FREQUENTLY ASKED QUESTIONS ABOUT BRAIN INJURY

1.What are the causes of nontraumatic brain injuries?

Nontraumatic brain injuries are caused by changes or problems within the brain itself. These problems can occur for many reasons. Some examples of nontraumatic brain injury are:

- Spontaneous bleeding: Bleeding within the brain can occur by weak or malformed blood vessels. High blood pressure, arterial venous malformations, or rare bleeding disorders can trigger the bleeding. A subdural hemorrhage (bleeding on the brain) or an intracranial hemorrhage (an expanding pool of blood within the brain) are examples of terms used to describe this type of bleeding. This type of injury can also be called cerebrovascular accident or a hemorrhagic stroke.
- Infections or metabolic disorders: There are many types of infections and metabolic changes (chemical or biological reactions) that may happen to the body and affect the brain. For example, a virus in the body may attack the brain, causing injury to brain tissue. An overdose of drugs, a loss of oxygen due to heart or lung failure, or a sudden chemical change because of failure of a body organ are examples of metabolic changes that can injure brain tissues.
- Tumors: A tumor in the brain may cause injury to the surrounding brain tissue. When surgery is used to remove a tumor, the surgical process may result in changes to the brain.

2.What will be the recovery pattern of my loved one?

There is no predictable or set pattern of recovery following a nontraumatic brain injury. The recovery process is unique to each person and to the type of injury. Some injuries will affect very specific areas of the brain, while others may have effects on the brain function as a whole. Injury that is confined to one area is called focal injury. Injury that affects wider brain function is called diffuse injury. Factors that will affect recovery after a brain injury include the following:

- The exact location of the injury within the brain
- The severity and size of injury
- The general medical condition of the patient
- The amount of swelling or fluid around the injury
- The nature of the medical treatment received

The doctor can explain how these factors apply to each patient. It is important to remember that no two injuries are alike. It is not wise to compare recovery from one individual to that of another.

3.How much recovery can I expect to see in my loved one?

This is one of the most important concerns of all families. It is also one of the most difficult to answer. Each brain injury is different. One of the first things you must understand is that it is not wise to compare one patient's recovery to another's.

Research tells us that the fastest recovery happens in the first six months after the injury occurs. Recovery continues after the first six months, but in many cases it will continue at a slower pace. Sometimes changes are seen years past the injury.

In the first few weeks, our team will decide on some long-term goals for your family member. This is based on a first idea of how much recovery to expect. The goals will change over time as recovery is faster or slower than anticipated.

It is important to understand that treatment alone does not cause the patient to get better, Recovery happens as the brain tissue and other body organs heal. Treatment also teaches the patient to use and make the most of the abilities he/she does have.

Serious brain injury, in most cases, will mean lasting changes in the injured person.

4.How long will my family member be in rehabilitation?

This is also a difficult question to answer. There are many factors that affect the length of stay. The team works together on this decision, and the family is a

member of the team. The doctor makes the final decision after talking to all of the team members.

Soon after admission, you will be informed about the team expectations for your family member's stay at the rehabilitations hospital. These expectations may change as recovery occurs, based on the patient's rate of progress. We will keep you informed about any changes.

The team looks at many factors when deciding how long a patient should stay here. Short-term goals are set at each meeting. These goals are steps to reaching the overall long-term goals. Team members use their knowledge, expertise, and experience to judge the amount of time needed to reach these goals. This is the basis of the length of stay estimate.

The team will share their ideas with you. They will listen to your needs also. The needs of the patient and you, the family, are always a major factor in planning for discharge.

Brain injury recovery is a long-term process. Discharge does not mean the end of treatment. The team will work closely with you and the patient to plan for follow-up services and outpatient services.

5.How are outpatient services arranged?

Before discharge, the team will recommend what is needed. Your social worker will help you find or choose the services and programs that will best meet your needs and the team recommendations.

Many patients will continue with outpatient services at the rehabilitation hospital. If services are provided by another program or agency, the team makes sure that the agency receives information about the patient.

We keep in contact with each patient for some time after discharge. Patients are asked to return to follow-up appointments with some team members. The point of these meetings is to see that progress continues as expected and to help plan and arrange for the patient's changing needs.

6.When will my loved one be able to return to work or school?

It is very hard to say exactly when, or even if, someone who has experienced a brain injury can return to work or school. Many factors need to be considered. These include not only the physical and cognitive recovery of the patient, but the type of job or school the patient was involved in before the injury.

