



Upper-Limb Amputee Rehabilitation: It's Not Just About the Hand, Or Is It?

Upper-Limb Prosthetics Society (ULPS) Symposium

Jamie Vandersea, CPO, Advanced Arm Dynamics, Clinical Manager - Walter Reed National Military Medical Center
Steven Moran, M.D., Director of the Hand Transplant Program, Mayo Clinic, Rochester, MN

INTRODUCTION

The area of upper-limb prosthetic rehabilitation has seen a surge of activity and research in the recent years. Multi-articulating hand systems, once thought impossible, have emerged from the research lab into the everyday lives of our patients. Major manufacturers from all over the world are developing technology that is useful and desirable for home use by nearly all levels of limb loss or absence. Even though these systems have been shown to increase acceptance and deliver a capacity for higher function there is still a limitation to what we can provide in terms of prosthetic options. With a desire of even higher functionality surgeons around the world have been working on transplantation techniques for the upper limb amputee as well.

The Upper-Limb Prosthetics Society of the American Academy of Orthotists and Prosthetists is bringing two experienced individuals to present on the advances of upper-limb terminal device options as well as the emerging field of hand transplantation. Our goal is to bring to the forefront the advances in upper limb rehabilitation technology and technique. The first presentation will be by Jamie Vandersea, CPO and will overview all of the prosthetic options specifically in the multi-articulating prosthetic hands. The discussion is not limited to prosthetic options as we will have Dr. Steven Moran, M.D., Director of the hand transplant program from the Mayo Clinic in Rochester, MN to discuss the emerging technique for hand transplantation.

METHOD

Jamie Vandersea, CPO works with Advanced Arm Dynamics and is the Clinical Manager for the team at the Walter Reed National Military Medical Center. In his experience there he has had the opportunity to fit and participate in the training of dozens of amputees who have been fit with the latest hand technology including the iLimb Ultra, BeBionic and the Michelangelo hand. He will describe his experiences with each of these options, discuss the indications for the hands, describe the patient selection criteria, provide a training overview of each hand and discuss some of the patient feedback regarding each hand type.

Dr. Moran has published several times on the topic of hand transplantation and is Director of the Mayo program for hand transplant which is the nation's first clinical based program. Dr. Moran will discuss the results to date on transplants around the world, discuss the patient selection process, discuss the ethics of starting a program and demonstrate the collaboration needed with other professions including prosthetics to ensure the highest level of outcome.

A panel discussion will also be formed at the end of the symposium, allowing for questions and answers to the variety of topics presented.

DISCUSSION

As treatment options change for the upper-limb patient and the technology changes for these devices, it is imperative that we keep up to date on the options. Participants at the end of this session will be able to understand patient indications, contraindications and rehabilitation techniques required for the newest multi-articulating hand technologies as well as for the option of hand transplantation.

REFERENCES

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