

## GLOSSARY OF PROSTHETIC AND ORTHOTIC TERMS

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**Abduction:** The movement of a limb away from the median, or midline, of the body.

**Above Elbow Prosthetic (AEP):** A Prosthetic utilized for acquired amputations or congenital absences of the hand, forearm, and elbow, above the elbow.

**Above Knee Prosthetic (AKP):** A Prosthetic utilized for acquired amputations or congenital absences of the foot, ankle, shin, and thigh, above the knee joint level.

**Adapter:** Device used to connect a prosthetic socket to a pylon/foot.

**AK:** Above Knee; also referred to as transfemoral. It is an amputation between the knee and the hip and the prosthetic devices have to control two joints (knee and ankle) through mechanical means.

**Ankle Orthotic (AO):** An orthotic utilized for the treatment of disorders only involving the ankle.

**Ankle/Foot Orthotic (AFO):** An orthotic utilized for the treatment of disorders of the ankle and foot below the knee joint.

**Anterior:** The front of the body, or a foot or shoe.

**Assistive Device:** Equipment designed to aid in mobility, including ramps and bars, or individual devices such as a walker or cane.

**BE:** Below Elbow amputation of the upper limb; also referred to as transradial.

**Below Elbow Prosthetic (BEP):** A prosthetic utilized for acquired amputations or congenital absences of the hand or forearm below the elbow.

**Below Knee Prosthesis (BKP):** A prosthetic utilized for acquired amputations or congenital absences of the foot and ankle below the knee.

**Bilateral Amputee:** A person who is missing or has amputated both arms and legs.

**Biomechanics:** The science of locomotion of the body.

**BK:** Below Knee; also referred to as transtibial.

**Cerebral Palsy:** Any neuromuscular disability caused by lesions in the brain occurring before birth, at birth, or during infancy.

**Cervical Orthotic (CO):** An orthotic utilized for the treatment of disorders only involving the cervical spine.

**Cervical/Thoracic Orthotic (CTO):** An orthotic utilized for the treatment of disorders involving the cervical and/or thoracic spine.

**Cervical/Thoracic/Lumbosacral Orthotic (CTLSO):** An orthotic utilized for the treatment of disorders involving the cervical, thoracic, and/or lumbosacral spine.

**Congenital Amputee:** A person born without one or more limbs; more technically referred to as having a “limb deficiency”.

**Custom Designed Orthotics:** Orthotics that are custom-made and designed from an anatomical positive model, specific anatomical measurements, and/or contour drawings of the affected limb, torso, or spine to provide support and/or control of complex neuromuscular and/or musculoskeletal disorders.

**Custom Designed Prosthetics:** Prosthetics are custom-made from an anatomical positive model of an individual’s residual limb and following anatomical measurements of the sound limb.

**Custom-Fitted Orthotic:** Orthotic which is pre-made in specific anatomical sizes and is modified and custom fitted to the affected limb or spine to control moderate or complex neuromuscular and/or musculoskeletal disorders.

**Definitive prosthetic:** This is the name typically given to your “final” prosthetic after your residual limb has matured and stopped changing shape.

**Disarticulation:** An amputation through a joint such as the hip, knee, ankle, shoulder, elbow, or wrist.

**Distal:** A structure that is located farther away from the attached end of a limb.

**Dorsal Surface:** The top of the foot and the back of the hand.

**Dorsiflexion:** The action at your ankle when you raise your toes toward your nose.

**ED:** Elbow Disarticulation; amputation through the elbow joint.

**Elbow Disarticulation Prosthetic (EDP):** A prosthesis utilized for acquired amputations or congenital absences of the hand or forearm through the elbow joint.

**Elbow Orthotic (EO):** An orthotic utilized for the treatment of disorders only involving the elbow.

**Elbow/Wrist/Hand Orthotic (EWHO):** An orthotic utilized for the treatment of disorders of the elbow, wrist, hand, and/or fingers below the shoulder joint.

**Electric Powered Component:** An electric-powered elbow, wrist, hand, or hook component utilized to provide controlled positioning for functional use in the design of prostheses.

**Endoskeletal Prosthetic:** Prosthetic designed with internal supporting structural components.

**Energy Return:** A spring-like feeling of return from a specific type of prosthetic foot.

**Eversion:** Rotation of hand or foot away from the midline.

**Exoskeleton Prosthetic:** Prosthetic designed with a rigid external supporting structural shell.

**Exoskeleton:** Prosthetic without pylon or components. It has a hard finish with no internal componentry.

**Extension:** The act of straightening a limb at a joint.

**Femur:** The large bone in your thigh located between your hip and your knee.

**Fibula:** The smaller bone on the lateral side of your lower legs located between your knee and ankle.

**Flexion:** The act of bending a limb at a joint, thus forming an angle.

**Foot Orthotic (FO):** An orthotic utilized for the treatment of disorders of the foot below the ankle joint.

**Foot shell:** A rubbery shell is attached to your prosthetic foot. Some foot shells have a split between the 1<sup>st</sup> and 2<sup>nd</sup> toes to allow sandals to be worn.

