



**AC Joint** — Acromioclavicular joint; joint of the shoulder where acromion process of the scapula and the distal end of the clavicle meet; most shoulder separations occur at this point.

**Abduct** — Movement of any extremity away from the midline of the body. This action is achieved by an abductor muscle.

**Abrasion** — Any injury which rubs off the surface of the skin.

**Abscess** — An infection which produces pus; can be the result of a blister, callus, penetrating wound or laceration.

**Adduct** — Movement of an extremity toward the midline of the body. This action is achieved by an adductor muscle.

**Adhesion** — Abnormal adherence of collagen fibers to surrounding structures during immobilization following trauma or as a complication of surgery which restricts normal elasticity of the structures involved.

**Aerobic** — Exercise in which energy needed is supplied by oxygen inspired and is required for sustained periods of vigorous exercise with a continually high pulse rate.

**Anabolic Steroids** — Steroids that promote tissue growth by creating protein in an attempt to enhance muscle growth. The main anabolic steroid is testosterone (male sex hormone).

**Anaerobic** — Exercise without use of oxygen as an energy source; short bursts of vigorous exercises.

**Anaphylactic Shock** — Shock that is caused by an allergic reaction.

**Anterior Compartment Syndrome** — Condition in which swelling within the anterior compartment of the lower leg jeopardizes the viability of muscles, nerves and arteries that serve the foot. In severe cases, emergency surgery is necessary to relieve the swelling and pressure.

**Anterior Cruciate Ligament (ACL)** — A primary stabilizing ligament within the center of the knee joint that prevents hyperextension and excessive rotation of the joint. A complete tear of the ACL necessitating reconstruction could require up to 12 months of rehabilitation.

**Anterior Talofibular Ligament** — A ligament of the ankle that connects the fibula (lateral ankle bone) to the talus. This ligament is often subject to sprain.

**Anti-Inflammatory** — Any agent which prevents inflammation, such as aspirin or ibuprofen.

**Anterogram** — A film demonstrating arteries after injection of a dye.

**Arthrogram** — X-ray technique for joints using air and/or dye injected into the affected area; useful in diagnosing meniscus tears of the knee and rotator cuff tears of the shoulder.

**Arthroscope** — An instrument used to visualize the interior of a joint cavity.

**Arthroscopy** — A surgical examination of the internal structures of a joint by means for viewing through an arthroscope. An arthroscopic procedure can be used to remove or repair damaged tissue or as a diagnostic procedure in order to inspect the extent of any damage or confirm a diagnosis.

**Aspiration** — The withdrawal of fluid from a body cavity by means of a suction or siphonage apparatus, such as a syringe.

**Atrophy** — To shrivel or shrink from disuse, as in muscular atrophy.

**Avascular Necrosis** — Death of a part due to lack of circulation.

**Avulsion** — The tearing away, forcibly, of a part or structure.

**Baker's Cyst** — Localized swelling of a bursa sac in the posterior knee as a result of fluid that has escaped from the knee capsule. A Baker's cyst indicates that there is a trauma inside the knee joint that leads to excessive fluid production.

**Bone Scan** — An imaging procedure in which a radioactive-labeled substance is injected into the body to determine the status of a bony injury. If the radioactive substance is taken up the bone at the injury site, the injury will show as a "hot spot" on the scan image. The bone scan is particularly useful in the diagnosis of stress fractures.

**Brachial Plexus** — Network of nerves originating from the cervical vertebrae and running down to the shoulder, arm, hand, and fingers.

**Bruise** — A discoloration of the skin due to an extravasation of blood into the underlying tissues.

**Bursa** — A fluid-filled sac that is located in areas where friction is likely to occur, then minimizes the friction; for example between a tendon and bone.

**Capsule** — An enclosing structure which surrounds the joint and contains ligaments which stabilize that joint.

**Cartilage** — Smooth, slippery substance preventing two ends of bones from rubbing together and grating.

**CAT Scan** — Use of a computer to produce a cross sectional view of the anatomical part being investigated from X-ray data.

**Cellulitis** — Inflammation of cellular or connective tissue.

**Cervical Vertebrae** — Group of seven vertebrae located in the neck.

**Charley Horse** — A contusion or bruise to any muscle resulting in intramuscular bleeding. No other injury should be called a charley horse.

**Colles' Fracture** — A fracture of the distal end of the radius with the lower end being displaced backward.

**Concentric Muscle Contraction** — A shortening of the muscle as it develops tension and contracts to move a resistance.

