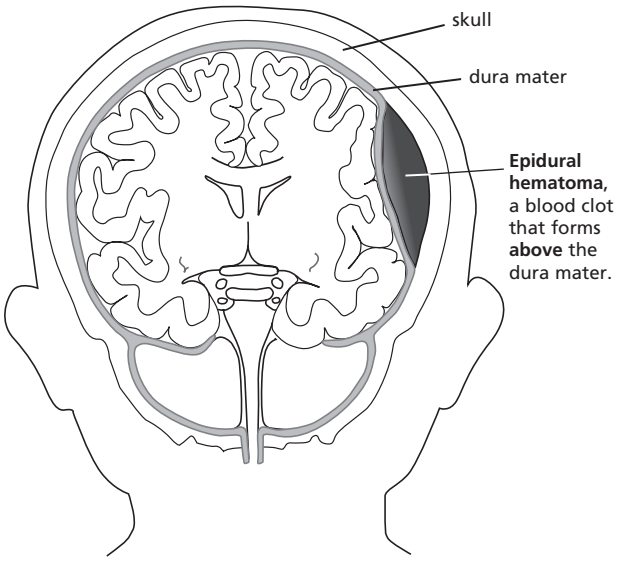
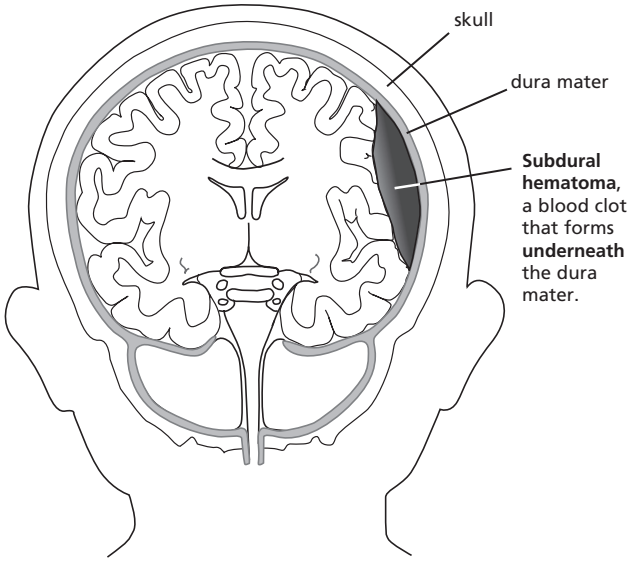
Let's Talk About...

Epidural and Subdural Hematoma





The dura mater (DOO-ra MAT-er) is a tough, fibrous membrane that surrounds the brain. An **epidural hematoma** (ep-ih-DOO-ral heem-uh-TOE-ma) is a collection of blood that forms above the dura mater (please refer to illustration). A torn artery usually causes this collection of blood. The blood that leaks from the artery forms a pocket that bulges out and puts pressure on the brain. If the epidural hematoma is removed quickly, the person will likely recovery. This is because it prevents the brain from being bruised or permanently damaged. A **subdural hematoma** (sub-DOO-ral heme-uh-TOE-muh) is a collection of blood that forms underneath the dura mater (please refer to illustration). The blood comes from small veins that are torn and bleed. The blood that leaks from the veins forms a pocket that bulges out and puts pressure on the brain. If the pocket is big enough, it can bruise or tear the brain tissue near it. This can damage the brain. If this happens, a full recovery is less likely.

What causes an epidural or subdural hematoma?

A person can get these hematomas from a car or bicycle accident, a fall, being shaken, or any blow to the head.

What does a child do when they have an epidural or subdural hematoma?

Your child may have a headache, vomit, be unusually sleepy, be fussy, or be unconscious (unable to wake up). Seizures may also occur with hematomas.

How does the doctor treat a hematoma?

Your child will receive a CT scan (also called a CAT scan) to find out where the injury is, what size it is, and how much bleeding there is. The scan takes pictures of your child's brain. Your child may need

surgery to remove the blood clot and to make sure the bleeding has stopped. Before the surgery, the nurse will shave part of your child's head so the surgery can be completely clean. Your child will also get some medicine to help her relax and sleep. See the handout ***Let's Talk About… Sedation for tests and procedures*** for more information. During surgery, the surgeon removes an area of the skull to get to the hematoma. After the surgeon removes the blood, he puts the skull bone back and holds it in place with tiny screws. The skin over the surgical area will be closed with sutures (soo-churs) or skin staples.

