

The Choice of Terminal Devices

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SINCE the chief purpose of all other components of the upper-extremity prosthesis is to make it possible for the terminal device to be operated effectively, the hook or artificial hand is considered to be the most important component of any artificial arm. The terminal device (or devices, since they can quickly be interchanged for a given individual) plays the decisive role in determining the functional and cosmetic value of the prosthesis to the wearer. Of considerable importance, therefore, is a knowledge of the process by which the terminal device is chosen from among the many types available commercially (19). But the criteria for selection and prescription of hooks and hands present a confusing picture and often are difficult to isolate. Some amputees, because of long-standing habit, resist change and retain the hook or hand with which they were first fitted. Others rely on the advice of well-intentioned friends, who also may be amputees, and make frequent changes in the attempt to find what does not exist—the *completely* satisfactory device. Perhaps the largest group depend upon the prosthetist for guidance (14).

With the recent development of prosthetics clinic teams, usually consisting of a physician, a prosthetist, and a therapist (3), the tendency is for more and more amputees to have their terminal devices prescribed for them. Although the prescription of terminal devices by the clinic team is clearly the most desirable method, certain aspects of this process are confusing too because different clinic teams

pursue different lines of thought in making decisions. Some clinics concentrate on occupational factors and attempt to prescribe in terms of success on the job. Other groups rely heavily on the amputee's personal preferences, while still others make their choices largely with regard to site of amputation, believing, for example, that a long-below-elbow amputee should be prescribed one terminal device, a medium-above-elbow amputee another.

Finally, many clinic teams have developed, through experience or persuasion, other relatively fixed preconceptions with regard to terminal devices and prescribe within the framework of established biases. Among these are a preference for canted hook fingers as opposed to straight fingers (or vice versa), a preference for either steel or aluminum construction, a preference for voluntary-opening as opposed to voluntary-closing (or vice versa), a distaste for artificial hands as being functionally of little or no value (rarely the reverse), a preoccupation with the desire to prescribe low-cost items (also rarely the reverse), and preferences or dislikes based on other specific features.

This discussion is not intended to be all-inclusive, nor is it meant in a critical vein. Its purpose is simply to illustrate the difficulty of reaching a valid decision in the prescription of a terminal device and to highlight the divergent opinions extant today. An attempt is made to explore the factors involved in the proper choice of a particular terminal device for a particular amputee.

To arrive at the best choice of a terminal device for a particular amputee involves a number of considerations. First, perhaps, are the psychological needs of the individual. These arise from a complex of the intangible judgments, desires, motivations, and preju-

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