Summary

- Stuttering, or stammering, is a speech disorder characterised by interruptions to speech such as hesitating, repeating sounds and words, or prolonging sounds.
- The cause of stuttering is unknown, but genetics are thought to play a significant role.
- Children and adults who stutter can benefit from speech therapy.

Children and adults who stutter can benefit from speech therapy.

Symptoms of stuttering

The symptoms vary widely between individuals, but can include:

- Hesitation, as if the next word is ‘stuck’
- Repeating sounds, syllables or words such as ‘I-I-I think’ or ‘where-where-where is it?’ and so on
- Prolonging sounds, such as ‘mmmm-mummy’.

Causes of stuttering

The cause is unknown, but researchers suspect that people who stutter have a slight ‘glitch’ in the brain connections responsible for speech production.

The fact that stuttering tends to run in families indicates that genetics is involved somehow in the condition. Studies of stuttering in twins have also found that both twins are more likely to stutter if they are identical rather than fraternal.

It was once assumed that parents, who mistakenly thought that their child had begun to stutter, caused a child’s stuttering. When children start to talk, they naturally hesitate and stumble over words. It was proposed that over-anxious parents believed this natural hesitation was stuttering, and pressured their child to talk properly, which caused the child to start ‘real’ stuttering. However, there is no evidence to indicate that anything parents do, or don’t do, can cause a child to stutter.

Effects of stuttering

Children who stutter are more likely to be teased by their peers. Older children and adults who stutter often fail to achieve their educational or career potential and may experience significant anxiety in social situations.

Development of stuttering

The progression of stuttering tends to follow the following pattern:

- Stuttering normally begins in children aged two to three years.
- Stuttering may develop gradually or suddenly.
- If stuttering is not treated in the preschool years, it starts to become difficult to treat in later years.

Degrees of severity

Stuttering is graded by its degree of severity. Most researchers rate stuttering by the percentage of stuttered syllables. While the child speaks, the speech pathologist counts all the stuttered and non-stuttered syllables. One classification method is:

- **Mild** – below five per cent of syllables stuttered
- **Mild to moderate** – 5 to 10 per cent of syllables stuttered
- **Moderate** – 10 to 15 per cent of syllables stuttered
- **Moderate to severe** – 15 to 20 per cent of syllables stuttered
- **Severe** – above 20 per cent of syllables stuttered.

Stuttering can also be measured with severity rating scales.

Natural recovery

Some children appear to recover from stuttering without any intervention. However, it is not possible to predict whether an individual child will recover. Parents should not be advised that their child will ‘grow out of’ stuttering. This will not be true in all cases, for if it were, there would be no such thing as stuttering in adulthood.
There are many problems in measuring the actual rate of natural recovery – estimates have ranged from 30 to 90 per cent of cases. Several recent estimates have been around the 75 per cent mark, but these were population estimates and they cannot be applied to children who come to a clinic for treatment. For reasons unknown, boys seem to be less likely to recover naturally than girls.

Seek professional help

Parents should always seek professional help from a speech pathologist if their child begins to stutter. The speech pathologist will determine whether treatment should occur immediately or whether it is better to wait a while to see if natural recovery occurs. Stuttering children should always be treated at some time during the preschool years.

Treatment for children

The best evidence (from clinical trials) for treating children who stutter is the Lidcombe Program of Early Stuttering Intervention. This is a behaviour modification treatment. The main principles involve praising a child when words are spoken clearly, and occasionally noting when stuttering has occurred.

It’s essential for parents to be trained in the Lidcombe technique to ensure they know how to comment positively about their child’s speech (rather than the child’s behaviour). If parents and carers receive proper training, there is no evidence that correcting a child’s speech will cause the child to become stressed or anxious. In fact, research has shown that the Lidcombe program causes no such adverse psychological events.

Treatment for adults

Treatment for stuttering is much more effective in the preschool years, but treatment for older children, adolescents and adults is effective as well. The best evidence available supports the use of a technique called ‘prolonged speech’ or ‘smooth speech,’ where the person’s speech pattern is reconstructed.

Where to get help

- Speech pathologist
- Your school nurse for referral
- Your local community health centre

Things to remember

- Stuttering, or stammering, is a speech disorder characterised by interruptions to speech such as hesitating, repeating sounds and words, or prolonging sounds.
- The cause of stuttering is unknown, but genetics are thought to play a significant role.
- Children and adults who stutter can benefit from speech therapy.

