

# Stroke Risk and Treatment: Understanding your Options

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# What will we learn?

- How does a Stroke happen. What are the different types of Stroke?
- What are four major conditions or risk factors that increase your chances of having a stroke and what you can do to reduce your risk
- How is a Stroke treated? Why is time so important?

*(National Stroke Association Video  
are you street smart about stroke? )*

- <https://www.youtube.com/watch?v=nxwu9z1bhU0>

# Stroke Facts and Figures



- On average, one American dies from a stroke every **4 minutes**
- 30-50% have lifelong disability
- Stroke risk increases with age **BUT**, a stroke can occur at any age (including pediatrics)
- Stroke costs US estimated **\$34,000,000,000**

CDC: Stroke Facts. Retrieved from <http://www.cdc.gov/stroke/facts.htm>

# Has Stroke touched you?



- Have you had a Stroke or TIA?
- Are you a caregiver for a Stroke Survivor?
- Had a parent or family member who has had a Stroke?
- Did your doctor say you were at risk for Stroke?

# What is a Stroke?

- Stroke is referred to as **“brain attack.”**
- Stroke is a sudden **neurological deficit** caused by interruption of blood flow to the brain.
- Brain has blood vessels. Like a tree, big branches and small ones which carry nutrients. If larger blood vessels are blocked more of the brain can be damaged

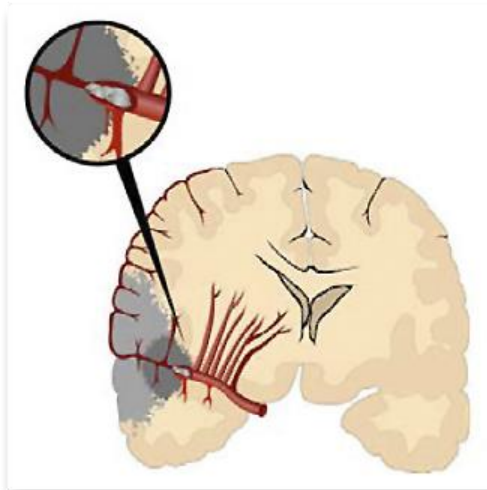


- Manifestations of the stroke depend on **which region** or extent of brain affected

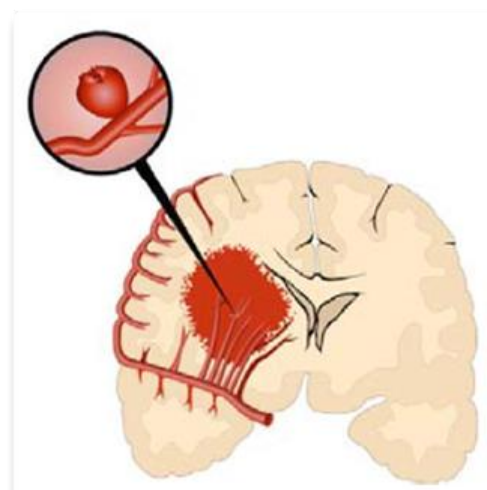
# Stroke Types

An interruption of blood flow to the brain which leads to brain injury.

