

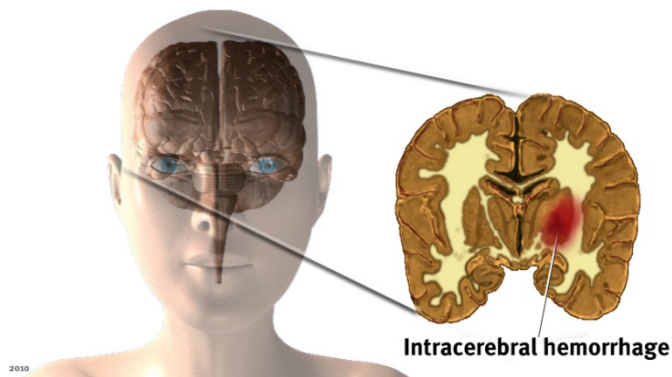
# Intracerebral Hemorrhage

## For patients in the Neuro-Intensive Care Unit

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### What is it?

An Intracerebral Hemorrhage, or ICH, happens when a blood vessel deep inside your brain bursts. The blood then leaks into the brain tissue. This blood puts pressure on the brain. This pressure can cause brain cells to die and may cause a loss of function in some body parts.



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### What are the symptoms of ICH?

- Sudden, severe headache
- Sudden confusion or change in awareness
- Sudden nausea or vomiting
- Sudden numbness or weakness in the face, arm, or leg
- Sudden clumsiness or difficulty walking
- Sudden problem speaking or understanding

### Who is at high risk?

People with:

- High blood pressure that stays high for a long time
- Abnormal or diseased blood vessels
- Heavy alcohol or drug abuse

- A family history of ICH
- Smoking
- Use of blood thinners

### **What to do?**

ICH is a medical emergency!

Call 911 if you experience any of the symptoms of ICH.

### **What to expect?**

When you arrive at the hospital the doctor will order medical tests to help make your diagnosis. You may have any of the following tests:

- Computed Tomography Scan (CT)
- Magnetic Resonance Imaging (MRI)
- Angiogram
- Blood Tests
- Monitoring in the Intensive Care Unit (ICU) or in the Stroke Unit

### **What treatment will I receive?**

#### **At the hospital:**

Your doctor will select the best treatment according to how large the bleed is and what caused it. Treatment can include:

- Drugs to reduce and control blood pressure and swelling in the brain
- Draining excess fluid with a small tube (a catheter) or with needles
- Sometimes surgery may be needed to relieve the pressure and prevent further injury to the brain

#### **Later:**

After leaving the hospital you may need more care. This depends on the size of the ICH, and how much damage the ICH caused.

Follow up care may include:

- Return visits to Neurology or Neurosurgery
- Follow up visits for blood pressure control

Comprehensive Stroke Center  
ICH Patients in the Neuro-Intensive Care Unit

- Short term rehabilitation
- Long term rehabilitation

**Rehabilitation:** therapy to improve function.

## What can I do to prevent ICH?

The biggest risk-factor for ICH is high blood pressure that stays high for a long time.

If your blood pressure is high, work with your doctor to reduce it.

Some other simple steps you can take:

- Limit your alcohol intake
- If you smoke, quit
- Eat more fruits and vegetables

## Where can I learn more?

- American Stroke Association Stroke support line: 888-478-7653 or [www.strokeassociation.org](http://www.strokeassociation.org)
- National Stroke Association [www.stroke.org](http://www.stroke.org) or Tel: 800-787-6537
- Internet Stroke Center at [www.strokecenter.org](http://www.strokecenter.org)
- UMHS Stroke Program Website [www.med.umich.edu/stroke](http://www.med.umich.edu/stroke)

## What you need to know about your hospital stay

### How long will it last?

Every case is unique and depends on the size, location and how much damage the hemorrhage (bleed) caused.

### The dangers of being bed bound

The human body is meant for a life lived upright and on the move. Because patients may stay in bed (at least in the early stages of therapy) they are at high risk for developing several serious conditions:

- Dangerous blood clot formation
  - To reduce this risk patients wear inflatable calf wraps (“SCD’s”) while they are in bed or a chair. This therapy helps to improve blood flow by

simulating the action that active muscles have on blood vessels.  
Patients also receive drugs to prevent clots.

