



2025 Annual Stroke CBL

CROUSE HEALTH

Stroke Facts

- ▶ 5th leading cause of death
- ▶ Up to 80% are preventable
- ▶ 7 million stroke survivors in US
- ▶ TIA are warning signs prior to actual stroke
- ▶ 1 happens every 40 seconds
- ▶ Every 4 minutes someone dies
 - ▶ 40% in males
 - ▶ 60% in females
- ▶ Approx 795,000 Americans suffer a new or recurrent stroke each year
- ▶ Stroke is leading cause of disability
- ▶ 1 in 3 young adults do not know common stroke symptoms
- ▶ Cost \$100 billion annually
- ▶ STATS on Recovery
 - ▶ 10% recover completely
 - ▶ 25% minor impairments
 - ▶ 40% moderate to severe impairments
 - ▶ 10% require long term care
 - ▶ 15% of patients die shortly after

What is a Stroke?

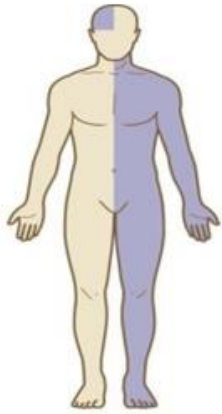


A brain injury caused when a blood vessel to the brain becomes blocked or bursts, cutting off blood flow and oxygen to the brain



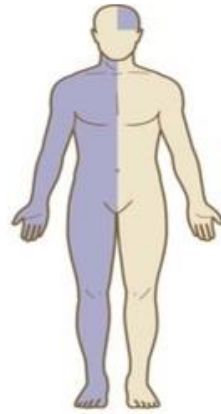
Types of Strokes

- **Ischemic** (Blockage) 87% - blocked blood vessel to brain
- **Hemorrhagic** (bleeding) 13% - burst / leaking blood vessel in the brain



Right-brain damage
(stroke on right side of the brain)

- Paralyzed left side: hemiplegia
- Left-sided neglect
- Spatial-perceptual deficits
- Tends to deny or minimize problems
- Rapid performance, short attention span
- Impulsive, safety problems
- Impaired judgment
- Impaired time concepts



Left-brain damage
(stroke on left side of the brain)

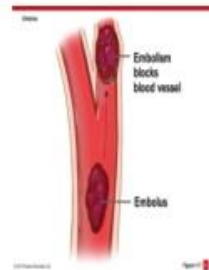
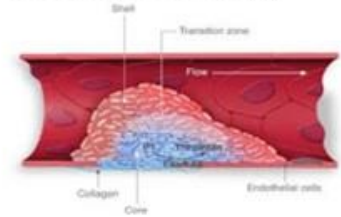
- Paralyzed right side: hemiplegia
- Impaired speech/language aphasias
- Impaired right/left discrimination
- Slow performance, cautious
- Aware of deficits: depression, anxiety
- Impaired comprehension related to language, math

