

MEDICAL TERMINOLOGY AND ABBREVIATIONS

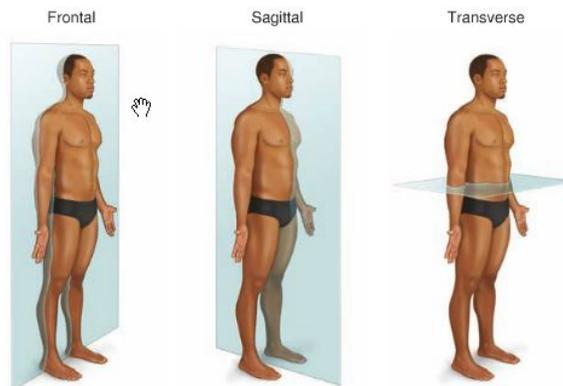
Standard Anatomical Position and Anatomical Planes: Before we cover medical terminology and abbreviations, it will be helpful to understand the standard anatomical position and the anatomical planes of the body. All anatomical location and movement terms are with respect to the standard anatomical position which refers to a body in the standing position with the arms and palms facing forward (thumbs out).



Frontal Plane: Divides the body into front and back portions (or posterior and anterior as described below).

Sagittal Plane: Divides the body into left and right portions

Transverse Plane: Divides the body into upper and lower halves (or superior and inferior as described below).



Location Terms:

Superior and Inferior: Superior refers to something “above” while Inferior refers to something “below”. In the anatomical position, the head is the most superior part of the body while the feet are the most inferior. Examples: The hips are superior to the legs but inferior to the chest.

Anterior and Posterior: Anterior refers to the front and posterior refers to the back. As an example, in the anatomical position a person’s heart is posterior to their sternum as the heart lies behind the sternum. Alternatively, the sternum is anterior to the heart since it lies in front of the heart.

Medial and Lateral: Imagine a line splitting the human body into right and left halves in the anatomical position (facing forward). Medial means towards that center line (midline) while means away from the midline. Examples: The nose is medial to the ears. The shoulders are lateral to the sternum.

Proximal and Distal: These terms are used to describe a structure's distance from the torso with proximal being closest to the torso and distal being furthest away. Examples: The hand is distal to the elbow. The knee is proximal to the ankle.

Movement Terms:

Flexion and Extension: These motions occur in the sagittal plane and refer to increasing or decreasing the angle between two body parts.

- **Flexion** refers to a decrease in the angle between two body parts.
- **Extension** refers to an increase in that angle. For example, flexion at the elbow decreases the angle between the wrist and the shoulder, as seen when doing a bicep curl. Extension of the elbow increases that angle as seen when you straighten your arm.

Abduction and Adduction: These terms refer to movement towards or away from the body in the frontal plane.

- **Abduction** is a movement away from the midline of the body.
- **Adduction** is a movement towards the midline. For example, abduction of the shoulder joint moves the arm further away from the body while adduction returns the arm closer to the side of the body. Abduction of the hip joint spreads the legs apart while adduction of the hip joints brings the legs together (remember those hip abduction and adduction machines in the gym? Now you know where they get their names from!)

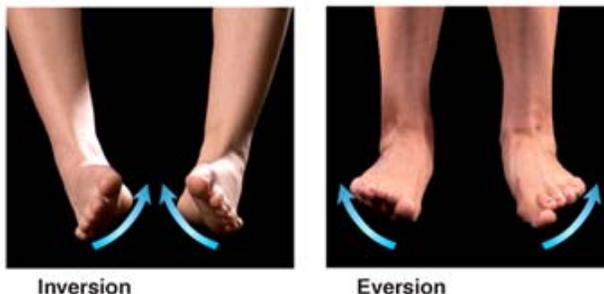
Internal (medial) and External (lateral) Rotation: These terms refer to movement of the limbs around their long axis.

- **Internal rotation** is a movement towards the midline of the body.
- **External rotation** is a movement away from the midline. To understand these terms, take a moment and, with a straight leg, rotate it to point your toes inward. You have just internally rotated your hip joint. Now bend your elbow to a 90-degree angle, imagining that you are carrying an object in front of you. Now rotate your arm outward as if you are going to hand that object to someone standing beside you. You have just externally rotated your shoulder joint.

