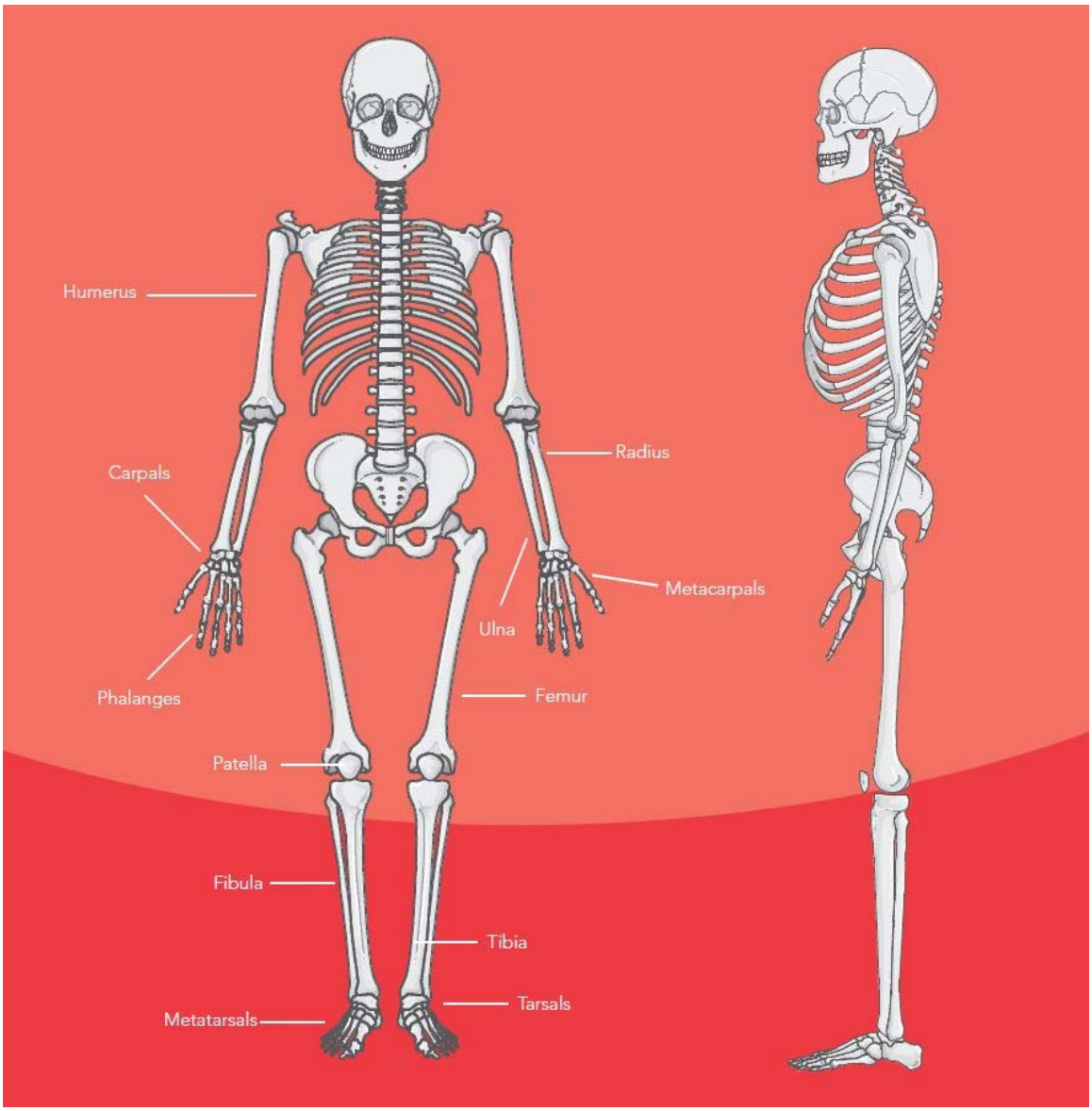
BRIGHAM AND WOMEN'S HOSPITAL

A PATIENT GUIDE TO ORTHOPEDIC TRAUMA CARE



ORTHOPEDIC TRAUMA INITIATIVE
HARVARD MEDICAL SCHOOL

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INTRODUCTION

Brigham and Women's Hospital (BWH) provides expert clinical care for trauma patients from all over New England. Our program provides for all needs of the trauma patient, including initial life-saving measures, critical care, surgery, and rehabilitation. Certified by the American College of Surgeons as a Level I trauma center, we are dedicated to using our outstanding clinical expertise and compassion to meet the needs of our patients and their families.

You are a patient on the Orthopedic Trauma Service because your musculoskeletal system has been injured. "Musculoskeletal system" is the medical term used to refer to all your bones, joints, muscles and tendons. Orthopedic surgeons are the medical specialists who deal with the musculoskeletal system, caring for broken bones — called fractures — as well as other injuries to the musculoskeletal system. Depending on the type of injury and how severe it is, your recovery can take weeks, months, or even longer. Your recovery will first take place in the hospital and then in places like a rehabilitation hospital, skilled nursing facility or your own home.

The Orthopedic Trauma Service is led by doctors who specialize in injury management. However, it takes a full team of people to start you on your way to recovery. This manual will introduce you to the team and will try to give you some idea of what to expect while you are at BWH. We realize that you and your family likely have many questions and concerns about your injury, treatments, recovery and about the patient experience at BWH. We understand that unexpected injuries can be the source of great stress and that hospitalization can be confusing and scary.

