



مؤسسة حمد الطبية  
Hamad Medical Corporation

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# Handbook for Trauma Patients and Their Families

Hamad Trauma Center  
Hamad General Hospital



# Handbook for Trauma Patients and Families

## Purpose

The handbook is designed to provide information about patient care at Hamad General Hospital's Trauma Center.

The handbook has an area for patients and family to write down questions for medical staff or take notes about the treatment.

## Parking

Patient and visitor parking areas are located near the Outpatient Clinic free of charge. Valet Parking is available during working hours for a small fee.

Handicapped persons may park at designated areas in the parking lots or in the front of the main entrance of Hamad General Hospital.

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## Message from the Head of Trauma Surgery



Trauma is one of the most common causes of death and injury in the young adult population within Qatar and the wider Gulf region. As such, providing excellent trauma care is of central importance to Hamad Medical Corporation (HMC).

In order to diminish or eliminate the risk of death or permanent disability, injured patients require timely evacuation, transportation to the appropriate hospital, and diagnosis and treatment by a multidisciplinary team of dedicated healthcare professionals.

To meet the needs of injured patients in Qatar, in 2007 HMC established a Trauma Center at Hamad General Hospital – the only Trauma Center in the State of Qatar. Injured patients now receive organized, multidisciplinary and highly specialized care.

The success of our Trauma Center is due to the skills, dedication and vision of the men and women who work tirelessly day-in and day-out to provide the best possible care always for all of our injured patients.

Helping our population stay healthy is our primary goal and we are putting a substantial effort into promoting a Trauma System. A system which promotes injury prevention and ensures that injured patients receive optimum care.

**Dr. Hassan Al-Thani**

Head of Trauma and Vascular Surgery  
Hamad General Hospital

Welcome to  
Hamad General  
Hospital Level I  
Trauma Center:  
“We are here to  
help.”

Trauma is an unexpected occurrence. No one thinks, “I’m going to get hurt today.” The sudden injury, then being in the hospital and going through recovery can cause fear, frustration and anxiety. You may feel confused and frightened by some things you hear and see. You may not understand some words that people use. Your experience with advanced medical care may even be a whole new world for you.

We hope the information in this handbook will help you better understand and cope during this difficult time. It includes basic facts about the most common types of injuries and their treatments, the patient care process, and hospital services and policies.

You will have many questions during your time with us. Some of the answers may be in this handbook but some may not. Use the space in the back of this book to write down questions that you have for the doctors and staff. You can also take notes about your events and experiences.

Every member of the hospital staff at Hamad General Hospital is here to help. Do not be afraid to ask any questions or express any concerns you have. We look forward to your recovery.

Hamad General  
Hospital is a  
Level I Trauma  
Center

#### **Introduction to Hamad Trauma Center**

Hamad General Hospital is a Level I Trauma Center, the highest level possible and the only Level I Trauma Center in Qatar. As a Level I Trauma Center, the hospital is ready to care for injured patients 24 hours a day, every day. Each year we receive and evaluate more than 5,000 injured patients, of which approximately 2,000 are admitted to our hospital for trauma care. Trauma patients are transported directly to Hamad General Hospital from an injury scene throughout Qatar by both ground ambulance and helicopter.

Injured patients require care from a dedicated Trauma Team that consists of physicians of various specialties, nurses, emergency medical technicians, paramedics and other healthcare providers.

The multidisciplinary team of professionals ensures implementation of an integrated plan of care for all trauma patients, from the pre-hospital setting through rehabilitation and outpatient care, to achieve the highest standards of care. The Trauma Surgery Service coordinates this care.

We try to improve care of our injured patients through research programs, injury prevention programs, and close collaboration with our community hospitals and trauma centers around the world. Our vision is to have a State-wide Trauma System in Qatar, with a well-distributed structure of acute care hospitals and other facilities as members of a system that will become a model for trauma systems in other Gulf countries.

## The Trauma Flow: What Happens Immediately After the Injury?

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### Know the 5 to Save a Life

1. Dial 999 immediately.
  2. Know your location.
  3. Answer all questions.
  4. Follow all instructions.
  5. Give way to Ambulances.
- 

#### At The Injury Scene

When trauma occurs, Hamad Medical Corporation's Ambulance Service's highly trained personnel immediately respond. The Ambulance Service operates under the command of the Ministry of Public Health, transporting and treating injured and sick patients from throughout the entire State of Qatar. Supported by a state-of-the-art fleet of ambulances and helicopters, experienced personnel, including critical care paramedics, assess and treat injured persons before transporting them to the Trauma Center or an appropriate Emergency Department. Trauma patients are transported to the Hamad General Hospital Trauma Center by ground or air ambulance, depending on the severity of their injuries, travel distance and traffic conditions.

The Ambulance Service's commitment is to provide the foundations for excellent treatment that meets international standards and delivers the best medical treatment to injured victims.

#### Arrival At The Hospital

The Hamad Trauma Center receives patients based on protocols from the scene which triages (sorts) patients to the most appropriate hospital. Patients with the most severe injuries and/or who have the potential for life-threatening injuries are transported to the Hamad Level I Trauma Center. During the ambulance

ride, the ambulance team provides information about your loved one's injuries and medical condition so that the team at the Trauma Center will be waiting and ready to treat the patient as quickly as possible. The trauma team typically includes trauma surgeons, an emergency doctor, nurses, a respiratory therapist, and x-ray technicians. The team is ready 24 hours a day, seven days a week. Also, specialty doctors are on-call to help with care.

#### Initial Assessment In The Trauma Resuscitation Unit

Trauma care at the hospital begins in the Trauma Receiving Unit (TRU), a specialized area located within the Emergency Department. The TRU has six trauma beds. It is equipped with state-of-the-art technology and staffed with highly-trained trauma surgeons and nurses, twenty-four hours a day, seven days a week. The TRU area is for the initial trauma patient assessment. The initial assessment includes:

- An exam to find life-threatening injuries
- x-rays, ultrasound and perhaps a computerized tomography (CT) scan so that doctors can better find all the injuries
- Transfer from TRU to an area in the hospital
- If needed, transfer to the operating theater (OT) for surgery.



### Surgical Care

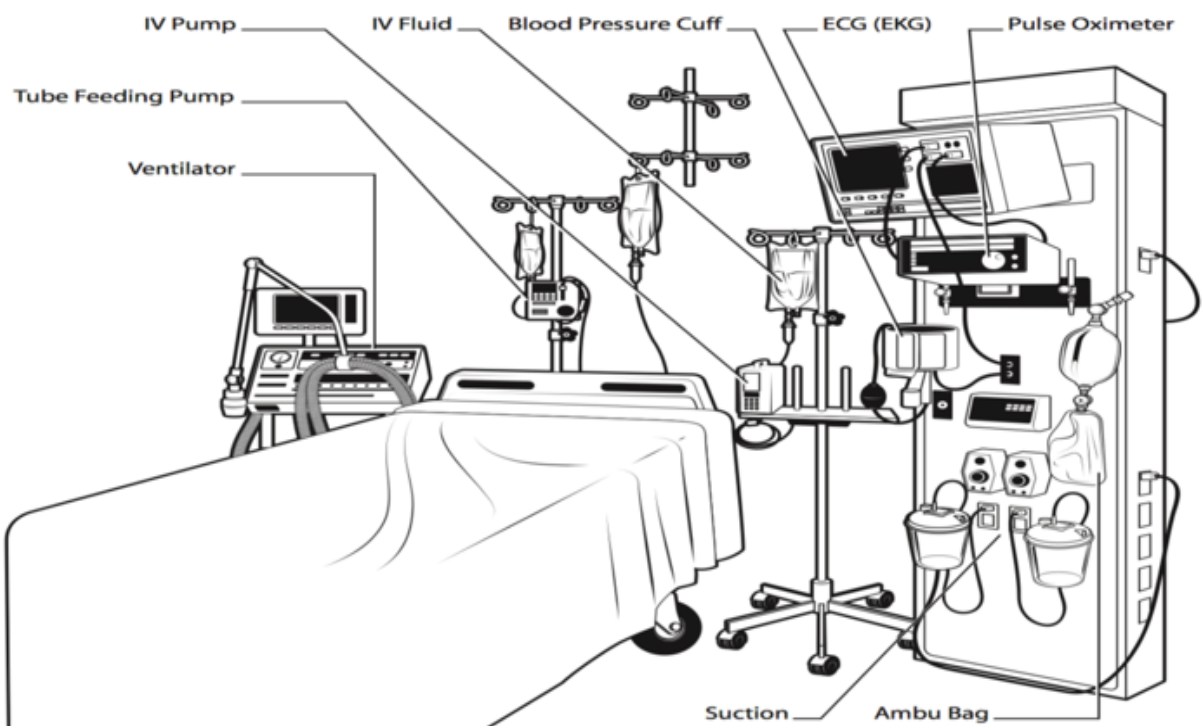
Many trauma patients need surgery. The operating theater has 20 rooms staffed by a highly trained multidisciplinary team that uses the latest surgical technologies. Surgeons in all specialties are available and can coordinate multi-specialty approaches to improve patient outcomes.

