

What is the purpose of this procedure?

A **blood patch** is a procedure used to relieve headaches caused by cerebrospinal fluid (CSF) leaks. **Cerebrospinal fluid** is the fluid that flows in and around the hollow spaces of the brain and spinal cord, and between two of the meninges (the thin layers of tissue that cover and protect the brain and spinal cord).

Cerebrospinal fluid leaks are typically caused by the puncture of the **dura mater** (the sac that surrounds the spinal cord). A CSF leak may cause a type of headache called a **post dural puncture headache** that normally worsens when you are upright and is relieved by lying down. This procedure uses your own blood to seal these leaks.

What are the risks associated with this procedure?

The risks are infrequent. They include:

- Allergic reaction to medication
- Nerve damage (spinal cord and nerve roots)
- Bleeding and bruising at the injection site
- Pain at the injection site or during the injection
- Infection
- Puncture of the sac surrounding the spinal cord (dura mater)
- No improvement or worsening of your pain (in some cases)

How should I prepare for the procedure?

- You must have a driver with you at the time of check in and check out. Your driver must accompany you to the clinic for your procedure. You can be discharged only to the care of a responsible adult driver 18 or older.

- Since you may receive sedation, it is important that you do not eat within 6 hours before the procedure. Small amounts of clear liquids are ok up to 2 hours before the procedure. If you are a diabetic, be sure to discuss eating and medication schedule with your doctor.
- You may need to stop taking certain medications several days before the procedure. Please remind the doctor of all prescription and over-the-counter medications you take, including herbal and vitamin supplements. The doctor will tell you if and when you need to discontinue the medications.
- It is very important to tell the doctor if you have asthma or had an allergic reaction to the injected dye for a previous radiology exam (CT scan, angiogram, etc). An allergic reaction has symptoms such as hives, itchiness, difficulty breathing, or any treatment which required hospital stay. The doctor may prescribe medications for you to take before having the procedure.
- Tell the doctor if you develop a cold, fever, or flu symptoms before your scheduled appointment, or if you have started taking antibiotics for an infection.

What will happen during the procedure?

The procedure is performed on an outpatient basis in a special procedure room equipped with a fluoroscope (x-ray).

1. In the pre-procedure area the nurse or doctor will place an IV line. This is used for fluids and sedation.
2. For your safety and comfort, when you get to the procedure room you will be connected to monitoring equipment (EKG monitor, blood pressure cuff, and blood oxygen monitoring device), and positioned on your stomach.
3. Your back is cleansed with an antiseptic soap and the doctor injects numbing medicine into your skin, this will cause a burning sensation for a few seconds.

4. The doctor then carefully directs a needle with help of the fluoroscope (x-ray) to the epidural space. Contrast dye will be injected to help see the space better and ensure correct needle placement.
5. The doctor draws a small amount of blood from your arm and injects it into your back. You may feel some minor pain or pressure in the back as it is injected.

What should I expect after the procedure?

After the procedure you will be taken to the recovery area where you will spend up an hour lying flat on your back. Most people experience immediate benefit following the injection, but we encourage you to rest as much as possible the rest of the day. Avoid lifting heavy objects (groceries, children) and physical exertion or straining. You may slowly resume your usual activities the following day. If your headache is not relieved, or returns and is severe, please contact the clinic to discuss further management. The clinic phone number is (734) 615-7246.

If you would like further information including videos of procedures, please visit our website: <http://www.umpain.com/>

Disclaimer: This document contains information and/or instructional materials developed by Michigan Medicine for the typical patient with your condition. It may include links to online content that was not created by Michigan Medicine and for which Michigan Medicine does not assume responsibility. It does not replace medical advice from your health care provider because your experience may differ from that of the typical patient. Talk to your health care provider if you have any questions about this document, your condition or your treatment plan.

Patient Education by [Michigan Medicine](#) is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License](#). Last Revised: 06/2018