



## Treatment of Cerebellar Motor Dysfunction and Ataxia

This information summarizes the conclusions of the 2018 AAN Comprehensive Systematic Review: Treatment of Cerebellar Motor Dysfunction and Ataxia. It is provided as a service of the AAN to help you understand what research shows about the effectiveness of the treatments for ataxia caused by cerebellar dysfunction.

The American Academy of Neurology (AAN) is the world's largest association of neurologists and neuroscience professionals. Neurologists are doctors who identify and treat diseases of the brain and nervous system. The AAN is dedicated to promoting the highest quality patient-centered neurologic care.

### What are cerebellar dysfunction and ataxia?

Cerebellar dysfunction is a disruption in the way your cerebellum works. Your cerebellum is a part of your brain that does many things, including helping your body maintain balance and muscle coordination.

One possible effect of cerebellar dysfunction is ataxia. Ataxia is a failure of muscle coordination or irregular muscle movements. Ataxia can affect the movement of many different parts of your body. There are many different types of ataxia, and they can affect your body differently. Depending on the type, ataxia may lead to:

- Lack of balance
- Clumsy movement of your entire body
- Uncontrollable shaking of your arms and legs
- Difficulty speaking clearly (dysarthria)
- Unusual eye movements (nystagmus)

### What does the evidence show?

The authors discuss what the evidence shows in the conclusions. The conclusions are based on the authors' analysis of all of the evidence found. For all therapies, the evidence about duration of treatment effect is limited by the duration of the supporting studies. The following list gives a summary of the conclusions of this comprehensive systematic review:

- For most drugs and nondrug therapy used for ataxia, the evidence is weak or moderate that they are helpful.
- For patients with episodic ataxia type 2, the drug 4-aminopyridine may reduce the number of attacks.
- In some degenerative ataxia syndromes, riluzole may reduce ataxia signs.
- Daily inpatient physical and occupational therapy may help to lessen some forms of ataxia that get worse over time.

### This systematic review was endorsed by the A-TCP Children's Project.

#### Key to Evidence Levels

After the experts review all of the published research studies, they describe the strength of the evidence supporting each recommendation:

Strong evidence = Future studies very unlikely to change the conclusion

Moderate evidence = Future studies unlikely to change the conclusion

Low evidence = Future studies likely to change the conclusion

Very low evidence = Future studies very likely to change the conclusion

This statement is provided as an educational service of the AAN. It is based on an assessment of current scientific and clinical information. It is not intended to include all possible proper methods of care for a particular neurologic problem or all legitimate criteria for choosing to use a specific procedure. Neither is it intended to exclude any reasonable alternative methodologies. The AAN recognizes that specific patient care decisions are the prerogative of the patient and the physician caring for the patient, based on all of the circumstances involved.

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