- Pneumonia
  - To fight back against pneumonia, you'll be exercising your lungs by doing deep breathing with an inhalation meter called the "Incentive Spirometer."
  - To further ensure best lung inflation, the nurses may vibrate your chest walls by clapping on them with their hands or with an air powered "thumper" to shake loose any accumulating secretions.
- Even something as ordinary as constipation may become dangerous in a patient who is bed-bound. This is because "bearing down" is one of the actions that produces strain on the brain's arteries. Stool softening medications and early use of laxatives help to lessen straining.

### **How can family and friends help patients achieve the best outcomes?**

Your loved one has suffered a life-changing event that affects the entire family. Still, while in the hospital, it's very important for everyone to keep focused on the needs of the patient. The actions of family and friends are key factors in reducing brain damage and having the best possible outcome. Here are some guidelines for family and friends:

### **What can family members do to improve outcomes of ICH?**

#### **Be at your best through a possibly long ordeal**

The strength of family members is an asset for the patient. Responding to the patient's on-going needs during this stay is an important role, and families find that they can provide stronger support by pacing themselves and taking steps to prevent burnout. These steps include eating well, getting enough sleep, asking others for help and allowing some time away from the hospital. Saving your own strength can definitely be an act of love.

#### **Be an ally in caring for your loved one**

Every aspect of Neuro ICU care is based on solid research and past success. To

achieve the best possible outcome, the patient must follow every detail of the treatment plan. Caregivers are key to ensuring that their loved one is taking part in all necessary therapies, even when it's not always easy. Please help us be sure the patient is:

- Doing deep breathing exercises
- Following restrictions in bed positioning
- Wearing the inflatable calf wraps
- Following fluid restrictions (if needed)
- Following any other instructions from the medical team

### **Preserve life outside the hospital**

Most likely your loved one has suffered a sudden event that deeply shakes a family's world. While your attention is focused on your sick loved one, life beyond the hospital room still moves forward. Responsibilities outside the hospital continue to demand attention, and taking care of your house, caring for children, and staying connected with work are not acts of disloyalty. In fact, spending some of your time keeping things in balance is necessary to preserving the life your loved one most wants to rejoin.

### **Your partnership with the Neuro ICU**

#### **What is the best way to keep informed about a patient's clinical status?**

The bedside RN is very well-informed and can answer a great number of your questions. If your question needs a response from a doctor, the RN can page the doctor and arrange a more direct discussion. Your doctor will get back to you as soon as possible. But please understand that with the great demands on a doctor's time and attention, "as soon as possible" may not always be right away. The University of Michigan Health System is committed to keeping patients and families well informed, and you can be confident that every effort will be made to keep the wait short.

### **What resources are available to support patients and families?**

**Social Workers** are staff members that help families cope with emotional or social difficulties related to the hospital stay. Social workers also assist with counseling, general information, and referrals to community agencies.

**Discharge Planners** arrange for continuing therapy and nursing needs after the patient leaves the hospital. They also may arrange placement in rehabilitation or extended care facilities if needed.

**The UMHS Guest Assistance Program (GAP)** provides financial assistance for transportation, parking, meals, and lodging for family members who qualify.

**Nurse Practitioners** help coordinate the overall management of the patient. They are a rich source for information about medical care after the ICU stage.

**Spiritual Care** providers respond around the clock to patients and families who need spiritual counseling, anointing, emergency baptism, crisis intervention and other supportive measures.

**The Unit Clerk**, located by the main NICU entrance, is another important ally and a good source for coordinating visits around bedside procedures. The clerks also provide directions, and make other arrangements.

**The Unit Host** is on the unit during day and early evening hours. The Host works to promote comfort and meet many of the practical needs of patients and families beyond those mentioned above.

**The Bedside Registered Nurse** remains your best, first contact. The RN will help put you in touch with any of the supportive resources listed above.

### **What happens after leaving the Neuro Intensive Care Unit?**

Based on your daily progress your doctor will decide when you are able to leave the Neuro ICU and move to the Neuro General Care floor, rehab or home. This

setting will be familiar in many ways. The same doctors will be overseeing your care. In this more relaxed setting, the focus of care will be shifting away from battling against possible damages and toward returning to the activities of daily living.

Before you leave the hospital, your nurse will give you more details about the follow-up care and lifestyle changes you may need.

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12/2016