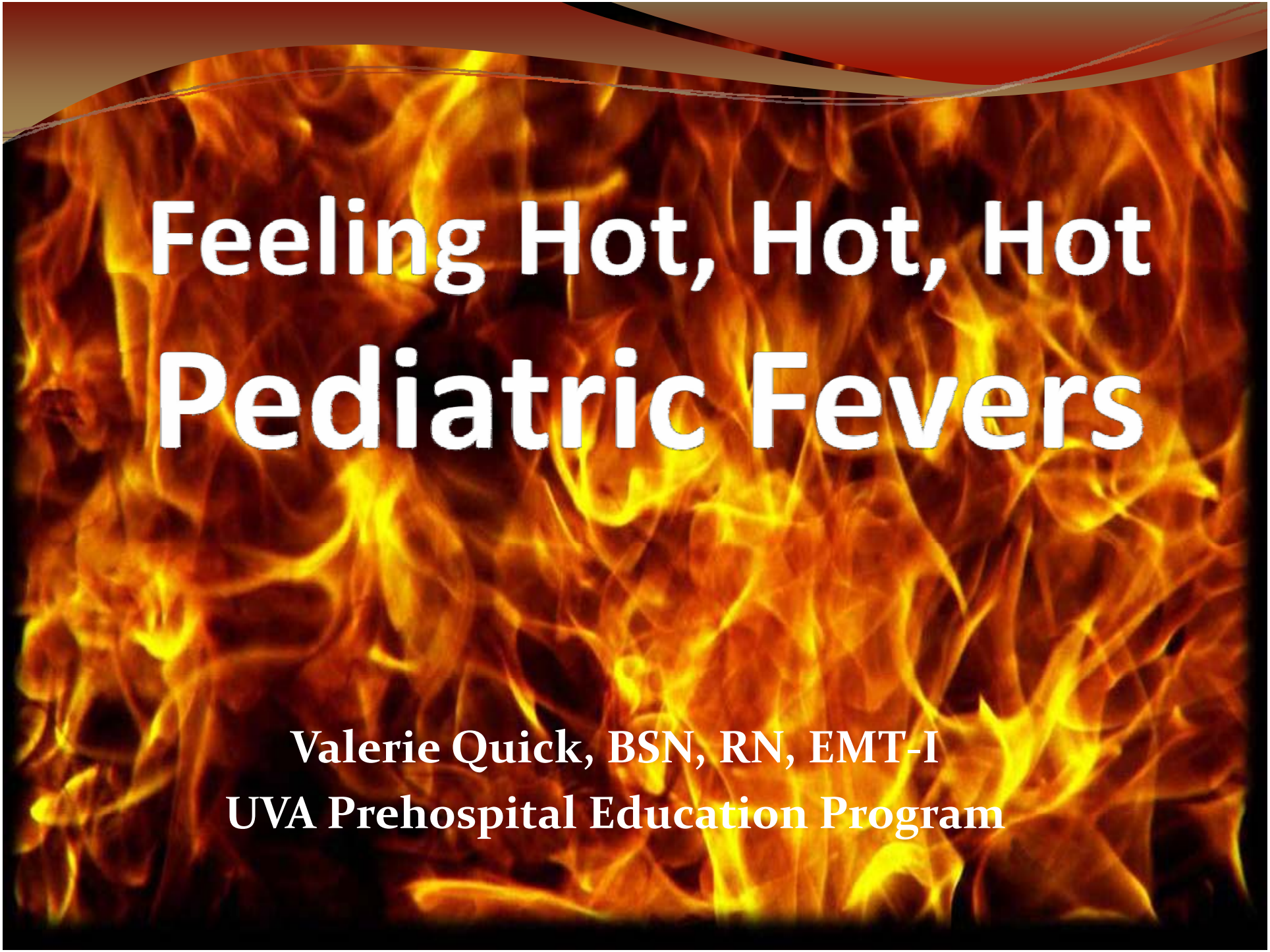

Feeling Hot, Hot, Hot
Pediatric Fevers
Valerie Quick, BSN, RN, EMT-I
UVA Prehospital Education Program

"Give me a chance to create a fever and I will cure any disease"