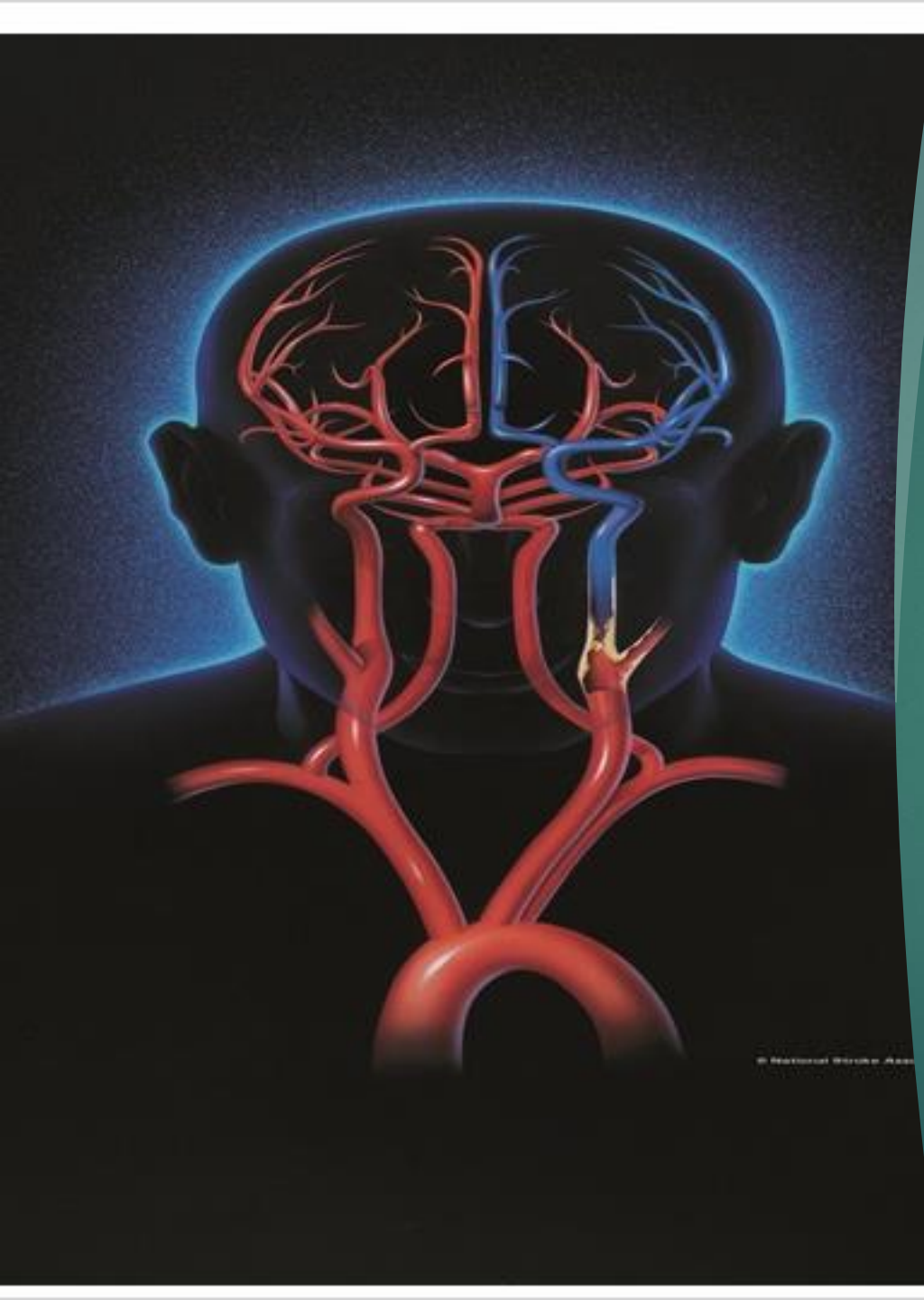


Ischemic Stroke – Causes?

Fatty deposits line the blood vessel wall

- Thrombus: A blood clot forms at the fatty deposit
- Embolus: A traveling particle gets stuck in a small vessel





Brain Attack- A call to action

- ▶ Most descriptive and realistic description of a stroke
- ▶ Should warrant same degree of emergency care as a heart attack
- ▶ Every minute matters- immediate response crucial. TIME is BRAIN.
- ▶ Call 911 immediately
- ▶ Treatment is available – some options most effective when administered in first 3 hours of symptom onset
- ▶ Receiving treatment early improves chances of little to no disability
- ▶ In US- it is 12-24 hours before average person gets to hospital
- ▶ RECOGNIZE symptoms of a stroke

Ischemic Stroke – How to Recognize it



Ischemic Stroke – Recognizing

- Confusion might be:
 - Aphasia-loss of ability to understand or express speech
 - Dysarthria-difficulty or unclear articulation of speech
- Strokes in the posterior circulation
 - Gait disturbance (imbalance while walking)
 - Vertigo
 - Nausea/vomiting
 - Blurry vision, partial loss of vision



Ischemic Stroke – Risk Factors

Same in Men & Women	Stronger in Women	Specific in Women
Age	High blood pressure	Pregnancy
Ethnicity	Atrial fib	Complications in pregnancy (ex. Preeclampsia, gestational diabetes)
History of heart disease	Diabetes	Oral contraceptive use
Smoking	Migraine with aura	Changes in hormonal status
Obesity/ diet	Metabolic syndrome	Postmenopausal hormone use
Physical inactivity		

- Know your risk factors and take control!



Ischemic Stroke - Prevention

- High Blood Pressure
 - Most common modifiable risk factor (for ischemic stroke and hemorrhagic strokes)
 - Women are more likely to be treated for their high blood pressure than men, but less likely to be controlled
- Prevention measures:
 - Take medications as prescribed
 - Decrease salt intake
 - Exercise
 - Maintain a healthy weight



Ischemic Stroke Prevention

- Atrial Fibrillation
 - Increases stroke risk by 4-5 x
 - 60% of people with a-fib over the age of 75 are women.



