THE PROS AND CONS OF ADAPTIVE EQUIPMENT

For people with disabilities, specialized equipment can be used to enhance function in their environment. It is important to remember that equipment is a prescriptive item and misuse can be destructive to the rehabilitation process and to the person’s physical well-being and self-image.

Most commercially available equipment can be suitably adapted for each client. Many clients, however, will require individually constructed equipment. Once an adapted device has been supplied to a client, continual monitoring will be necessary to check the fit and suitability. Changes in function, growth and so on may require equipment modifications.

Since the prescription and design of equipment to meet motor needs is in itself a challenge, it may be easy to lose sight of equally essential aspects of the client’s life. The impact of a piece of equipment on cognitive/perceptual and psychosocial development must be taken into account. The final decision as to what pieces of equipment will be provided and when and where they will be used, should be made by weighing the pros and cons for not only motor but also cognitive and psychosocial needs. This is where the team process can lend perspective and help develop the appropriate balance.

Motor Needs
Good, specialized equipment can be used to normalize tone, decrease the influence of pathological reflexes, increase range of motion (passive and active), decrease the tendency toward deformities, increase stability, and facilitate components of normal movement in a developmental sequence. All of these will help provide the sensation of good body alignment while contributing to increased function.

On the other hand, static positioning devices do not respond to the client’s self-initiated movements. Equipment cannot be used as the client begins to show a postural response. Thus, the equipment, when used without proper judgment and continuous supervision, can block function if the client’s status changes.

Adaptive equipment provides clients with postural support so they can direct their energy toward participation in their environment. Without central control, a person may expend a great deal of effort in an attempt to fight gravity, maintain equilibrium, and deal with the fear of falling. When these problems are reduced, clients can better attend to visual and auditory stimulation. They also have a more stable base from which to exercise fine motor control, so their ability to manipulate and use objects can improve.

As another advantage, adaptive equipment on wheels can provide mobility to clients who have no other means of self-propulsion or to those whose movements are so slow that the effort is not worth the goal toward which it is directed. Thus, a world of exploration is opened to those otherwise trapped in space.

Technological advances have greatly increased the availability of technical aids on all levels. Augmentative communication devices have provided increased cognitive assessment capabilities and opportunities for improvement in the potential for cognitive development. These more sophisticated devices allow clients to access systems, thereby demonstrating cognitive function and facilitating the educational process.

There are drawbacks. The provision of equipment necessarily limits some kinds of sensory feedback. Because of the nature of positioning, meaningful tactile and kinesthetic stimulation is often limited to the face and arms. The rest of the body is generally maintained in a static position, with constant pressure and relative joint immobility. Even equipment that provides movement through space is limited to one dimension.

A child strapped to a scooter board cannot
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