A TRAINING PROGRESSION FOR THE UPPER LIMB PROSTHETIC USER
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As we all know, each patient that we see in our practices is an individual and should be approached with a client-centered philosophy. During the early phases of rehabilitation, my role as an occupational therapist on the amputee rehabilitation team is to work with the patient to determine his or her view of their interaction with their environment and their occupation. This is an all encompassing view of their life. A person’s environment includes physical, social, cultural and institutional elements. A person’s occupation is any aspect of self-care, productivity, and leisure that is part of their life. Once we have a sense of the areas of importance to this person, an occupational therapist will analyze the key components and skills required for the patient to perform in these occupations. This analysis will lead to the development of an individualized rehabilitation program.

My introduction was focused on the individual because the protocol that I will present is generic and requires the previously described approach to individualize the program in order to ensure success for that patient. It is critical for the patient to participate as an equal team member in order for the patient to fully engage in the process. This process is just that, a process. It requires frequent adjustments and fine tuning as skills and goals evolve. There are a few excellent measures that foster this approach to rehabilitation.

Once an individual’s needs are established, it can be helpful to use a framework to structure the approach to the rehabilitation program. The following framework is the product of the collaboration of therapists who are experienced in rehabilitation of the upper limb amputee. The significant numbers of amputees who are returning from Operation Iraqi Freedom and Operation Enduring Freedom have necessitated further development and formalization of the protocol. The protocol presented is as it is used at Walter Reed Army Medical Center and it contains sections that will consistently apply to the population there due to the common training and occupation among the patients. This protocol can be easily adapted to respond to civilians whose circumstances are much more varied.

Upper Limb Amputee Prosthetic Training Protocol

Phase 1: Healing
- Evaluation
- Wound care
- Edema control
- Desensitization/scar management
- Pain control
- ROM
- Conditioning
- Psychological support
Phase 2: Pre-Prosthetic Training
- Change of dominance
- ADL training
- Strengthening
- Myosite testing
  - Basics
  - Accurate recruitment – palpation, bilateral contraction, common postures
  - MyoLab, MyoBoy
- Myosite training
  - Myoboy – isolated contraction, contract/relax, co-contraction, quick/slow
    - EMG type screen
    - Hand
    - Cars
- Training with electrodes and TD
- Continue edema control and scar management prn

Phase 3: Basic Prosthetic Training
- Donning/doffing
- Component terminology and operation
- Prosthetic care and limb tolerance
- Controls training
- Basic ADL’s

Phase 4: Advanced Prosthetic Training
- IADL checklist: advanced and individualized categories

Phase 5: Discharge Planning
- Community resources and vocational planning

I believe that the early focus on myotraining and use of electrodes attached to an operational terminal device prior to fitting have increased the initial success rate and motivation that patients in this rehabilitation program have had. The goal of this rehabilitation progression is to build basic control skills into individualized function and ultimately a patient who feels confident with their prosthetic limb.