No Food or Full and Thin Liquid" diet for patients with adaptive disorders.  
... Order "Thin and Thin Liquid" diet for patients with poor disorders.  
... Do not mark check for problems, difficulty chewing, and bolus. Mark on top if difficulties are noted. If no problems, advance diet as tolerated.

REG Name: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

### DVT Prevention

- Hypercoag state
- Immobility

[www.thebraininstitute.com/research/\\_/022%20LIB%20PAPER.pdf](http://www.thebraininstitute.com/research/_/022%20LIB%20PAPER.pdf)



## Figuring Out Why

### Diagnostic Studies

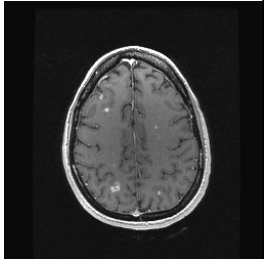
- CT scan / MRI
- Doppler / CTA / MRA / Angio
- Echocardiogram

### Lab Work

- Lipid panel
- HgA1C
- Hypercoag studies
- Tox panel

### Monitoring

- Telemetry
  - Inpatient
  - Outpatient



### Other Thoughts

- Cancer
- Hormones

## Optimum Outcome

### Rehab Services

- Physical therapy
- Occupational therapy
- Speech Language therapy
- Inpatient
- SNF
- Acute Rehab
- Outpatient

### Preventing Future Events

### Prevention

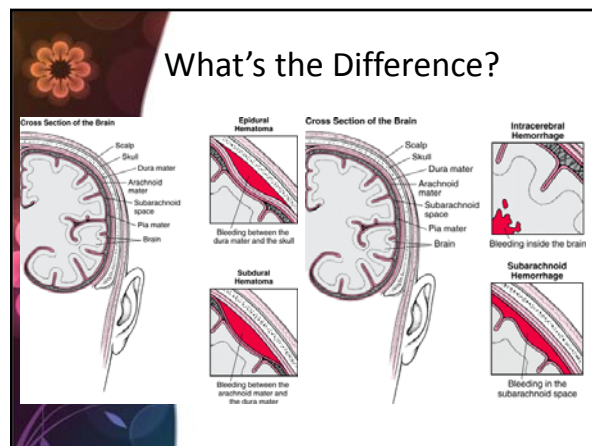
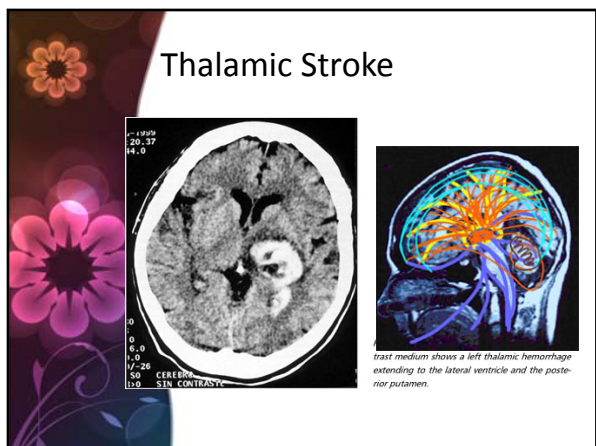
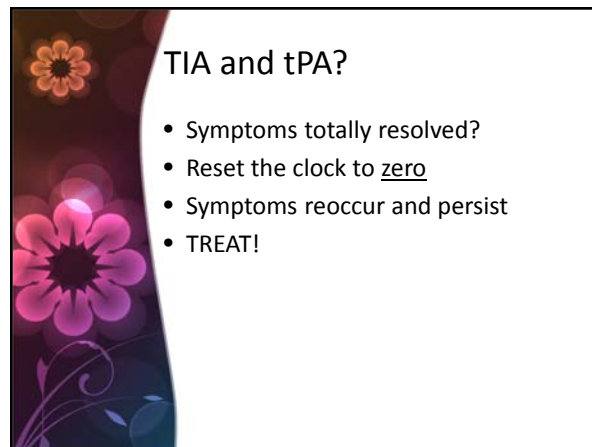
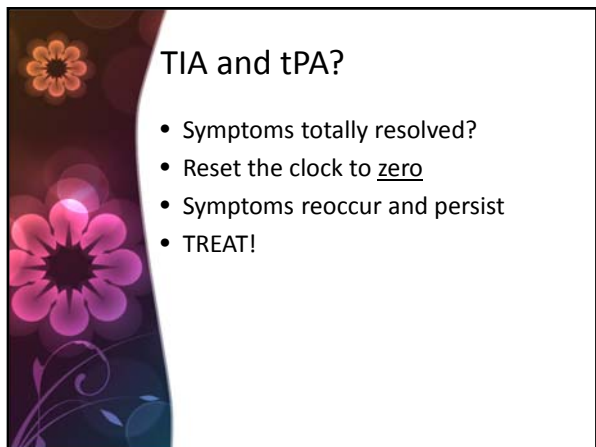
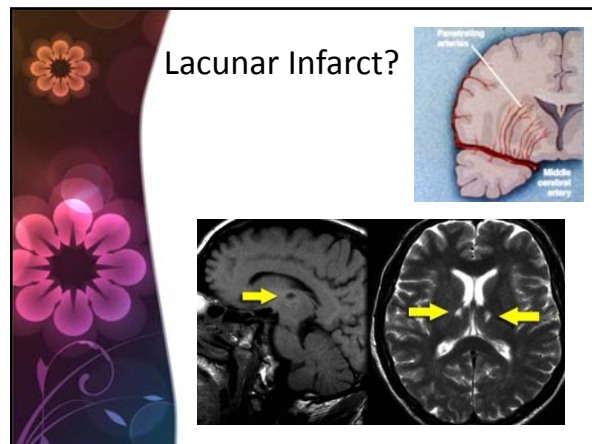
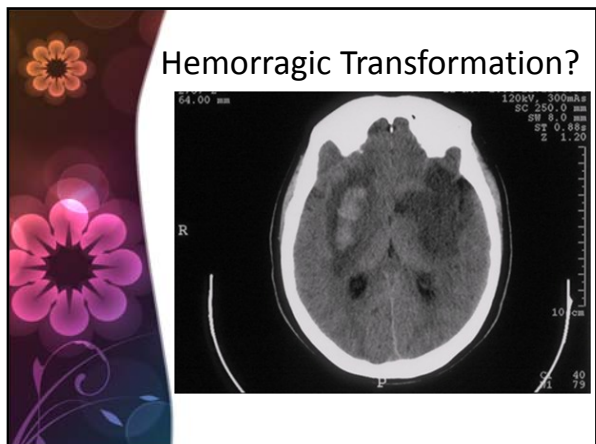
- Take medications
- Don't smoke
- Regular exercise
- Manage weight
- Alcohol in moderation
- Manage diabetes
- No illegal drugs
- No hormone therapy

### What the Heck?


### But the CT is negative?

- First 6- 12 hours - ischemia
- MRI will show infarct immediately

### Watershed Infarct?







**Acute Neurovascular RN (NVRN)  
Review Course and Exam**  
El Camino Hospital  
2500 Grant Road, Mountain View CA 94040

Review November 16 and 17, 2012 7:30am—4:00 pm  
Exam November 18, 2012 8:45am

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13.0 continuing nursing education contact hours will be awarded to full attendance, of which 2.25 are of pharmacology content. (A274-A251-0530-12)

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