**Ischemic= “blockage”: 85%**



**Hemorrhagic=“bleeding”: 15%**



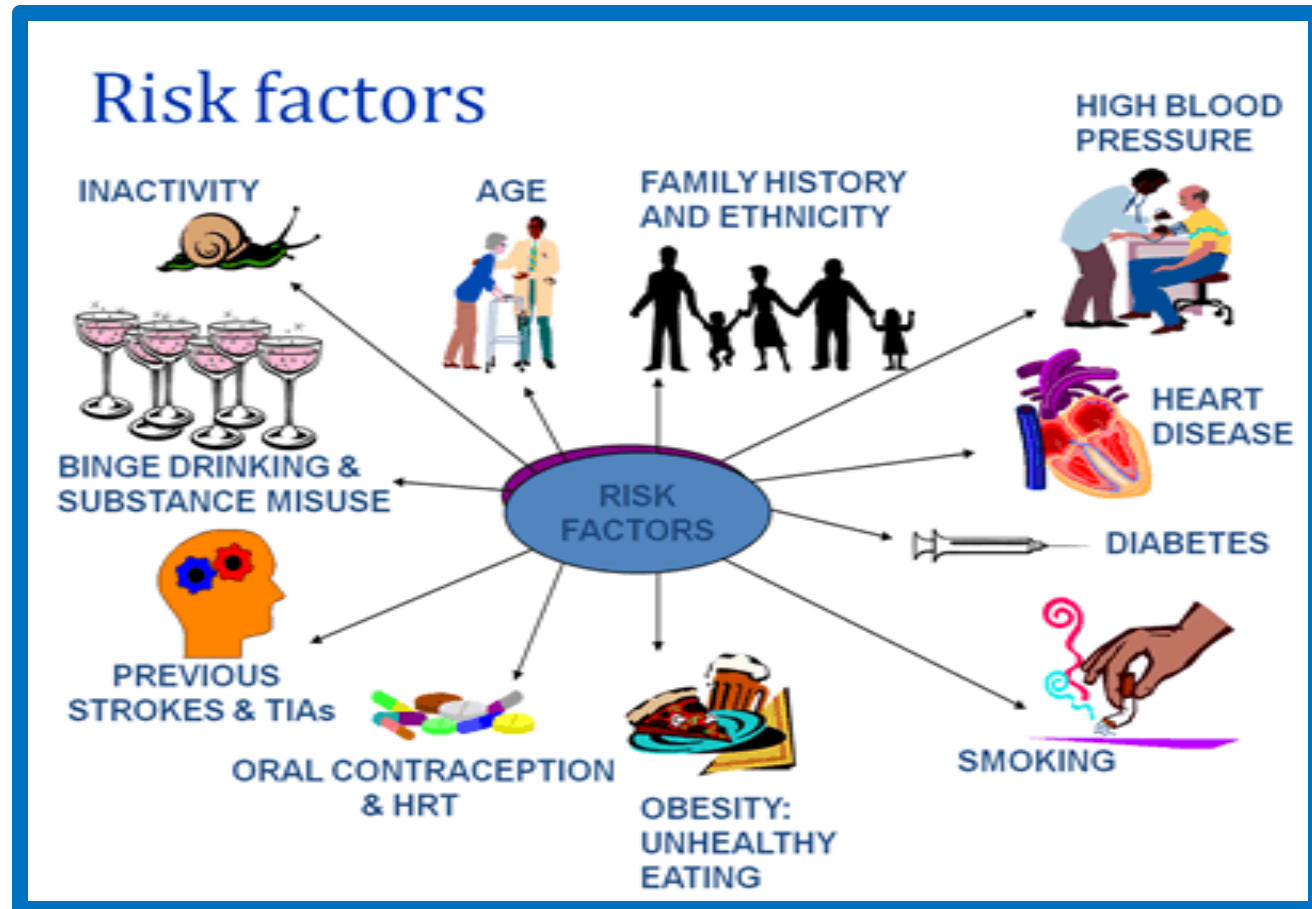
# TIA or “Mini Stroke”

- aka “Transient ischemic attack” (TIA)
- Warning sign of a future stroke – **up to 40% of TIA patients will have a future stroke**
- Symptoms of TIAs are the same as stroke
- TIA symptoms can resolve within minutes or hours
- TIA is a medical emergency!!!!





# What puts me at risk?



# Types of Risk Factors

## Non Modifiable

- Age
- Ethnicity
- Race
- Family History
- Previous Stroke/TIA

## Modifiable: Can Change



Smoking



Alcohol and Drug  
Misuse



Obesity and Unhealthy  
Eating

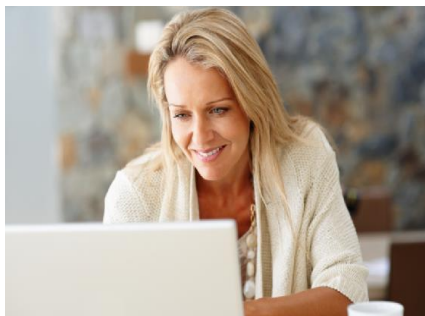


High Blood Pressure



Heart Disease

# Women: Unique Stroke Risk



- ✓ High Blood Pressure-  
more likely
- ✓ Pregnancy
- ✓ Oral Contraceptive  
Use
- ✓ Post Menopausal  
Hormones
- ✓ Migraines
- ✓ Depression and  
Stress



# What can we do?



Your Doctor/Provider and You

# Stroke and High Blood Pressure: Lower it!

- Symptoms: dizziness, facial flushing, nervousness, sweating, difficulty sleeping. Headaches only when BP is very high or hypertensive crisis



- Get checked!
- Medications for  $>140/90$ 
  - Take your meds

# Stroke and High Blood Pressure

- **LEADING CAUSE** of all Strokes
- “Silent Killer” no symptoms
- **High Impact Condition:** all over the body
- **3 of 4 1<sup>st</sup> time Strokes** have high BP

- **Biggest Bang for your Stroke Buck !!**

[www.heart.org](http://www.heart.org)



## What do your blood pressure numbers mean?

The only way to know (diagnose) if you have **high blood pressure** (HBP or hypertension) is to **have your blood pressure tested**. Understanding your blood pressure numbers is key to controlling high blood pressure.

## Healthy and unhealthy blood pressure ranges

Learn what's considered normal, as recommended by the American Heart Association.

BLOOD PRESSURE CATEGORY	SYSTOLIC mm Hg (upper number)		DIASTOLIC mm Hg (lower number)
NORMAL	LESS THAN 120	and	LESS THAN 80
ELEVATED	120 – 129	and	LESS THAN 80
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 1	130 – 139	or	80 – 89
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 2	140 OR HIGHER	or	90 OR HIGHER
<b>HYPERTENSIVE CRISIS</b> (consult your doctor immediately)	HIGHER THAN 180	and/or	HIGHER THAN 120

# Physical Inactivity: Move it! and Weight Lose it



Any weight loss will reduce strain  
on the heart

Do what **YOU** can do! Not  
strenuous!!