Lifestyle Changes

- Regular exercise (it has to work for YOU!)
- Limit alcohol intake (not more than 1 / day)
- No smoking
- Diet
 - HIGH in fruits, vegetables, grains, nuts, extra virgin olive oil
 - LOW in saturated fats



Oral Contraceptive Use

- Why does birth control increase your risk of stroke?
 - Older age (45-49 years)
 - Combined with smoking
 - Components of metabolic syndrome
 - History of blood clots (genetic factors)



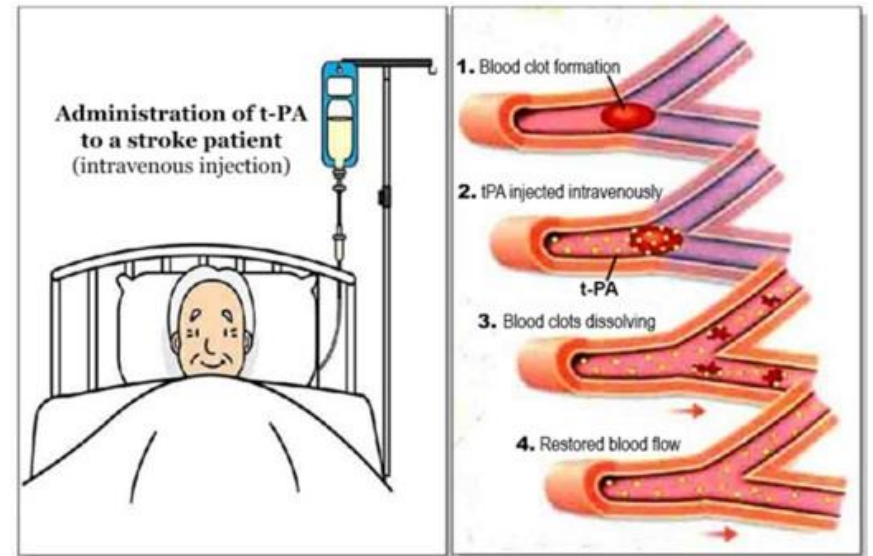
Pregnancy

- Pregnancy is a stroke risk (hypercoagulable state, venous-stasis)
 - More likely in 3rd trimester and first 6 weeks post-partum
- Pregnancy-related high blood pressure and associated complications (pre-eclampsia) is the leading cause for increased stroke risk
 - Obesity
 - > 40 years of age
 - History of high BP, diabetes, vascular disease
 - Family history of pregnancy related high blood pressure



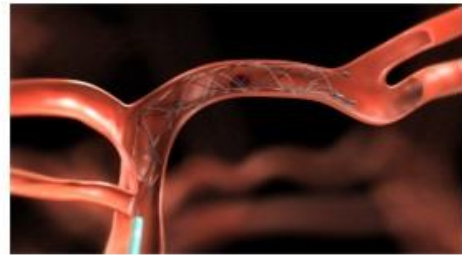
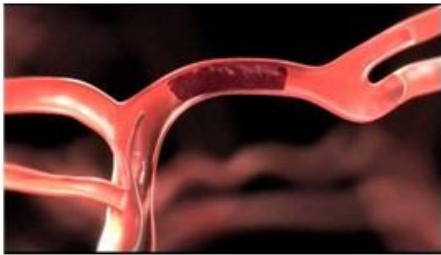
Treating Ischemic Stroke

- There are more acute treatment options than ever, but they are only available in short time windows.
- Clot-busting drug
 - IV t-PA/ IV Tenecteplase
- Endovascular therapy
 - Mechanical thrombectomy
- Rehabilitation



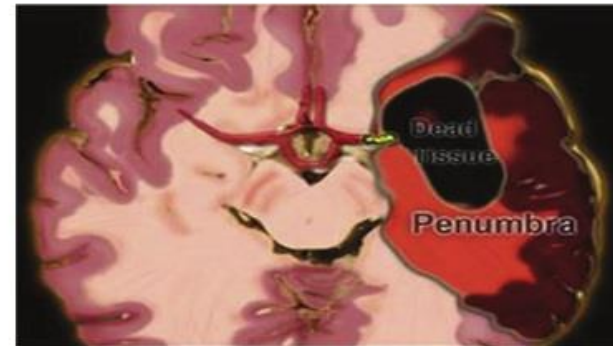
Endovascular Therapy:




- If patient meets certain criteria the Neuro Interventional Team has the capabilities to manually withdraw clots from the head and neck



Time is Brain!! – But why??

- The penumbra is an area of tissue that surrounds the infarct.
- Main goal of therapy in first few hours of ischemic stroke is to restore blood flow to the penumbra.