Pronation and Supination: Pronation refers to "facing down" while supination refers to "facing up". When laying on your back, you are laying in a supine position. When laying on your stomach, you are in a prone position. With your forearm resting on your desk, keep your shoulder still and turn your hand so that your palm is facing up. This is supination. Now flip your palm so that it is facing down. This is pronation.

Dorsiflexion and Plantarflexion: These terms describe movement of the ankle. Dorsiflexion refers to flexion of the ankle so that the toes are pointed up. Plantarflexion refers to extension of the ankle so that the toes point down. Imagine a woman wearing high heeled shoes. The shoes are placing her ankle into constant plantarflexion.

Eversion and Inversion: These terms are typically used when describing movement of the foot and ankle away from (eversion) or towards (inversion) the midline of the body.

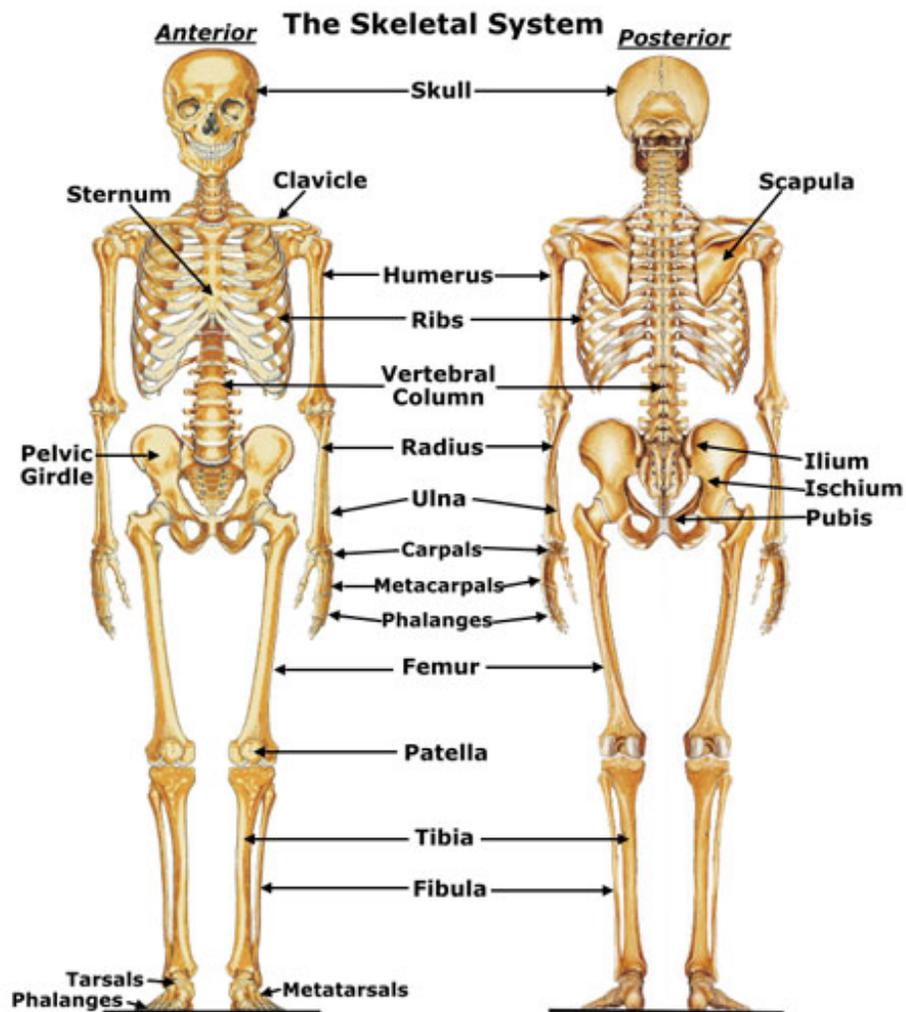


ac	Before meals	GP	General practitioner
ACL	Anterior cruciate ligament	HR	Heart Rate
ADL	Activities of daily living	hs	At bedtime
ad lib	As desired	Hx	History
Afib	Arterial fibrillation	ICU	Intensive care unit
AP	Anteroposterior	inf	Inferior
A&P	Anterior and posterior	inj	Inject
AQ	Water	IMP	Impression
bid	Twice a day	IU	International unit
BLS	Basic life support	IV	Intravenous
BMR	Basal metabolic rate	JT	Joint
BP	Blood pressure	LBP	Lower back pain
bpm	Beats per minute	MD	Medical doctor
c*	With	MRI	Magnetic resonance imaging
C/O	Complaint of	MS	Multiple Sclerosis
D/C or DC	Discontinue or discharge	NPO	Nothing by mouth