Anything in moderation and  
regularly is the ticket!



# Exercise- Move it! AHA Recommendations

- 150 minutes **Moderate** exercise each week




## 5 – 30 minute sessions

(walking dog, washing car, raking leaves dancing for x min)

- 75 minutes **Vigorous** exercise each week



- 3--- 25 minute sessions (running, race walking, swimming, )



# Exercise: What Counts?

## Does not have to be ALL or NOTHING.....

- Walk the Dog or Walk to a Destination
- Walk your child/grandchild: spice it up! scavenger hunt, new parks, Mall walk – Club
- Join a team
- Combine with TV time: Jog in place, or use treadmill for a 30 min during your favorite show
- Take the stairs
- Dance/Zumba/Ballroom
- Water Aerobics
- Music while doing chores ( Weed, dust, sweep, vacuum)
- Seasonal activities: ice skating in winter, biking in summer
- Walk during lunch breaks at work, Desk exercises

Do it when you are most energetic

Schedule it like an appointment or meeting

Ask a partner to go with you

Keep a gym bag packed or lay out clothes night before

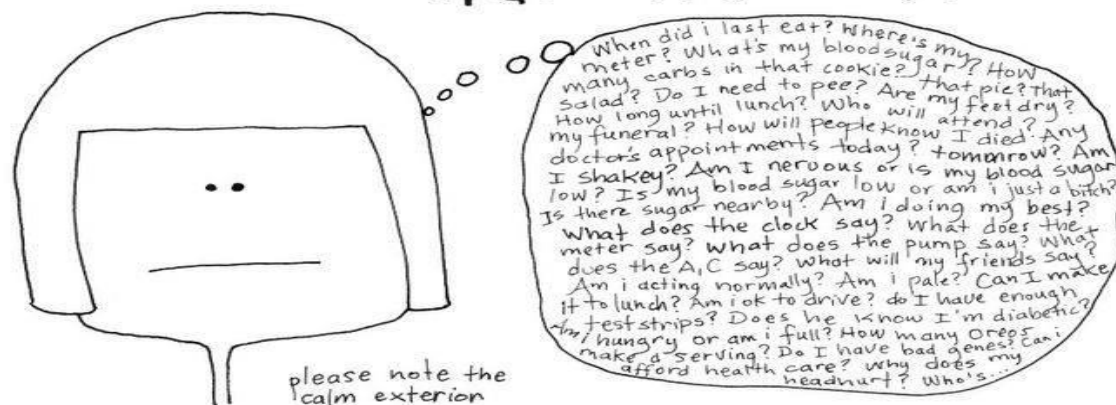
Start Triggers – reminders—a time of day, place, or cue—that kick off an automatic reaction (sneakers by the bed)

Try a mindfulness approach – pay attention to your body



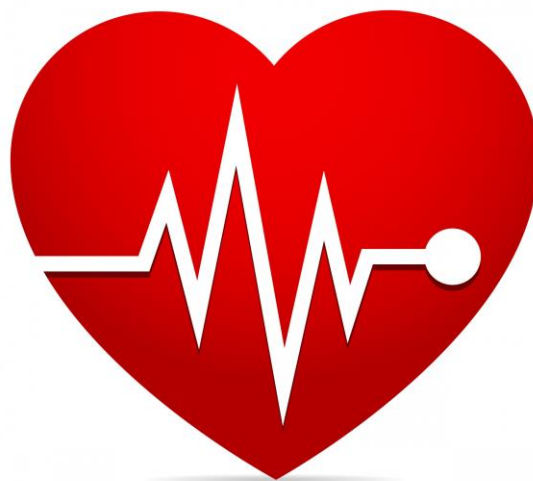
# Diabetes: Manage It

what goes on in a diabetic's head:



**See your MD**  
**Take Meds as directed**  
**Check Blood Sugar**  
**Meet with Nutritionist/Get Help**

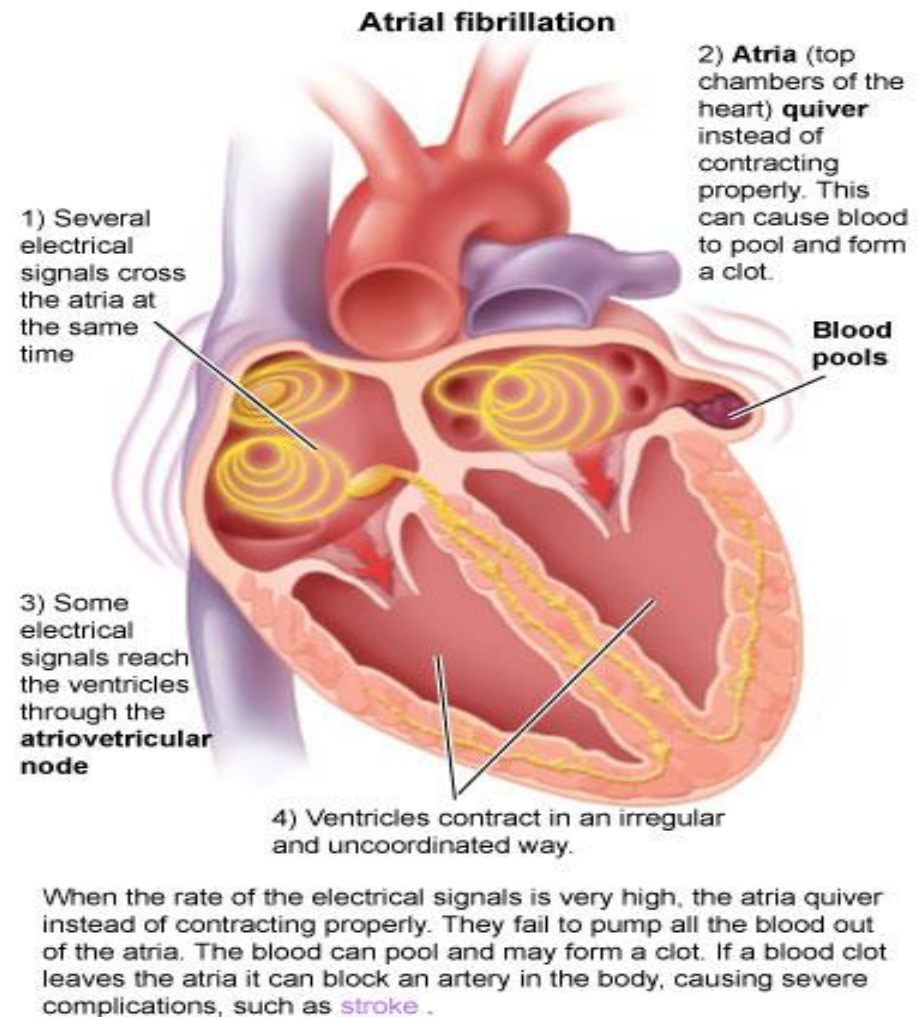
# Heart Risk: Treat it



**See your MD**  
**Take Meds as directed**  
**Have tests as ordered**  
**You have one heart !**

# Atrial Fibrillation (Afib) Special risk

- Atrial fibrillation is a type of heart rhythm disorder called an **'arrhythmia'**
- Atrial fibrillation is a condition that occurs when there is a fault in the electric activity in the heart muscle, causing the heart to beat irregularly and in an uncoordinated way.



# Afib-Stroke Connection:

- 15% of Strokes are due to **untreated** Afib per American Heart/Stroke Assoc.
- Afib increases your chances of a Stroke **5 times** that of the general population
- Uncontrolled High Blood Pressure is the most common cause of Afib **and** the highest risk factor for Stroke.



Afib is more common in **women** than men after age 75. Women over 75 should be screened for Afib

# How Common is Afib?

- Most common heart arrhythmia
- More than 2.7 million Americans have Atrial Fib
- Risk increases with age
- Number of people with A Fib doubles every decade of life after age 50
- 1 in 200 people between 50 and 59 have A Fib
- 1 in 10 people over 80 years old have A Fib





# What are the symptoms of Afib?

- FAST, pounding, irregular heart beat
- Shortness of breath
- Tiredness
- Dizziness or fainting
- Chest pain or tightness
- **YOU MAY NOT HAVE ANY SYMPTOMS!**



# Treatment Goals for Afib



- Maintain Normal Sinus Rhythm (regular, steady)
  - Rate Control
  - Decrease Symptoms



# Signs of Stroke

- Sudden numbness or weakness, especially on one side of the body
- Sudden confusion, trouble speaking or understanding
- Sudden trouble seeing
- Sudden dizziness, trouble walking or loss of balance
- Sudden, severe headache



# Think “FAST”

## SPOT A STROKE



Stroke Warning Signs and Symptoms

# What Next? Panic?

- **NO!!! Call 911**
- Don't try to bring the person yourself
- EMS communicates with the hospital and can help if symptoms worsen or change
- Do not ignore the symptoms even if they go away!!



# What is the rush? Why is time so important when you are having a Stroke?



“When a stroke is happening, **every minute 1.9 million neurons**, 14 billion synapses, and 12 km (7.5 miles) of myelinated fibers **are destroyed**.

