

Choosing Wisely[®]

An initiative of the ABIM Foundation

ConsumerReports[®]Health

American Academy
of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN[™]



CT scans for children with head injuries

When they need them—and when they don't

A blow to the head can be scary. But usually it is not very serious. Often there is just a mild concussion, with no serious injuries like bleeding or cracks to the skull.

After a head injury, the doctor may order a test called a CT scan (pronounced “cat” scan). A CT scan takes many X-rays, to create a 3D picture of the brain. But your child may not need a CT scan for a minor head injury. Here's why:

Often, CT scans aren't necessary.

About half of children in emergency rooms with head injuries get CT scans. But one in three of the CT scans aren't necessary. Before ordering a CT scan, the doctor should examine the child and ask about the injury and symptoms.

If your doctor thinks your child has a mild concussion, a CT scan will probably not be helpful—the CT scan results are usually normal.

CT scans are better for other kinds of injuries, such as skull fractures or bleeding in the brain. A concussion is not caused by bleeding in the brain.



CT scans have risks.

CT scans use radiation, which can increase the risk of cancer. Children, and especially infants, have greater risks because their brains are still developing. And unnecessary CT scans can lead to more tests and treatments, with more risks.

CT scans are expensive.

CT scans of the brain can cost between \$500 and \$900. Costs vary widely. It's okay to ask if the scan is really needed before spending the money.

When to see a doctor.

Go to the doctor right away if your child becomes unconscious, has a headache that won't stop, or is dizzy, confused, or nauseous. These symptoms may happen hours or days later.

When to get a CT scan of the brain.

A doctor should order a CT scan if it is likely that the child has a skull fracture or bleeding. The doctor should ask about the accident and symptoms listed below. The doctor should also examine the child for signs of skull fracture, such as black eyes and bleeding.

The accidents listed below are more likely to cause serious head injuries:

- A motor vehicle accident
- Falling from three or more feet off the ground
- Falling down five or more stairs
- Falling off a bicycle without a helmet

The symptoms listed below may be signs of serious injury:

- Becoming unconscious
- Tingling on one side of the body
- Being dizzy or losing balance
- Loss of vision or hearing
- A headache that gets worse
- Being very sleepy or irritable

What to expect if a CT scan is needed.

- The CT scan should happen soon. The child may need immediate treatment.
- The doctor will use the lowest dose of radiation.
- The scan will include only the head (unless there may be a neck or spine injury).
- Repeated scans will be avoided.

This report is for you to use when talking with your health-care provider. It is not a substitute for medical advice and treatment. Use of this report is at your own risk.

© 2014 Consumer Reports. Developed in cooperation with the American Academy of Pediatrics. To learn more about the sources used in this report and terms and conditions of use, please visit ConsumerHealthChoices.org/about-us/.

Advice from Consumer Reports

Caring for a child after a head injury

Watch your child closely.

Head injuries can cause:

- Changes in memory and judgment.
- Headaches.
- More sensitivity to light and sound.
- Changes in sleep, speech, reaction time, or balance.

Make sure you understand your doctor's advice for care. If the changes listed above do not get better, take your child back to the doctor. If they get worse, see the doctor right away.

Don't let your child return to sports or school too soon.

Because of the changes listed above, returning to sports can be risky, and going to school can be hard. Ask your doctor for advice.

After a concussion, a child may be more likely to fall and get another head injury. This is most likely in the first 10 days. Having a second concussion is dangerous.

Usually, a child should have at least a week with no symptoms before going back to sports.

The return to sports should be gradual.

Prevent future head injuries.

The risk of concussion is greatest in football, rugby, hockey, lacrosse, and soccer. Make sure your child wears a helmet for activities like biking, skateboarding, skating, skiing, sledding, or playing football. Make sure the helmet fits properly and stays in good shape. Replace helmets if they're damaged.

