

Head Injury Decision Guide: Is a CT scan right for my child?

Head injuries are common in children. Fortunately, most head injuries are not dangerous. Your medical provider needs to do an examination of your child and ask you some questions about things that happened during and after the injury. You and your medical caregiver can go through this document together to help decide if your child needs a CT scan.

- 1 Tell your medical provider the details of the accident.** How long ago did it happen? Was it a fall or a car accident? How far, how fast? The more details you give, the better.

- 2 Check  any of the signs and symptoms that have happened in your child since the accident.** Complete the checklists below with your medical provider.

Less serious signs and symptoms



☐ Losing consciousness (passing out)



☐ A bump on the head



☐ A bad headache



☐ Vomiting

More serious signs and symptoms



☐ Behavior changes



☐ Weakness



☐ A dent in the head



☐ Seizure



☐ Bleeding out of an ear, or a bruise behind the ear



☐ Clear liquid coming out of the nose



☐ Loss of hearing, especially if it is in just 1 ear

- 3 Your medical provider will use the information they gather from the physical exam and talking with you to figure out whether your child is at **low**, **medium**, or **high** risk of serious brain injury.**

Low Risk
for serious brain injury

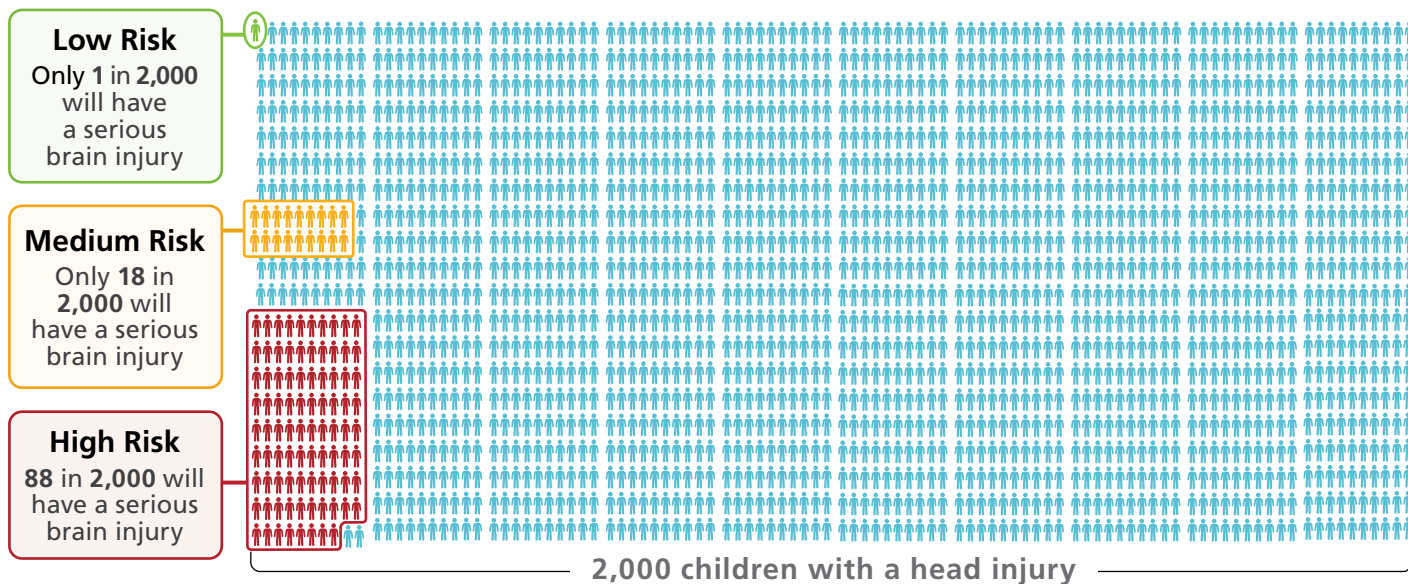
Medium Risk
for serious brain injury

High Risk
for serious brain injury

4 What does **low**, **medium**, or **high** risk mean?

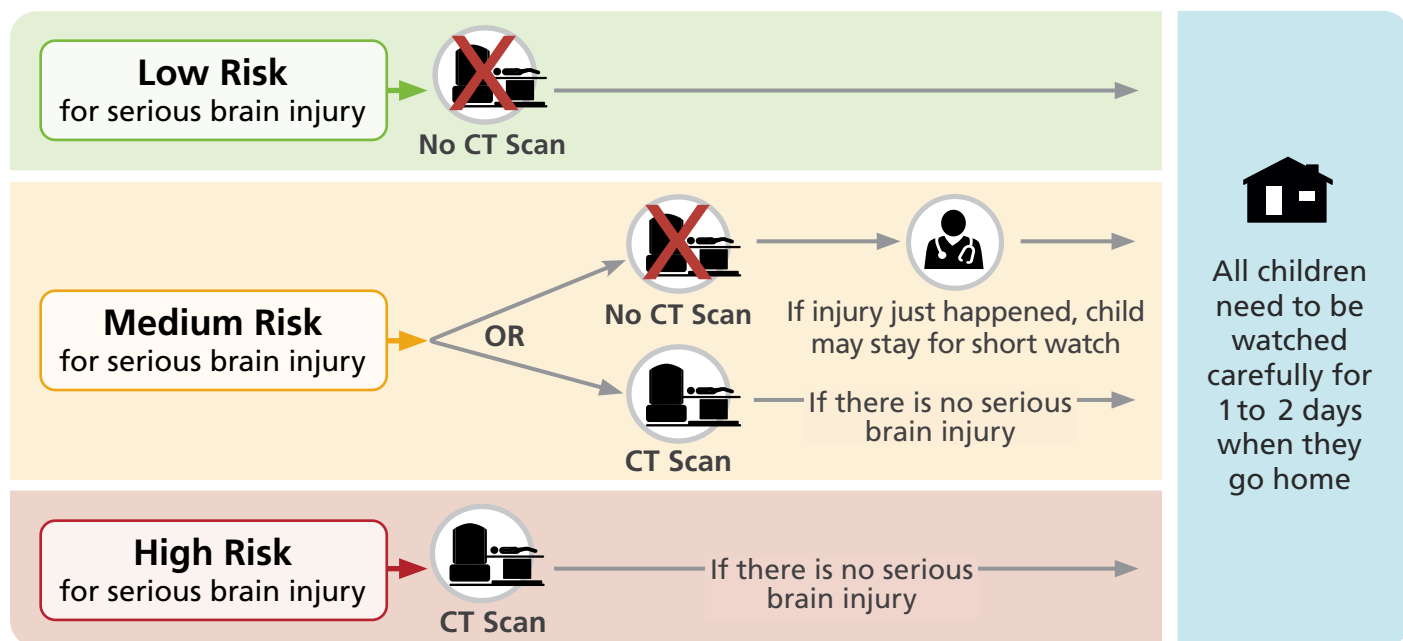
When a child hits their head, the main concern is a serious brain injury that may need surgery or hospitalization. The risk categories — **low**, **medium**, and **high** — show how likely your child is to have a serious brain injury. A CT scan is used to find serious brain injury. Unfortunately, CT scans use radiation. When your child is exposed to radiation, they have a slightly higher risk of getting cancer in their lifetime. A CT scan should only be done when it is really needed.

The image below shows the risk of serious brain injury in each category. For example, in the **low** category, the risk of serious brain injury is 1 in 2,000. If your child is in this category, this means that if 2,000 children have a head injury like the one your child has, only 1 of them will have a serious brain injury, while 1,999 will not. The risk of a serious brain injury is so low that a CT scan would not be recommended.