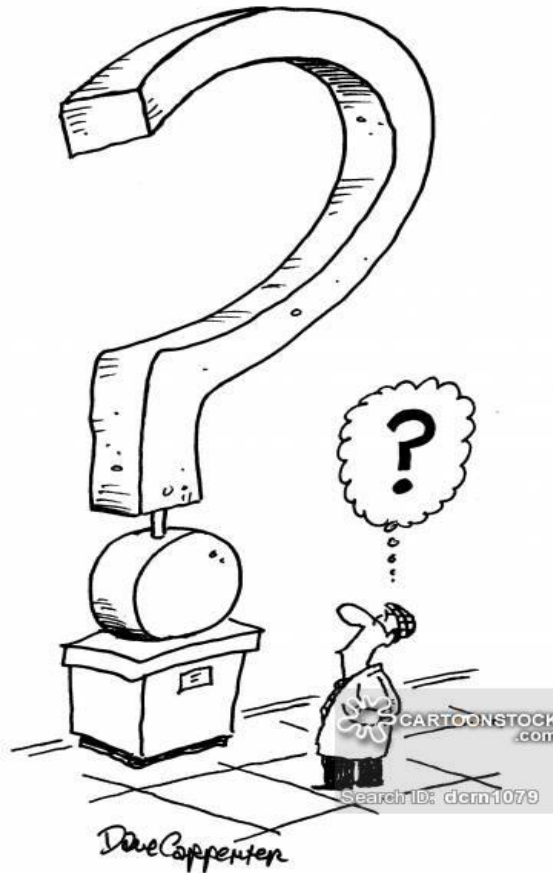
Compared with the normal rate of neuron loss in brain aging, the **ischemic brain ages 3.6 years each hour** without treatment.”

# Not all strokes are created equal...

How can you help the Stroke doctor?

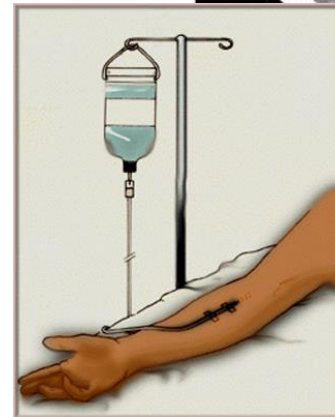
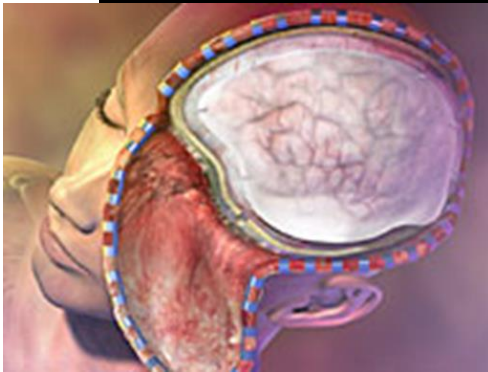
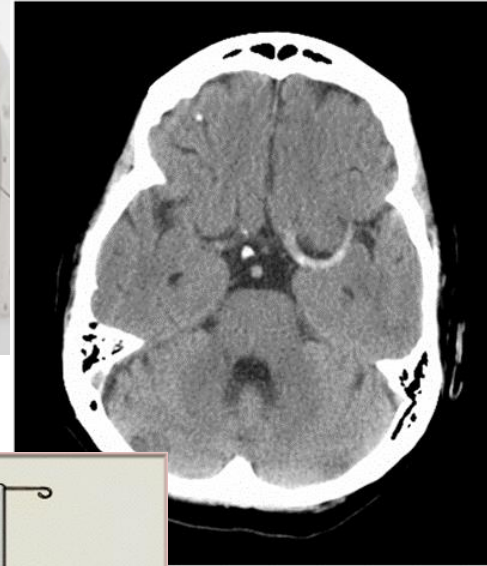
Last Known Well or Normal ?

Symptoms Started?





# CT Scan first: EKG of the brain



# Stroke Treatment Goal: Time is brain.

- **tPA (Alteplase)** “Clot buster” remains the gold standard for stroke treatment
  - Approved for treatment in 1995
  - Very strict window of treatment
    - Administer within **3 hours** of last known well (LKW)
    - Special cases tPA can be administered up to 4.5 hours after LKW
    - **Works better the faster you give it** and this faster treatment leads to better outcomes \*