### How The Hospital Cares For The Family

When the family of a trauma patient arrives at the Trauma Center, they are taken to see the patient in the Trauma Resuscitation Unit. The doctors can tell you how the patient is doing. They will let you visit as soon as the tests and procedures are done and the patient is ready for visitors. Because the unit is so busy, only two people should visit the patient at one time. When the patient moves to their hospital room, other visitors will be welcome.



## Trauma Units and Wards: Where Do Patients Stay?



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Patients can be admitted from the TRU to different areas of the hospital. Where they go depends on the amount of care needed for their injuries.

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### Trauma Intensive Care Unit (TICU)

The sickest patients are cared for in the Trauma Intensive Care Unit (TICU) because they need the specialized care provided by intensive care doctors and nurses. These patients are in critical condition and require close and constant monitoring. Each nurse in the TICU cares for only one or two patients. The patients are often very sick, often not very awake, and may need medical machines to help them.

Visitors should limit their time with the patient so the patient can rest and get better. There is a lot of strange equipment in the TICU (the diagram above may help explain why the equipment is used).

### **High Dependency Care Unit (HDU)**

As patients in the TICU improve, they may be transferred to a High Dependency Unit (HDU). Patients may also go straight from the Emergency Department to an HDU if they are severely injured, but not as unstable as to require treatment in the TICU. These patients are more stable than those in the TICU and require less monitoring but are not independent or stable enough to move to a regular nursing unit. Nurses in the HDU may care for two patients.

### **Trauma Surgery Unit (4 North 2) and Other Surgical Care Wards**

Patients without critical injuries and do not require the monitoring levels found in TICU and HDU, are admitted to Trauma Surgery Unit (4 North 2) where the nurses may care for three to four patients.

There are other wards that care for trauma patients and they are the Orthopedic, Neurosurgery and PICU wards.

### **Orthopedic Ward**

The Orthopedic Ward is located on the fourth floor. These patients primarily have broken bones.

### **Neurosurgery Ward**

The Neurosurgery Ward is located on the fourth floor. These patients usually have some sort of brain or spinal cord injury. The Neurosurgery HDU is also located in the same ward.

### **Pediatric Intensive Care Unit (PICU)**

The Pediatric Intensive Care Unit (PICU) at Hamad General Hospital provides intensive care for children up to the age of 14 with life threatening injuries, as well as post-operative care for patients recovering from some surgical procedures. The PICU is staffed 24 hours a day by a multidisciplinary team of pediatric critical care specialists.



## Medical Professionals: Who Takes Care Of The Patients?

### **Case Manager**

Case managers are primarily nurses who will assist with your discharge plans to make certain you have what you need to continue your recovery.

### **Dietitian**

Dietitians are the food and nutrition experts. They work closely with the nurses and doctors in caring for patients. For example, if a patient has diabetes or requires tube feedings, the dietitians explain the proper diet and provide information to the patient and family.

### **Neurosurgeon**

Neurosurgeons are doctors specially trained in surgery for the brain or spinal cord.

### **Nurse**

Nurses manage the day-to-day treatment and recovery of patients and communicate with the doctors and other medical care providers regarding a patient's care.

### **Nursing Assistant**

Nursing assistants help the nurse with a patient's care. Nursing assistants may help get the patient out of bed or help with feeding. Nursing assistants function under the direction of a nurse.

### **Occupational Therapist**

Occupational therapists help patients regain their ability to do daily activities such as getting out of bed, eating, dressing, using the toilet and bathing. They help patients with strength, coordination and movement.

### **Orthopedic Surgeon**

Orthopedic surgeons are doctors specially trained in surgery to repair broken bones.

### **Orthopedic Technician**

Orthopedic technicians place casts on broken bones and help with other procedures. They also set-up and maintain equipment such as traction.

### **Patient Educators**

Patient educators are nurses who have been trained to help patients understand their injuries, illnesses and treatment.

### **Pharmacist**

Pharmacists are medicine experts. They work closely with nurses and doctors and help choose medicines and their doses.

### **Physical Therapist**

Physical therapists help patients regain their strength and their ability to move their extremities such as hands or feet or whatever body part was damaged.

### **Psychiatrist**

Psychiatrists are medical doctors who specialize in the evaluation, diagnosis and treatment of emotional and mental disorders.

### **Resident**

Residents are doctors who have finished medical school but are continuing training in a chosen specialty. They provide for routine patient care activities and keep the attending doctors informed of each patient's progress.

### **Respiratory Therapist**

Respiratory therapists provide breathing support and treatments when needed by the patient.

### **Social Worker**

Social workers provide emotional support and guidance about how a patient's injury can affect the patient and the family. Hospital social workers specialize in medical and crisis counseling. They work with the medical team, communications between patients and the medical team, and facilitating access to services within the hospital and with the outside community. The social worker also may help coordinate home needs.

### **Speech and Language Therapist**

A speech therapist works with a patient on language, memory and swallowing difficulties.

## A Typical Day In The Trauma Intensive Care Unit

### Trauma Surgeon

Trauma surgeons are physicians specially trained in trauma surgery, such as internal injuries not involving the brain, spinal cord or broken bones. Trauma surgeons deal with abdominal and chest injuries that cause damage to internal organs.

This physician regularly visits patients to check on their progress and to coordinate with other members of the trauma team. A trauma surgeon is in the hospital 24 hours a day. All trauma surgeons are physicians with training in general surgery. Some of our trauma surgeons also have an additional fellowship training in trauma and critical care.

A Trauma Consultant is a surgeon who oversees the care of the patient while they are in the trauma unit within Hamad General Hospital.

### Wound Care Nurse

Wound care nurses know how to care for wounds. They work closely with doctors and patients' nurses in wound assessment and treatment to help heal wounds.



Most patients are connected to equipment that gives doctors and nurses up-to-the-minute information so they can make the best decisions. The equipment monitors patients, delivers medicine and helps patients breathe. Do not worry if you hear alarms. Some alarms do not need immediate attention, and the staff members know which ones to respond to quickly.

In the morning, the trauma teams make "rounds." They go to each patient's bed to examine the patient, check the patient's progress and update the plan for the patient's care. After rounds, doctors may do treatments and/or procedures.

Physical and occupational therapists and nursing staff work together to help patients heal, regain strength and move normally. For example, they may raise the head of the bed, turn a patient every two hours, or help a patient sit up in the bed or a chair.

Patients may be moved to other areas of the hospital for x-rays and other tests. You can expect a busy place. Sometimes the staff will request visitors to leave the unit to provide patient privacy during treatment and visitors are asked to respect this.

## Visitors Are Important

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Visiting Hours is a time to be with your loved one and also to ask questions and meet staff. We believe that comforting visits from family and friends help most patients heal. Family and close friends know the patient better than anyone else and sometimes have information that can make a difference in treatment. This is often a good time to begin learning how to take care of your loved one at home.