Parmenides – 540 BC


Objectives
Define fever and etiology
Categorize high risk categories of febrile illnesses
Address myths commonly held by providers and parents
Discuss fever relationship in seizures
Discuss assessments for children with febrile illnesses
Discuss treatments for febrile illnesses

Fever is…

- Scary to parents and providers
- Uncomfortable
- Inconvenient
- Feared as something bad or sign of something worse

Fever is…

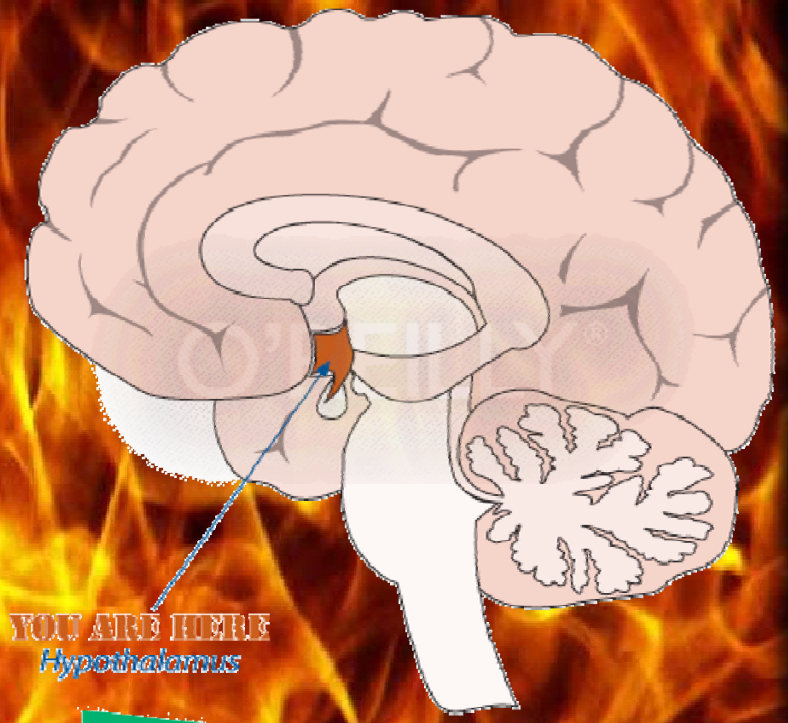
- Rarely dangerous
- Good in most cases
- A normal response to illness
- Your way to get stronger

The Good Side of a Fever

- Vital defense against infection
  - Cancer treatment?
- Kills germs
- Increases white blood cell mobility
- Shortens illness
- Reduce spread of infection to others
- Potentiates antibiotics

Body Temperature

- Regulated by hypothalamus
  - Thermostat – "set point"
  - The 4 "Fs"
    - Fearing, fighting, feeding and…
- Normal Average - 98.6°
- Circadian rhythm
  - Lowest in morning
  - Highest at night



What is a Fever?

- AKA: Pyrexia
- It is a SIGN!
- Rarely goes above 106-107°
- A neurochemical response to a pyrogen
  - Immune system response
  - Fear, anxiety, sleep, hungry and….mating

Why Do We Get Sick?


Bacterial
Ear Infections
Viral
Common Cold
UTI
Strep
Sepsis
Enteritis
RSV
E.Coli
Influenza
Measles
Mumps
Rubella
Staph/MRSA
Meningitis
HFM
Whooping Cough
Pneumonia
Fifth's Disease
Hepatitis
Appendicitis
Epiglottis
Croup
Mono

Symptoms Accompanying Fever

- Aches
- Rigors (the shakes)
- Feeling hot
- Feeling cold
- Fatigue
- Loss of appetite
- Cranky, irritable

Temperature

- Tactile vs Thermometer
- THE NUMBER

99° 101° 103° 105° ????

