

TRAINING

LEARNING TO USE A PROSTHESIS

by

DINAH STOCKER

Although it may be fairly easy for a person to learn to open and close a hand, or bend and straighten an elbow, learning to use a prosthesis to perform daily tasks quickly, efficiently and with no awkwardness can take a great deal of practice. It is much like learning to drive a car. It is easy to put it in gear and go or stop, but learning to steer, turn corners, pass cars, park, back up and drive defensively takes hours of practice.

Have you notice the person who holds their prosthesis with their dominant hand when trying to open and close the terminal device? Have you noticed the child who runs down the hall dragging his/her prosthesis behind them or holding it out like an airplane? Usually these are people who have either a poor fitting prosthesis or are not using or wearing their prosthesis.

Once a prosthesis is assembled, check out and training occur simultaneously. Breaking training sessions down to incorporate different actions or activity patterns is one method of describing training.

Passive Use: With both a passive prosthesis and a powered prosthesis, passive use helps to make the person aware of where the terminal device is in relation to the end of their residual limb. Using the prosthesis to stabilize paper, to crawl with, to push up on when going to stand, to catch a big ball or carry a large box or wide object are all important aspects of prosthetic use. Another important aspect of prosthesis use is using it when making gestures or explaining something to a person. We all use hand gestures and so should a person with a prosthesis.

Passive use of the prosthesis can be incorporated throughout the training process or can occur at specific stages depending upon the skill of the individual. A child who has returned for a prosthesis refit but who has a poor wearing pattern needs to become comfortable initially using the prosthesis passively. Passive use training can also occur at the time when a weighted check socket is available.

Active grasp and release: Practicing drills requiring active grasp and release is one of the first stages of training. Open and close of the terminal can be practiced in isolation, without having other goals of a task come into play. During this time the function of the prosthesis can be assessed and any problems with componentry can be seen. During this phase, table games such as Hi-Q and checkers have repetitive grasp and release. Modifying the "pegs" and using pieces of wet sponge, cereal, and blocks encourage light and heavy pinch. Also, altering the size of items, assists the person to realize the limits of grasp size.

Functional activities: Once passive use and active grasp and release have been practiced, functional activities are introduced, where the quality of the end result of the task is important. Where possible tasks should be as meaningful as possible. For children, activities can be part of games or play. With adults, asking them to list, either verbally or

on paper, tasks they think they will perform at home and at work gives the adult partnership in the treatment planning process. Also, many adults will suggest tasks which are important to them.

Incorporating tasks which require gross motor and fine motor and passive actions is important.

Final check out: As a final check out, presenting timed tasks, unusual tasks which require some problem solving and using a functional test can be methods of recording a baseline for an individual's abilities to use their prosthesis. This baseline can be repeated next time the person returns for review or refit. When observing the person using the prosthesis it is important that the terminal device performs the functions as required, such as opening and closing without delay; maintaining grip, both strong and weak; and not opening or closing as the person moves or gestures when the battery is turned on.

The enclosed brief list describes tasks for gross motor, fine motor and passive use.