DO	Doctor of osteopathy	pc	After meals
Dx	Diagnosis	po	By mouth
ECG	Electrocardiogram	prn	As needed
EEG	Electroencephalogram	PT	Physical Therapy
EMG	Electromyogram	qd	Every day
ENT	Ear, nose and throat	qid	Four times per day
exc	Excision	RN	Registered nurse
FX	Fracture	ROM	Range of motion
GI	Gastrointestinal	Rx	Prescription
CAD	Coronary artery disease	s*	Without
caps	Capsules	S&S	Signs and symptoms
CBC	Complete blood count	stat	Immediately
CC	Chief complaint	sx	Symptoms
CNS	Central Nervous System	Tabs	Tablets
COPD	Chronic obstructive pulmonary disease	tid	Three times per day
CPR	Cardiopulmonary resuscitation	UA	Urinalysis
diff	Differential blood count	Vfib	Ventricular fibrillation
		VS	Vital Signs

BASIC HUMAN ANATOMY

- **Musculoskeletal System:** The musculoskeletal system encompasses the skeletal system and the muscular system which allows movement. The skeletal system and muscular system are connected by tendons, ligaments, joints and other connective tissues. Together, this system provides form, support, stability and movement to the body and protects vital organs.
- **Ligaments:** They connect the bones to each other and stabilize joints. Cartilage is a connective tissue that prevents the bones from rubbing against each other.
- **Tendons:** They connect attach muscle to the bone.

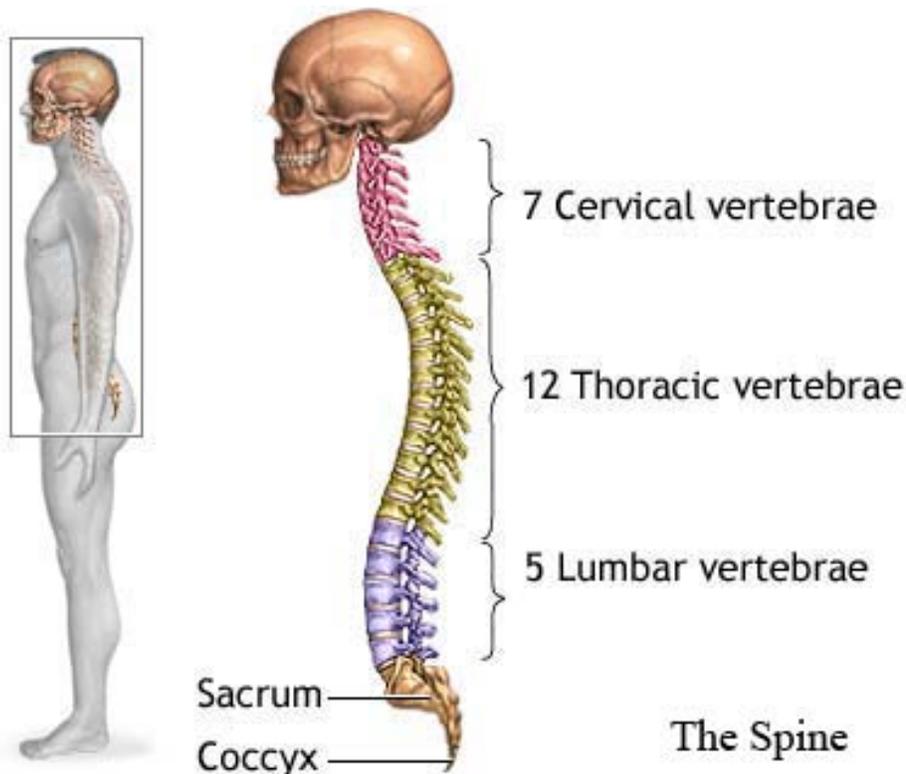
Here is the general diagram of the skeletal system:



The Spine: Because of the number of injuries related to the spine that an adjuster will see throughout his or her career, we will provide a short overview of the makeup of the spine.

