

Guideline 9.2.4 - First Aid Management of a Seizure

Summary

To whom does this guideline apply?

This guideline applies to adults, children, and infants.

Who is the audience for this guideline?

This guideline is for use by bystanders, first aiders and first aid training providers.

Summary of Recommendations

The Australian and New Zealand Committee on Resuscitation (ANZCOR) makes the following Good Practice Statement recommendations:

1. If unresponsive and not breathing normally, follow ANZCOR Basic life support flow chart.
2. Follow the person's seizure management plan if there is one in place.
3. Remove the person from danger and remove any harmful objects which might cause them secondary injury.
4. Lay the person down and turn the person on the side when practical.
5. Protect their head, and try and place something soft and flat under their head.
6. Avoid restraining the person during the seizure unless this is essential to avoid injury.
7. Do not force the person's mouth open nor attempt to insert any object into the mouth.
8. Frequently reassess, particularly their airway and breathing (ANZCOR Guideline 4 and 5).
9. Manage the person as for any unconscious person (ANZCOR Guideline 3).
10. Send for an ambulance if the person may be pregnant or in any situation where the seizure is not consistent with the person's prescribed management plan [Good Practice Statement].

1.0 | Introduction

A seizure is a sign of abnormal brain activity, which can be caused by many problems.

Up to 10% of the population is likely to experience a seizure at some time in their life.¹

A seizure may occur when the normal pattern of electrical activity of the brain is disrupted. This can cause changes in sensation, awareness, and behaviour, or sometimes convulsions, muscle spasms or loss of consciousness.

Seizure duration varies greatly and most terminate in less than 5 minutes.

Epilepsy is diagnosed by a medical specialist after a person has at least two unprovoked seizures.^{1,2} Many people have active lives and manage their seizures, not all seizures require hospitalization. Often, the person will just need time to rest and recover after a seizure.

A Seizure Management Plan is a document that is developed, along with the person's doctor, to ensure that those who may be around the person experiencing a seizure understand how the person wants to be supported. It describes seizure types, triggers, how to support the person, and emergency procedures that should be followed.

Factors that a seizure may be associated with include:

- lack of oxygen (hypoxia)
- onset of cardiac arrest
- medical conditions affecting the brain, e.g. low blood sugar, low blood pressure, head injury, neurological diseases such as tumor, stroke, infection
- trauma to the head
- some poisons and drugs
- withdrawal from alcohol and other substances of dependence
- fever in children under six years

2.0 | Recognition

Seizure activity may affect all or part of the body and may take many forms, depending on which part of the brain is involved. Symptoms may include:

- sudden generalised spasm of muscles producing rigidity
- if standing the person will fall down
- jerking movements of the head, arms, and legs
- shallow breathing or breathing may stop temporarily
- dribbling from the mouth; the tongue may be bitten leading to bleeding
- incontinence of urine and/or faeces
- changes in conscious state from being fully alert to confused, drowsy, or loss of consciousness
- changes in behaviour where the person may make repetitive actions like fiddling with their clothes.

A Generalised seizure usually involves the entire body and causes a loss or marked alteration in consciousness. It may result in life-threatening problems with airway or breathing, or risk of trauma from muscle spasms or loss of normal control of posture and movement.

A Focal seizure (previously called a partial seizure) usually involves only part of the body, and the person may retain consciousness, but may be frightened or confused. A Focal seizure may sometimes progress to a generalised seizure.

A Childhood febrile seizure caused by fever, usually resolves without treatment. It occurs in approximately 3% of children at some stage between the age of six months and six years.³ Children who suffer from a febrile seizure are not at increased risk of epilepsy unless they have risk factors.³

3.0 | Management of a Seizure

- If the person is unresponsive and not breathing normally, follow the Australian Resuscitation Council and New Zealand Resuscitation Council Basic Life Support Flowchart (Refer to ANZCOR Guideline 8).

Otherwise:

- Follow the person's seizure management plan if there is one in place.
- Remove the person from danger and remove any harmful objects which might cause them secondary injury.
- Lay the person down and turn the person on the side when practical.
- Protect their head, place something soft and flat under their head (e.g., a folded jumper or jacket).
- Time the seizure.
- Avoid restraining the person during the seizure unless this is essential to avoid injury.
- Maintain an airway and frequently reassess the person, particularly their breathing (Refer to ANZCOR Guideline 4 and 5).
- Manage the person as for any unconscious person (Refer to ANZCOR Guideline 3).
- Reassure the person who may be dazed, confused or drowsy.
- Do not offer them anything to eat and drink until they are fully awake and alert.

Send for an ambulance if:

- the seizure happens in water or the person may be pregnant
- you do not know the person
- this is their first seizure or if it is unknown if there is a history of seizures
- the seizure departs from the usual pattern
- the seizure lasts more than 5 minutes or another seizure begins
- the person does not regain consciousness within 5 minutes
- there is no seizure management plan in place
- you are concerned about any aspect of the person's care such as injury.

A seizure in water is a life-threatening situation. If the seizure occurs in water:

- Support the person in the water with the head tilted so the face is out of the water.¹
- Remove the person from the water as soon it is safe to do so.¹

Do not:

- Put a child in a bath to lower their temperature during a seizure as this is dangerous.
- Force the person's mouth open nor attempt to insert any object into the mouth.

4.0 | Advanced Management

If you are the carer/family of a person with epilepsy you may have received training in the use of medications to stop a seizure.

In this case, you should follow your training and the person's seizure management plan.

Further Reading

[ANZCOR Guideline 2 - Managing an Emergency](#)

[ANZCOR Guideline 3 - Recognition and First Aid Management of the Unconscious Person](#)

[ANZCOR Guideline 4 - Airway](#)

[ANZCOR Guideline 5 - Breathing](#)

[ANZCOR Guideline 8 - Cardiopulmonary Resuscitation \(CPR\)](#)

[ANZCOR Guideline 9.1.4 - Head Injury](#)

[ANZCOR Guideline 9.2.2 - Stroke](#)

Abbreviations

Abbreviation	Meaning/Phrase
ANZCOR	Australian and New Zealand Committee on Resuscitation
ARC	Australian Resuscitation Council
NZRC	New Zealand Resuscitation Council
RACP	Royal Australasian College of Physicians

References

1. Epilepsy Foundation <https://epilepsyfoundation.org.au/understanding-epilepsy/seizure-first-aid/>
2. Epilepsy Action Australia <https://www.epilepsy.org.au> and <https://epilepsy.org.au/about-epilepsy/first-aid//>
3. Royal Children's Hospital, Clinical Practice Guidelines on Seizures <https://www.rch.org.au/clinicalguide/>

About this Guideline

Search date/s	September 23 and December 23
Question/PICO 1:	What new papers have been published since 2013 on the first aid management of seizures
Method:	Scoping review
Primary reviewers:	George Lukas, Finlay Macneil
Other consultation	
Worksheet	See ARC and NZRC websites, evidence supporting guidelines tabs at: https://resus.org.au/worksheets-to-support-guidelines/
Approved:	June 2024
Guideline superseded:	9.2.4 (Nov 2014)