Standing Belt

Theodore I. King II

Key Words: equipment, departmental, occupational therapy • equipment design • self-help devices

When standing balance is a problem, therapists often use equipment such as parallel bars or stand-in tables to help the client maintain an upright posture. But these physical aids have several drawbacks. They may offer more support than needed, thereby hindering the therapeutic goal of improving dynamic standing balance; limit the ability to engage in bilateral upper extremity tasks; or be costly and functionally prohibitive as part of a home program.

A standing belt is an alternative equipment choice to help the client maintain an upright posture. It has been used with clients with spinal cord injuries who must wear leg braces; however, I have not found it documented in the literature. I devised a standing belt with the following features:

- Adjustable belt size to fit more than one client and for ease in donning and removing
- Adjustable side strap to allow changes in length, thereby grading the amount of support
- Snap hooks on the ends of the side straps for safety and simple attachment to a table or countertop with the use of eye hooks or C-clamps

The standing belt consists of a leather weight-lifting belt to which is riveted a boat-trailer strap (see Figure 1). Both of these items are available in major sporting goods departments or stores. Weight-lifting belts come in various sizes and can be adjusted to fit most clients. The trailer strap comes with a buckle to adjust its length and is cut to size for use with the belt. The strap should measure approximately 50 in. long to allow for adjustability. It is attached to the back of the weight-lifting belt at its center with four or five rivets. Most trailer straps have S-hooks at one or both ends. These are replaced with snap hooks for easy attachment to eye hooks, which are embedded approximately 30 in. apart on a table or countertop. If a table is used, it is important to consider its weight and stability to ensure safety when the standing belt is used. The adjustable strap allows the therapist to grade the stability, as needed, while also allowing the client some anteroposterior and side-to-side movement.

Standing belts are inexpensive and effective tools to help clients who use long leg braces or lack functional, dynamic standing balance. Unlike other standing aids (e.g., parallel bars and stand-in tables), standing belts can be used in various home and work settings and are less expensive and more transportable. They permit functional bilateral upper extremity activity while the client works on improving dynamic standing balance (i.e., the ability to maintain an
upright posture when shifting weight while engaged in an upper extremity task) (see Figure 2). The belt may also be applied backwards (see Figure 3) so that the client can face away from the table or countertop to participate in gross motor activities (e.g., catching and throwing a ball) while challenging standing balance.

I have used standing belts for 8 years with approximately 15 clients with varied diagnoses of spinal cord injury, cerebrovascular accident, cerebral palsy,
and traumatic head injury. In some cases, leg bracing has been necessary to assist in maintaining an upright posture while using the standing belt. In other cases, improved trunk stability has allowed clients to discontinue their use of the belt. In still other cases, clients have used a standing belt for many years to allow increased functional activity.

It is important to evaluate trunk stability before using the belt, because it is necessary for the client to have enough control to keep the upper body in an upright position while standing. A standing belt in the occupational therapy clinic allows the therapist to evaluate client readiness for the device. When the trunk is sufficiently stable to allow bilateral upper extremity activities while using the belt, home use is encouraged. Clients use the belt at home to engage in activities such as washing dishes, washing and grooming at the sink, and standing at a workbench. Some clients have also found the belt to be useful in vocational settings (e.g., working as a cashier).