**Concussion** — Jarring injury of the brain resulting in dysfunction. It can be graded as mild, moderate or severe depending on loss of consciousness, amnesia and loss of equilibrium.

**Contusion** — An injury to a muscle and tissues caused by a blow from a blunt object

**Cortical Steroids** — Used to suppress joint inflammation.

**Costochondral** — Cartilage that separates the bones within the rib cage.

**Cryokinetics** — Treatment with cold and movement.

**Cryotherapy** — A treatment with the use of cold.

**Cyst** — Abnormal sac containing liquid or semi-solid matter.

**Degenerative Joint Disease** — Changes in the joint surface as a result of repetitive trauma.

**Deltoid Ligament** — Ligament that connects the tibia to bones of the medial aspect of the foot and is primarily responsible for stability of the ankle on the medial side. Is sprained less frequently than other ankle ligaments.

**Deltoid Muscle** — Muscles at top of the arm, just below the shoulder, responsible for shoulder motions to the front, side and back.

**Disc, Intervertebral** — A flat, rounded plate between each vertebrae of the spine. This disc consists of a thick fiber ring which surrounds a soft gel-like interior. It functions as a cushion and shock absorber for the spinal column.

**Dislocation** — Complete displacement of joint surfaces.

**Eccentric Muscle Contraction** — An overall lengthening of the muscles as it develops tension and contracts to control motion performed by an outside force; oft times referred to a "negative" contraction in weight training.

**Eccymosis** — Bleeding into the surface tissue below the skin, resulting in a "black and blue" effect.

**Edema** — Accumulation of fluid in organs and tissues of the body (swelling).

**Effusion** — Accumulation of fluid, in various spaces in the body, or the knee itself. Commonly, the knee has an effusion after an injury.

**Electrical Galvanic Stimulation (EGS)** — An electrical therapeutic modality that sends a current to the body at select voltages and frequencies in order to stimulate pain receptors, disperse edema, or neutralize muscle spasms among other functional applications.

**Electromyogram (EMG)** — Test to determine nerve function.

**Epicondylitis** — Inflammation in the elbow due to overuse.

**Ethyl Chloride** — "Cold spray," a chemical coolant sprayed onto an injury site to produce a local, mild anesthesia.

**Fat Percentage** — The amount of body weight that is adipose, fat tissue. Fat percentages can be calculated by underwater weighing, measuring select skinfold thickness, or by analyzing electrical impedance.

**Femur** — Thigh bone; longest bone in the body.

**Fibula** — Smaller of the two bones in the lower leg; runs from knee to the ankle along the outside of the lower leg.

**Flexibility** — The ability of muscle to relax and yield to stretch forces.

**Flexibility Exercise** — General term used to describe exercise performed by a player to passively or actively elongate soft tissue without the assistance of an athletic trainer.

**Fracture** — Breach of continuity of a bone. Types of fractures include simple, compound, comminuted, greenstick incomplete, impacted, longitudinal, oblique, stress, or transverse.

**Gamekeeper's Thumb** — Tear of the ulnar collateral ligament of the metacarpophalangeal joint of the thumb.

**Glycogen** — Form in which foods are stored in the body as energy.

**Grade One Injury** — A mild injury in which ligament, tendon, or other musculoskeletal tissue may have been stretched or contused, but not torn or otherwise disrupted.

**Grade Two Injury** — A moderate injury when musculoskeletal tissue has been partially, but not totally, torn which causes appreciable limitation in function of the injured tissue.

**Grade Three Injury** — A severe injury in which tissue has been significantly, and in some cases totally, torn or otherwise disrupted causing a virtual total loss of function.

**Hamstring** — Category of muscle that runs from the buttocks to the knee along the back of the thigh. It functions to flex the knee, and is often injured as a result of improper conditioning or lack of muscle flexibility.

**Heat Cramps** — Painful muscle spasms of the arms or legs caused by excessive body heat and depletion of fluids and electrolytes.

**Heat Exhaustion** — Mild form of shock due to dehydration because of excessive sweating when exposed to heat and humidity.

**Heat Stroke** — Condition of rapidly rising internal body temperature that overwhelms the body's mechanisms for release of heat and could result in death if not cared for appropriately.

**Heel Cup** — Orthotic device that is inserted into the shoe and fit under the heel to give support to the Achilles tendon and help absorb impacts at the heel.

**Hematoma** — Tumor-like mass produced by an accumulation of coagulated blood in a cavity.

**Hot Pack** — Chemical pack that rests in water, approximately 160 degrees, and retains its heat for 15-20 minutes when placed in a towel for general therapeutic application.