100.4°F (38°C)

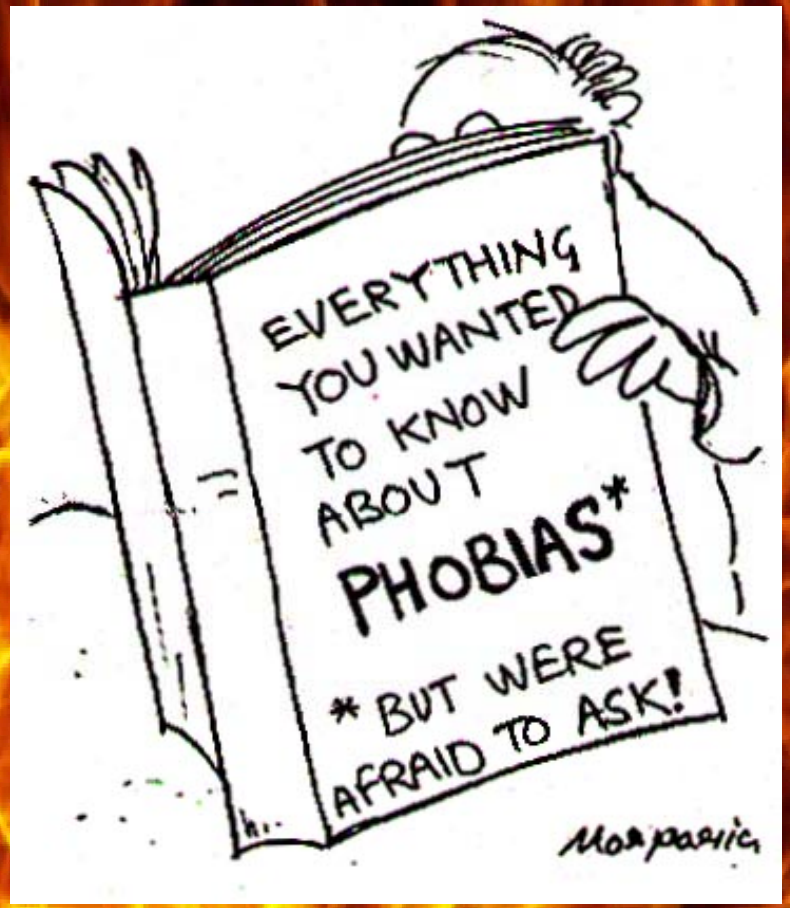
- No one number means anything
  - PEDIATRIC ASSESSMENT TRIANGLE
- Pyrexia vs Hyperthermia

Kids and Fever

- Immature brain
  - Hypothalumus
- Immature immune system
- Daycare vs At-Home

Fever Phobias

- The higher the number, the worse the disease.
- It's going to destroy brain cells, cause brain damage, decrease the IQ…
- It's going to cause a seizure.
- A little fever gets a little Tylenol.
- Cooling.