The **spine** is made up of 33 bones called vertebrae that are stacked one on top of the other. Each vertebra is separated and cushioned by an intervertebral disk which keeps the bones from rubbing together. The vertebrae are numbered and divided into 5 regions:

- **Cervical (neck):** The main function of the cervical spine is to support the weight of the head. There are 7 cervical vertebrae numbered C1-C7 with C1 located at the top of the spine connecting to the skull and C7 located at the bottom of the neck.
- **Thoracic (mid back):** The main function of the thoracic spine is to hold the ribcage and protect the heart and lungs. There are 12 thoracic vertebrae numbered (from top to bottom) T1-T12.
- **Lumbar (low back):** The main function of the lumbar spine is to bear the weight of the body. There are 5 lumbar vertebrae numbered (from top to bottom) L1-L5.
- **Sacrum:** The sacrum connects the spine to the hip bones. There are 5 sacral bones that are fused together.
- **Coccyx:** The coccyx is also known as the tailbone and is comprised of 4 bones that are fused together.



Common Injuries and Diseases in Casualty Claims Handling

- **Strains & Sprains:** A **strain** is the stretching or tearing of a muscle or tendon. As covered previously, tendons connect the muscle to the bone. Low back and hamstring strains are common. A **sprain** is the stretching or tearing of the ligaments which connect two bones together. The most common sprain is in the ankle. The initial treatment for both injuries is rest, ice, compression and elevation... easily remembered as RICE. Most can be treated at home but more severe tears may require surgical repair.
- **Dislocations:** A dislocation is an injury at the joint where there is an abnormal separation where two bones meet. Dislocations are usually caused by sudden trauma to the joint such as a fall. They are most commonly seen in shoulders and fingers.
- **Fractures:** A fracture is the medical term for a broken bone. There are many types of fractures, but the main categories are displaced, non-displaced, open, and closed. A **closed fracture** is when the bone breaks but there is no puncture or open wound in the skin. An **open fracture** is one in which the bone breaks through the skin; it may then recede back into the wound and not be visible through the skin. This is an important difference from a closed fracture because with an open fracture there is a risk of a deep bone infection. Displaced and non-displaced fractures refer to the way the bone breaks. In a **displaced** fracture, the bone snaps into two or more parts and moves so that the two ends are not lined up straight. If the bone is in many pieces, it is called a comminuted fracture. In a **non-displaced** fracture, the bone cracks either part or all the way through, but does not move and maintains its proper alignment.

Other types of fractures:

- A greenstick fracture is an incomplete fracture in which the bone is bent. This type occurs most often in children
 - A transverse fracture is when the broken piece of bone is at a right angle to the bone's axis
 - An oblique fracture is when the break has a curved or sloped pattern
 - A comminuted fracture is when the bone breaks into several pieces
 - A buckled fracture, also known as an impacted fracture, is one whose ends are driven into each other. This is commonly seen in arm fractures in children
 - A pathologic fracture is caused by a disease that weakens the bones, such as osteoporosis
 - A stress fracture is a hairline crack
- **Soft Tissue Injuries:** Injuries such as a contusion (bruise) or a sprained or strained back, neck, knee or ankle are referred to as soft tissue injuries because they involve muscles, ligaments, tendons and other soft connective tissue throughout the body. Soft tissue injuries are subjective in nature, require limited treatment, resolve themselves quickly with rest, ice, elevation, and/or over the counter or prescribed medication.
 - **Brain Injuries:** Brain injuries or "Traumatic head injuries" are among the most serious of casualties. The results of traumatic brain injury range from mild concussions (resulting in a brief period of unconsciousness, dizziness, or disorientation) to comas and lasting cognitive problems.
 - **Arthritis:** Arthritis is a general term referring to joint pain or joint disease. There are over 100 types of arthritis and related conditions. Symptoms often include pain, swelling, stiffness, and decreased range

of motion. The most common type of arthritis is **osteoarthritis** which generally occurs with age. Over time the cartilage in the joints can wear away, allowing bone to rub against bone, causing pain, swelling and stiffness. Another common form of arthritis is inflammatory which includes rheumatoid and psoriatic arthritis. These are autoimmune conditions in which the immune system