\* <http://www.massgeneral.org/about/newsarticle.aspx?id=5035>

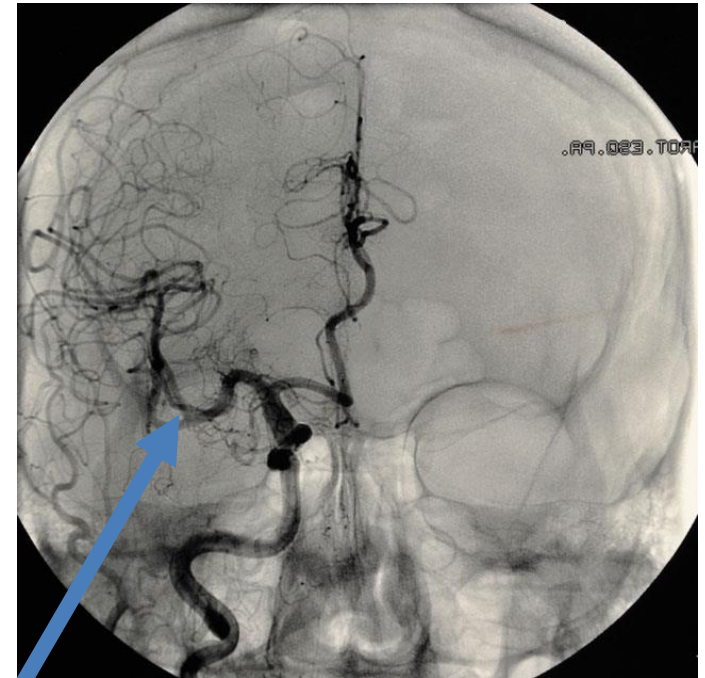
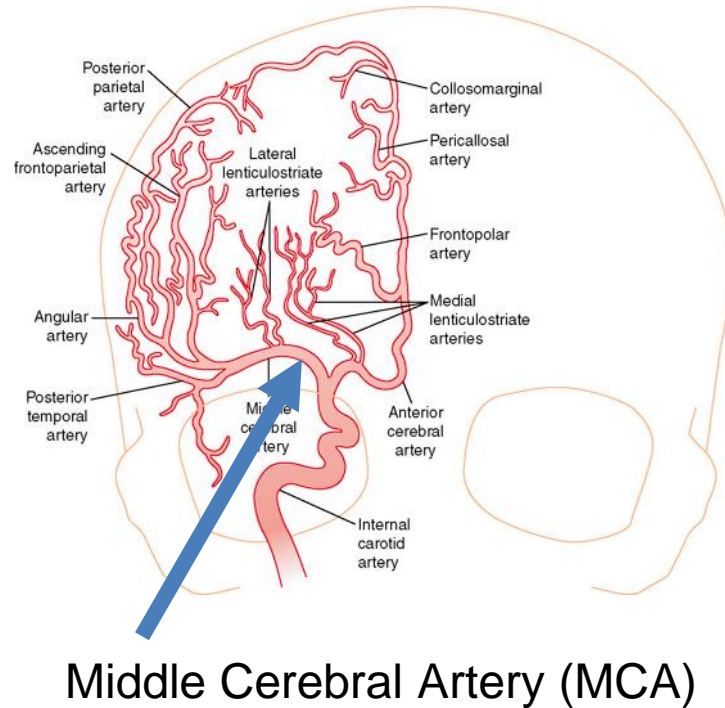
<http://www.strokeassociation.org/STROKEORG/>

AboutStroke/Treatment/Stroke-Treatments



# Severe Ischemic Stroke

## Large Vessel (Artery) Occlusion (LVO): “MI” of the brain



Blocked MCA



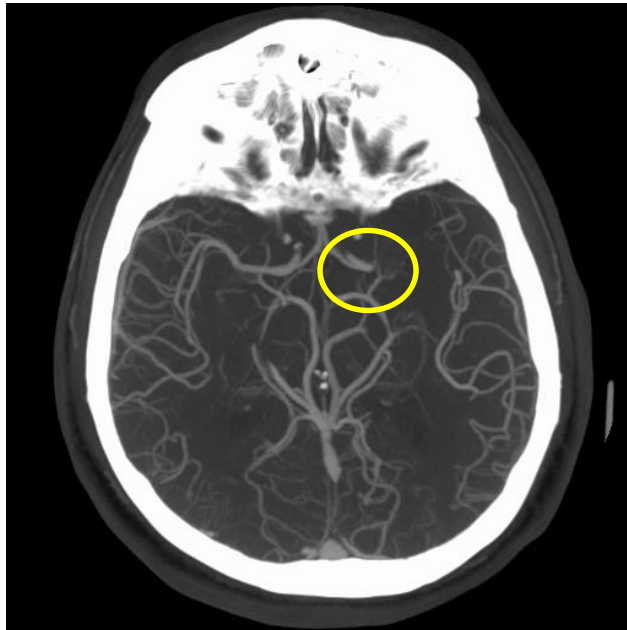
# CTA/CTP in Ischemic Stroke

- **CT-Angiogram**
  - IV Contrast allows for visualization of blood flow and potential dysfunction
  - Can identify blockage here, if present
- **CT-Perfusion**
  - Identifies tissue at risk
    - What tissue is salvageable, and what is not?
    - Helps the MD decide

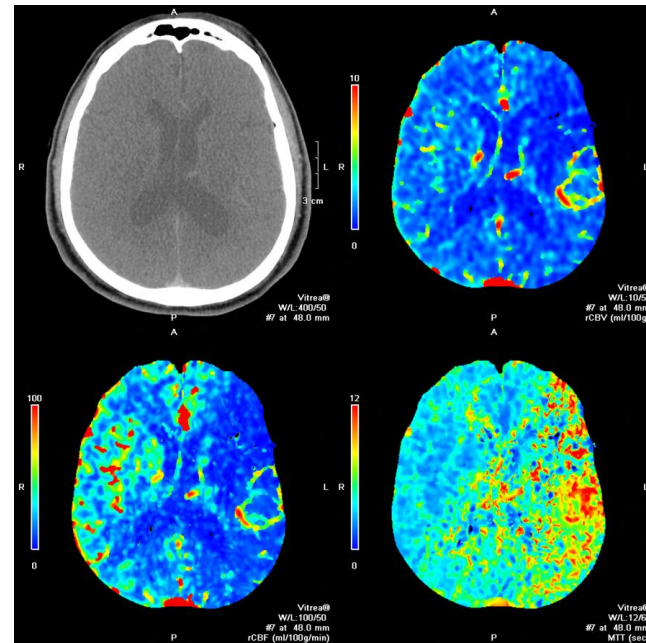


# CTA/CTP in ischemic stroke

*"Picture is worth a thousand words"*



CT Angiogram (CTA)



