

Choosing Wisely®

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Brain scans for head injuries

When you need them—and when you don't

A blow to the head can be scary. Usually, the injury is not severe. But sometimes there can be a concussion, bleeding on the brain, or cracks to the skull.

It is important for the doctor to examine you or your child for a possible concussion or another injury. A blow to the head can cause a brain injury.

The doctor may order a brain scan to make sure you do not have a fractured skull or a serious brain injury. But these scans are usually not needed. Here's why:

Brain scans are usually not helpful for a concussion.

A CT scan takes pictures to create images of the brain. The scan can show if there's a fracture or bleeding. An MRI creates clear images of brain tissue.



But these scans cannot show if you have a concussion. A concussion is different from a fracture or bleeding. A concussion affects how your brain works, and most people recover within a few weeks.

How do you know if you have a concussion?

Only a doctor can diagnose a concussion. The doctor will:

- Ask about your accident.
- Check your memory, speech, balance, and coordination.
- Check your head, eyes, ears, and neck.
- Look for symptoms of a concussion:
 - Headache, vomiting, nausea
 - Dizziness, balance problems
 - Blurred vision
 - Ringing in the ears
 - Confusion, memory loss, poor concentration
 - Sensitivity to light or noise
 - Brief loss of consciousness

Scans have risks.

CT scans use radiation, which can increase your risk of cancer. Children, and especially infants, have more risks because their brains are developing. Young children may need sedative drugs so they lie still for a scan. These drugs have risks. And imaging test results are sometimes unclear. This can lead to more tests and visits to a specialist.

Brain scans cost a lot.

A standard brain CT scan costs hundreds of dollars, and an MRI scan costs even more. If your results are not clear, you may have to pay for extra tests and doctor visits.

When do you need a CT scan or MRI?

A CT scan is usually the best first test to use if the doctor thinks you have a skull fracture or bleeding in the brain. Your doctor should look for symptoms and ask about the accident.

Possible symptoms of skull fracture and bleeding:

- Weakness on one side of your face or body
- Trouble speaking, hearing, or swallowing
- Reduced vision
- Seizures
- Repeated vomiting
- Severe headache
- One pupil larger than the other
- Fluid or blood from an ear or nose
- Tenderness over the skull

Your doctor may also order a CT scan if:

- You lost consciousness.
- You were in a car accident.
- You fell more than three feet.

An MRI may be helpful if your symptoms continue for 48 hours or more after the injury, or if your symptoms get worse.

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

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