This document uses common words and terms to describe Orthopedic injuries, their treatments and the types of care and services you may receive while you recover from your injuries. It also provides general information about BWH and its available services. This document is meant to add to — not replace — the information you receive from your care providers. Please do not hesitate to ask questions about any information you are given or read in this manual. You are a very important part of the team, and we want you to feel informed.

THE TEAM

BWH ORTHOPEDIC TRAUMA PROFESSIONAL STAFF

Mitchel B. Harris, MD, is the Chief of the BWH Orthopedic Trauma Service. Dr. Harris graduated medical school from the University of Illinois. He completed his residency in Orthopedic surgery at Dartmouth/Hitchcock Medical Center. He completed fellowships in trauma and adult spine surgery at the University of Toronto, Sunnybrook Health Science Centre, and Queen's Medical Centre in Nottingham, UK. His clinical interests lie in the treatment of peri-articular fractures and spinal column injuries.

Michael J. Weaver, MD, is an attending physician on the BWH Orthopaedic Trauma Service. Dr. Weaver graduated from University of California Los Angeles School of Medicine and then from the Harvard Combined Orthopaedic Residency Program. He subsequently completed a trauma fellowship with our Combined Massachusetts General Hospital and Brigham and Women's Hospital program. Dr. Weaver's clinical interests include treatment of fractures around total hip and knee replacements, peri-articular fractures, hip arthritis and other degenerative hip conditions and fractures of the pelvis and acetabulum.

Mark Vrahas, MD, is the Chair of the Harvard Medical School Orthopedic Trauma Initiative. In this role, Dr. Vrahas provides Orthopedic trauma care to patients at both the Brigham and Massachusetts General Hospital. Dr. Vrahas graduated from medical school and completed his residency at the University of Pittsburgh. He is considered a national and international expert in the management and treatment of pelvic and acetabular fractures as well as difficult fractures and fractures that do not heal properly.

A Physician Assistant is a mid-level level medical professional working with the team in the outpatient, inpatient, and OR setting. Our physician assistant specializes in the care of patients with orthopedic injuries. She works very closely with all doctors and other clinical providers involved in your care. More importantly, she works closely with you and your family.

Trauma Fellow: The Trauma Fellow is another important member of our team. The fellow has completed his/her orthopedic residency training and is now specializing in orthopedic trauma for one year (called a fellowship) in preparation for going into practice as an independent orthopedic surgeon. Our fellow acts like an attending doctor on our service.

Houman Javedan, MD: Our team also includes a medical doctor called a "geriatrician" who help us take care of patients who are 70 years old and above. As people age, they tend to develop medical conditions that require careful attention. Our geriatrician, Dr. Javedan, has special medical training in the care of older patients and helps us with the decisions involving the care of patients in this age group.

Depending on your fracture or injury, we may also ask other Orthopedic sub-specialties to assist in your care. These doctors are:

Hand and Upper Extremity Service

George Dyer, MD, is a graduate of Harvard Medical School. Dr. Dyer completed his residency at the Harvard Combined Orthopedic Residency Program. He completed his fellowship in Upper Extremity Surgery at BWH. He is interested in injuries involving the hand and upper extremity.

Brandon E. Earp, MD, is a graduate of Stanford University School of Medicine. Dr. Earp completed her residency at the Harvard Combined Orthopedic Residency Program. She completed her fellowship in Upper Extremity Surgery at BWH and is now the Chief of Orthopedic Surgery at Brigham and Women's Faulkner Hospital. Dr. Earp is interested in complex trauma to the upper extremity.

Joint Reconstruction

Daniel M. Estok II, MD, graduated from the University of Miami Medical School. He completed his residency in Orthopedic surgery at Duke University Medical Center and then a Total Joint Reconstruction Fellowship at Mass General Hospital. Dr. Estok specializes in joint (hip and knee) replacement surgery and a kind of surgery called "revision surgery." Revisions surgeries are required when a patient's hip or knee surgery fails or wears out as a result of a fracture or a problem with the orthopedic implant.