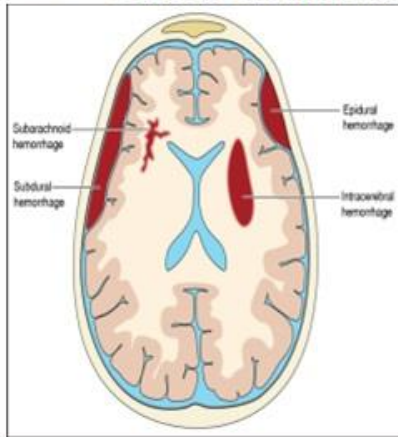


LEGEND	
	Normal brain tissues
	Penumbra region
	Dead tissue region

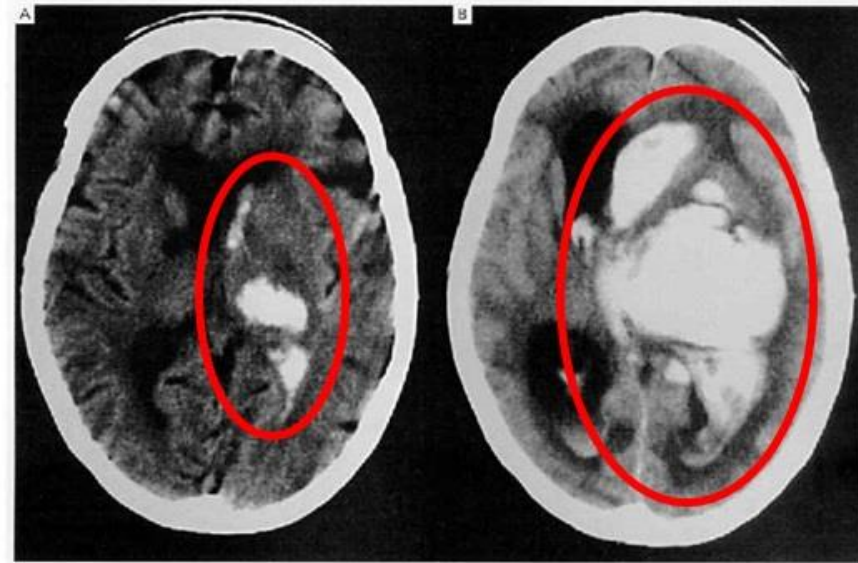


Hemorrhagic Stroke

- Accounts for ~13% of all strokes.
- 2 types
 - Intracranial hemorrhage
 - Subarachnoid hemorrhage



Intracerebral hemorrhage at 1 hour and 6 hours



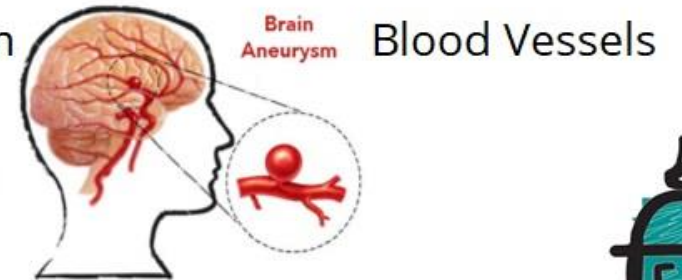
Hemorrhagic Stroke – How to Recognize it

- Symptoms may look similar to ischemic stroke
- Could also include:
 - Headache
 - Nausea/ vomiting
 - Decreased level of consciousness
 - Light intolerance
 - Neck stiffness / pain



