FACTSHEET



# Breath-holding spells

## What is a breath-holding spell?

Breath-holding spells (or 'attacks') occur in approximately 5% of toddlers and babies aged from 6 months to four years. A breath-holding spell may happen after a child becomes upset or injures themselves, for example after a minor bump or fright. The child opens their mouth as if to cry but makes no noise. They may look very pale in the face or their lips may look dusky blue for a moment. Sometimes the child may become limp and fall to the ground. Twitchy movements of their limbs may occur for a few seconds. The child usually recovers quickly after being unresponsive for a short period and then cries normally as if upset.

Breath-holding spells often occur as part of toddler tantrums. The spell is a reflex reaction to an unpleasant stimulus which they can't stop from happening and is not deliberate 'bad' behaviour on their part.

## Are there different types of breath-holding spells?

There are two types of breath-holding spells: blue (cyanotic) breath-holding spells and pale (pallid) ones. Blue spells refer to the child's lips and mouth turning a dusky blue colour during a spell, and pale spells are when the child's face drains of colour. Both may occur in the same child at different times. Neither type has any serious consequences (unless the child hurts themself if they fall), but they are both frightening to witness.

## What causes breath-holding spells?

Breath-holding spells are caused by either a change in the child's usual breathing pattern, a brief slowing of their heart rate or a combination of the two. These reactions may be brought on by physical pain or by strong emotions, such as fear or frustration.

The underlying reason why breath-holding spells occur is not fully known. One-third of children with breath-holding spells will have a family history of similar episodes. In some children, breath-holding spells may be related to iron deficiency anaemia, a condition in which the body has low numbers of red blood cells. Most children with breath-holding spells do not have a serious underlying problem.

Children with breath-holding spells do not have epilepsy, though as the episodes may look like epileptic seizures, the two are often confused. In epileptic seizures, the child may turn blue, but it will be during or after the seizure and not before. Jerking movements of the limbs in epilepsy tend to be faster, stronger, more rhythmical and last longer than those seen with breath-holding. Wetting and soiling are common in epileptic seizures, though are rare with breath-holding spells. Breath-holding spells only occur when the child is awake and usually when the child is standing. Epileptic seizures may occur at any time during wakefulness or sleep and in any position.

Pauses in breathing (apnoeas) only occur during sleep and usually in infants aged less than six months.

There is no increased risk of children with breath-holding spells later developing a seizure disorder or having developmental delay. Some children with pale spells may be more likely to faint during their teenage years.

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## When do they start and will they stop?

Breath-holding spells occur at similar rates in boys and girls. The spells usually start around 12 months of age, often when the child begins walking and falling, and usually stop before they start preschool. They rarely occur before six months of age or after age four.

## How often do they occur?

Breath-holding spells vary in severity and frequency. They may happen fairly often, sometimes several times a day or once every few weeks. They usually occur more often when a child is overtired, upset and irritable (grizzly). Many parents who have witnessed breath-holding spells can predict when another spell is likely to happen in their child.

## What to do during a spell?

Don't panic. Lie the child on their side and observe them. Don't shake the child, put anything into their mouth or splash water onto them. Keep their head, arms and legs away from hitting anything hard or sharp. Allow the episode to stop by itself. Treat the child normally after the event. Do not punish or reward the behaviour.

## What needs to be done for my child?

Discuss the problem with your family doctor. Your child will initially need a thorough examination to see that they do not have any other problems, such as an irregular heartbeat, neurological signs and their developmental milestones should be checked. Breath-holders are usually healthy.

## What should concern my family doctor and me?

- Loss of consciousness and becoming very pale or dusky without any provoking factors.
- Very frequent spells, such as several per day, should be assessed. This may still be within the normal range of what can happen during breath-holding spells but it should be further investigated.
- Children with breath-holding spells followed by prolonged stiffening or shaking which goes on for more than one minute and is associated with slow recovery, needing several hours of sleep, or remaining confused for a long time afterwards need further assessment.
- Children less than six months of age need to be investigated to exclude other possible underlying causes of their symptoms. Breath-holding spells may still occur in this age group, though this is less common.

## What can be done in the meantime?

No special treatment is needed. Anti-epileptic treatment is not effective and is rarely recommended or trialed.

Oral iron supplementation may have a role in reducing the frequency and severity of breath-holding spells, particularly if iron-deficiency anaemia is present (common in toddlers). Treating anaemia, if present, will often decrease the frequency of spells which lead to passing out. Supportive management (observation and protection from injury from falls) are generally all that is needed during an episode.

The parents' most important job is to not reinforce the breath-holding behaviour through a 'reward' of excessive care and attention. Know your child's signs of tiredness and make sure they get plenty of rest. Help your child feel secure by minimising and managing their frustration. It is important that your child is not treated in any special way or differently from their siblings or other children. Behavioural problems can outlast the period of time that spells occur and become more of a burden to the family. Ask your doctor for help and/or referral to a behaviour modification or positive parenting program, usually run by your local community health centre.

### Remember:

- Children commonly hold their breath after a fright, mild injury or after becoming startled or upset.
- They may transiently become pale in the face or turn dusky blue around the lips. Your child may appear to be unresponsive and may fall down.
- Children may be dazed, drowsy or inconsolable for a few minutes after a breath-holding spell. See your doctor if your child does not appear to be back to normal within half an hour or remains sleepy.
- Children with breath holding don't usually have a serious underlying illness, though they can be frightening to watch.
- Children with breath-holding spells should not be treated differently to other children during or after a spell and will eventually grow out of them as they age.