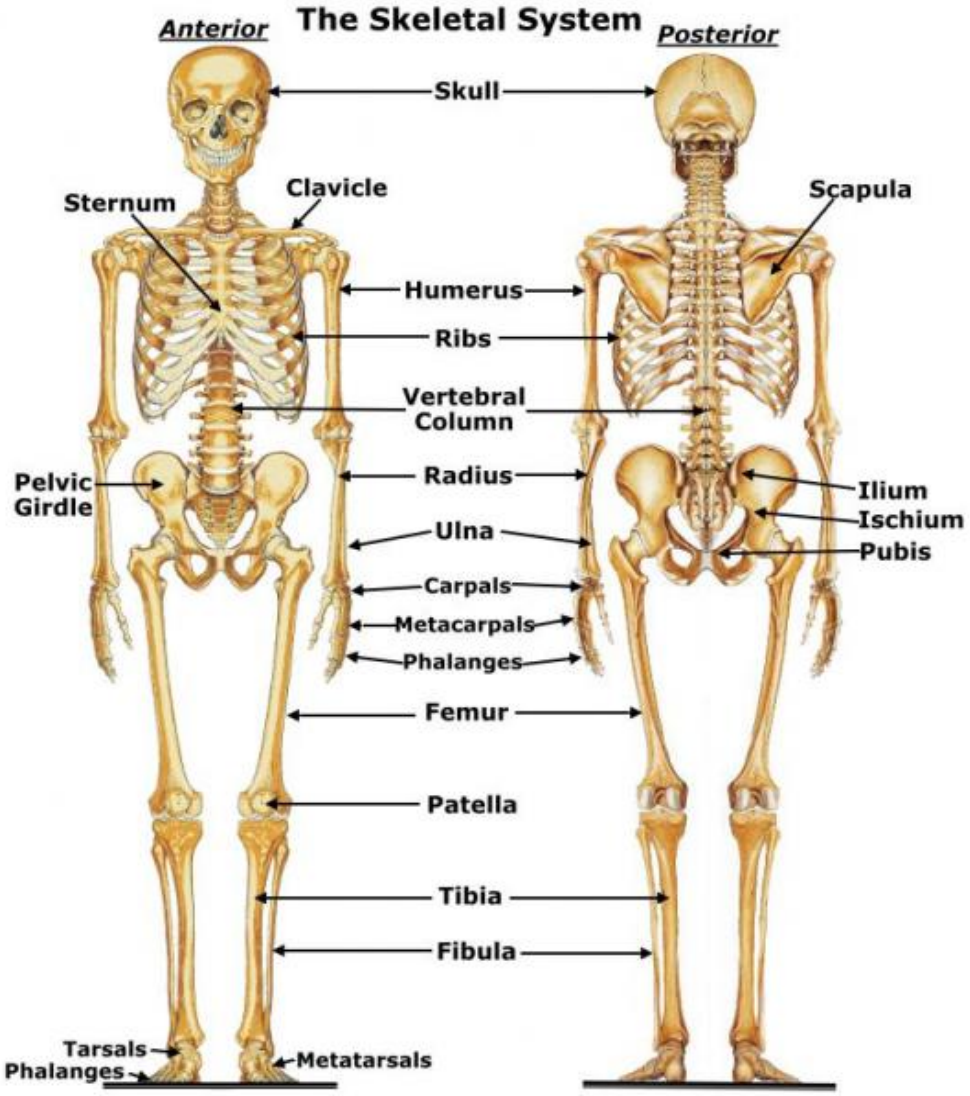
Sports Medicine

Scott Martin, MD, is a graduate of Jefferson Medical College and Hospital for Special Surgery Orthopedic Residency. He completed Fellowships in Sports Medicine and Total Joint Reconstruction. Dr. Martin performs surgeries on patients who need to have their ligaments reconstructed around the knee, and also performs a kind of surgery that repairs complex shoulder injuries in patients on our Service.

Elizabeth Matzkin, MD, is a graduate of Tulane University Medical School. She completed her residency at University of Hawaii and went on to complete a Fellowship in Shoulder and Sports Medicine at Duke University Medical Center. She assists the trauma team with complex joint issues involving the shoulder and knee.

THE HUMAN SKELETON

Below there are two pictures of the human skeleton: the front (anterior) and the back (posterior). These pictures show the formal names of all of the bones in the human body. You will likely hear many of these terms while you are recovering from your injuries. Please ask us at any time what they mean.



PHASES OF CARE

There are different phases of care that a person goes through when they come into the hospital with an Orthopedic injury. Usually patients enter the hospital through the Emergency Department (ED) and then go either to surgery, intensive care or to a general Orthopedic nursing unit. The phases of care that you go through will depend on when your injury happened, where the injury is on your body and how severe the injury is. The phases of care are explained below:

Resuscitation: The Emergency Department phase of care

The first phase of care for an Orthopedic trauma patient begins in the ED. This is where the trauma team, made up of several emergency medicine doctors, surgeons and nurses, works together to rapidly diagnose and treat injuries and decide what type of tests are needed. Treatment will begin as soon as the injuries are evaluated and may include stabilizing the fractured (broken) bones and repairing any lacerations (cuts). Trauma patients usually stay in the ED for several hours to get care and treatment. Our primary goal in this first stage of treatment is to make sure that there are no life- or limb-threatening injuries.

After resuscitation

The second phase of care depends on how stable a patient is and the type of injury that he or she has sustained. One of the following may happen:

1. You will be discharged to your home with instructions about how to follow-up for additional care.
2. You will be admitted to the hospital.
   If you are admitted directly to the hospital,
   a) You may first go to the operating room for surgical repair of your injury, or ...
   b) You may be admitted to the intensive care unit if you have serious injuries, but do not need surgery right away, or
   c) You may be admitted to one of the Orthopedic floors for possible surgery at a later time.

If you have surgery

The trauma team will decide early in your treatment whether your injuries will benefit from surgery. The goals of any Orthopedic surgery are to maximize the return of function of the injured bones and soft tissues.

There are some types of Orthopedic injuries that require immediate surgical repair. If the team decides that you have such an injury, you will be taken

directly from the ED to the operating room for surgery. Most Orthopedic injuries, however, do not need the surgery immediately and you will go to the nursing floor – also called an inpatient unit - first.

A team made up of an Orthopedic attending and resident surgeons, an anesthesiologist and operating room nurses will be involved with your care and treatment throughout your surgery. These team members will explain the details of surgery to you and describe their individual roles. You or a member of your family designated by you will be required to sign a consent form before surgery will be performed.

If you are admitted to the intensive care unit or to an Orthopedic floor before you have surgery, your Orthopedic surgeon will likely meet with you and your family to discuss what will happen during the surgery, how the team will repair your injury and what you can expect during your recovery. Independently, an anesthesiologist will meet with you to discuss your medical history to determine what type of anesthetic will be best for you.

On the day of surgery, you cannot eat or drink anything prior to the surgery (this status is called “NPO”). You will be given an approximate time when your surgery will take place. Please forgive us if we have to change the day or time of your surgery, as we admit new patients with life-threatening injuries for emergency surgery every day. Because there are only so many operating rooms, these emergencies can delay our “scheduled” surgeries. We will do our best to keep you and your nurse informed of any schedule changes.