References

- Adults Who Stutter: Treatment, The Australian Stuttering Research Centre, Faculty of Health Sciences, The University of Sydney, NSW, Australia. More information here.
- Parents with Children who Stutter: Treatment, The Australian Stuttering Research Centre, Faculty of Health Sciences, The University of Sydney, NSW, Australia. More information here.
- Stuttering, Private Speech Pathologists Association of Western Australia, WA, Australia. More information here.
- Private Speech Pathologists Association of Western Australia. More information here.
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More information

Brains and nerves

The following content is displayed as Tabs. Once you have activated a link navigate to the end of the list to view its associated content. The activated link is defined as Active Tab

- Brain and nerve basics
- Brain and head injury
- Brain tumours
- Brain related conditions
- Epilepsy and seizures
- Nerve related conditions
- Spinal cord
- Speech and language
- Tests and procedures

Brain and nerve basics

- Brain
  Messages relay between the brain and the motor and sensory nerves of the body in a constant ‘conversation’.

- Brain death
Brain death differs from other states of unconsciousness in important ways.

- **Brain surgery**
  
  Brain surgery is performed for a number of reasons, including alterations in brain tissue, brain blood flow and cerebrospinal fluid.

- **Central nervous system birth defects**
  
  Folic acid taken before conception, and during at least the first four weeks of pregnancy, can prevent around seven out of 10 cases of neural tube defects.

- **Corona**
  
  A wide range of illnesses, conditions and events can cause corona.

- **Epilepsy and Young People - Diagnosis (video)**
  
  Epilepsy is the world’s most common serious brain disorder and is characterised by a tendency to have recurrent seizures. Most seizures are spontaneous and brief yet self-limiting and can involve.

- **Nervous system**
  
  The nervous system helps all the parts of the body to communicate with each other.

**Brain and head injury**

- **Acquired brain injury**
  
  The long-term effects of brain injury will be different for each person and can range from mild to profound.

- **Alcohol related brain impairment**
  
  A person with alcohol related brain impairment (ARBI) might experience problems with coordination, thinking, planning and memory.

- **Alcohol related brain impairment - memory loss**
  
  If a person with alcohol related brain impairment is aware of their memory limits, they can learn how to deal with them.

- **Alcohol related brain impairment - support**
  
  People with alcohol related brain impairment benefit when their life is organised and follows a good structure.

- **Brain injury and sexual issues**
  
  A brain injury can change the way a person experiences and expresses their sexuality.

- **Head and spinal injuries first aid**
  
  Head injuries can be serious and require urgent medical attention. A hard blow to the head from a fall, knock or assault can injure the brain, even when there are no visible signs of trauma to the.

- **Head injuries and concussion**
  
  There is no specific treatment for mild head injury other than plenty of rest, and not overdoing things.

- **Subarachnoid haemorrhage**
  
  A subarachnoid haemorrhage is any bleed located underneath one of the protective layers of the brain known as the arachnoid layer.

- **Subdural haematomas**
  
  Subdural haematomas are blood clots formed underneath one of the protective layers of the brain.

**Brain tumours**

- **Acoustic neurona**
  
  In its earlier stages, an acoustic neurona can present similar symptoms to other, less serious conditions, which may delay diagnosis and treatment.

- **Brain tumours - cancer**
  
  Brain cancer symptoms and treatment depend on which part of the brain is affected.

- **Brain tumours - gliomas**
  
  Gliomas are brain tumours associated with the three types of glial cell in the brain.

- **Meningioma**
  
  A meningioma is a non-cancerous brain tumour and responds well to treatment.

- **Pituitary tumour**

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betterhealth.vic.gov.au
Generally, pituitary tumours are benign and slow growing, and pituitary cancers are extremely rare.

Brain related conditions

- Amnesia
  Loss of memory can be temporary or permanent, but 'amnesia' usually refers to the temporary variety.

- Creutzfeldt-Jakob disease (CJD)
  Creutzfeldt-Jakob disease is characterised by physical deterioration of the brain, dementia and walking difficulties.

- Dementia explained
  Dementia is not a normal part of ageing and can happen to anybody.

- Epilepsy and Young People - Diagnosis (video)
  Epilepsy is the world's most common serious brain disorder and is characterised by a tendency to have recurrent seizures. Most seizures are spontaneous and brief yet self-limiting and can involve.

- Headache
  Although nearly all of us will experience a headache during our lifetime, persistent headaches need to be medically investigated with tests such as scans, eye tests or sinus x-rays.

- Headache – migraine
  Migraine causes a severe and throbbing headache, usually on one side of the head, as well as symptoms such as nausea.

- Hydrocephalus
  Hydrocephalus is the abnormal enlargement of the brain cavities (ventricles) caused by a build-up of cerebrospinal fluid.

- Leukodystrophy
  Leukodystrophy refers to a group of inherited disorders that affect the white matter of the brain, which causes loss of normal brain functions.

- Stroke explained
  A stroke interrupts blood flow to an area of the brain and is a medical emergency.