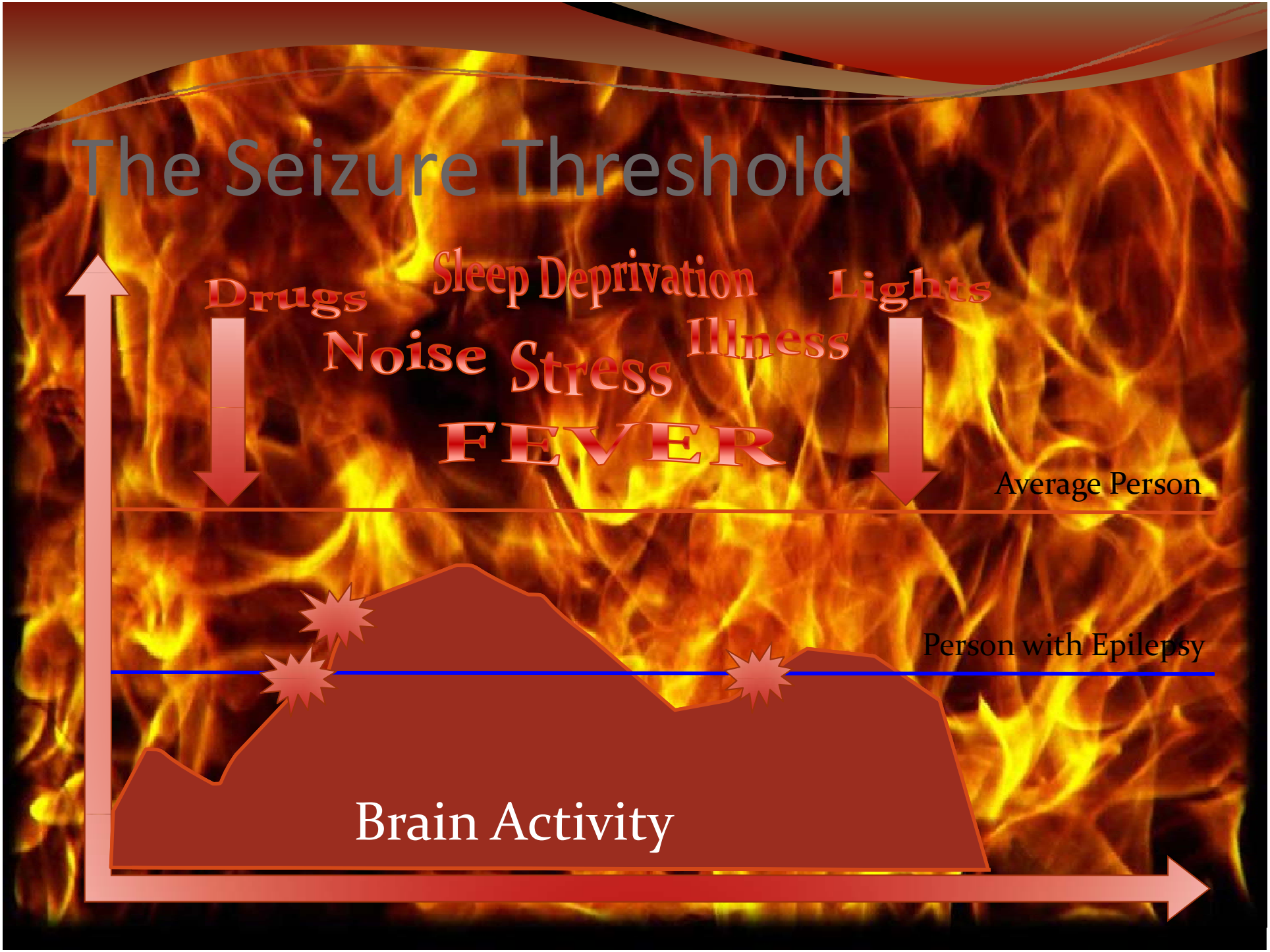
Risky Groups

- Newborn Babies
  - < 6 weeks
- Dehydration

- Chronic Steroid Use
- Immuno-compromised
  - HIV
  - Cancer
  - Transplant
  - Cystic Fibrosis
  - Diabetes
  - Sickle Cell
  - Congenital Heart Abnormalities

