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## *Convulsion*

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### **DEFINITION**

An abnormal, involuntary contraction of the muscles most typically seen with certain seizure disorders. The term convulsion is sometimes used as a synonym for seizure, but not all seizures are characterized by convulsions. A person having convulsions appears to be shaking rapidly and without control. Other possible causes of convulsions include fever, meningitis, drug or alcohol abuse or withdrawal, poisoning, hypoglycemia, increased intracranial pressure and head injury.

### **PATHOPHYSIOLOGY**

Anything that disturbs the normal pattern of neuron activity -- from illness to brain damage to abnormal brain development -- can lead to seizures.

Seizure may be caused by primary central nervous system disorders, metabolic or idiopathic origins.

### **SIGNS & SYMPTOMS**

- Drooling or frothing at the mouth
- Rapid eye movements
- Grunting and snorting
- Loss of bladder or bowel control
- Sudden falling
- Teeth clenching
- Temporary halt in breathing
- Uncontrollable muscle spasms with twitching and jerking limbs
- Unusual behavior like sudden anger, sudden laughter, or picking at one's clothing
- May have aura symptoms

## SIGNS & SYMPTOMS CONTINUED

The person may have warning symptoms before the attack, which may consist of:

- Fear or anxiety
- Nausea
- Vertigo
- Visual symptoms (such as flashing bright lights, spots, or wavy lines before the eyes)

Symptoms after an attack (Post-ictal):

- Brief blackout followed by period of confusion

## ASSESSMENT

### *History-*

- Obtain complete health history including diagnosis, medications, significant injuries, traumatic events, hospitalizations, surgeries and allergies.
- Determine onset, duration, precipitating and alleviating factors
- Determine if patient is taking medication for seizures and are they compliant
- Assess if this is a first occurrence or patient has history of seizures
- List any psychiatric or medical illnesses, including method of treatment such as hospitalization (medical and psychiatric) and response.
- Identify any additional factors including substance abuse, seizure history, recent ECT therapy, episodes of fever/pain, presence of acute infection, exposure to toxic substances, traumatic events; change in environment, including unfamiliar noises, excessive visitors

Questions that help to clarify the type of seizure include the following:

- Was any warning noted before the seizure? If so, what kind of warning occurred?
- What did the patient do during the seizure?
- Was the patient able to relate to the environment during the seizure and/or does the patient have recollection of the seizure?
- How did the patient feel after the seizure? How long did it take for the patient to get back to baseline condition?
- How long did the seizure last?

## ASSESSMENT CONTINUED

If the incident is not a first occurrence, you may add the following questions:

- How frequently do the seizures occur?
- Is anything known to precipitate the seizures?
- Has the patient shown any response to therapy for the seizures? (if any)

### *Physical-*

- Overall appearance, manner, and attitude
- Behavior observations and level of psychomotor behavior
- Mood and affect (presence of suicidal or homicidal ideation as observed by others and reported by client)
- Insight and judgment
- Cognition as evidenced by level of consciousness, orientation (to time, place, and person), thought process and content (perceptual disturbances such as illusions and hallucinations, paranoia, delusions, abstract thinking)

## NURSING INTERVENTIONS

- Assess knowledge of various stimuli that may precipitate seizure activity.
- Review diagnostic studies or laboratory tests for impairments and imbalances.
- Use and pad side rails with bed in lowest position, or place bed up against wall and pad floor if rails not available or appropriate.
- Evaluate need for or provide protective headgear.
- Administer anticonvulsant therapy as prescribed.
- Protect the patient from injury during seizures.
- If the patient is taking anti-seizure medications, constantly monitor for toxic signs and symptoms such as slurred speech, ataxia, lethargy, and dizziness.
- Monitor the patient's compliance with anticonvulsant drug therapy.
- Encourage the patient to eat balanced, regular meals.
- Advise the patient to be alert for odors that may trigger an attack.
- Avoid restraining the patient during a seizure.
- Loosen any tight clothing, and place something flat and soft, such as pillow, jacket, or hand, under his head.
- Avoid any forcing anything into the patient's mouth if his teeth are clenched.
- Avoid using tongue blade or spoon during attacks, which could lacerate the mouth and lips of, displace teeth, precipitating respiratory distress.
- Turn the patient's head to the side to provide an open airway.
- Reassure patient after the seizure subsides by telling him that he's all right, orienting him to time and place, and informing that he's had a seizure.
- Monitor blood sugar after convulsion if patient is diabetic

## PATIENT TEACHING

Teach family and/or caregivers:

- DO NOT restrain (try to hold down) the person.
- DO NOT place anything between the person's teeth during a seizure (including your fingers).
- DO NOT move the person unless they are in danger or near something hazardous.
- DO NOT try to make the person stop convulsing. They have no control over the seizure and are not aware of what is happening at the time.
- DO NOT give the person anything by mouth until the convulsions have stopped and the person is fully awake and alert.
- DO NOT start CPR unless the seizure has clearly stopped and the person is not breathing or has no pulse.

Teach family or caregivers to call 911 or local emergency number if:

- This is the first time the person has had a seizure
- A seizure lasts more than 2 to 5 minutes
- The person does not awaken
- Another seizure starts soon after a seizure ends
- The person had a seizure in water
- The person is pregnant or injured
- The person does not have a medical ID bracelet (instructions explaining what to do)
- There is anything different about this seizure compared to the person's usual seizures
- Limit or avoid alcohol intake.
- Encourage to have enough sleep to prevent attacks

## CULTURAL CONSIDERATIONS

Review cultural beliefs regarding seizures as some cultures may consider seizures as a curse or a sign of being possessed by an evil entity.

## COORDINATING CARE WITH NURSING ASSISTANT (THINGS TO TELL CNA)

- Notify the nurse immediately of any potential seizure activity
- Remain with patient and ensure safety
- Note time of onset and duration

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