**Humerus** — Bone of the upper arm that runs from the shoulder to the elbow.

**Hydrotherapy** — Treatment using water.

**Hyperextension** — Extreme extension of a limb or body part.

**Iliotibial Band** — A thick, wide fascial layer that runs from the iliac crest to the knee joint and is occasionally inflamed as a result of excessive running.

**Inflammation** — The body's natural response to injury in which the injury site might display various degrees of pain, sweating, heat, redness, and/or loss of function.

**Internal Rotation** — Rotation of a joint or extremity medially, to the inside.

**Lesion** — Wound, injury or tumor.

**Ligament** — Band of fibrous tissue that connects bone to bone or bone to cartilage and supports and strengthens joints.

**Lumbar Vertebrae** — Five vertebrae of the lower back that articulate with the sacrum to form the lumbosacral joint.

**Magnetic Resonance Imaging (MRI)** — Imaging procedure in which a radio frequency pulse causes certain electrical elements of the injured tissue to react to this pulse and through this process a computer display and permanent film establish a visual image. MRI does not require radiation and is very useful in the diagnosis of soft tissue, disc, and meniscus injuries.

**Meniscectomy** — An intra-articular surgical procedure of the knee by which all or part of the damaged meniscus is removed.

**Meniscus** — Crescent shaped cartilage, usually pertaining to the knee joint; also known as "cartilage." There are two menisci in the knee, medial and lateral. These work to absorb weight within the knee and provide stability.

**Metacarpals** — Five long bones of the hand, running from the wrist to the fingers.

**Metatarsals** — Five long bones of the foot, running from the ankle to the toes.

**Myositis** — Inflammation of a muscle.

**Necrotic** — Relating to death of a portion of tissue.

**Neoprene** — Lightweight rubber used in joint and muscle sleeves designed to provide support and/or insulation and heat retention to the area.

**Neuritis** — Inflammation of a nerve.

**Orthotic** — Any device applied to or around the body in the care of physical impairment or disability, commonly used to control foot mechanics.

**Paresthesia** — Sensation of numbness or tingling, indicating nerve irritation.

**Patella** — The kneecap. The patella functions to protect the distal end of the femur as well as increase the mechanical advantage and force generating capacities of the quadriceps muscle group.

**Patella Tendinitis** — Inflammation of the patella ligament; also known as "jumpers knee."

**Patellofemoral Joint** — Articulation of the knee cap and femur. Inflammation of this joint can occur through: 1) acute injury to the patella, 2) overuse from excessive running particularly if there is an associated knee weakness, 3) chronic wear and tear of the knee, 4) as a result of poor foot mechanics. Patellofemoral irritation can lead to chondromalacia, which in its most chronic condition, could require surgery.

**Peroneal Muscles** — Group of muscles of the lateral lower leg that are responsible for everting the knee. Tendons of these three muscles are vital to the stability of the ankle and foot.

**Phalanx** — Any bone of the fingers or toes; plural is phalanges.

**Phlebitis** — Inflammation of a vein.

**Plica** — Fold of tissue in the joint capsule and a common result of knee injury.

**Posterior Cruciate Ligament (PCL)** — A primary stabilizing ligament of the knee that provides significant stability and prevents displacement of the tibia backward within the knee joint. A complete tear of this ligament necessitating reconstruction could require up to 12 months of rehabilitation.

**Quadricep Muscles "Quads"** — A group of four muscles of the front thigh that run from the hip and form a common tendon at the patella; they are responsible for knee extension.

**Radiography** — Taking of X-rays.

**Radius** — Forearm bone on the thumb side.

**Reconstruction** — Surgical rebuilding of a joint using natural, artificial or transplanted materials.

**Referred Pain** — Pain felt in an undamaged area of body away from the actual injury.

**Retraction** — The moving of tissue to expose a part or structure of the body.

**Rotator Cuff** — Comprised of four muscles in the shoulder area that can be irritated by over use. The muscles are the supraspinatus (most commonly injured), infraspinatus, teres minor, and subscapularis.

**Rotator Cuff Impingement Syndrome** — A micro-trauma or overuse injury caused by stress, and the four stages are: 1) Tendinitis with temporary thickening of the bursa and rotator cuff; 2) Fiber dissociation in the tendon with permanent thickening of the bursa and scar formation; 3) A partial rotator cuff tear of less than one centimeter; and 4) A complete tear of one centimeter or more.