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You may sometimes have to wait before you can visit your loved one or a nearby patient requires special care. Visits are often limited for patients with brain injuries because they need to rest in a quiet location.

### Why Visitation May Be Limited

There are times during a patient's stay when visitation may be limited. This may be because the patient needs rest; treatment must be carried out or, in some cases, because too many visitors can be harmful to the patient's recovery. For certain injuries, such as brain injury, too many stimuli can hinder the patient's healing. For these patients, the number of visitors and their length of the stay may be limited.

### We Are Here To Help

Feel free to ask any hospital employee for help finding a patient room, hospital department or service. All our employees and doctors wear photo identification badges.

### Family Waiting Rooms

We have waiting areas for families and friends outside of the units.

Please remember that you share waiting rooms with other patients' family members and friends. People can feel on edge, so gentleness and respect is always welcome.

### Visitor's Responsibilities

Hamad General Hospital is committed to providing a safe, healthy environment for patients and their families. To maintain that environment, we count on you, as a family member or friend, to assist us in the following ways:

- Observe the visiting hours for the area you are visiting. Please do not sleep in waiting rooms unless you have permission.
- Respect our patients' right to privacy and leave the patient room or care area when asked by hospital staff. Be respectful of the property of other people and of the hospital.
- Be considerate of the rights of our patients and hospital staff by treating them with courtesy and respect, and assisting with the control of noise and the number of visitors.
- Do not visit if you are not feeling well or have an illness that could be transferred to our patients. If you are not sure, please check with your healthcare provider.
- For the safety of young children, please provide adult supervision in all areas of the hospital. Ask the patient's nurse before bringing any children under the age of 12 into a patient's room.



## The Healthcare Team Needs Help From The Family

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The primary job of the trauma team is to treat patients. We need your help in taking care of your loved one and making sure they get the best care possible. Here are things you can do to help us and your loved one.

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### **Take Care of Yourself**

Worry and stress are difficult for you, and you need your strength to offer support to your loved one. The trauma team understands that this time can be just as stressful for family and friends as it is for patients.

Be sure to take any medications that your doctor has prescribed for you. Take breaks. Go for a walk around the hospital campus. Get plenty of sleep and eat regular meals to help you think better, keep up your strength and prevent illness so you can be there for your loved one when you are needed

### **Ask For Help From Your Family and Friends**

Remember to ask for help. Think about how others can help you. Make a list in the back of this book so you will be prepared to accept help when friends offer. Friends often want to help and to be involved.

### **Ask Questions and Stay Informed**

Members of the trauma team know that family and friends are more comfortable when they know as much as possible about a loved one's condition. The family is an important part of the healthcare team because you may have information that may make a difference in treatment and recovery.

Keeping friends and family updated about a loved one, can be very hard and tiring. It helps if you choose a spokesperson from your group (and another as a back-up). This person will collect everyone's questions for the doctor or nurse and deliver the answers. Having one spokesperson allows staff to focus on caring for your loved one instead of repeating the same information over and over again to several different people.

When you think of questions during the day, write them down so you can ask your doctor or medical team for answers when you see them. As you listen carefully to the medical team, you might want to ask questions until you understand the diagnoses and options for treatment. Stress makes it hard to remember unfamiliar information. Ask questions until you understand. And write down what you are told so you can remember and accurately report the information to other family members. We have provided space at the end of this handbook to write down your questions and the answers.



### Help Maintain a Restful and Healing Place

When you are in the hospital, please talk in a quiet voice and try not to make a lot of noise, especially around patients.

To help maintain a healthy setting for patients and families, kindly:

- Follow the visiting hours for the area.
- Respect other patients' rights and privacy.
- Leave the patient room or care area when asked by hospital staff.
- Knock or softly call the patient's name before entering if a door or curtain is closed.
- Wash your hands or use the hand sanitizer before you go into a patient's room and when you come out.
- Do not visit if you are sick or are not feeling well.
- Talk with the nurse before bringing any children under the age of 12 when visiting. For the safety of young children, make sure an adult stays with young children at all times.
- Do not ask other families about details of their loved one's care.
- Remember to treat everyone with respect.
- Kindly help us control noise and the number of visitors.
- Follow all infection prevention policies needed for the patient.



## Dealing with Your Loved One's Injury: Grief and Loss

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Just as our bodies can be traumatized, so can our minds. Trauma (injury) can affect your emotions, spirit, will-to-live, dignity, sense of security, and beliefs about yourself and the world. The effect may be so great that your usual ways of thinking and feeling may change. The ways you used to handle stress may no longer work.

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Patients may have a delayed reaction to their injury. In the hospital, they may focus on their physical recovery rather than on their emotions. As the reality of what has happened becomes clearer, they may have a range of feelings, from relief, to anxiety and / or feelings of loss. Family members also may go through a range of emotions between first hearing the news of the injury and on through the patient's recovery.

Injured patients and their families often feel loss on some level. The loss may relate to changes in health, income, family routine or dreams for the future. Each person responds to these changes in their own way and in their own time. Grief is a common response. When it does not resolve, though, it can hinder recovery and add to family problems.

### **Coping With Loss**

The stress that goes with injury and grief can affect your health as well as your ability to make decisions during the first several months after the injury. It is important for you to try to eat well, sleep and exercise. If you have any long-term health problems, such as heart disease, be sure to stay in contact with your doctor to keep an eye on your own health.

Part of the work of recovery for you and your family is to use the help other

people can give you and finding a support system. This can be a friend or other family member, a religious leader or another person who has experienced similar loss. Not everyone knows what to say or how to be helpful. Some people avoid those who have experienced a trauma in their family because it makes them uncomfortable. It may take some time to find friends or family who can be good listeners.

### **When a Patient Dies**

Few things in life are as painful as the death of a loved one. We all feel grief when we lose a loved one but grief is also a very personal response. It can dominate one's emotions for many months and often many years. For most people, the strong feelings of grief slowly change over time. It may take time to recover from this suffering. In time, painful memories will fade.

### **Helping Children**

Be direct, simple and honest. Explain what happened in terms that the child can understand. Encourage the child to talk about their feelings. Crying is a normal reaction to loss. Accept the child's responses; be careful not to tell the child how they should feel. Keep as much order and security in the child's life as possible. Be patient. Know that children need to hear "the story" and ask the same questions again and again.

## Is It Stress or Post-Traumatic Stress Disorder

Going through a traumatic event can cause a range of strong emotions, including mental distress. For example, it is common for people to feel sad, anxious, and/or have sleep problems right after the injury. Crying is common. Other emotions such as anger, anxiety, irritability, grief or self-doubt may also appear. These emotions are perfectly normal.

For some people, the stress is resolved over time. For others, it may hold steady or even increase. In about one out of four people, the stress is so severe that it is called post-traumatic stress disorder (PTSD).

### What is PTSD?

PTSD is a type of anxiety that occurs in response to a traumatic event. It was first described in military veterans but now we know that PTSD is also a common result of injuries that occur in everyday life. PTSD has defined symptoms that are present for at least four weeks. After a trauma, people

may have some PTSD symptoms but that does not mean they have PTSD. PTSD means having a certain number of symptoms for a certain length of time.

There are three types of PTSD symptoms:

Type	Symptoms
<b>Hyper-vigilance</b>	<ul style="list-style-type: none"> <li>• Having a hard time falling asleep or staying asleep</li> <li>• Feeling irritable or having outbursts of anger</li> <li>• Having a hard time concentrating</li> <li>• Having an exaggerated startle response</li> </ul>
<b>Re-experiencing</b>	<ul style="list-style-type: none"> <li>• Having recurrent recollections of the event</li> <li>• Having recurrent dreams about the event</li> <li>• Acting or feeling as if the event were re-occurring (hallucinations or flashbacks)</li> <li>• Feeling distress when exposed to cues that resemble the event</li> </ul>
<b>Avoidance</b>	<ul style="list-style-type: none"> <li>• Avoiding thoughts, feelings, conversations, activities, places or people that are reminders of the trauma</li> <li>• Less interest or participation in activities that used to be important</li> <li>• Feeling detached; not able to feel</li> </ul>

## After The Hospital: Planning For Discharge

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Discharge planning begins on admission. A nurse case manager will help you with your discharge plans. The doctor and therapists, along with your case manager, will assess the level of care you will need after you leave the trauma center. The patient's and family's abilities are part of this decision.