**Foot:** This is attached to the bottom of the pylon of your prosthetic, typically the same length as your sound side foot.

**Gait Training:** Learning how to walk with your prosthetic elements.

**Hand Orthotic (HO):** An orthotic utilized for the treatment of disorders of the hand and/or fingers below the wrist joint.

**Hip Disarticulation Prosthetic (HDP):** A prosthetic utilized for acquired amputations or congenital absences of the complete leg involving the foot, ankle, shin, and thigh at the hip joint level.

**Hip Orthosis (HO):** An orthosis utilized for the treatment of disorders only involving the hip.

**Hip/Knee/Ankle/Foot Orthotic (HKAFO):** An orthotic utilized for the treatment of disorders of the hip, knee, ankle, and foot.

**Hybrid Components:** A blend of mechanical, electric-powered, and/or passive-mechanical, shoulder, elbow, wrist, hand, and/or hook components utilized in the design of the prosthetic elements.

**Hyperextension:** Extending the extremity beyond anatomical position.

**Initial Swing:** Part of the swing phase is when the leg begins to swing forward during walking.

**Inversion:** The inward rotation of the plantar surface, or sole, of the foot so that it faces toward the median, or midline, of the body.

**Keel:** Inner component of prosthetic feet.

**K-Levels:** Medicare defines K-Levels based on an individual's potential functional ability.

**Knee Disarticulation Prosthetic (KDP):** When your amputation level is through the knee joint separating the femur from the tibia.

**Knee Orthotic (KO):** An orthotic utilized for the treatment of disorders only involving the knee.

**Knee Sleeve:** A soft material that supports the knee joint.

**Knee:** A mechanical artificial knee attached between the bottom of your socket and the pylon that connects it to your prosthetic foot.

**Knee/Ankle/Foot Orthotic (KAFO):** An orthotic utilized for the treatment of disorders of the knee, ankle, and foot below the hip joint. It is a device that encompasses the entire leg.

**Lateral (External) Rotation:** The rotation of a body part away from the median, or midline, of the body. Also referred to as external rotation.

**Lateral:** The outside of your body.

**Liner:** An item typically with gel on the inside and fabric on the outside that you will roll over the end of your residual limb before donning your prosthetic. This protects your residual limb and often helps to suspend your prosthetic from your residual limb.

**Medial (Internal) Rotation:** The rotation of a body part toward the median, or midline, of the body. Also referred to as internal rotation.

**Medial:** Toward the center line of your body.

**Median Plane:** The vertical plane that divides the body into right and left halves.

**Multiaxis Foot:** Foot design that allows inversion and eversion of the foot; this type of foot is effective for walking on uneven surfaces.

**Musculoskeletal:** Pertains to the muscles and skeleton.

**Myoelectric Control:** A prosthetic control technique that utilizes skin surface EMG muscle potentials for the actuation and movement of an electric-powered prosthetic component.

**Orthotics:** The practice and science of providing orthotic rehabilitation engineering services related to the assessment, design, and development of external assistive, supportive, and/or corrective anatomical devices, referred to as orthoses, to restore specific neuromuscular and/or musculoskeletal disorders of the human body.

**Orthotist:** An allied health practitioner specifically trained in providing orthotic services at the direction of, and in consultation with, a licensed practicing physician.

**Palmar (Volar) Flexion:** Bending the wrist so the palmar surface of the hand points toward the forearm.

**Palmar (Volar) Surface:** The front, or palm, of the hand. Also referred to as the volar surface.

**Paralysis:** Complete loss of the ability to control muscular activity in various locations.

**Partial Foot Prosthetic (PFP):** A prosthetic utilized for acquired amputations or congenital absences of the foot and/or toes below the ankle.

**Partial Hand Prosthetic (PHP):** A prosthetic utilized for acquired amputations or congenital absences of the hand and/or fingers below the wrist.

**Passive Control:** Prosthetic control by using pre-positioning of a manually operated friction, free motion, or locking type joint for the actuation and movement of a mechanical prosthetic component.

**Pedorthics:** The practice and science of providing pediatric rehabilitation engineering services related to the design, manufacture, modification, and fit of shoes and foot orthoses to alleviate foot problems caused by disease, a congenital defect, overuse, or injury.

**Plantar Surface:** The bottom, or sole, of the foot.

**Plantarflexion:** The action at your ankle when you lower your toes toward the floor.

**Posterior:** The side of your body that faces backward.

**Pre-Fabricated Orthotics:** An Orthotic that is pre-made in general anatomical sizes, i.e. small, medium, and large, and is fitted to the affected limb or spine to control mild neuromuscular and/or musculoskeletal disorders, or to evaluate the need for a custom designed orthotics.