Many patients will look fine and act normally in physical ways or in places like home where demands are not great. But there are often thinking or behavioral changes that can cause problems in a work or school setting. Many times, the patient does not see that he/she has any of these problems.

The key to returning to work or school is planning. Planning needs to be done by the family and the team. We also need to include the school and employer, to help in planning the return and to make them aware of the patient's needs. Many times we will also involve a social agency in the planning. We emphasize involving everyone who is concerned with this return in the planning process. This will give your family member the best chance for success.

7.What is cognition and cognitive retraining?

Cognition refers to thinking. Cognition involves many mental processes and skills including: memory attention, learning skills, planning skills, etc. These skills are used to plan ahead to help us understand the results of our actions, to stay safe, and to relate to other people.

After a brain injury, most patients have some problem(s) in cognitive areas. The entire team works together to discover each patient's problem areas and then work with the patient to improve their cognitive (thinking) abilities. This is called cognitive retraining or cognitive rehabilitation.

Formal cognitive retraining is done in one-to-one sessions. These sessions focus on practicing cognitive skills and on ways to use old skills or learning new skills to replace those that have been lost.

Cognitive retraining is not limited to formal sessions with a therapist. It is included in many of the patient's daily activities. For example, the occupational

therapist and nurse focus on treating the patient's planning skills while doing some morning dressing and care. They help the patient to relearn these skills and teach him/her new ways to think, or plan ahead, if that skill is needed. The occupational therapist and nurse practice with the patient, guiding him/her through the activities.

Practice is very important. It helps reinforce old skills as they are relearned and new skills are taught.

8.What kind of memory problems can occur after brain injury?

There are many types of memory. Two examples are long-term and short-term memory. Long-term memory includes memories of family history and your address or telephone number. An example of short-term memory would be what you ate for breakfast.

Because of memory problems, learning and relearning can be very hard for some brain-injury patients. In general, memory improves as other thinking processes improve. However, many patients with brain injury also have long-lasting problems with memory.

There are many ways to help people who have memory problems.

- Be patient
- Repeat things many times
- Give cues, such as a written schedule or a list
- Encourage patient to use a memory log as part of the cognitive retraining program. (Some people will need to continue using this long after discharge.)
- Plan each day in the same way with a simple routine. Do the same activity in the same way each day.

  Memory problems will cause stress for the patient. Anger or frustration often results from poor memory. This is only natural, because the person does not know how to act. By keeping a simple, constant routine, the patient can learn more easily and will be more comfortable.

These problems will also cause stress for the family members. It is easy to become confused or frustrated by the patient's memory problems. The best thing you can do is to remain calm and to state the facts, in simple words, that the patient does not remember. Repeat the information if necessary. Do not argue with the patient. Sometimes it will be better to just change the subject or to involve the patient in another task.

9.Why does my loved one talk or act strange?

The brain is the control board for all the body's functions. This involves behavior, speech, and feelings. When the brain is injured, the patient may speak or act in strange ways. The brain is not receiving messages or controlling actions the way it could before the injury.

Behavior can be frightening or embarrassing. The patient may swear. He/she may say things that embarrass the family or be rude to others. The person with the brain injury may be verbally or physically violent—hitting or yelling. Remember he/she does not know or understand that these actions are strange or wrong. He/she is confused and unable to plan or think things through.

When inappropriate behavior occurs, it is important to focus on the cause for the wrong behavior, not on the action itself. Try to figure out what the patient is feeling or what he/she wants. Usually, when the patient is acting strangely, he/she is frustrated. Be calm. If you get upset, it may only make things worse. Try to take the patient somewhere quiet. Give simple directions to help the patient with what he/she is doing, or ask simple questions to discover what the patient is feeling or wants. Sometimes you may just need to leave the person alone for a few minutes, to allow him/her to calm down. Finally, do not take anything the patient may say or do personally.

In some cases, behavior problems can be very serious or continue for a long time. If this is the case, a special treatment plan, developed by a psychologist, will be followed by the entire rehabilitation team. You will

also learn how to follow this plan. Certain medications can also help and may be used along with the behavior plan.

10.What are perceptual deficits?