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### **The final decision for hospital discharge is made by your doctor.**

If special arrangements need to be made for discharge, a case manager will meet with the patient and family to help with these plans. This can include ordering special equipment or nursing care, arranging continuous care in another facility, or simply helping work out a family schedule of care for the patient.

### **Levels of Care in the Community Rehabilitation Hospital**

Patients who are able to tolerate three hours or more of therapies each day may qualify for placement in an acute rehabilitation hospital such as Rumailah Hospital

### **Skilled Nursing Facility (SNF)**

Patients requiring continuous daily physical, occupational and/or speech therapies might benefit from a short stay at a skilled nursing facility.

### **Home with Home Care**

The case manager will make arrangements for patients requiring home nursing or therapy prior to discharge.

### **Home with Outpatient Care**

Patients requiring outpatient care (physical or occupational therapy, for example) will be given a prescription upon discharge from the hospital and will need to make an appointment with a clinic near their home.

### **Home with No Home Care**

Many patients will not require specialized home care from a nurse or therapist and will be discharged to the care of family, sometimes with recommendations for physician follow-up only.



## Common Traumatic Injuries and Their Treatment

In this section of this handbook, we describe some of the common types of injuries people have and how they are typically treated. The trauma staff can give you more details about your loved one's injuries. At the end of the book there is a place for you to list these injuries.



### Head Injuries

A traumatic brain injury, sometimes called a TBI, is an injury to the brain. There are many types of brain injury, some are listed below.

#### Cerebral Concussion (minor):

A brief loss of consciousness after a blow to the head; a mild concussion may produce a brief period of confusion with some memory loss of the events that caused the injury. A head scan does not show this injury.

#### Cerebral Contusion (more severe):

Described as bruising of the brain tissue. This can occur beneath a skull fracture, or because of a powerful blow to the head that causes the brain to shift and bounce against the inside of the skull.

#### Diffuse Axonal Injury:

Forces twist the brain around so the nerve fibers (which are made up of axons) are stretched, snapped and sheared. This is also referred to as a closed head injury.

### Hematomas:

Head injuries and skull fractures may cause tearing and cutting of the blood vessels carrying blood into the brain, resulting in blood clots that exert pressure on the brain. A blood clot in the brain is referred to as a hematoma and may be any of the following types:

- Subdural hematoma – occurs when a vein in the brain is damaged and bleeds, putting pressure on the normal brain tissue.
- Epidural hematoma – refers to damage to an artery, which bleeds and puts pressure on normal brain tissue.
- Intracerebral hematoma – occurs when there is bleeding directly within the brain itself. This usually occurs with penetrating injuries or blood vessels that rupture deep within the brain.

### Skull Fracture

Characterized by cracks in the bones of the skull and caused by external forces against the outside of the head; may occur when the skull bone breaks, causing damage to the brain and the blood vessels below the injury.

A traumatic brain injury that is described as “mild” implies that there was minimal or no loss of consciousness at the time of injury. These types of injuries are often not reported or treated. Neurological exams may appear normal, which makes it hard to diagnose the injury

but symptoms can show up later. Such symptoms may include a foggy memory, a hard time solving problems, headaches, dizziness, nausea, fatigue, mood swings, anxiety, depression, disorientation and delayed motor response.

### Diagnosis and Evaluation

The trauma team observes patients with a head injury very closely, including:

- Checking the patient’s pupils with a light
- Checking the level of consciousness. They use the Glasgow Coma Scale (GCS) to find out how badly the brain has been injured. The GCS includes testing for eye opening, talking and movement. GCS scores range from a high of 15 (normal), to a low of 3 (coma from injury or drugs).
- Checking to see if patients react to touch or if they feel dull, sharp or tingling feelings. observe the patient’s movement

When doctors think a patient has a brain injury, they often order a scan of the brain (CT scan). This scan will find out if there is any swelling of the brain, any bleeding or a blood clot.

### Treatment

Doctors base treatment for a brain injury on the type and location of the injury. Treatments may include:

- **Medications** to lower brain pressure, medications to lower anxiety, and medications that change the fluid levels in the brain.
- **Intracranial Pressure Monitor (ICP)**, which measures pressure in the brain. There are two types of monitors: A tube placed in the brain that only measures brain pressure and a tube placed into a small space in the brain that measures brain pressure and also drains fluid from the brain to lower the pressure of the brain.
- **Craniotomy**, which is a surgical opening in the skull to remove a clot and lower brain pressure. This is done in the operating theater.
- **Shunt**, which is a tube placed to drain excess fluid in the brain. This is done in the operating theater.
- **Crainectomy**, which involves removing a part of the skull bone to give the brain more room to swell. This type of surgery may also be done when a clot is removed. The skull bone is replaced when the patient is better (usually several months later).

### Specialists Involved

There may be many specialists involved in the treatment of a patient with a brain injury. Some of those may include a neurosurgeon, trauma surgeon, physical therapist, occupational therapist and a patient educator.

## Chest Injuries

Chest injuries are often life threatening when the lungs are bruised. The goal of treatment is to protect breathing and blood flow, time is critical in restoring and maintaining airway and heart/lung function. Types of chest injuries include:

- Rib fractures – the most common type of chest injury; they can be very painful but will usually heal without surgery in three to six weeks.
- Flail Chest – two or more ribs are broken in more than two places and the chest wall is not working as it should during breathing.
- Hemothorax – blood collects in the chest cavity due to a rib fracture.
- Pneumothorax – air collects in the chest cavity due to an injured lung.
- Hemo-pneumothorax – both blood and air collect in the chest cavity.
- Pulmonary contusion – bruising of the lung; if severe, it can be life threatening because bruised lung tissue does not use oxygen well.

## Diagnosis and Evaluation

Doctors often use a chest x-ray or CT scan to find out more about the injury. Also, they can tell how the lung is using oxygen by taking and testing blood from an artery. A procedure called a thoracotomy may also be performed to assess the extent of injury. This procedure involves making a surgical incision in the chest wall.

## Treatment

Patient participation in the recovery process is essential with chest injuries. To promote healing of the lung(s), the patient may be instructed to cough, perform deep breathing exercises and stop smoking. Patient participation is important to help reduce the risk of pneumonia, recurrent lung collapse, and breathing problems requiring a ventilator (breathing machine).

## Specialists Involved

Specialists involved in the care can include trauma surgeon, thoracic surgeon, cardiovascular surgeon, respiratory therapist, physical therapist and occupational therapist.

## Abdominal Injuries

Injury can occur to abdominal organs such as the liver, spleen, kidney, stomach or bowel. The injuries may be laceration (cuts), contusions (bruises) or rupture (severe tearing of the tissue).

## Diagnosis and Evaluation

There are many ways to diagnose an abdominal injury, including:

- physical examination;
- CT scan;
- a blood count to check hemoglobin and hematocrit, two measures of blood loss;
- ultrasound; and
- surgery, called a laparotomy in which the surgeon makes an incision in the abdomen and examines the inside of the abdomen.

## Treatment

Treatment for an abdominal injury depends on the organ that is injured and the severity of the injury. Many injuries to the kidney, spleen or liver can be treated without surgery. Often, however, severe injuries to the abdomen require a number of surgeries.