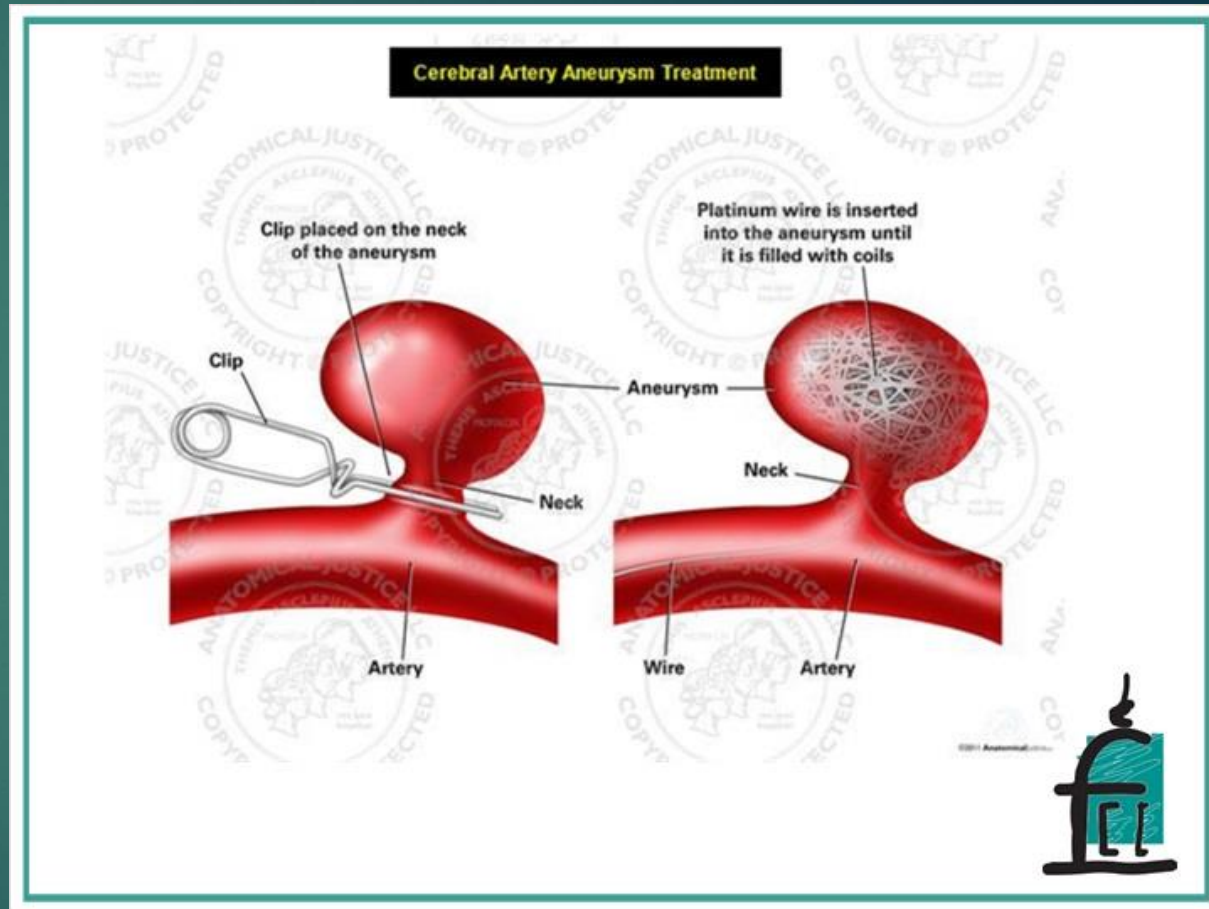
Hemorrhagic Stroke – Risk Factors and prevention

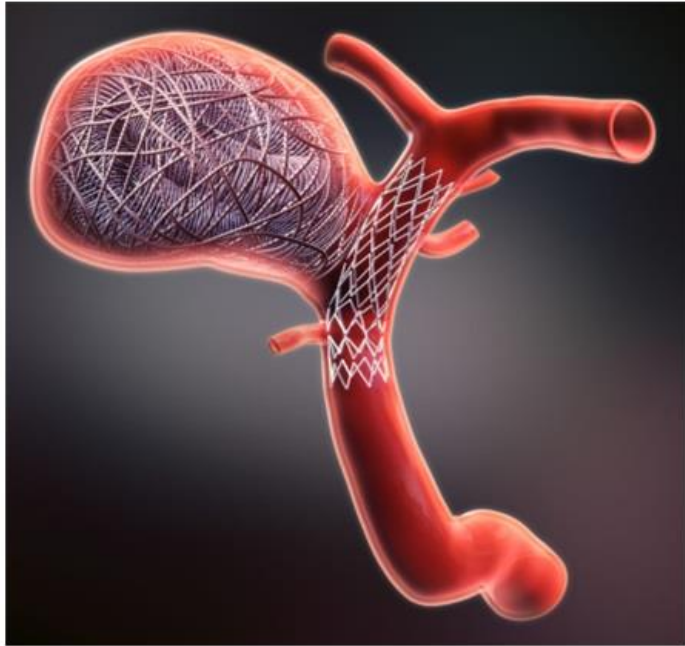
- High blood pressure is the number one risk factor for both ischemic and hemorrhagic stroke.
- Cigarette smoking
- AVM: Abnorm
- Aneurysm
- Illegal drugs
- Trauma



Hemorrhagic Stroke - Treatment

- Aggressively manage blood pressure (prevent rebleeding)
- AVM treatment
 - Excision-surgical removal
 - Embolization-injection of glue or other non-reactive liquid adhesive material into the AVM in order to block it off
- Aneurysm treatment
 - Clipping
 - Coiling





Thank you for reviewing Crouse Health Housewide Stroke Education