

Alan Zacharias, M.D
Associated Neurologists of Boulder Community Health
303 415-8800
azacharias@bch.org





## Symptoms of Stroke

- FAST
  - Face, Arm, Speech, Time
- Any acute change in function should be considered a stroke until proven otherwise
- Never wait to see if it will go away!
  - Time is brain
  - You need to act on symptoms to potentially save yourself or a loved one from permanent impairment

## Unique symptoms for women

- » Loss of consciousness
- » Generalized weakness
- » Confusion/agitation
- » Shortness of breath
- » Vomiting, hallucinations, pain, seizures, hiccups

## Other unique aspects

» More likely to live alone, spend long time in a care facility and have worse outcomes

#### **Definition**

- Loss of blood flow (ischemic)
  - localized clot or a clot from a distant site (embolism)
  - 85%
- Bleeding (hemorrhagic)
  - ruptured blood vessel
  - 15%



### **Examination**

- » Physical and Neurologic exam
- » We are gathering findings that help us to determine what has occurred and where
- » NIHSS-a scale to estimate severity and guide our treatment



## **Testing**

- » CT scan to look at brain and blood vessels
- » MRI
- » Labs
- » EKG
- » Chest x-ray



#### **Treatment**

- » Acute treatment
- » Long-term treatment



### **Acute Treatment**

- » Tissue plasminogen activator (t-PA)
- » Aspirin
- » Endovascular procedures procedures



## Long-term Treatment

- » Blood thinner options
  - » Aspirin
  - » Plavix
  - » Coumadin
  - » Heparin-like products



# Other Treatments and Risk Factor Modification

- » Cholesterol
- » Blood pressure
- » Hormones and oral contraceptives
- » Blood Sugar
- » Diet



#### More risk factors

- » Migraine
- » Heart disease
- » Age
- » Pregnancy



## Oral contraceptives

- » The pill was introduced in 1960
- » Prior age limit was 35 (smokers) and 40 (nonsmokers)
- » 1989 no limit up to menopause in healthy nonsmokers
- » use low dose (less than 50mcg) estrogen
- » Progestin only no increase stoke risk

#### **OC Stroke Risk**

- » 11 per 100,000
- » Treating 24,000 women leads to one additional stroke per year
- » Similar risks with patch or ring
- » Must weigh risk in setting of migraine with aura, especially after age 35

## Menopausal Hormone Therapy

- » No increase risk of bleeding strokes
- » Mild increase risk of stroke (0.15/100 vs 0.13/100)
- » MHT benefits outweigh risk in women less than 60 y/o or less than 10 yrs from menopause
- » Requires review with gynecologist

#### Resources

- » American Stroke and Heart Association
- » National Institutes of Health
- » National Stroke Association
- » American College of Obstetricians and Gynecologists
- » Up To Date
- » womenshealth.gov