## Specialists Involved

Trauma Surgeon



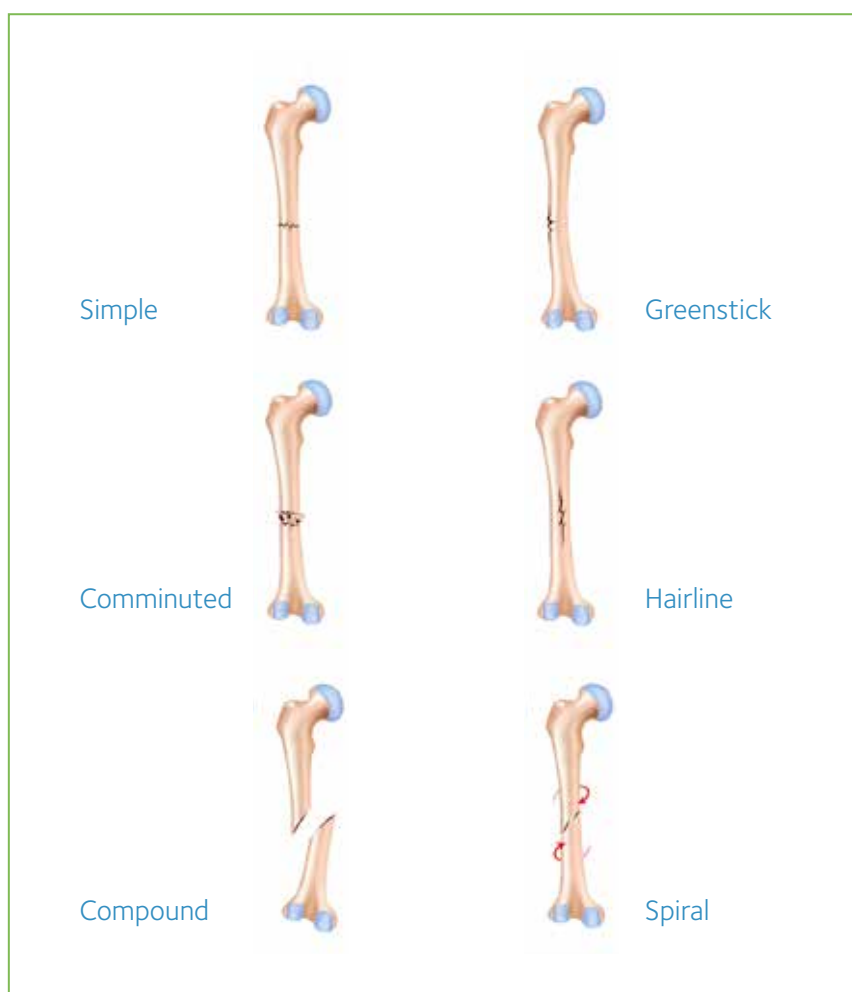


### Bone, Ligament and Joint Injuries

Trauma can harm bones, ligaments and joints.

Types of fractures or broken bones include:

- Closed fracture: broken bone that does not pierce the skin.
- Open or compound fracture: when the bone breaks and pushes through the skin; it is more serious because the wound and the bone may get infected.
- Comminuted fracture: a fracture in which the bone is broken or splintered into pieces.
- Greenstick fracture: a fracture in which the bone is partially bent and partially broken; occurs most often in children.
- Spiral fracture: a fracture that follows a line like a corkscrew.
- Hairline fracture: a minor, very thin line fracture in which all the portions of the bone are in perfect alignment.



#### Diagnosis and Evaluation

Doctors can usually see whether most bones are broken by using regular x-rays. However, for other bones such as the spinal column, doctors may use a CT scan. To find out if there is any damage to joints or ligaments, doctors may order a Magnetic Resonance Imaging (MRI) scan.

#### Treatment

Treatment for a broken bone depends on the type, severity and locations, and whether the tissue around the bone is damaged. A doctor may choose to treat a fracture in several different ways:

- a cast, sling or splint
- closed reduction: moving the limb or joint to its normal position without surgery.

- open reduction: surgery is done to return the bone to its normal position; pins, wires, plates and/ or screws may be used to hold the bone in its proper place.
- external fixator: the surgeon puts pins in the bone above and below the break, and connects the pins to metal bars outside the skin that hold the bones together so they can heal. The fixator is removed after the fracture is healed.

#### Specialists Involved

Orthopedic surgeon, physical therapist, occupational therapist, and wound care nurse are typical specialists that follow orthopedic patients. If there are other injuries, additional specialists may be involved.





### **Spinal Cord Injury**

Trauma can harm the spinal bones and the spinal cord. Two main types of spinal cord injury can occur:

**Quadriplegia (also called tetraplegia):** when the patient has paralysis (cannot move) of the arms and legs due to a spinal cord injury anywhere from the first cervical vertebra (C1) to the first thoracic vertebra (T1). An injury at or above the C4 level affects breathing and patients often need a ventilator (breathing machine).

**Paraplegia:** when the patient has paralysis (cannot move) of both legs due to a spinal cord injury anywhere from the second thoracic vertebrae (T2) to the twelfth thoracic vertebra (T12). Paralysis of the chest and abdomen may also be present

Doctors may also say that the patient has a **complete** or an **incomplete** injury.

**Complete:** means the patient cannot move and has no feeling. It does not always mean that the spinal cord has been cut in two.

**Incomplete** means the patient has some movement or feeling. Incomplete injuries may be to the back, front or center part of the cord. With an injury to the back part of the spinal cord, the patient may have movement but be unable to feel that movement. With

an injury to the front part of the spinal cord, the patient may lose movement but may be able to feel touch and temperature. An incomplete injury may get better in time but it is hard to know when or if full function will return.

### Diagnosis and Evaluation

Doctors use physical exams, x-rays, CT scans and Magnetic Resonance Imaging (MRI) scans to diagnose spinal cord injury. X-rays do not show the cord itself but do show damage to the vertebral column. CT scans and MRI scans give the best picture of the spinal cord and bones. Sometimes doctors cannot do an MRI because of other injuries the patient has, because of the patient's weight, or because the patient has a pacemaker, monitor or other metal device. In such cases, doctors use other tests to evaluate the patient.

### Treatment

In the first 12 hours after a spinal cord injury, steroids often are given to the patient to try to reduce paralysis. If the spinal cord was completely severed, no treatment can reduce paralysis.

The patient may need surgery to give support to the spine. Surgery may not change paralysis but will allow the patient to sit up. Talk with the surgeon about the goals of surgery. In any case, getting out of bed improves healing and the sense of well-being and lowers the risk of pneumonia, pressure sores and blood clots.

### Special Attention

Special attention to bladder and bowel function, as well as skin care is important in the early management of a spinal cord injury. Patients with spinal injuries receive special attention to prevent pressure sores and a condition called autonomic dysreflexia.

- Pressure sores (also known as pressure ulcers or decubitus) are breakdowns in the skin caused by constant pressure on one area and decreased blood flow from not moving. Pressure sores can occur on the bottom, hips, back, shoulders, elbows and heels. Skin redness is the first sign that a sore may be starting, so it is important to check the skin frequently during the day to prevent these sores. If a sore occurs, it can take many months to heal or even need surgery. Moving the patient from side to side and propping up the feet can help prevent pressure sores.
- Autonomic dysreflexia may occur when the spinal cord injury is at or above the T6 level. It means the messages about blood pressure control are not being sent as they should be. As a result, when blood pressure goes up due to pain (for instance), it may not return to normal once the pain is treated. High blood pressure can cause a stroke, so it is very important to know the warning signs and find the cause. Signs of autonomic dysreflexia include headache, seeing spots or

blurred vision, sweating, or flushing (redness) of the skin. Conditions that may cause autonomic dysreflexia include a twisted catheter, a full bladder or bowel or even an ingrown toenail.

### Specialists Involved

Neurosurgeon, orthopedic surgeon, physical therapist, occupational therapist, clinical nurse specialist, respiratory therapist, wound care nurse and patient educator are some specialists that may be involved in the

## "What I Wish I Had Known":

### Comments from former trauma patients

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Dates and times given for medical procedures, tests or even discharge are never set in stone. There are many factors or people involved and coordination of efforts does not always work out as first planned. Remember that if you are scheduled for an MRI, for example, but an emergency comes in, the emergency will take priority. Consider proposed dates as targets but not necessarily guarantees.