CT Perfusion (CTP)

# Endovascular Therapy (Neuro Intervention) “Clot Retrieval” : When?

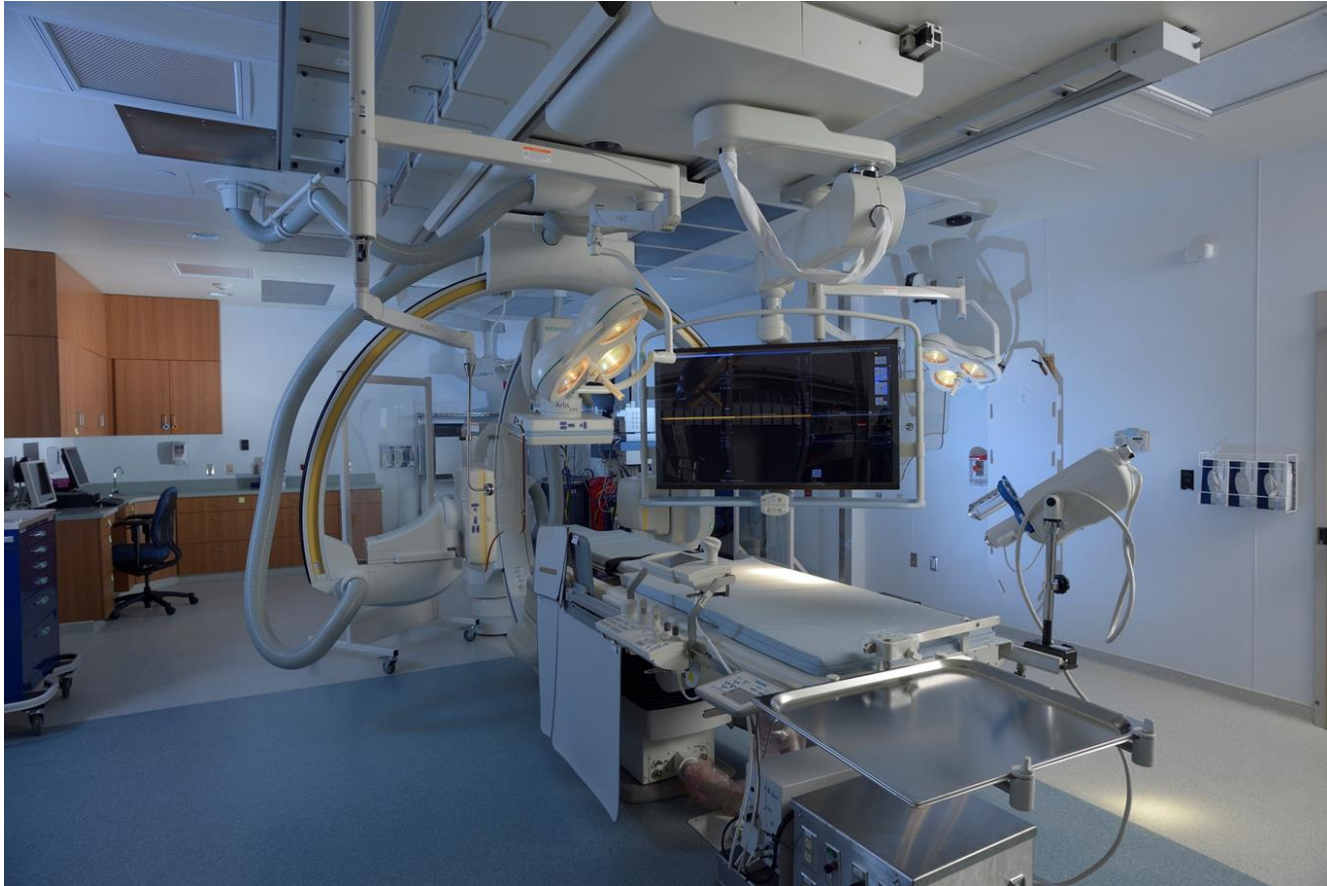
Sooner the better, but now there are options.....



