Seizure Recognition & First Aid
Objectives

- Recognize common seizure types and their possible impact on individuals
- Know appropriate first aid
- Recognize when a seizure is a medical emergency
- Provide social and academic support
What is a Seizure?

A brief, excessive discharge of electrical activity in the brain that alters one or more of the following:

- Movement
- Sensation
- Behavior
- Awareness
What is Epilepsy?

- Epilepsy is a chronic neurological disorder characterized by a tendency to have recurrent seizures.
- Epilepsy is also known as a "seizure disorder".
Famous People with Epilepsy

- Julius Caesar
- Napoleon Bonaparte
- Charles Dickens
- Agatha Christie
- Truman Capote
- Vincent Van Gogh
- Beethoven
- Isaac Newton
- Richard Burton
- Danny Glover
- Neil Young
Did You Know That...

- Most seizures are NOT medical emergencies
- People may NOT be aware they are having a seizure and may NOT remember what happened
- Epilepsy is NOT contagious
- Epilepsy is NOT a form of mental illness
- Epilepsy is NOT a form of mental retardation
- People almost never die or have brain damage during a seizure
- A person CAN NOT swallow his/her tongue during a seizure
Did You Know That...

- Epilepsy can develop at ANY age
- 20% of cases develop before the age of five
- 50% of cases develop before the age of twenty-five
- Epilepsy currently affects about 300,000 senior citizens nation wide
- By the age of twenty, 1% of the population can be expected to develop epilepsy
- By the age of 75, 3% of the population can be expected to have been diagnosed with epilepsy and 10% will have experienced some type of seizure
Epilepsy is More Common Than You Think

- Epilepsy & seizures affect over 3 million Americans of all ages
- 315,000 students in the United States
- More than 45,000 new cases are diagnosed annually in children
- Approximately 200,000 new cases of seizures & epilepsy occur each year
- 1 in 26 people will develop epilepsy
- 1 in 10 people will have a seizure in their lifetime
- Epilepsy is more common than Cerebral Palsy, Parkinson’s Disease and Multiple Sclerosis combined
Common Causes of Epilepsy

- For seventy percent (70%) of people with epilepsy the cause is unknown
- For the remaining thirty percent (30%) common identifiable causes include:
  - Brain Trauma
  - Brain lesions (e.g. tumors)
  - Poisoning (lead)
  - Infections of the brain (e.g. meningitis, encephalitis)
  - Brain Injury at birth
  - Abnormal brain development
Seizure Types

- **Generalized Seizures**
  - Involve the whole brain
  - Common types include absence & tonic-clonic
  - Symptoms may include convulsion, staring, muscle spasms and falls

- **Partial Seizures**
  - Involve only part of the brain
  - Common types include simple partial and complex partial
  - Symptoms relate to the part of the brain affected
Absence Seizures

- Pause in activity with blank stare
- Brief lapse of awareness
- Possible blinking or chewing motion
- Usually lasts 1 to 10 seconds
- May occur many times a day
- May be confused with:
  - Day dreaming
  - Lack of attention
  - ADD
Generalized Tonic-Clonic

- A sudden, hoarse cry
- Loss of consciousness
- A fall
- Convulsions (stiffening of arms & legs followed by rhythmic jerking)
- Possible loss of bowel or bladder control
- Occasionally skin, nails or lips may turn blue
- Generally lasts 1 to 3 minutes
- Usually followed by confusion, headache, tiredness, soreness, speech difficulty
First Aid – Generalized Tonic-Clonic Seizure

- Stay calm and track time
- Check for epilepsy/seizure disorder ID (bracelet or necklace)
- Protect the person from possible hazards (chairs, tables, sharp objects, etc.)
- Turn person on his/her side
- Cushion the head
- After the seizure, remain with the person until awareness of surroundings is fully regained
- Provide emotional support
- Document seizure activity
Dangerous First Aid

- DO NOT put anything in the person’s mouth during a seizure
- DO NOT hold the person down or restrain them during the seizure
- DO NOT attempt to give oral medications, food or drink during a seizure
When is a Seizure an Emergency?