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- Do not be afraid to ask for pain medicine. Remember, however, a process must be followed and it may take a while to fulfill the request, i.e., your nurse must have an order from your doctor before you receive any medications.
- Get involved in your treatment. You have the right to consider different options and to discuss those options with your physician. If you are told that you need a certain test, feel free to ask for an explanation of the test and what that test will show.
- Physical therapy is very important. Muscles weaken VERY quickly and any activity that you can handle will help you recover quicker. Try to arrange for pain medication about 30 minutes or so before you have physical therapy. This can help minimize the amount of pain and soreness the therapy may cause.
- Plan ahead. Your discharge from the hospital may come more quickly than you expect, and you may be discharged before you feel really ready to go. The best way to be prepared is to make plans early. Ask your nurse about what kind of help is available to arrange for rehabilitation, home care, equipment or follow-up appointments. Even with all this preparation, you may discover you need other equipment or devices after you return home. Your home care provider or doctor's office can help you make arrangements once you are home.
- Try to be patient with yourself. Your recovery may not always follow a "straight line." It is not unusual to feel good one day, then really tired the next. You will need to be patient and focus on your long-term progress.
- Take notes. Ask a family member or friend to keep a journal of what happens during the hospitalization. These notes may be interesting to you in the future.
- Ask for help. Unexpected hospitalization disrupts every bit of your life – routines, schedules, relationships and plans. You are probably used to being very independent, but you now rely on other people for everything in your life. Don't be afraid to ask for the help you need. Your family and friends want the opportunity to help out in any way they can, and only need your invitation to do so.

## Patient's Rights and Responsibilities

### Patient's Rights

While you are a patient at Hamad General Hospital, your rights as a patient include the right to:

- Have access to treatment or accommodations that are available and medically indicated.
- Receive care with respect and dignity.
- Make decisions about your treatment or refuse treatment under applicable law (You are responsible for your actions if you refuse treatment or do not follow your physician's instructions.).
- Personal privacy and confidentiality in accordance with Qatar law.
- Know the identity and role of the individual(s) caring for you, as well as which physician is primarily responsible for your care.
- Voluntarily participate in clinical training programs or any research project affecting your care or treatment
- Consult with another physician at your own request.
- A complete explanation of the need for a transfer to another facility, the alternatives to a transfer, and the assurance that the other facility has agreed to accept your transfer.
- Be informed by your treating physician of any continuing care needs that must be met following discharge from the hospital.
- Be informed about the hospital's rules and regulations including how patient complaints are addressed.

### Patient's Responsibilities

The care you receive while you are a patient depends partially on you. Your responsibilities include:

- Providing complete and accurate information about past, present and developing health conditions.
- Indicating whether you clearly understand the course of treatment and what is expected of you.
- Following the treatment plan recommended by your physician.
- Following hospital rules and regulations affecting patient care and treatment.
- Being considerate of the property and rights of other patients and hospital personnel.
- Reporting any changes in condition to your nurse or doctor.
- Keeping follow-up appointments.

## Other Helpful Information

### Spiritual Considerations

Hamad General Hospital has an Al-Mutawa office onsite. The office is open daily from 7.30 am to 1.30 pm and 3.30 pm to 9.30 pm. The mosque is located on the ground floor near the main entrance, and includes separate prayer areas for women and men.

### Teaching Hospital

Hamad General Hospital is a teaching hospital with student nurses, physical therapists, occupational therapists, respiratory therapists, physicians and other health professionals working here. These students gain practical experience in the treatment and care of patients. The hospital hopes that patients will agree to let students be involved in their treatment and care. However, if a patient does not wish students to be involved, he/she has the right to say so.





## Trauma Surgery Service Additional Programs

### **Injury Prevention and Outreach Education**

Injury prevention and outreach education efforts in the community help teach ways to avoid injury, for example, the use of car restraints for all passengers, especially children. Efforts also focus on bike-helmet use, pedestrian safety and safety at home and work sites. Our injury prevention programs are coordinated with different institutions and organizations in our community.

### **Research**

The Hamad Trauma Center is involved in numerous research projects about trauma patient care, recovery and prevention of injury. Our approach is to engage in research based on the needs of our patient population in order to generate knowledge that can be used in treating injured patients.

### **Trauma Registry**

The Trauma Registry is a data repository that involves a systematic collection of clearly defined set of injury, health, treatment and demographic data on injured patients. The data is used by the Trauma Center to constantly evaluate and improve the care of injured patients. The Registry serves also provides information for injury prevention efforts, and helps investigators understand the medical, economic and social impacts of injuries.



## Glossary of Common Medical Terms

Procedures	
<b>Craniectomy</b>	Removing a part of the skull bone to give the brain more room to swell. This type of surgery may also be done when a clot needs to be removed. The skull bone is replaced when the patient is better (usually several months later).
<b>Craniotomy</b>	Surgical opening in the skull to remove a clot and lower brain pressure. This is done in the operating theater.
<b>Gastrostomy</b>	Surgery to make an opening into the stomach to place a feeding tube. This surgery is often done at the bedside.
<b>Jejunostomy</b>	Surgery to make an opening in the small intestine to place a feeding tube.
<b>Laparotomy</b>	Surgery that opens the abdomen so doctors can examine and treat organs or blood vessels.
<b>Thoracotomy</b>	Surgery to open the chest wall.

<b>Suction</b>	A procedure to remove secretions from the mouth and lungs.
<b>Tracheostomy</b>	Surgery that makes an incision in the throat area just above the windpipe (trachea) to insert a breathing tube. When it is complete, the breathing tube in the mouth will be taken out. This surgery is often done at the bedside. The tracheostomy may be removed when the patient can breathe on their own and can cough up secretions.

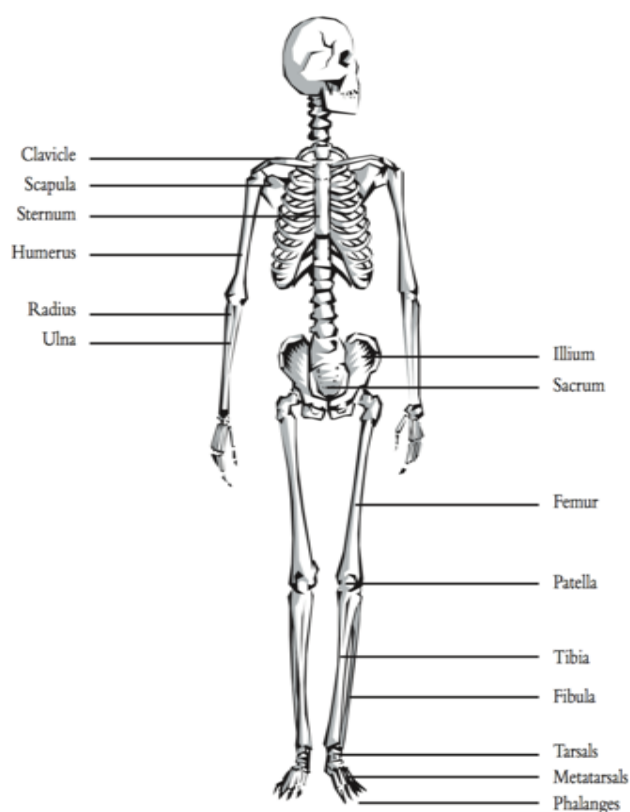


Equipment	
<b>Ambu bag</b>	A device used to help patients breathe.
<b>Blood pressure cuff</b>	A wrap that goes around the arm or leg and is attached to a monitor that causes the wrap to squeeze the arm/leg lightly in order to measure the blood pressure.
<b>Cervical collar (c-collar)</b>	A hard plastic collar placed around the neck to keep it from moving. Most patients have a c-collar until the doctor can be sure that there is no spine injury. If there is no injury, the doctor will remove the collar.
<b>ECG/EKG (electrocardiogram):</b>	A painless tracing of the electrical activity of the heart. The ECG/EKG gives important information about heart rhythms and heart damage.
<b>Endotracheal tube</b>	A tube that is put down a patient's throat to help with breathing. The tube passes through the vocal cords so the patient cannot speak while it is in place.
<b>Foley catheter</b>	A tube placed in the bladder to collect urine.
<b>Halo</b>	A device used to keep the neck from moving when there is a cervical spine injury. When used, a c-collar is not needed.
<b>Intracranial pressure (ICP) monitor</b>	A tube placed in the brain to measure pressure of the brain swelling caused by excess fluid.