Perceptual problems reduce a person's ability to understand what his/her senses are telling him/her. This can cause the person to act strangely at times. Some examples of perceptual problems are problems with judging distance or problems being able to tell the difference between objects in the back of a room and those in the front. This can cause the person to bump into things when walking or cause him/her to misjudge the distance when reaching for something. Depending on what part of the brain is hurt, many different perceptual problems may occur.

Some perceptual problems get better over time. Others will not, but there are many things that can be done to help with these problems. The therapist might be able to teach the patient ways to get around the problem. Another approach is to teach other people how to help with the problem. A third way is to change the patient's living area to adapt to the problem.

11.What is a seizure?

Seizures are caused by a change in the normal electrical pattern in the brain. A seizure can run from a "blackout spell" to a full convulsion. Brain injury can make seizures more likely to happen. Different types of brain injuries have a greater or lower risk for seizures.

In most cases, seizures can be treated quite easily with medicines called anticonvulsants. Sometimes, even if a patient has never had a seizure, anticonvulsants are prescribed. These medicines are prescribed if the type of brain injury has a high risk for seizures.

Your doctor can best answer any questions you have about seizures.

12.When can my loved one drive again?

Please check your state's laws and the rules of your insurance company. Many times they will have penalties for drivers who resume driving after a serious illness or injury without testing.

When the patient can resume driving is another question that is hard to answer. Driving is a complex task. It uses many skills. Skills important to driving are perception, coordination, sight, reflexes, and the ability to make quick decisions. As you know, these are the skills most often affected by brain injury.

What this means is that every person who has experienced a brain injury should take some specialized tests before starting to drive again. Our occupational therapy department can test driving skills. This testing can be done before or after discharge. Often the test will need to be repeated. When the rehabilitation team feels that the patient is ready to take the test, they will send him/her.

13.How does a brain injury affect the body?

A brain injury may cause changes in movement, communication, thinking, or behavior. Changes may include the following:

- Paralysis or weakness in one or both sides of the body
- Poor balance
- Unable to plan motor movements
- Poor coordination
- Too much or too little muscle tone
- Easily tired (fatigued)
- Problems swallowing (dysphagia)
- Repeating a movement over and over (perseveration)
- Increased sensitivity to touch
- Decreased or loss of feelings to part of the body
- Some loss of vision
- Uncontrolled movements of the eye(nystagmus)
- Double and/or blurred vision
- Weakness of muscles that move the eyes

- Problem judging how far away something is (depth perception)
- Decrease in what is seen and/or heard
- Loss of sense of smell or taste
- Increased sensitivity to movement or sounds
- Decreased awareness of position of body parts
- Ignoring items on one side of the body (neglect)
- Ignoring one side of the body
- Problems understanding what is said
- Problems understanding what is read
- Problems speaking
- Problems saying or writing thoughts
- Slurring of words
- Making up words (jargon)
- May sleep all the time (uses all energy to stay awake)
- Changes in sleep patterns (may not be able to sleep through the night; needs many shorter periods of sleep during the day)
- Changes in the ability to control body temperature, blood pressure, or breathing
- Uncontrolled appetite or thirst
- Loss of bladder and bowel control
- Confusion about who he or she is, where he or she is, and who else is around (orientation)
- Easily distracted (short attention span)
- Unable to keep attention to a task for a period of time (concentration)
- Trouble learning new information
- Poor judgment (unsafe)
- Unable to plan events or tasks, draw conclusions, and make decisions (problem solving)
- Does or says the same thing over and over (perseveration)
- Trouble adjusting to changes in daily routine (inflexibility)
- Unable to understand complex ideas (abstract thinking)
- Problems with sense of direction
- Unable to do simple math problems
- Trouble recognizing important information (discrimination)
- Problems doing tasks in the right order (sequencing)
- Lack of interest (apathy)

- Not wanting to do a task (lack of motivation)
- Unable to start a task (initiation)
- Extreme and rapid changes in emotion (mood swings)
- Crying or laughing at the wrong times (emotional lability)
- Irritability
- Depression
- Trouble controlling emotions: temper flare-ups, aggression, cursing and frustration
- Inappropriate sexual behavior or decreased sex drive
- Social immaturity
- Focuses on self (self-centered)
- Lack of sensitivity to the feelings of others
- Confusion
- Impulsiveness
- Restlessness, agitation
- Not aware of physical and thinking problems
- Does not like to accept help from others (tries to do things without help, which may not be safe)
- Believes it will not be hard to return to former job or lifestyle