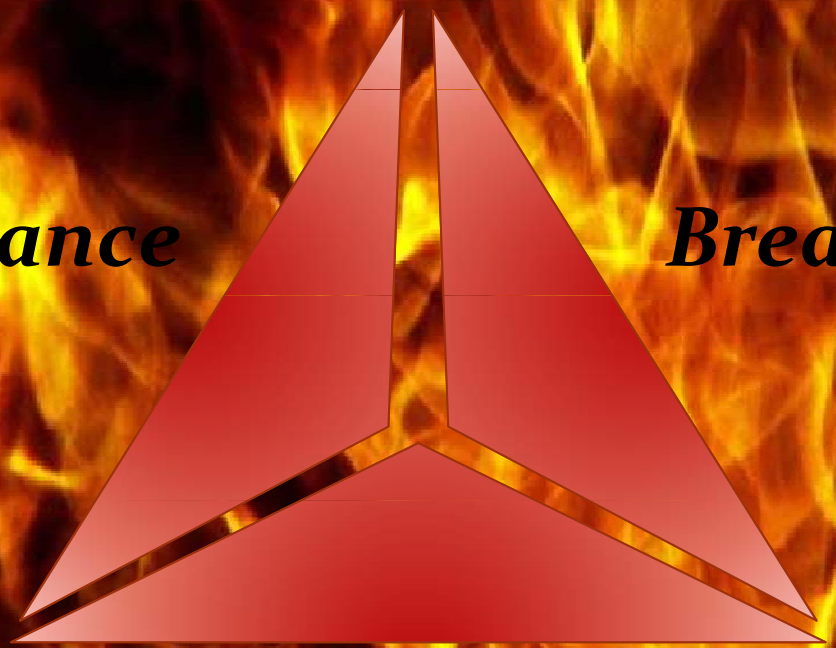
Febrile Seizures

- Frightening for all involved
- Usually less than one minute in duration
- Convulsion triggered by a fever
  - Height or rise???
- Occurs between 6 month-5 years of age
  - Average age around 24 months
- Boys > girls
- 1/3 will reoccur


The Seizure Threshold
Drugs
Sleep Deprivation
Lights
Noise
Stress
Illness
FEVER
Average Person
Person with Epilepsy
Brain Activity