After you have surgery, you will be taken to the recovery room, called the Post Anesthesia Care Unit (PACU). Here, you will awake under the close observation of the nursing and anesthesia staff. Your family should check in at the Bretholtz Center Family Liaison Area located near the Admitting Department on the lobby level. It is in this location that the hospital staff can contact your family to update then on your progress and when the surgery has been completed. Once your surgery has been completed, the Family Liaison staff can coordinate a brief recovery room (PACU) visit for you and your family.

Intensive care unit (ICU) floors

You may be admitted to the ICU directly from the Emergency Department or after surgery. Trauma patients are monitored closely in the ICU. Your treatments will continue and your therapies will begin here (for example, physical therapy and occupational therapy). Most trauma patients who need

intensive care go to the Burn/Trauma or Surgical Intensive Care Unit (ICU) located on the eighth floor of the Tower, Pods C or D. The staff of this unit specializes in the care of trauma patients with multiple injuries. Visiting hours are flexible and based on the patient's condition, how busy the unit is at the time and the family's needs. It is suggested that visitors try to come between the hours of 1 PM and 8 PM. The Burn Trauma ICU's telephone number is (617) 732-7710.

Orthopedic inpatient floors

Many of the Orthopedic trauma patients admitted to the hospital are admitted directly to the Orthopedic units. Some patients may be admitted to other floors due to room availability, but they will still have the same access to the team, therapists, and care coordinators.

When you first arrive on an Orthopedic floor, the nursing staff will help settle you into your room. Your family and/or significant other may be asked to wait outside of the room or in the waiting room until you are fully settled. It is important for our patients to visit with their friends and family. Visiting hours are from 1 PM to 9 PM. However, these guidelines are based on individual patient and visitor needs.

What you can expect each day: The Orthopedic Trauma Service team visits patients early each morning and as needed throughout the day to review progress and plan the daily and long-term care. These visits are called "Rounds." Your team will examine your injuries to assess healing and will determine whether the present treatments remain appropriate or need to be changed.

Professional staff such as Physical Therapists, Occupational Therapists, Dieticians, and Social Workers will see you as needed to assess your progress and provide treatment. A case manager — who is a nurse by training — will visit with you and your family to assess hospital discharge needs and to set up a plan for your care once you leave the hospital.

Your main point of contact while you are on an inpatient unit is your nurse. She/he stays in touch with other team members throughout the day to ensure that your patient care plan is carried out as directed. Please do not hesitate to talk with your nurse about any questions or concerns you may have.

COMMON ISSUES AFTER TRAUMA

Pain

Pain and discomfort are expected after any major injury and/or surgery. Your team will make every effort to reduce your pain to a more comfortable level. If you ever feel that your pain is not well controlled, you should tell your nurse as soon as possible.

The two most common pain treatments are patient controlled analgesia (PCA) and oral medications. PCA is a system that you control with your hand that delivers pain medication into your IV line. When you feel the pain building up, you can give yourself a dose of pain medication by pushing a button that controls a pump. The pump will then deliver the medication into your IV line, which should reduce your pain almost instantly. There is no danger delivering pain medication in this form as the pump is set with limits on the number of doses that may be given. This kind of pain management is often reserved for patients who have major injuries and are typically only given to patients on the first day and night after surgery.

There are different types of pain medicine you can take by mouth. Some medicines are called narcotics, which in rare cases can cause addiction in people who take them for pain for a long period of time. Most people who take narcotics for pain do not become addicted.

We have learned that pain makes recovery from surgery more stressful on the body, so it is important to take your pain medicine to help your body heal. While you are in the hospital, your doctors and nurses will work with you to create a smart and effective pain management plan to help control your pain. It is OK to take pain medicine while you are having pain. You should feel free to take strong pain medicine or narcotics for severe pain, and non-narcotic medications like Tylenol for mild or moderate pain. Please do not hesitate to ask your team about this very important part of your care.

Coughing and deep breathing

Part of the treatment for many trauma patients is to cough and breathe deeply at least every two hours to prevent pneumonia and to help the lungs work correctly. We will ask you to do this often after your surgery so that you can continue to heal well from your injuries.

Medications

In addition to your pain medication, you may receive antibiotics to help prevent and/or treat infection. You will also receive medication to prevent the formation of blood clots. A stool softener may be given to you once you are able to eat in order to prevent constipation (a common side effect of surgery and pain medicines). It is not unusual that your ability to move your bowels will be slowed down by the anesthesia, bed rest or pain medications. Please notify your nurse if you cannot move your bowels.

Urinary catheter

Immediately following a trauma, some patients find urination to be difficult. For the first few days after trauma, you may have a catheter placed to drain your bladder. This catheter is a small plastic tube usually placed while you are in the emergency room or the operating room. You may feel an urge to urinate even though the catheter is removing the urine from the bladder. While this feeling is normal, please feel free to discuss this with your nurse.

"Pneumo" or "air" boots

Pneumo boots (also called air boots) are made of soft plastic material that wraps around the legs to help prevent blood clots. The boots automatically inflate and deflate to help the circulation. You may also have to wear support stockings to help the circulation in your legs.

Learning about Bones and Fractures

What bones are made of

To understand why bones break, it helps to know what bones do and what they are made of. The bones of the body form the skeleton, which supports and protects the softer parts of the body. Bones are living tissue. They grow rapidly during one's early years and renew themselves when they are broken. Bones have a center called the marrow, which is softer than the outer part of the bone. Bone marrow has cells that develop into red blood cells (which carry oxygen to all parts of the body) and white blood cells (which help fight disease). Bones also contain the minerals calcium and phosphorus. These minerals are combined in a crystal-like structure, and due to their unique structure, bones can bear large amounts of weight.

