

Title: **Angulation Osteotomy to Improve Function in Transhumeral Amputee Rehabilitation**

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Learning Outcomes: At the conclusion of this presentation the attendees will:

1. Understand the clinical basic surgical considerations of a angulation osteotomy
2. Understand the prosthetic considerations of a angulation osteotomy
3. Understand the rehabilitation considerations of a angulation osteotomy

Abstract:

Regardless of prosthetic design, there exist inherent limitations which adversely affect the functionality of transhumeral prostheses. Loss of voluntary humeral rotational control, limitations in prosthetic suspension and decreased range of motion limit the user's acceptance and functional use of a prosthesis.

Various techniques have been discussed in the medical literature to compensate for these shortcomings. These include socket design techniques, harness techniques, and surgical techniques.

Marquette introduced the concept of humeral angulation osteotomy to resolve these issues. By surgically angling the distal humerus the amputee can be fit with a self-suspending prosthesis that enables voluntary rotational control without restrictions to range of motion. Although this technique is discussed in various prosthetic text books, very few cases have been reported. Case studies will be presented showing surgical, rehabilitation, and prosthetic considerations.

Angulation Osteotomy to Improve Function in Transhumeral Amputee Rehabilitation (page 2)

Presenter's experience:

Presenter has extensive clinical expertise as well as lecturing experience including:

AAOP Upper Limb Fellowship Module

AOPA presentations

AAOP presentations

ISPO presentations

MEC presentations

CMSA presentations

PM&R presentations

Biographical Sketch of Presenter:

Troy Farnsworth, CP, FAAOP is an American Board for Certification accredited prosthetist and licensed engineer, specializing in upper extremity prosthetics. As the Vice President of Hanger Prosthetics & Orthotics, Inc. National Upper Extremity Prosthetic Program, Mr. Farnsworth lectures, educates and demonstrates to patients, therapists and physicians nationally and internationally. Clinically he specializes in the rehabilitation of difficult cases of upper limb loss. He currently provides clinical consultation and services for the Center for Intrepid at Brooke Army Medical Center (BAMC) in San Antonio, Texas for amputee soldiers returning from global conflicts.