**Sacrum** — Group of five fused vertebrae located just below the lumbar vertebrae of the low back.

**Scapula** — Shoulder blade.

**Sciatica** — Irritation of the sciatic nerve resulting in pain or tingling running down the inside of the leg.

**Sciatic Nerve** — Major nerve that carries impulses for muscular action and sensations between the low back and thigh and lower leg; it is the longest nerve in the body.

**Shin Splint** — A catch-all syndrome describing pain in the shin that is not a fracture or tumor and cannot be defined otherwise.

**Sorbothane** — An energy absorbing polyurethane utilized in some foot orthotics to absorb shock forces of the foot.

**Spasm (Theory)** — Muscle soreness induced by exercise; is the result of reduced muscle blood flow, which results in pain.

**Spleen** — Large, solid organ responsible for the normal production and destruction of blood cells.

**Spondylitis** — Inflammation of one or more vertebrae.

**Spondylolisthesis** — Forward displacement of one vertebrae over another below it due to a developmental defect in the vertebrae.

**Spondylosis** — Abnormal vertebral fixation or immobility.

**Sprain** — Injury resulting from a stretch or twist of the joint and causes various degrees of stretch or tear of a ligament or other soft tissue at the joint.

**Sternum** — The breast bone.

**Steroids** — Any one of a large number of hormone-like substances. See Anabolic steroids and cortical steroids.

**Strain** — Injury resulting from a pull or torsion to the muscle or tendon that causes various degrees of stretch or tear to the muscle or tendon tissue.

**Stress Fracture** — A hair-line type of break in a bone caused by overuse.

**Stress X-ray** — A continual X-ray taken when a portion of the body is stressed to its maximum in order

to determine joint stability. This is a test utilized in some ankle injuries.

**Stretching** — Any therapeutic maneuver designed to elongate shortened soft tissue structures and thereby increase flexibility.

**Subluxation** — Partial dislocation of a joint. The term usually implies that the joint can return to its normal position without formal reduction.

**Talus** — The ankle bone that articulates with the tibia and fibula to form the ankle joint.

**Target Heart Rate** — A pre-determined pulse to be obtained during exercise when circulation is working at full efficient capacities.

**Tarsals** — Group of seven bones of the foot consisting of the calcaneus, talus, cuboid and three cuneiform bones.

**Temporomandibular Joint (TMJ)** — The articulation of the jaw and skull; considered by some to be vital in resolution of injuries throughout the body.

**Tendinitis** — Inflammation of the tendon and/or tendon sheath, caused by chronic overuse or sudden injury.

**Tendon** — Tissue that connects muscle to bone.

**Tennis Elbow** — General term for lateral elbow pain.

**Thoracic** — Group of twelve vertebrae located in the thorax and articulate with the twelve ribs.

**Thoracic Outlet Compression Syndrome** — A neuro-vascular disorder of the upper extremity common in throwing.

**Tibia** — Larger of the two bones of the lower leg and is the weight-bearing bone of the shin.

**Tomograph** — A special type of X-ray apparatus that demonstrates an organ or tissue at a particular depth.

**Trachea** — The windpipe.

**Transcutaneous Electrical Nerve Stimulator (TENS)** — An electrical modality that sends a mild current through pads at the injury site which stimulates the brain to release the natural analgesic, endorphin.

**Transverse Process** — Small lateral projection off the right side and left side of each vertebrae that functions as an attachment site for muscles and ligaments of the spine.

**Trapezius** — Flat triangular muscle covering the posterior surface of the neck and shoulder.

**Triceps** — Muscle of the back of the upper arm, primarily responsible for extending the elbow.

**Turf Toe** — Sprain of the metatarsophalangeal (MTP) joint of the great toe.

**Ulna** — Forearm bone that runs from the tip of the elbow to the little finger side of the wrist.

**Ulnar Nerve** — Nerve in elbow commonly irritated from excessive throwing.

**Ultrasound** — An electrical modality that transmits a sound wave through an applicator into the skin to the soft tissue in order to heat the local area for relaxing the injured tissue and/or disperse edema.

**Valgus** — Angulation outward and away from the midline of the body.

**Varus** — Angulation inward and toward the midline of the body.

**Vasoconstriction** — Decrease of local blood flow.

**Vasodilation** — Increase of local blood flow.

**"Wind Knocked Out"** — Syndrome describing a contraction of the abdominal nerve trunk, the solar plexus, as a result of an abdominal contusion.

**Wrist** — The junction between the two forearm bones (radius and ulna) and the eight wrist bones (trapezium, capitate, hamate, pisiform, triquetrum, lunate and scaphoid).

**Zygoma** — The cheekbone.