How fractures occur

Fractures, or broken bones, occur when a large force that the bone cannot support is applied. Bones are rigid, but they do bend somewhat when an

outside force is applied to them. When this force stops, bones return to their original shape. For example, if you fall forward and land on your outstretched hand, there is an impact on the bones and connective tissue of your wrist as you hit the ground. The bones of the hand, wrist and arm can usually absorb this shock by bending slightly and then returning to their original shape and position. If the force is too great, however, bones will break, just as a plastic ruler breaks after being bent too far.

Types of fractures

The severity of a fracture usually depends on the force that caused the fracture and the strength of the bone. If the bone is bent only slightly, then the bone may crack rather than breaking all the way through. If the force is extreme, such as in an automobile collision or a gunshot, the bone may shatter. If the bone breaks in such a way that bone pieces stick out through the skin or a wound goes all the way down to the broken bone, the fracture is called an “open” fracture. An open fracture is particularly serious because once the skin is broken, infection in both the wound and the bone can occur. “Closed” fractures — breaks in the bone that do not cause the bone to stick through the skin — are the more common type of fracture. All fractures are either open or closed.

Dislocations

A dislocation occurs when a joint exceeds its range of motion so that the bone is no longer in its socket. When dislocations occur, there may be a large amount of soft tissue injury in the joint capsule and surrounding ligaments and muscle, with possible vein, artery and nerve damage. The team may attempt to relocate the limb (called a reduction) while in the ED or the operating room.

Risks and complications of a fracture and/or a dislocation

The below are other injuries and potential complications that may occur when a bone has fractured or become dislocated.

Blood vessel injury: When patients sustain fractures, injuries to nearby arteries and veins also may occur. These types of injuries can cause bleeding or loss of blood flow below the injured area. The team will follow your bleeding studies, examine the injured limb and check your pulses and circulation closely.

Compartment syndrome: Patients with severe fractures or crush injuries are at risk for developing compartment syndrome — a condition that occurs most frequently in the leg or forearm. Compartment syndrome causes increased pressure in the soft tissues that, in turn, causes decreased blood

supply to the affected muscles and nerves. This decreased blood supply can lead to damage if the pressures are not relieved. The team will check you closely for signs of compartment syndrome, which include: throbbing pain that does not become better with pain medicine; swelling and increased pain to the muscle when it is stretched; and firmness over the compartment.

Damage to nerves: Patients with fractures may also experience damage to the nerves close to the injured area. To diagnose potential nerve injuries, the team will ask you if you can move and/or feel the affected limb. Some nerve injuries may improve with time as swelling around the area decreases.

Deep Vein Thrombosis (DVT): A DVT is a blood clot that develops in one of the blood vessels in the leg or pelvis. Trauma patients are at risk for developing DVT's because of both the kind of injury it is and the inactivity associated with it. Signs or symptoms of DVT include pain or tenderness over the injury site, swelling, fevers and/or changes in skin color. The team will order a special radiological test that looks for blood clots in your body and may take precautionary measures such as giving you blood thinning medicine and devices to wear on your legs called "pneumo boots" or "air boots" to prevent DVT's from forming.

Infection: All fractures put you at increased risk for infection. However, open fractures (fractures in which the skin is broken) put patients at even higher risk for infection. Wound and bone infections can be disabling for patients because they can delay or prevent healing of the fracture. Open fractures are evaluated in the ED, where patients are given antibiotics and a tetanus vaccine. If you have an open fracture, you will likely be taken to surgery within 24 hours, so that the fracture site may be cleaned. If the wound is not completely clean, it will be kept open to the air, while the fracture will be treated with a cast, splint, traction or a device called an external fixator.

Pneumonia: A patient who cannot get out of bed frequently may develop pneumonia – an infection of the lungs – that results from fluids building up in the lungs. Signs of pneumonia include fever, chills and a cough. You can help prevent pneumonia by coughing and breathing deeply on a regular basis and by getting out of bed as soon as the team feels it is safe for you to do so.

Post-traumatic arthritis: Fractures that involve a joint (knee; hip; elbow; shoulder) have a higher risk of developing arthritis (degeneration and inflammation of the joint) at some point after healing has taken place. Early treatment of these fractures and proper healing reduces this risk. Our goal is

to repair your fracture to as near perfect as possible to hopefully avoid the onset of early arthritis.

***Pulmonary embolism* (*PE*)**: A pulmonary embolism — commonly referred to as a "PE" — is a blood clot that develops in the leg or pelvis and then travels through the bloodstream to the lungs, where it can cause problems. A trauma patient who is not active is at risk for developing a PE. Signs of this type of complication include shortness of breath, difficulty breathing and taking short and rapid breaths. A patient who is suspected to have a PE will be given oxygen and placed on a monitor to evaluate heart rate and how much oxygen is entering the bloodstream. He/she will also undergo a special test that searches for this type of clot.

Swelling and blisters: Injury to the soft tissues near the fracture or dislocation site can occur, resulting in bruising and swelling to the area. The swelling can be significant and possibly cause blisters. You may be instructed to keep the injured part of your body elevated and/or apply ice to help decrease the swelling. The team will examine the fractured area to watch for the development of blisters. Significant swelling and blister formation can cause surgery to be delayed.