Epilepsy and seizures

- Epilepsy and employment
  Many people living with epilepsy are successfully employed across a range of professional fields.

- Epilepsy
  Medication can provide seizure control for approximately 70 per cent of people with epilepsy.

- Epilepsy and exercise
  It is rare for a person with epilepsy to have a seizure during physical activity, but you should always take safety precautions when exercising.

- Epilepsy and Young People - Diagnosis (video)
  Epilepsy is the world's most common serious brain disorder and is characterised by a tendency to have recurrent seizures. Most seizures are spontaneous and brief yet self-limiting and can involve.

- Epilepsy - first aid and safety
  Good seizure management is an important part of reducing the risks associated with epilepsy.

- Epilepsy in children
  Children with epilepsy generally have seizures that respond well to medication, and they enjoy a normal and active childhood.

- Epilepsy - lifestyle issues
  Learn about your epilepsy so that you can make informed decisions about your lifestyle.

- Fever - febrile convulsions
  A febrile convolution is a fit that occurs in children when they have a high fever.

- Fibromyalgia
  Fibromyalgia is a condition associated with widespread pain and tenderness.
Medicinal cannabis

Medicinal cannabis is a legal, high quality medicine that can be prescribed for people by their doctor.

Nerve related conditions

- Bell's palsy
  The majority of people with Bell's palsy, around 90 per cent, will recover completely with time.
- Carpal tunnel syndrome
  Carpal tunnel syndrome can be caused by repetitive hand movements, pregnancy and arthritis.
- Complex regional pain syndrome (CRPS)
  Complex regional pain syndrome (CRPS) is a painful condition of a person’s arm, hand, leg or foot, which occurs after an injury, such as a fracture.
- Diabetes type 2
  Type 2 diabetes may be prevented, but it cannot be cured.
- Diabetic neuropathy
  Diabetes is the most common cause of neuropathy.
- Eyes - optic neuritis
  Optic neuritis is inflammation of the optic nerve that causes blurred, grey and dim vision.
- Friedreich's ataxia
  To the casual observer, a person with Friedreich ataxia may seem to be drunk.
- Guillain-Barré syndrome
  Most people with Guillain-Barré syndrome experienced some form of viral or bacterial infection before the onset of symptoms.
- Neuralgia
  Neuralgia is pain in a nerve pathway. Generally, neuralgia isn't an illness in its own right, but a symptom of injury or a particular disorder.
- Sciatica
  Most cases of sciatica resolve by themselves within six weeks to three months.

Spinal cord

- Quadriplegics - tendon transfer surgery
  Many quadriplegics could live more independent lives with a highly specialised operation called tendon transfer surgery.
- Spina bifida
  Folate can prevent up to 70 per cent of spina bifida cases if taken daily for one month before conception and during the first three months of pregnancy.
- Spinal cord injury - paraplegia
  Most people who have a spinal cord injury are young males, who have a greater tendency to indulge in risky behaviour.
- Spinal muscular atrophy (SMA)
  A child with spinal muscular atrophy type 1 rarely lives beyond three years of age.
- Syringomyelia
  Syringomyelia is the growth of a cyst in the spinal cord that may result in paraplegia or quadriplegia if not treated.

Speech and language

- Childhood apraxia of speech
  Childhood apraxia of speech affects a person’s ability to organise the muscles used in speech.
- Dyslexia
  Dyslexia is a type of specific learning difficulty (SLD) in which the person has difficulties with language and words.
- Stuttering
  Children who stutter should see a speech pathologist, preferably before they start school.
Tests and procedures

- **CT scan**
  The CT scan is a medical imaging procedure that uses x-rays and digital computer technology to create detailed images of the body.

- **EEG test**
  In a person with epilepsy, an electroencephalogram (EEG) may show bursts of abnormal discharges in the form of spikes and sharp wave patterns.

- **MRI scan**
  The MRI scan is a medical imaging procedure that uses a magnetic field and radio waves to take pictures inside the body.

- **PET scan**
  PET scans are tests that show how an organ or tissue is working.

- **X-ray examinations**
  An x-ray examination uses a special machine to take two-dimensional pictures of internal body structures to help diagnose conditions or injuries.

Related Information

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  Loss of memory can be temporary or permanent, but ‘amnesia’ usually refers to the temporary variety.

- **Coma**
  A wide range of illnesses, conditions and events can cause coma.

- **Brain death**
  Brain death differs from other states of unconsciousness in important ways.

- **Epilepsy and exercise**
  It is rare for a person with epilepsy to have a seizure during physical activity, but you should always take safety precautions when exercising.

Home

Related information on other websites

- [Australian Speak Easy Association](#)
- [The British Stammering Association](#)

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Last updated: April 2013

Page content currently being reviewed.

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Back to Top