<b>Intravenous (IV) fluid</b>	Fluid put in the vein to give patients drugs and nutrition.
<b>Intravenous (IV) pump</b>	a special machine that gives a precise rate of fluids and / or drugs into the vein.
<b>Nasogastric tube (NG tube)</b>	a tube put into the patient's nose to give medication and nutrition (food) directly into the stomach. It can also be used to get rid of excess fluids from the stomach.
<b>Orthotic</b>	a device, such as a splint, that keeps part of the body from moving around.
<b>Prosthetic</b>	A device that replaces a missing body part, such as a leg, arm or eye.
<b>Pulse oximeter</b>	An electronic device placed on the finger, toe or ear lobe to check oxygen levels.
<b>Tube feeding pump</b>	A special machine to give fluids and nutrition (food) into the stomach or small intestines using a nasogastric tube (NG tube).
<b>Ventilator</b>	A breathing machine, sometimes called a respirator, that help patients breathe and give oxygen to the lungs.

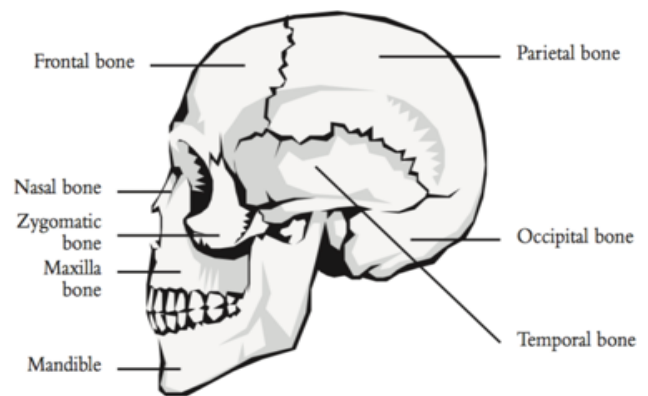
Anatomy	
Skeletal Bones	
acetabulum	the hip socket.
carpals	the eight bones of the wrist joint.
clavicle (collar bone)	a bone curved like the letter "F" that moves with the breastbone (sternum) and the shoulder blade (scapula).
femur	the thigh bone, which runs from the hip to the knee and is the longest and strongest bone in the body.
fibula	the outer and smaller bone of the lower leg, from the ankle to the knee; it is one of the longest and thinnest bones of the body.
humerus	the upper bone of the arm from the shoulder to the elbow.
ilium	one of the bones of the pelvis; it is the upper and widest part and supports the flank (outer side of the thigh, hip and buttock).
ischium	the lower and back part of the hip bone.
metacarpals	the bones in the hand that make up the area known as the palm.
metatarsals	the bones in the foot that make up the area known as the arch.
patella (knee cap)	the lens-shaped bone in front of the knee.
phalanges	bones of the fingers or toes.

### Skeletal Bones



Skeletal Bones	
<b>pelvis</b>	is made up of three bones (ilium, ischium and pubis) that form the girdle of the body and support the vertebral column (spine); the pelvis is connected by ligaments and includes the hip socket (the acetabulum).
<b>pubis (pubic bone)</b>	the bone at the front of the pelvis; pubic bone.
<b>radius</b>	the outer and shorter bone in the forearm .
<b>sacrum</b>	the triangular bone between the fifth lumbar vertebra and the coccyx.
<b>scapula (shoulder)</b>	the large, flat, triangular bone that forms the back part of the shoulder.
<b>sciatic nerve</b>	the largest nerve in the body, passing through the pelvis and down the back of the thigh.
<b>spinous process</b>	the small bone that protrudes at the back of each vertebra.
<b>sternum (breastbone)</b>	the flat bone at the front center of the chest.
<b>tarsals</b>	the seven bones of the ankle, heel and mid-foot.
<b>tibia</b>	the inner and larger bone of the lower leg between the knee and ankle.
<b>ulna</b>	the inner and larger bone of the forearm, between the wrist and the elbow, on the side opposite of the thumb.

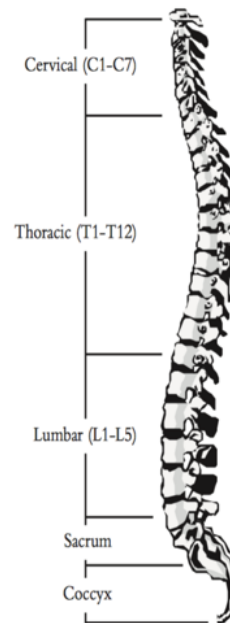
### Skull Bones



Bones: Skull and Face	
<b>Frontal bone</b>	forehead bone.
<b>mandible</b>	the horseshoe-shaped bone forming the lower jaw.
<b>maxilla</b>	the jawbone; it is the base of most of the upper face, roof of mouth, sides of the nasal cavity and floor of the eye strong.
<b>nasal bone</b>	either of the two small oblong bones that form the bridge of the nose.
<b>parietal bone</b>	one of two bones that together form the roof and sides of the skull.
<b>temporal bone</b>	a bone on both sides of the base of the skull.

Spinal Bones	
atlas	the first cervical vertebra.
axis	the second cervical vertebra.
cervical vertebrae (C1 – C7)	the first seven bones of the spinal column controlling the neck and arms, as well as the diaphragm (breathing); injury to the spinal cord at the C1-C7 level may result in quadriplegia.
coccyx	a small bone at the base of the spinal column, also known as the tailbone.
incomplete spinal cord injury	spinal cord is not severed and patient may have some sensation.
intervertebral disk	the shock-absorbing spacers between the bones of the spine (vertebrae).
lumbar vertebrae (L1 – L5)	the five vertebrae in the lower back; injury to the spinal cord at the lumbar level may affect bowel and bladder function, and may or may not involve paralysis below the waist.
sacral vertebrae	consists of five joined vertebrae at the base of the vertebral column.
sacrum	five joined vertebrae at the base of the vertebral column.
spinous process	the small bone that protrudes at the back of each vertebra.

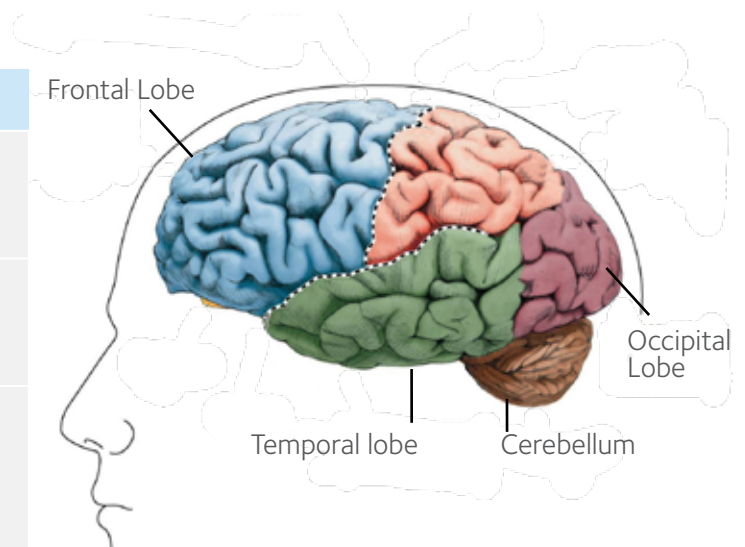
### Spinal Cord



**thoracic vertebrae (T1-T12)** the twelve vertebrae in the middle of the back that are connected to the ribs; injury to spinal cord at the thoracic level may result in paraplegia and may affect other organs such as the liver, stomach and kidneys, and functions such as breathing.