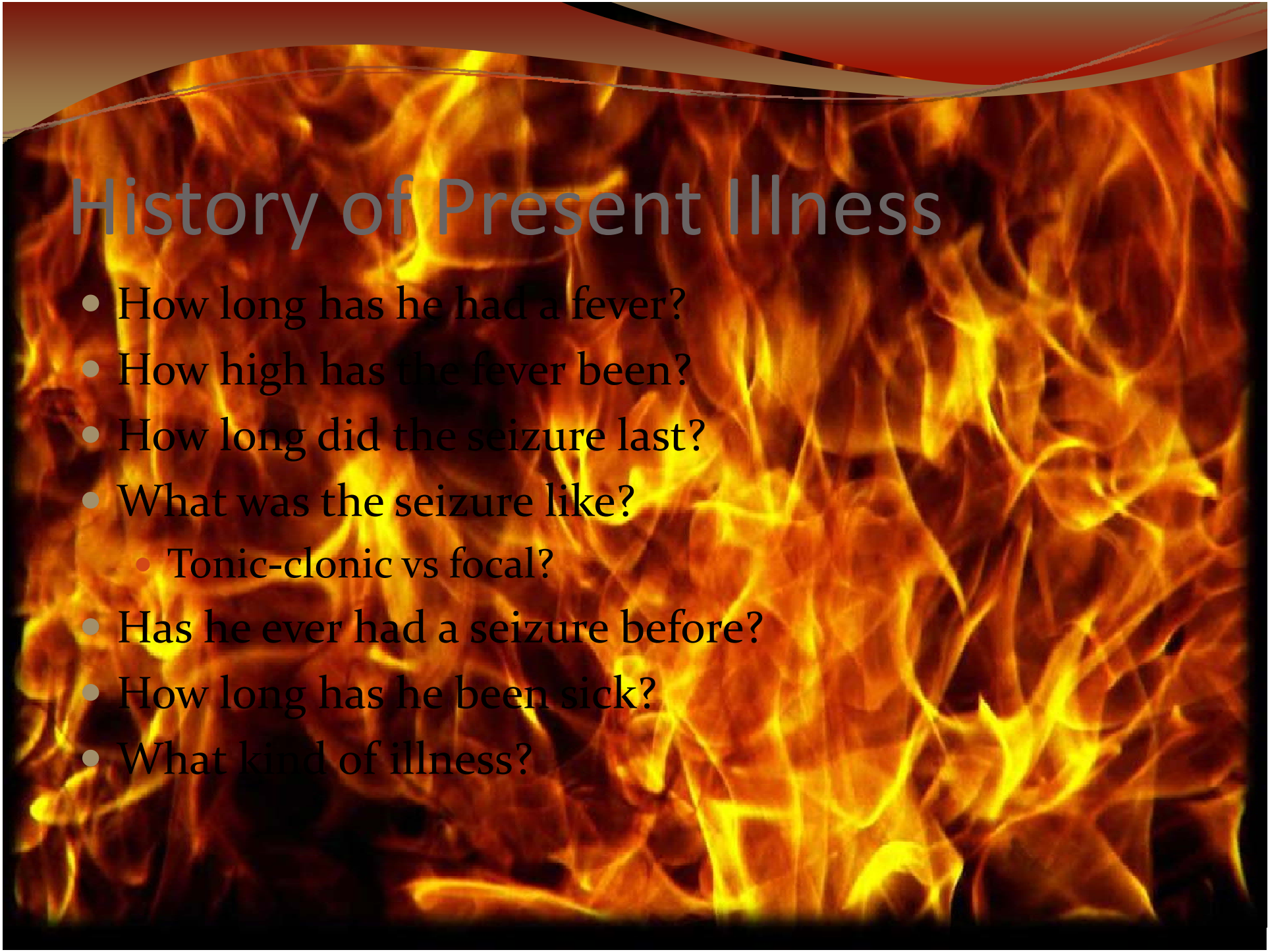

Not a Febrile Seizure
Seizure disorder
Meningitis
Hypoxia
Trauma
Brain cancer
Medication induced/poisoning
Dehydration
Electrolyte imbalance

Pediatric Assessment Triangle



Assessing the Child

- Other signs and symptoms
- Allergies
- Medications
  - Including alternative medications
  - Accidental
  - Antipyretics (Tylenol/Acetaminophen, Motrin/ibuprofen/Advil, *Aspirin*…)
- Last oral intake (breast or bottle)
- Last output (urine/stool)



History of Present Illness

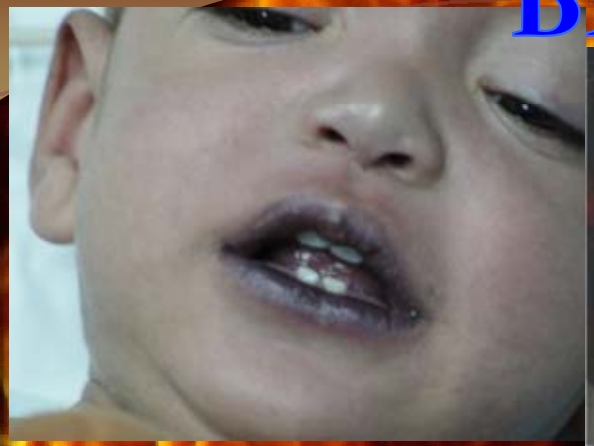
- How long has he had a fever?
- How high has the fever been?
- How long did the seizure last?
- What was the seizure like?
  - Tonic-clonic vs focal?
- Has he ever had a seizure before?
- How long has he been sick?
- What kind of illness?

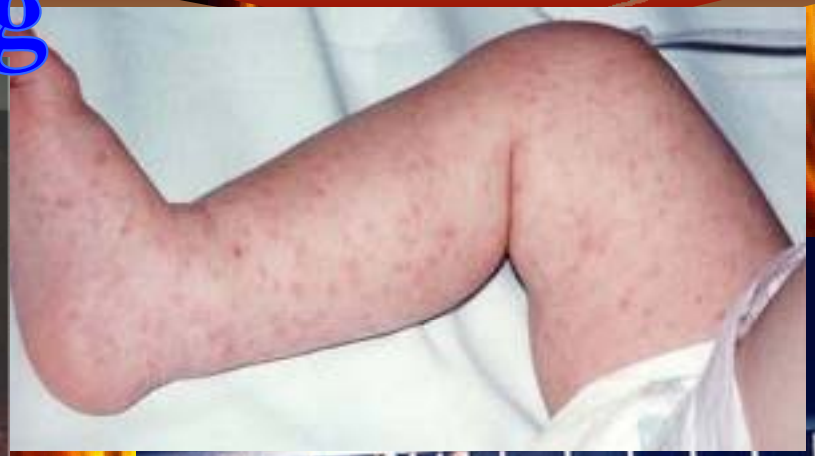

Medical History
Prematurity
Birth history
Congenital issues
Chronic Illnesses
Immunizations