HOW FRACTURES HEAL

Fracture healing is divided into three stages: the inflammatory stage, the healing stage, and the remodeling stage.

Inflammatory stage

This stage begins as soon as your bone breaks. For the first two weeks after your injury, your body will rush healing cells to the area to begin the process of fracture healing. This typically causes swelling in the affected area. At the end of this stage, the bone will have started to knit together with fibrous tissue not yet visible on X-rays.

Healing stage

After the inflammatory stage, the healing stage begins. This stage usually lasts six weeks to three months. At the beginning of this stage, the body starts to lay down tissue that acts as the bone's "building blocks." Later in this stage, the body starts to lay down bone. At the end of this stage, the body has actually bridged the fracture gap with new bone and the bone is considered healed.

Remodeling stage

Once the body has healed the fracture, its work is not done. The body wants to "remodel" the bone to make it strong and does this over the next year. This process generates considerable inflammation and causes both swelling and mild pain.

TYPES AND KINDS OF TREATMENTS

Casts, splints, slings and braces

All of these devices are designed to protect the area of your surgery and/or injury to allow healing to occur. Your doctor will determine the appropriate times when these devices can be removed.

Open reduction and internal fixation (ORIF)

With this type of treatment, surgery is performed in which the bone fragments are re-aligned (reduced) and then held together with metal plates and/or screws. The bone fragments may also be held together by inserting rods down through the marrow space in the center of the bone.

External fixation

In this type of treatment, the bones are repositioned and held in place by

external devices. Pins are placed above and below the fracture site and then connected to metal bars outside of the skin. This device is a frame that holds the bones in the proper and stable position so they can heal. After an appropriate period of time, the external fixation device is removed. Internal fixation may then be necessary.

Traction

Traction is usually used to align a bone or bones by a gentle, steady pulling action. The pulling force is transmitted to the bone through a metal pin through a bone with weights pulling the bar. Traction is often used as an early treatment, before other forms of treatment like internal or external fixation.

Walkers, crutches and canes

All these devices provide support through your arms to limit the amount of weight going through the injured leg or to improve your balance and safety. The device will be chosen according to your ability and the amount of weight-bearing allowed for your injury as well as your physical therapist's recommendations. The possible weight bearing statuses determined by your doctor may be non-weight bearing, touch-down, partial, or full weight bearing.

REHABILITATION

Most of your recovery from your injuries will take place outside of the hospital. It will start in the hospital and continue in other settings. For most patients, rehabilitation will last for several months in many kinds of settings. At different points during this phase, you may need to spend time in a hospital-like setting that provides different types of care than the hospital does, or you may be able to continue your recovery in an outpatient or home setting.

Rehabilitation hospital

Some patients who still need medical care after surgery may need to stay in a facility that is called a rehabilitation hospital. In this rehabilitation hospital, there are many skilled therapists, nurses and doctors who will work with you every day to help you regain your independence and movement. You will leave BWH with a specific plan of care and goals for your rehabilitation.

Transitional care unit/skilled nursing facility

If you need less medical supervision after leaving the hospital but you are

not independent enough to return home, a transitional care unit (TCU) or a skilled nursing facility (SNF) will be the right level of care for you. In this setting, you will begin to regain the strength and function you had prior to your injury. A TCU is housed within a hospital, while a SNF is its own free-standing building. They are very similar to one another.

Visiting Nurses Association or Home Health Agency

If the team thinks that your medical status and injury are safe enough, you may be able to rehabilitate with a therapist or visiting nurse who comes to your home to provide this care. The (VNA) or another home-health agency will send a team of therapists and/or nurses to you in your home. They will help you to continue your therapy and teach your family how to take care of you while you are at home.

Outpatient therapy and follow-up appointments

Therapy after surgery is just as important as the surgery itself. Outpatient therapy visits are often needed after discharge from the hospital, rehabilitation setting or home care to continue to work on your specific rehabilitation plan. Your Orthopedic surgeon will want to see you in his or her office at a certain time after you leave the hospital to see how well you are recovering from your injuries. Before you leave the hospital, you will be given instructions about when this follow-up care should occur.

FALLS AND FRACTURES IN PATIENTS 65 AND OLDER

One in three individuals over the age of 65 falls each year. When an older person falls they could experience serious injury and the consequences could be life altering. A fracture may result in disability and loss in independence. In fact, falls are the main reason why older people lose their independence.

The Centers for Disease Control reports that twenty to thirty percent of people who fall suffer moderate to severe injuries such as lacerations, hip fractures, and head traumas. These injuries can make it hard to get around or live independently, and increase the risk of early death.

Falls are the most common cause of traumatic brain injuries. Almost 50% of fatal falls among older adults were due to traumatic brain injuries. Most fractures among older adults are caused by falls. The most common are fractures of the spine, hip, forearm, leg, ankle, pelvis, upper arm, and hand.

Many people who fall, even if they are not injured, develop a fear of falling. This fear may cause them to limit their activities, which leads to reduced mobility and loss of physical fitness, and in turn increases their actual risk of falling.

The American Geriatric Society recommends that all patients over the age of 65 undergo a comprehensive falls assessment – particularly if they have fallen in the last year. The kinds of recommendations that may come from this kind of assessment include:

- A physical therapy referral for exercises that will help the patient with balance, strength, and gait (the way he or she walks).
- Management of foot problems and footwear.
- A referral for possible problems with vision.
- Management of postural low blood pressure.
- Changes to medication or medication doses
- Adaptation or modification of the patient's home environment.
- An occupational therapy evaluation for kitchen safety.
- An evaluation of and treatment for osteoporosis, or other concerns.