After the surgery, your child will be moved to the Pediatric Intensive Care Unit (PICU) for further care. There will be lots of equipment around the bed. This helps the staff care for your child. See the handout ***Let's Talk About… ICU monitors*** to find out what all this equipment does. While your child is in the PICU, the nurses will frequently check her temperature, pulse, blood pressure, and alertness. Every effort will be made to keep your child comfortable. It is common for children to have a low fever after a dural hematoma. It is part of the healing process, because the brain has been irritated. It is not because of infection. It is also common for children to vomit. If your child vomits a lot, this can cause dehydration (dee-hi-DRAY-shun). Dehydration is when there is not enough fluids in the body. To keep this from happening, your child may receive fluids an IV (a tiny tube inserted into a vein).

What happens after the surgery?

Children may stay in Pediatric Intensive Care Unit (PICU) for two to three days. Once your child is awake, she will be moved to another part of the hospital. This is usually the Neuroscience Trauma unit. Your child can go home once she is alert, moving about, has not had a fever or vomiting for two to three days, is eating normal food, and her pain is managed with medication taken by mouth. Be sure to schedule a follow-up appointment before you leave the hospital.

Some children experience brain problems such as trouble walking, trouble speaking, or memory loss. If your child is having these types of problems, your nurse should educate you about mild brain injuries (ask your nurse for the handout, ***Let's Talk About… Mild brain injuries***). Your child may have rehabilitation team evaluate your child. They will complete their evaluation before your child goes home from the hospital. The team will talk with you about any continuing care your child may need.

What can my child do at home?

Once home, you must restrict your child's activities until the first follow-up appointment. Keep your child away from the following:

- contact sports (soccer and skiing are contact sports)
- any activity where your child may bump her head
- bicycling (even with a helmet)
- trampolines
- roller-skating or T-Ball
- school for one to two weeks (contact the school's education specialist.) When your child goes back to school, start with a short day and increase the time as your child feels better.

Your doctor will tell you when your child can return to school. If she returns to school before the first follow-up appointment, she cannot participate in recess and gym class. A child life specialist can help you put together a list of quiet activities for your child. Tell your nurse you would like to speak to a child life specialist. They can help with concerns of self-image, anxiety, stress, and other emotions. Once your child is home, you may notice some changes. Many of these are normal for a child who has had a brain injury. Many children have headaches, tire easily, and have mood swings.

If your child goes home from the hospital with medicines to control seizures and you notice any of the following, call the surgeon's office immediately:

- Your child acts "drunk" (walking into walls or appearing unsteady while walking).
- Your child has problems talking.
- Your child has more seizures.

- Your child seems too sleepy.
- Your child has more vomiting.

How do I care for my child at home?

1. Keep the area where the surgery was performed dry and clean.
2. Call the surgeon's office if the surgical area becomes red or tender, if you notice any fluid leaking from the surgical area (this may be yellow, green, clear, or bloody), or if your child develops a fever.
3. Bathe according to the discharge instructions from your doctor.
4. If the wound area becomes wet, carefully pat it dry with a clean towel. If needed, you can use a blow-dryer on a cool setting.
5. The staples or stitches usually need to be removed seven to ten days after the surgeon put them in place. See your child's discharge orders for specifics on this. If you live outside the area, your child's local healthcare provider can do this for you. Otherwise, come to the surgeon's office at the hospital. Call to arrange a time to have the stitches or staples removed.

Call your doctor if...

- Your child is more and more sleepy or you find it difficult to wake your child.
- Your child can't stay awake for a short time.
- Your child has severe headaches that get worse.
- Your child has trouble seeing or blurred vision that gets worse.
- You find fluid from the suture or staple site that is yellow, green, clear, or bloody. The fluid may also have an odor.
- Your child has more seizures.
- Your child develops nausea and vomiting that continue or get worse.

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