- First time seizure (no medical ID and no known history of seizures)
- Convulsive seizure lasting more than 5 minutes
- Repeated seizures without regaining consciousness
- More seizures than usual or change in type
- Person is injured, has diabetes or is pregnant
- Seizure occurs in water
- Normal breathing does not resume
- Person requests emergency evaluation
Simple Partial Seizures

- Full awareness maintained
- Rhythmic movements (isolated twitching of arms, face, legs)
- Sensory symptoms (tingling, weakness, sounds, smells, tastes, feeling of upset stomach, visual distortions)
- Psychic symptoms (déjà vu, hallucinations, feelings of fear of anxiety, or a feeling they cannot explain)
- Usually lasts less than one minute
- May be confused with: acting out, mystical experiences or psychosomatic illness
Complex Partial Seizures

- Awareness is impaired/Inability to respond
- Often begins with blank dazed stare
- AUTOMATISMS (repetitive purposeless movements)
- Clumsy or disoriented movements, aimless walking, picking things up, nonsensical speech or lip smacking
- Often lasts one to three minutes
- Often followed by tiredness, headache or nausea
- Person may become combative if restrained
- May be confused with:
  - Drunkenness or drug abuse
  - Aggressive behavior
  - Mental illness
First Aid - Complex Partial Seizure

- Stay calm and reassure others
- Track time
- Check for medical ID
- Do Not Restrain
- Gently guide/direct away from hazards
- Do NOT expect the person to obey verbal instructions
- Stay with the person until fully alert and aware
- If seizure lasts 5 minutes beyond what is routine for that person or if another seizure begins before full consciousness is regained, follow emergency protocol
Seizure Triggers or Precipitants

- **Flashing lights** and **hyperventilation** can trigger seizures in some individuals with epilepsy.
- Factors that might increase the likelihood of a seizure in someone with epilepsy include:
  - Missed or late medication (#1 reason)
  - Stress/anxiety
  - Lack of sleep/fatigue
  - Hormonal changes
  - Illness
  - Alcohol or drug use
  - Drug interactions
  - Overheating/overexertion
  - Poor diet/missed meals
Impact on Learning & Behavior

- Seizures may cause short-term memory problems
- Seizure activity, even without physical symptoms, may affect learning/memory
- Anti-Seizure medications may cause drowsiness, inattention, concentration difficulties and behavior changes
- People with epilepsy may be more likely to suffer from low self-esteem and/or mood disorders
Available Treatments

- Anti-seizure medications
  - Currently we have more than 20 medications to help control seizures
  - Medications do not CURE epilepsy, rather they help prevent or control seizure activity
  - Medication side-effects vary by the individual
  - Not all medications work for all types of seizures
Vagus Nerve Stimulator

- Device implanted just under the skin in the chest with wires that attach to the vagus nerve in the neck
- Delivers intermittent electrical stimulation to the vagus nerve in the neck that relays impulses to widespread areas of the brain
- Used primarily to treat partial seizures when medication is not effective
- Use of special magnet to activate the device may help prevent or reduce the severity of an oncoming seizure
- Individual may still require antiseizure medication
Available Treatments

- **Epilepsy Surgery**
  - Brain surgery to remove the small part of the brain where seizures begin or to interrupt the spread of electrical energy in the brain
  - Not everyone is a candidate for surgery

- **Ketogenic Diet**
  - Used primarily in children
  - Diet includes a very high fat content, no sugar and low carbohydrate and protein intake
  - It is a medical treatment NOT a fad diet
Diazepam Rectal Gel

- Used in acute or emergency situations to stop a seizure that will not stop on its own
- Approved by FDA for use by parents and non-medical caregivers
- State/school district regulations often govern use in schools
Tips for Supporting a Person with Epilepsy

- Stay calm during a seizure episode
- Be supportive
- Talk openly about epilepsy with the person and learn about their individual experiences
- Avoid overprotection and encourage independence
- Practice seizure recognition & first aid
Additional Tips and Topics

- Include the individual in as many activities as possible
- Communicate with parents about child’s seizure activity, behavior and learning problems
- Help to reduce the stigma that is wrongly associated with epilepsy by learning more about this disorder
- Become an advocate
Convulsive Seizure in a Wheelchair

- Do not remove from wheelchair unless absolutely necessary
- Secure wheelchair to prevent movement
- Fasten seatbelt (loosely) to prevent student from falling from wheelchair
- Protect and support head
- Ensure breathing is unobstructed and allow secretions to flow from mouth
- Pad wheelchair to prevent injuries to limbs
- Follow relevant seizure first aid protocol
Convulsive Seizure on a School Bus

- Safely pull over and stop bus
- Place student on his/her side across the seat facing away from the seat back (or in aisle if necessary)
- Follow standard seizure first aid protocol until seizure abates and child regains consciousness
- Continue to destination or follow school policy
Convulsive Seizure in the Water

- Support head so that both the mouth and nose are always above the water
- Remove the student from the water as soon as it can be done safely
- If the student is not breathing, begin rescue breathing
- Always transport the student to the emergency room even if he/she appears fully recovered
Resources

☐ Epilepsy Foundation Louisiana
  ▪ 225-298-5499/1-800-960-0587
  ▪ www.epilepsylouisiana.org

☐ Epilepsy Foundation (National)
  ▪ www.epilepsy.com