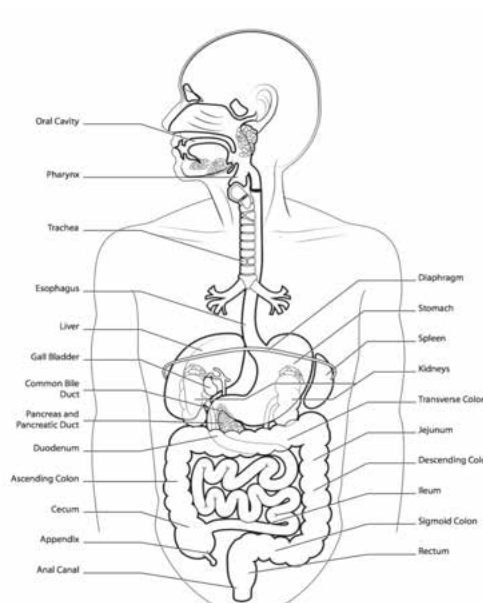
**transverse process** the two small bones that protrude from either side of each vertebra.

Brain	
brain stem	the part of the brain that connects to the spinal cord; it controls blood pressure, breathing and heartbeat.
cerebellum	second-largest part of the brain; controls balance, coordination and walking.
cerebrum	<p>the largest part of the brain with two halves known as hemispheres; right hemisphere controls the body's left side; the left hemisphere controls the body's right side; each hemisphere is divided into four lobes:</p> <ul style="list-style-type: none"> <li>• <b>frontal lobe:</b> area behind the forehead that helps control body movement, speech, behavior, memory and thinking.</li> <li>• <b>occipital lobe:</b> area at the back of the brain that controls eyesight.</li> <li>• <b>parietal lobe:</b> top and center part of the brain, located above the ear; helps us understand things like pain, touch, pressure, body-part awareness, hearing, reasoning, and memory.</li> <li>• <b>temporal lobe:</b> part of the brain near the temples that controls emotion, memory and the ability to speak and understand language.</li> </ul>



Digestive System	
<b>colon</b>	the final section of the large intestine; it mixes the intestinal contents and absorbs any remaining nutrients before the body expels them.
<b>duodenum</b>	the first part of the small intestine; it receives secretions from the liver and pancreas through the common bile duct.
<b>esophagus</b>	the muscular tube, just over nine inches long, that carries swallowed foods and liquids from the mouth to the stomach.
<b>gallbladder</b>	a pear-shaped sac on the underside of the liver that stores bile received from the liver.
<b>ileum</b>	the lower three-fifths of the small intestine.
<b>jejunum</b>	the second part of the small intestine.
<b>kidney</b>	one of a pair of organs at the back of the abdominal cavity that filters waste products and excess water from the blood to produce urine.
<b>large intestine</b>	absorbs nutrients and moves stool out of the body.
<b>liver</b>	organ that filters and stores blood, secretes bile to aid digestion and regulates glucose; due to its large size and location in the upper right portion of the abdomen, the liver is the organ most often injured.
<b>pancreas</b>	a gland that produces insulin for energy and secretes digestive enzymes.

### Digestive System

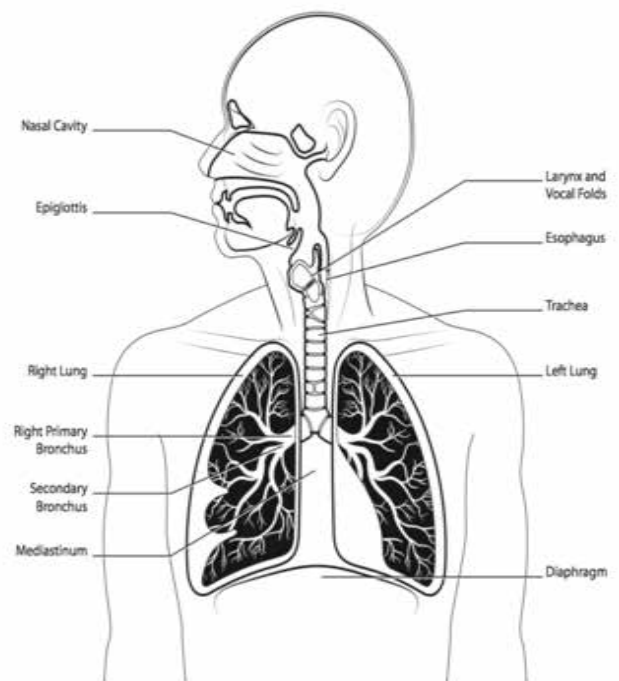


<b>rectum</b>	the lower part of the large intestine between the sigmoid colon and the anal canal.
<b>sigmoid colon</b>	the part of the colon between the descending colon and the rectum.
<b>small intestine</b>	the part of the digestive tract that breaks down and moves food into the large intestine and also absorbs nutrients.
<b>spleen</b>	an organ located in the upper left portion of the abdomen; the spleen filters waste, like infecting organisms, stores blood cells and destroys old blood cells; it is not vital to survival and a normal existence is possible but without it there is a higher risk of infections.
<b>stomach</b>	the large organ that digests food and then sends it to the small intestines.



Respiratory System	
<b>diaphragm</b>	dome-shaped skeletal muscle between the chest cavity and the abdomen that contracts when we breathe in and relaxes when we breathe out.
<b>epiglottis</b>	a flap of cartilage behind the tongue that covers the windpipe during swallowing to keep food or liquids from getting into the airway.
<b>vocal cord</b>	either of two thin folds of tissue within the larynx that vibrates when air passes between them to produce speech sounds.
<b>larynx (voice box)</b>	part of the airway; place in the throat where the vocal chords are located.
<b>lung</b>	one of organs in the chest that delivers oxygen to the body and removes carbon dioxide from it.
<b>mediastinum</b>	the part of the chest between the lungs that contains the heart, windpipe, esophagus, the large air passages that lead to the lungs (bronchi) and lymph nodes.
<b>nasal cavity</b>	A large air-filled space above and behind the nose in the middle of the face where inhaled air is warmed and moistened.
<b>pharynx (throat)</b>	the passageway or tube for movement of air from the nose to the windpipe and for food from the mouth to the esophagus
<b>trachea (windpipe)</b>	the main airway that supplies air to both lungs.

### Respiratory System



## Personal Health Information

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Use the following pages to record the names of all staff involved in your care or that of your loved one. List all the injuries and procedures and any questions you have along with the answers you receive. You can add anything else you may want to note here.

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### **Names of Healthcare Team**

Many doctors, nurses and other healthcare professionals will be involved in delivering specialized care. They are all part of the trauma team, led by the trauma surgeon.

Our trauma surgeons, consultants and specialists, provide 24-hour coverage of the trauma center. They have completed their formal education and training and serve as leaders of the healthcare team within their individual specialties. We also train future surgeons, who are known as surgical residents. Other members of the trauma team and their roles are listed at the beginning of this handbook. Take a minute and write down the names of the doctors and nurses taking care of your loved one.



Who are the trauma surgeons? .....

Who are the consulting physicians? These are doctors who help with the diagnosis and treatment of specific types of injuries.

Orthopedic Surgery .....

Neurosurgery .....

Rehabilitation .....

Other .....

Who are the nurses who are taking care of your loved one? .....

Who else in the hospital is helping in the care of your loved one?

Case Manager

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Social Worker

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Physical Therapist

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Occupational Therapist

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Speech Therapist

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Other

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# Injuries and Procedures

**List of major injuries:**

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**List of major procedures:**

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