**Pre-Fabricated Prosthetics:** Prosthetics are not pre-made in general anatomical sizes except for a temporary residual limb interface utilized in the design for preparatory prosthetics.

**Preparatory prosthetic:** This is the name typically given to your first or initial prosthetic.

**Prosthetic:** A prosthetic sometimes also called a Prosthesis is an artificial device that replaces a missing body part; the plural is prostheses. It is typically used to replace parts of the body that are lost by injury (traumatic) or missing from birth (congenital) or to supplement defective body parts.

**Prosthetist:** A medical professional who consults with you after your amputation surgery and fits you with your prosthetic. Your surgeon will typically refer you to a Prosthetist that they had experience with the process.

**Proximal:** A structure that is located closer to the attached end of a limb.

**Pylon:** The pipe that connects the socket to the foot in a below-knee prosthesis or knee to the foot in an above-knee prosthesis. It provides structural support and may be made of metal rods or carbon-fiber composites.

**Pylon connector:** A device that is used on either end of a pylon to connect it to a socket, knee, or foot.

**Range of Motion:** The amount of movement a limb has in a specific direction at a specific joint such as your hip or knee.

**Relief Area:** When fabricating a P&O, reliefs are made to provide space over a wound or bony prominence.

**Residual Limb:** The portion of the limb remaining after amputation.

**Retraction:** The backward movement of a body part such as the shoulder.

**SACH Foot:** Solid Ankle Cushion Heel refers to a compressible heel wedge that provides “pseudo-plantar flexion” on a prosthetic foot and it is used for low-activity patients.

**Shock Absorber:** Component used on a prosthesis that reduces vertical impact forces.

**Shoulder Disarticulation Prosthetic (SDP):** A prosthetic utilized for acquired amputations or congenital absences of the complete arm involving the hand, forearm, elbow, and upper arm through the shoulder joint.

**Shoulder Orthotic (SO):** An orthotic utilized for the treatment of disorders only involving the shoulder.

**Shoulder/Elbow/Wrist/Hand Orthotics (SEWHO):** An orthotics utilized for the treatment of disorders of the shoulder, elbow, wrist, hand, and/or fingers.

**Single Axis Foot:** Foot on a single hinge that allows plantarflexion and dorsiflexion.

**Single Axis Joint:** Orthotic, prosthetic joints featuring one (transverse) axis only.

**Sleeve:** An item that attaches to the top portion of the outside of your socket and rolls up onto your thigh after you've inserted your residual limb into the socket of your prosthetic. This helps to suspend your prosthetic from your residual limb.

**Socket:** The portion of the prosthetic that fits around the residual limb.

**Soft insert Liner:** Cup-shaped form, which fits inside the socket of a BK prosthetic.

**Stance Control:** It means that instead of stability coming from a locked knee joint, the brace can lock and unlock at just the right time while walking.

**Stance Flexion:** At heel strike, the knee is slightly flexed; this can be simulated in a prosthetic knee.

**Stance Phase:** The phase in gait where the leg under examination is contacting the ground.

**Swing Phase:** The phase in gait where the leg under examination is not contacting the ground.

**T.T.:** Transtibial amputation.

**Terminal Device:** The device attached to the end of an upper extremity prosthetic, such as a hook or hand.

**Terminal Swing:** The part of walking when the foot is just about to contact the floor.

**Tibia:** Bone located on the front of the leg below the knee. Also known as the shin bone.

**Transfemoral:** A type of amputation that occurs above the knee.

**Transhumeral:** A type of amputation that occurs above the elbow.

**Transradial:** A type of amputation that occurs at the forearm.

**Transtarsal Amputation:** A partial foot amputation, through the tarsal (foot) bones that lead to the toes.

**Transtibial:** A type of amputation that occurs below the knee.

**Traumatic Amputation:** An amputation, which is the result of an injury.

**Unilateral:** One-sided.

**Valgus:** Deformity of the foot resulting in the outward rotation of the plantar surface, or sole, of the foot so that it faces away from the median, or midline, of the body.

**Varus:** Deformity of the foot resulting in the inward rotation of the plantar surface, or sole, of the foot so that it faces toward the median, or midline, of the body.

**Wrist Disarticulation Prosthetic (WDP):** A prosthetic utilized for acquired amputations or congenital absences of the hand or forearm through the wrist joint.

**Wrist Orthotic (WO):** An orthotic utilized for the treatment of disorders only involving the wrist.

**Wrist Unit:** The component at the end of an upper extremity prosthetic allows the terminal device to be repositioned or interchanged with another terminal device.

**Wrist/Hand Orthotic (WHO):** An orthotic utilized for the treatment of disorders of the wrist, hand, and/or fingers below the elbow joint.