Please ask your surgeon for assistance with scheduling a falls risk evaluation and assessment.

FREQUENTLY ASKED QUESTIONS

How long do I have to use my crutches/walker/cane?
Your doctor will determine when it is safe for you to bear weight on your injured leg and stop using your crutches. Your physical therapist assists in the transition.

When can I put more weight on my leg?
Your weight bearing status will be explained to you before you are discharged from the hospital and any changes will be addressed at your follow-up appointments.

How long do I have to use the brace/splint?
Your doctor and therapist will instruct you on when and for how long you will need to use your brace or splint. This should be outlined in your discharge paperwork.

Can I shower?
It depends on your injury. Most patients can shower normally a few days after surgery and wash their incision. You should not shower if you have any open wound or drainage coming from your incision (surgery) site. If you have a cast, it must be covered with a shower bag or plastic bag to keep it dry. If the cast gets wet, it must be changed and call your surgeon's office. If you have any questions, ask one of your care givers.

When can I go back to work/school?
We recommend that you wait until your first outpatient appointment with your surgeon to see how you are healing.

When can I drive?
This is not an easy question to answer because it involves more than your surgeon's medical clearance. The surgeon will base his or her decision about whether you are OK to drive based on the how well you have recovered from your orthopedic injuries and whether or not you are taking narcotic pain medications. If you are still taking narcotic pain medications, you cannot drive. There is another important part of this decision and that is whether you and your family think that you are able to drive and feel well enough to do sot.

What happens to the metal pins, screws, and plates? Will they set off a metal detector? Will they stay in my body permanently or will they be removed?

Depending on the kind of fracture you have, the metal may stay in your body until you have healed or until it is no longer necessary. The metal can remain permanently for most fractures. As for the metal detectors, they should not be sensitive enough to detect the metal. If they are, you should explain to the security personnel that you have had surgery where metal was put in your body. Please know that it is safe for you to have an MRI with metal implants in your body.

Should I put ice on any of my swollen areas? If so, for how long?

You may apply ice to the area to decrease swelling and relieve pain for as long as you need in order to provide comfort. Heating pads feel comfortable but do not provide the pain relief like ice will.

How long until I can go back to the gym or play sports again?

The answer to this question is almost the same as returning to work or school. You can discuss this question with your surgeon during your first office visit.

When may I resume sexual activity?

The answer to this question varies according to the injuries you have sustained. Your doctor or occupational therapist can give you information to help you decide when and how you can safely resume sexual activity.

How long will I be in the hospital?

Trauma patients, on average, stay in the hospital for four or five days. You may be discharged before or after this time depending on the nature of your injuries and/or the kind of health insurance you have.

When should I see my doctor again?

Before you are discharged from the hospital, you will be given specific instructions about where and when you should see your doctor.

Do I need x-rays for my next office visit?

If you had surgery to repair a fractured bone, each of your regularly scheduled follow-up appointments will require an x-ray of the bone.

When do my sutures/staples come out? Should I take them out myself, or have my surgeon do this?

Sutures and staples are removed by a doctor or nurse within two to three weeks of surgery at your first post-op appointment.

How often do I need to change my dressing?

The answer to this question depends on the type of wound or incision that you have. The team will discuss this issue with you before you leave the hospital, and your nurse will show you how to do dressing changes at home.

What do I do with all of my insurance and disability forms?

Please send these forms to your surgeon's office with the patient sections completed and signed.

How long will I need to take medication?

The answer to this question depends on the type of medication(s) you have been prescribed. If you are on blood thinning medicine like aspirin, Coumadin or Lovenox , or antibiotics for infection, you will need to take it as long as the doctor feels it is necessary. This may be up to 3 months. Pain medications should be taken only when needed, as it is expected that the pain will steadily go away as the fracture heals.

How will the staff of the rehabilitation hospital or home care agency know what my injuries are and what my Orthopedic surgeon's plan is?

Before you leave the hospital, the team will write a referral to the next "team" from the rehabilitation hospital or agency who will help you continue your recovery. If they have any questions, they have the contact information to our offices to discuss them in detail.

Will my surgeon still manage my care during my rehabilitation?

If you go to a rehabilitation hospital, you will have a new physician from the rehabilitation hospital who will oversee the plan your BWH surgeon has set up. The staff of the rehabilitation hospital will contact your BWH surgeon should any issues arise. Patients who go to the Spaulding Rehabilitation Hospital are visited by an attending physician from our team once a week to monitor their progress and healing in conjunction with the Spaulding team.

CONTACT INFORMATION

Phone Numbers

BWH Main Number/Switchboard:	(617) 732-5500
Burn Trauma ICU:	(617) 732-7710
Orthopedic Offices:	(617) 732-5322
Orthopedic Floor 16A and 16B:	(617) 732-5006; (617) 732-5005

BWH Orthopedic Trauma Service Webpage:
https://www.brighamandwomens.org/orthopaedic-surgery/orthopaedic-trauma-service

PATIENT RIGHTS

Patient Rights and Responsibilities

Our goal is to provide you with the care that is right for your injuries and to help you recover as soon as possible. The hospital aims to deliver this care with a clear understanding of and respect for your individual needs and rights as outlined in the Massachusetts Patient Bill of Rights. You may contact the BWH Department of Patient/Family Relations at (617) 732-6636 for a copy of the Bill of Rights.