5 What are the recommended steps for my child?

Medical personnel have treated thousands of children with head injuries. They have created guidelines to help each type of injury get the best care. The series of steps are different for each risk category. Discuss the steps below with your medical caregiver.



6 Options



Short watch by medical provider

If your child is in the **medium** risk category, and it's been less than 4 hours since the injury, your doctor may want to watch for signs of serious injury for a few hours in a medical setting. During the watch period, your child will be examined a few times by a medical provider. If more serious signs or symptoms appear, the doctor may order a CT scan.

If your child doesn't have any serious signs or symptoms during this time, they will be sent home to be watched by family for 1 to 2 days.



CT Scan







If there is a **high** risk for brain injury, the doctor may suggest a CT scan. Your child will lay on a table, and the CT machine will use X-rays to see inside your child's head. Your child will not feel anything while the CT scan is happening. If serious brain injury is found, your child may need to stay in the hospital or have surgery. If nothing serious is found, they will be sent home to be watched by family for 1 to 2 days.

CT scans are really good at finding serious brain injuries but should only be used when needed. A CT scan slightly increases your child's risk of developing cancer in the future. In addition, CT scans are expensive.



Watched at home

Go to the emergency room or call your doctor if your child:

-  ☐ Is confused or abnormally hyper
-  ☐ Gets more and more tired and has trouble staying awake
-  ☐ Headache worsens, even with pain medicine
-  ☐ Is vomiting over and over
-  ☐ Is unsteady and can't walk or has arm or leg go weak or numb
-  ☐ Has a seizure

When your child comes home, follow your medical provider's instructions. Have your child relax and take it easy.

You will need to watch your child closely for any signs or symptoms of a serious brain injury for 1 to 2 days. If you see any, call your doctor or take your child to the emergency room right away. (see blue box on left).

Watching is important whether your child had a CT scan, spent some time being watched by a medical provider, or is only being watched at home.

For more information on what to expect and how you can help your child recover, see the Let's Talk About... handout ***Mild Traumatic Brain Injury***.



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