2018 AHA ASA Guidelines recommend considering treatment for up to 16 or 24 hours from Last known well

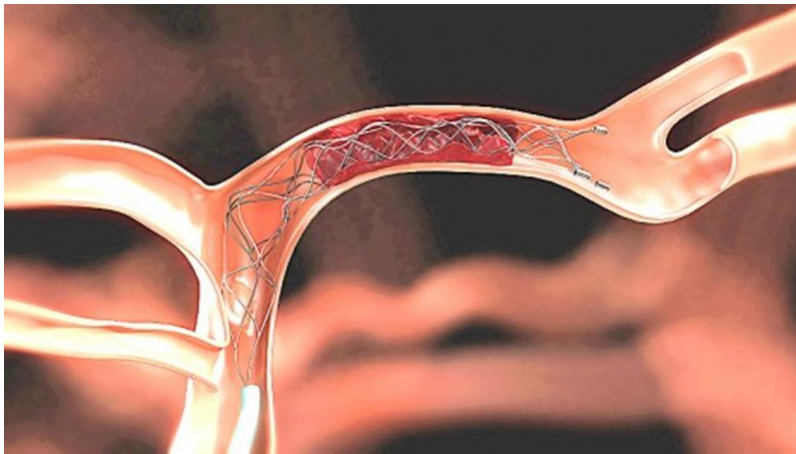
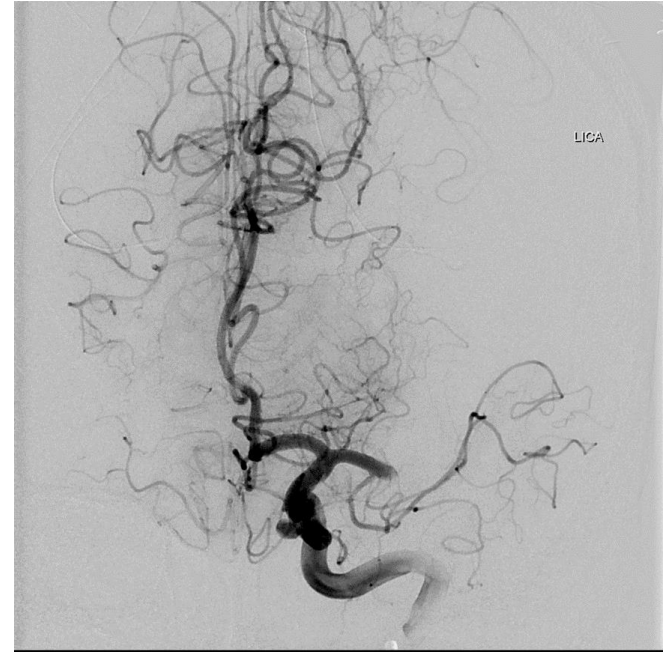
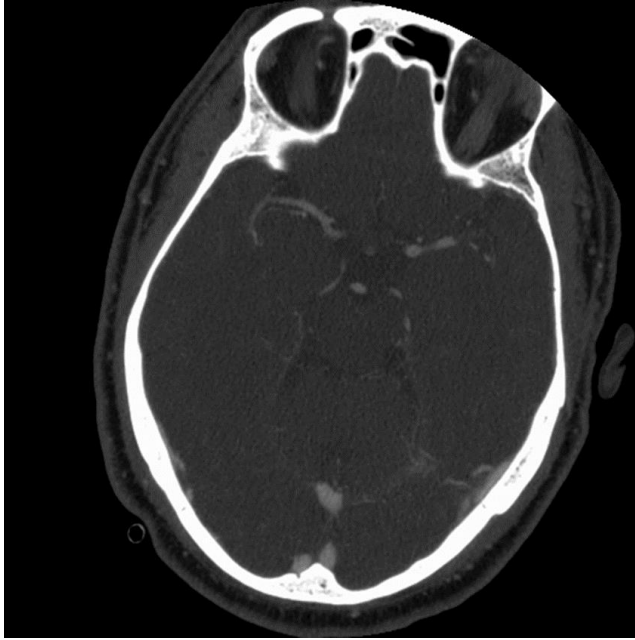


# Endovascular Therapy (Neuro Intervention) “Clot Retrieval”





# Retrieval of clot



# CNY Stroke Support Group

- Meets monthly- third Monday of every month
- Upstate Healthlinks Suite–Rt 298 East Syracuse off Carrier Circle
- All Stroke Survivors and Caregivers welcome not just Upstate patients



# What is a Comprehensive Stroke Center?

- Certified by DNV Healthcare
- Cares for ALL types of stroke patients
- 24/7 access to endovascular procedures
- 24/7 on site neurosurgical availability
- Three levels of specialized neuroscience nursing care
  - Neuro ICU
  - Neuro Step-down
  - Neuro floor
- Multidisciplinary approach to stroke care across the continuum of the disease process
- Catheter based therapy for patients beyond the tPA window.
- Only 5 Comprehensive Stroke Centers in NYS



# Poll the Audience.....

- Name one type of Stroke
- What is the most important risk factor that when controlled is the best at lowering your overall risk for Stroke?
- What are 2 ways Stroke is treated?
- How many can tell me what FAST stands for?



# Pass the Word about Stroke!

- Tell others about **F-A-S-T**
- Friends, Family, Colleagues, Church Groups
- Talk it up!!
- THANK YOU.....



# References

- Atrial Fibrillation know your treatment options presentation by E. Ohern, RN and D. Walborn, RN Feb 2016.
- [Www.StopAFib.org](http://www.StopAFib.org)
- [Www.afibmatters.org/](http://www.afibmatters.org/)
- [Www.Medtronic.com](http://www.Medtronic.com)
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