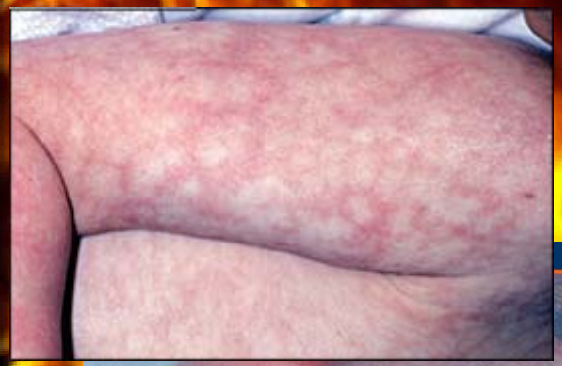
Physical Exam

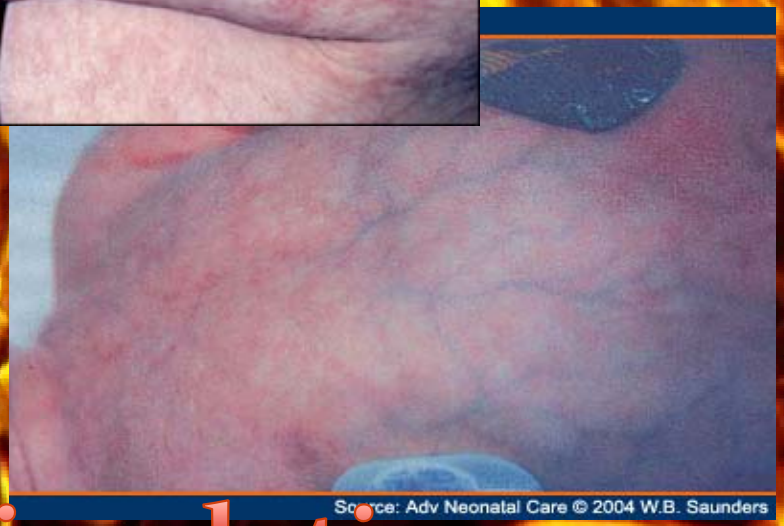
- Neuro – irritable, altered, lethargic
- Pulmonary – breath sounds, effort
- Cardiovascular – cap refill
- Skin
  - Signs of dehydration
  - Rashes
    - Look for non-blanchable rashes
  - Wet diapers? (Intake/Output questions)

Breathing









Appearance

Circulation

Management

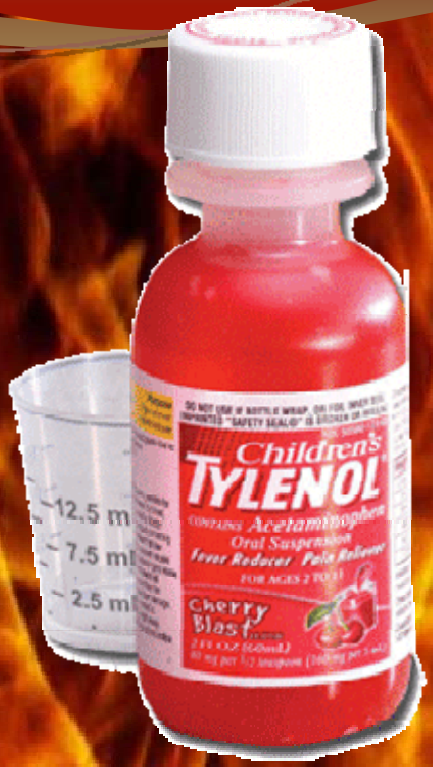
- Airway
  - POSITIONING IS KEY
  - Suction
- Consider oxygen
  - Blow-by
- Stimulation
- Good set of vitals
  - Cap Refill
  - Temperature?
  - O_2 probe?
- Blood glucose
- ECG Monitor
- IV/Fluids - (not likely)
- Medications
  - Antipyretics-comfort
  - Not likely but…
    - Glucose

Cooling a Fever

- No evidence that this is helpful
- May induce shivering
- Decrease metabolic demand if responding poorly
- Comfort
  - Patients and Parents

Antipyretics

- Pros
  - Easier exam
  - Comfort
  - Treat and release
- Cons
  - Dosing
  - Knocking out natural defenses
  - Treat and release



Keys to CYA

- Medical command involvement
- DOCUMENT, DOCUMENT, DOCUMENT!
- Don't treat and release on emergent level

Summary

- Fevers are scary but usually simple
- Keep your cool
- Use the pediatric assessment triangle
- When in doubt, call for help
- Questions?