Ethics

BWH has many resources in place for patients, families and staff to address ethical issues that may arise during treatment. Members of the BWH Ethics Committee, an independent advisory body, are available to consult with patients, families and staff who face serious decisions about appropriate treatment and care. At a patient or family member's request, we can arrange an ethics consultation with one or two members of the committee who will meet with you and the health care team responsible for the patient's care to discuss the treatment plan. For more information, call (617) 732- 8590 Monday through Friday, 8:30 a.m. – 5:00 p.m. You can also leave a confidential message at this number after hours. In emergencies, the ethics consultant on-call can be reached by calling the page operator at (617) 732-6660, 24 hours a day, seven days a week.

Health Care Proxy

Patients and their families often have questions about health care proxies and living wills. These legal documents describe your wishes about the type of medical care you would want to receive if you were unable to make those decisions for yourself. These documents also contain the name of the person you choose to make decisions for you if you cannot make them for yourself. Please ask your primary care physician to discuss these documents with you. For additional information and forms, please call the Admitting Staff at (617) 732- 7453, or the Care Coordination Department at (617) 732- 6469.

You may also download forms from our website at www.brighamandwomens.org/ethics/advancedirec.asp. If you have completed a living will or health care proxy, please bring a copy with you to the hospital, or have your family member bring it at the earliest possible time after the admission to the hospital

Patient and Family Relations Department

The Patient/Family Relations Department staff answers questions and concerns from patients and families, and they can help you identify resources within the hospital. They also are responsible for responding to and documenting complaints and compliments. Located in the Bretholtz Center in the Tower 1 Lobby, the office is open Monday through Thursday from 8:30 a.m. to 8 p.m., Fridays from 8:30 a.m. to 6 p.m., and Saturdays from 11 a.m. to 3 p.m. You may visit during these hours (no appointment necessary) or call the department at (617) 732- 6636.

GLOSSARY OF TERMS

The following is a partial list of common terms you may hear while receiving care for your injuries. Please ask any one of us what these terms mean and any you hear or see that you do not recognize or understand.

Anticoagulant: A medication that prevents the clotting of blood

Case manager: A health care professional who helps you and your family make plans for further care and treatment once you leave the hospital (for example, in a rehabilitation hospital or home environment)

Comminuted fracture: An injury where the bone is broken in many places

Compartment syndrome: A condition caused by the progression of pressure on the blood vessels of an extremity from swelling in the surrounding tissue. This results in reduced blood supply to an extremity, severe pain and limited movement. Treatment includes removal of restrictive dressings or casts or possibly surgery to release the pressure in the tissue.

Dislocation: An injury where a bone is displaced from the joint socket

External fixator: A metal device visible on the outside of the body that treats fractures by stabilizing the involved bones

Fasciotomy: A surgical procedure where the connective tissues are cut open — or "released" — to relieve the pressure caused by reduced blood flow to the muscle compartments surrounding the fractured bone

Health care proxy: The person you name to make medical decisions for you during times when you are not able to make them for yourself

Home health care: A team of nurses and/or therapists who go to your home to help you with your therapy and recovery process; they will teach your family how to care for you at home

Infection: The invasion of the body by micro-organisms that reproduce and multiply, causing disease through local cell injury and the release of toxins

Joint: A point of connection between two or more bones

Ligament: A stabilizing cord, band or sheet of soft tissue that links two or more bones or pieces of cartilage together

Muscle flap: A surgical procedure where muscle is transferred from an uninjured part of the body to the injured area/part of the body so that healing may take place

NPO: Usually used on night prior or morning of surgery when a patient is not allowed to eat or drink anything in order to keep the stomach empty for surgery. "You're NPO," means that you should not eat or drink anything until notified otherwise.

Occupational therapist: A rehabilitation specialist trained to evaluate and treat restrictions/ limitations in your ability to function independently in daily life roles.

Open reduction internal fixation: Also called "ORIF", this is a surgical procedure used to fix a fracture, usually involving metal rods, plates or screws

PACU: This stands for Post Anesthesia Care Unit; this term is commonly referred to as the recovery room

Physical therapist: A rehabilitation professional trained to examine and evaluate physical impairments, functional limitations and disability. The physical therapist provides exercise therapy and functional training to help you achieve your best function.

Pneumo boots: A tubular device that is placed around a patient's leg and alternately inflated and deflated with air to help prevent blood clots.

PCA: This stands for patient controlled analgesia, which is a system where the patient controls the delivery of pain medication into his/her body (usually by pressing a button connected to an IV)

PO: This term refers to food, drink and pills or other medications a patient must take by mouth

Reduction: The physical process of correcting or restoring bone fragments or joint dislocations to their normal anatomical position

Rehabilitation hospital: A hospital a patient may go to after BWH where you will receive intensive therapies (for example, physical and occupational) for injuries

Rounds: The physician team's early morning visits with and examinations of patients

Skin graft: The repair of a wound site with skin from another part of the body or from a skin bank

Sling: A bandage or device used to support an injured part of the body, most often the arm

SNF: This stands for skilled nursing facility, which is a hospital-like setting a patient may go to after discharge from BWH to continue recovery through appropriate therapies and nursing care

Soft tissue: Skin, fat and muscle

Splint: An Orthopedic device for immobilization, restraint or support of any part of the body

Sprain: A tension injury to a ligament that may cause swelling, pain, some loss of function or joint instability

VNA: This stands for Visiting Nurses Association, which is a team of nurses and/or therapists who go to a patient's home to help with therapy and the recovery process; the staff from the VNA will teach family members how to care for the patient at home (also see "home health care" above)

Weight bearing status: A recommendation as to the amount of weight one can place on an injured leg when walking. Usually recommended as no weight, weight bearing as tolerated, partial weight or full weight bearing

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