- **Open Wounds:**

- **Abrasion-** An abrasion occurs when the skin rubs or scrapes against a rough or hard surface. Road rash is an example of an abrasion. There is usually not much bleeding, but the wound needs to be scrubbed and cleaned well to avoid infection.
- **Amputation-** The word amputation refers to the removal of a body extremity. This can be done surgically or as the result of trauma. During some serious work-related accidents involving heavy machinery, body parts may be literally torn off and this is classified as being an amputation caused by trauma. If a body part has been badly damaged in an accident or suffers a serious infection it may need to be surgically amputated as a last resort if it cannot be saved. Common body parts to suffer amputations from accidents include fingers, toes, hands, feet, arms and legs. Even an eye may need to be removed if badly injured.
- **Avulsion-** An avulsion is a partial or complete tearing away of skin and tissue. Avulsions usually occur as a result of violent accidents and various types of work-related injuries. They bleed heavily and rapidly.
- **Incision-** A sharp object, broken shards of glass, mangled parts from an automobile accident, cause an incision. Incisions bleed a lot and quickly. If the incision is deep, tendons, ligaments, and muscles might be damaged.
- **Laceration-** A sharp object, broken shards of glass, mangled parts from an automobile accident, cause an incision. Incisions bleed a lot and quickly. If the incision is deep, tendons, ligaments, and muscles might be damaged.
- **Puncture-** A puncture is a small hole caused by a pointy object that penetrates the skin. Sometimes the debris from work-related injuries can cause a puncture wound. Punctures may not bleed much, but they can be deep enough to damage internal organs. Puncture wounds, even a small one, typically require a visit to a medical provider to get a tetanus booster shot to prevent infection.

Medical Tests

- **Laboratory Tests:** Tests performed in a laboratory using samples of blood, urine or body tissues
- **Radiography (X-Ray):** A common imaging test which uses electromagnetic waves to create images of internal structures of the body. X-rays are most commonly used to check for broken bones.
- **Magnetic Resonance Imaging (MRI):** A test that provides images of organs and internal structures using a magnetic field and pulses of radio wave energy. An MRI can provide information and identify problems that cannot be obtained via other imaging methods. MRI's are commonly done to diagnose problems such as tumors, injury, bleeding, infection, and more. A contrast material may be used during the test to show abnormal tissue more clearly.
- **Computerized Tomography (CT or CAT):** A CT scan uses a computer to combine a series of X-ray images taken from various angles into two-dimensional, cross-sectional images of bones, soft tissues and blood vessels. A CT Scan provides more information than a traditional X-ray and can be used to visualize nearly all parts of the body.
- **Electromyography (EMG):** A test used to assess the health of muscles and their respective nerve cells. The results of an EMG can identify nerve dysfunction, muscle dysfunction or problems with signal communication between the nerves and the muscle.
- **Nerve Conduction Studies:** This is another component of the EMG which uses electrodes attached to the skin to measure the speed and strength of the signal traveling between nerves. The nerve conduction study can identify nerve damage and destruction.
- **Myelography:** A test that uses X-rays or CT scans with a contrast dye injected into the spinal canal in order to identify problems in the spinal canal including the spinal cord, nerve roots and surrounding tissue. It has been used to diagnose conditions such as degenerative disk disease and spinal stenosis. Due to the invasive nature of myelography, MRI and CT scans have largely taken its place.
- **Arthroscopy:** A minimally invasive procedure in which a thin fiber optic scope is inserted into a joint space through a small incision. The operating surgeon can view the area on a monitor in order to diagnose and in some cases repair torn joint tissue.
- **Electrocardiogram (EKG or ECG):** A test that records the electrical activity of the heart as a line of spikes and dips (referred to as waves) on a strip of paper. It is used to identify abnormal heart rhythms and investigate the cause of chest pains.
- **Electroencephalography (EEG):** A test that detects electrical activity in the brain. It is most commonly used to show the type and location of activity in the brain during a seizure and has also been used to evaluate brain activity in patients suffering from impaired brain function due to problems including coma, tumors, long-term cognitive or memory problems and stroke.