Both childhood absence epilepsy and juvenile absence epilepsy are associated with typical absence seizures. These syndromes may cause other types of seizures as well.

Childhood absence epilepsy begins at the age of five or six and usually goes away once the child is an adult. Juvenile absence epilepsy starts when the child is around 12 years old, and may continue for the rest of the child's life.

What are other terms for absence epilepsy?

Other terms for absence epilepsy that you may come across include:

- absence seizure disorder
- akinetic petit mal
- minor epilepsy
- petit mal epilepsy
- pykno-epilepsy
- pyknolepsy
- pyknoleptic petit mal
- true petit mal

What causes absence epilepsy?

Both childhood and juvenile absence epilepsy are idiopathic generalized epilepsy syndromes. The child's brain will appear normal on imaging (MRI or CT scan) but he may in fact have very small changes in the brain at the cellular level.

There is a strong genetic component to childhood absence epilepsy. It has not been tied to a single gene. There is probably more than one gene that causes childhood absence epilepsy, and other factors probably play a role as well.

Although we know less about it, genetic factors are also important in juvenile absence epilepsy. It may share some genetic factors with juvenile myoclonic epilepsy.

What are the features of childhood absence epilepsy?

Childhood absence epilepsy usually begins when the child is between four and eight years old, with a peak age of onset at five or six years. It is unusual for childhood absence epilepsy to begin after age 11. About 10% of children with childhood absence epilepsy had febrile seizures at some point.

The child has clusters of absence seizures. He may have dozens or even hundreds of seizures per day. Because absence seizures are often confused with daydreaming, he and his parents may not notice them right away.

It is rare for children to have other seizure types at first, but about 40% of children with childhood absence epilepsy develop tonic-clonic seizures as well. These often begin near puberty, but can begin earlier or later. Myoclonic seizures are usually not seen, although some children may have twitching or jerking movements with their absence seizures.

About 10% to 15% of children with childhood absence epilepsy will have one or more episodes of absence status epilepticus.

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Most children have normal intelligence and a normal neurological exam, but between 5% and 24% may have some abnormalities.

What are the features of juvenile absence epilepsy?

We know less about juvenile absence epilepsy than about childhood absence epilepsy. If a child starts having absence seizures at age 10 or 11, it may be difficult to tell whether he has childhood or juvenile absence epilepsy.

Children with juvenile absence epilepsy begin having absence seizures near or after puberty, usually between the ages of 10 and 17, with a peak age of onset at around 12 years old. They usually have normal intelligence. They have no abnormalities on their neurological exam that might suggest a focal brain problem.

Children with juvenile absence epilepsy have fewer seizures than in childhood absence epilepsy. They may also have other types of seizures:

- About 80% of children with juvenile absence epilepsy also have tonic-clonic seizures. These may begin later than the absence seizures.
- About 15% of children with juvenile absence epilepsy also have myoclonic seizures, although they do not happen very often and may not be very obvious.
- Absence status epilepticus is also fairly common in children with juvenile absence epilepsy.

How many other children have absence epilepsy?

Between 2% and 8% of children with epilepsy have absence epilepsy. Usually, slightly more girls than boys have absence epilepsy.

Juvenile absence epilepsy seems to be less common than childhood absence epilepsy. In most studies, about 20% of children with absence seizures begin having them after age 10. The syndrome may be more common than we realize, because children and their families do not always realize that a child is having absence seizures, especially if he is not having very many per day.

How do you know that a child has absence epilepsy?

Absence epilepsy is usually easy to diagnose, although some absence seizures may be confused with complex partial seizures.

Your child's doctor will look for:

- information from you or your child's teacher about staring spells or other symptoms of absence seizures
- a typical EEG pattern during the absence seizures

Typical absence seizures can often be induced in the doctor's office. The doctor will ask your child to hyperventilate (breathe fast and deeply).

It is usually not necessary to do any neuroimaging studies (CT or MRI) if the child has typical absence seizures.

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How is absence epilepsy treated?

Anti-epileptic drugs usually control the seizures in childhood absence epilepsy very well. Any one of several possible drugs can be used, and probably fewer than 5% of cases do not respond to treatment. If a child with childhood absence epilepsy has seizures that cannot be controlled, his doctor may try a combination of two anti-epileptic drugs.

Juvenile absence epilepsy can often be controlled with anti-epileptic drugs as well. Because juvenile absence epilepsy usually affects teenagers, who are becoming more independent, it is especially important to educate them about the disorder. A teenager with juvenile absence epilepsy needs to take responsibility for his treatment, which includes taking his medication at the right time, getting enough sleep, and drinking little or no alcohol.

More information

- Drug Therapies for Epilepsy

What is the outlook for a child with absence epilepsy?

Childhood absence epilepsy

Childhood absence epilepsy often goes away two to five years after the seizures begin or when the child is a teenager. Some researchers believe that early treatment and good response to anti-epileptic drugs improve the chances that the seizures will go away permanently.

If a child has been free of seizures for at least two or three years, his doctor may try to gradually discontinue his anti-epileptic drugs. The decision to stop medication will depend on the individual child, and on factors such as his EEG, his activities, and whether he wants to start driving. Discontinuing medication should be done gradually and with a doctor's supervision, since sudden or early withdrawal may trigger seizures.

If the child has tonic-clonic seizures as well as absence seizures, these are less likely to go away. However, they are usually easy to control.

Up to one-third of children with childhood absence epilepsy seem to do poorly in terms of social adjustment. The reasons for this may include the seizures themselves, the underlying cause of the epilepsy, drug reactions, the child's feelings about having epilepsy, or other people's attitudes and prejudices. As a result, it is very important that the child, his family, his teachers, and his friends have accurate information about his condition.

One recent study in Nova Scotia followed a group of 72 children with childhood absence epilepsy until they were young adults (average age 20.5 years). Overall, 65% were seizure-free and off medication and another 7% were seizure-free on medication. Some had stopped taking their medication but still had seizures. The researchers found that some factors were linked to a better prognosis, including:

- normal IQ
- normal neurological examination
- absence seizures alone, without generalized tonic-clonic seizures
- no absence status epilepticus
- good seizure control with the first anti-epileptic drug tried

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- certain EEG features
- male sex

Fifteen per cent of the people in the study group had progressed to juvenile myoclonic epilepsy. The study found that 42% of adults who continued to have seizures also had emotional or psychiatric problems. Overall, the group of people with absence epilepsy were more likely than the comparison group with juvenile rheumatoid arthritis to drop out of high school, experience an unplanned pregnancy, or abuse drugs or alcohol, whether or not the seizures were controlled.

Juvenile absence epilepsy

We know less about the long-term outcome of juvenile absence epilepsy than we do about childhood absence epilepsy. The seizures usually respond well to anti-epileptic drugs, but children with this syndrome may need to take medication to control seizures all their lives. As in childhood absence epilepsy, uncontrolled seizures may lead to poorer social and academic outcomes.

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