

# Iron Supplements Effectively Treat Kids' Breath-Holding Spells

May 14 2010, By Randy Dotinga

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For many children, “I'm going to hold my breath until I pass out” is not an idle threat. An estimated one in 20 kids suffer from breath-holding spells, which come when they are upset, in pain or surprised. In some cases, the children twitch and jerk around involuntarily, as if they are having a seizure. Their faces sometimes turn blue or pale and they often faint.

It can be scary for parents and often frightening for kids too, who aren't thought to be able to make the spells come on voluntarily. Some kids might faint several times a day, distracting everyone around them.

Now, a new review of existing research - two studies - finds that a small daily dose of iron reduced or eliminated incidents of breath-holding spells more than 90 percent of the time.

Iron is cheap, easy to administer and does not cause serious side effects, said Dr. Anthony Zehetner, lead author of the review, which appears in the latest issue of the Cochrane Library.

The iron finding should help parents find some relief, said Zehetner, a medical fellow at The Children's Hospital at Westmead in New South Wales, Australia. He said he has had some parents “at their wits' end” come to his office with children who hold their breath and pass out.

While children can lose [blood flow](#) to their brains temporarily during breath-holding spells, typically they are not dangerous unless a child is

hurt during a fall, Zehetner said. The spells usually do not last more than three minutes.

Nevertheless, a fainting child alarms people. And kids ? typically [toddlers](#) ? who have the spells might need to undergo a variety of expensive tests to make sure that there is not a more serious cause, Zehetner said.

It is possible, of course, simply to ignore the spells. “Though this is hard to do so in reality as bystanders in public feel the child is having an epileptic seizure, an ambulance is called and the unfazed parent is labeled ‘inattentive’ and ‘uncaring,’” Zehetner said.

Pediatricians have not had much success with treatments. “We know what doesn't work,” including drugs that stop convulsions, nerve blockers and even implantable defibrillators in severe cases, Zehetner said. “I wanted to find out what would work. So out of clinical necessity, this research question was born.” He and his colleagues found two studies that fit their review inclusion criteria.

The review was published by The Cochrane Collaboration, an international organization that evaluates medical research. Systematic reviews draw evidence-based conclusions about medical practice after considering both the content and quality of existing medical trials on a topic.

A meta-analysis of the two studies, designed to combine their findings, found that four months of a small daily dose of elemental iron ? five milligrams per kilogram of body weight ? reduced attacks by 90 percent.

The studies were small: they included just 87 children. One study, from India, was from 1969 and the other, from the Middle East country of Jordan, was from 1997.

Iron's side effects include blackened stools and mild gastrointestinal upset, Zehetner said.

Why might iron be an effective treatment for breath-holding spells? It could have something to do with iron's effect on brain growth and development, Zehetner said. Children with low levels of iron tend to have more tantrums and be fussier and more irritable, he said.

However, parents should not first turn to iron pills, said pediatric neurologist Dr. Donna Ferriero, who suffered from the spells herself as a child and then had children who experienced the spells.

“Parents should be reassured, told, that they are not being manipulated by strong-willed children and that they should see their pediatrician who could help determine if there is an iron deficiency to correct,” said Ferriero, at the University of California at San Francisco.

If the fainting spells are a serious issue, iron might indeed work in kids whose faces turn blue because oxygen temporarily does not get into the blood going to the head, said Dr. Francis DiMario Jr., a pediatric neurologist. Yet, other kids faint because of a disruption in their heart rates and they might need medication, said DiMario, at Connecticut Children's Medical Center.

In the vast majority of cases, however, no treatment for children will be necessary, although parents might need a little help with figuring out how to handle the attacks, said Dr. Helen Cross, head of the Neurosciences Unit at University College London's Institute of Child Health in the United Kingdom.

“The issue for parents,” she said, “is not to be overprotective and try and prevent [children](#) from getting upset so then they begin to determine they can get what they want.”

**More information:** Zehetner AA, et al. Iron Supplementation for Breath-Holding Attacks in Children. Cochrane Database of Systematic Reviews 2010, Issue 5.

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