Frequently Asked Questions about Sit-to-Stand Patient/Resident Devices
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1. What is a sit-to-stand device?

Sit-to-stand devices are used to transfer patients/residents between two seated postures (e.g., seated on the edge of the bed to a wheelchair, or wheelchair to commode or shower cabinet). A sit-to-stand device is designed to support only the upper body of the resident and therefore requires the resident to be able to bear some weight. This is different than a total body lift (also called a Hoyer™ lift, because Hoyer™ was one of the first companies to make them) that's meant to support the entire weight of the resident/patient. A sit-to-stand device is meant to replace the manual stand-and-pivot transfer that's performed frequently by caregivers when transferring a weight-bearing resident/patient from a seated posture to a standing posture or different seated surface.

To help you understand the narrative information that follows, please review the illustration below. It shows common features of a sit-to-stand device.

2. How is a sit-to-stand device designed to handle a patient/resident safely?

Most modern sit-to-stand devices have several common features as seen in the illustration to the right. With a wide adjustable base, extremely strong sling materials, steel or aluminum mast and boom, and electrical motorized lifting mechanisms, most newer devices can transfer residents up to 300 pounds.

3. What are the benefits of using a sit-stand device?

The physical demands required to transfer a resident using a sit-stand device are significantly less than manually performing a stand-and-pivot transfer, even if the caregiver is using a transfer belt. This means less risk of a back or shoulder overexertion injury, which are two of the most common injuries in direct care staff. The less physically demanding the task, the less fatigued the caregiver is over the course of a shift, which also means less risk of injury.

Because sit-to-stand devices are designed to quickly transfer a resident between two seated surfaces, caregivers can eliminate two or three manual transfers when toileting or showering a resident. For instance, when toileting a resident, instead of manually transferring a resident from the bed to the wheelchair, the wheelchair to the commode, and then the commode back to the wheelchair, a sit-to-stand device can be used instead. Since sit-to-stand devices typically have a shorter base than a total body lift and place the resident in a standing or nearly standing posture, they can more easily fit and maneuver a resident into tight spaces such as bath and shower rooms.

Not only does the caregiver benefit from using a sit-to-stand device, but the patient/resident also benefits. Using a sit-to-stand device is much safer for the patient/resident since the device is specifically designed to handle the weight of a patient/resident. With a manual stand-and-pivot transfer, the caregiver must rely on
their own physical strength to perform the transfer, which often means working beyond their physical capabilities. This in turn means greater risk of dropping or mishandling the resident during a manual lift. Since sit-to-stand devices are designed to be used when toileting they also eliminate the manual transfer of the resident off the commode, which is often cited by caregivers as the most difficult transfer. In addition, modern sit-to-stand devices are very stable, require very little force to push or pull even with a heavy resident in the sling, and are designed with slings that reduce the risk of skin tear or abrasion. Also, with plenty of practice, a sit-to-stand device can be used by one caregiver, freeing up additional staff to focus on patient/resident care.

4. Can a sit-to-stand device be used with any resident/patient?

No. A sit-to-stand device should only be used with residents/patients that can bear some body weight. Depending on how much weight bearing capacity the resident has, the sit-to-stand device can raise the resident just high enough for short distance transfers such as bed to wheelchair or wheelchair to commode, or to a fully standing posture for longer distance transfers. Use of a sit-stand device also requires the patient/resident to be able to sit up on the edge of the bed with or without assistance, and to be able to bend their hips, knees, and ankles.

For those residents that can bear some body weight, a sit-to-stand device can also be a helpful rehabilitation tool. It can be used to promote increased weight bearing by controlling the resident’s position. The closer the resident is to upright, the more weight their lower extremities will be bearing.

5. Why is the Department of Labor and Industries interested in sit-to-stand devices?

As mentioned before, sit-to-stand devices significantly reduce the physical effort transferring patients/residents, which results in less risk of shoulder and back overexertion injuries. According to Labor and Industries workers’ compensation data and the Bureau of Labor Statistics on workplace injuries, the nursing home industry has one of the highest rates of overexertion injuries in the State of Washington. This is primarily due to shoulder and back injuries from transferring residents. Labor and Industries is interested in devices that could prevent workers from being hurt on the job and reduce industrial insurance costs.

Having one or several sit-to-stand devices in your facility won’t ensure that employees will use them. Research on the use of mechanical assistive devices in health care settings has found considerable reluctance from caregivers to use a mechanical lift when performing a transfer. Therefore it’s important that the introduction of sit-to-stand devices also include the following:

- Commitment from management that the use of mechanical assists benefits patients/residents and staff. It is an important part of the facility’s overall health and safety program.
- Training on the proper use of the device, which should include ample hands-on practice.
- Written policies and procedures that provide guidance on how and when sit-to-stands are to be used.
- Consistent and fair plan or process for ensuring compliance with policies and procedures on patient/resident handling.
- Education for residents and resident family members on the benefits of a sit-to-stand device.
6. How did Labor and Industries collect information on sit-to-stand devices?

In an effort to better educate ourselves and the nursing home industry about the use of these devices, as well as their capabilities and limitations, Labor and Industries evaluated a variety of assistive devices that can be used to help caregivers transfer residents. Total body lifts were included in the first evaluation and are reported on in the publication “Frequently Asked Questions about Portable Total Body Patient/Resident Lifts”. The second evaluation involved sit-to-stand devices. Both total lifts and sit-to-stand devices were evaluated in a skilled nursing facility with staff and residents. Nine sit-to-stand device manufacturers were originally contacted; six participated. The evaluations were conducted at Liberty Country nursing home in Centralia, Washington with staff and residents on one of the long term care units. Each evaluation lasted one week. Before staff used the devices, a representative from the manufacturer conducted approximately a one-hour in-service training for staff on the proper use of the device. Staff then used each device for one week as part of their normal resident transfer duties. An ergonomist and physical therapist with Labor and Industries attended each in-service and evaluated the devices on several features.

7. Does Labor and Industries endorse any of the sit-to-stand devices evaluated?

No. Labor and Industries does not endorse any of the specific manufacturers of sit-to-stand devices that were evaluated. The information on the different manufacturers is provided to assist you in making comparisons between the various brands and to highlight the most important features to consider when purchasing a sit-to-stand device.

8. What are the most important features to consider when purchasing a sit-to-stand device?

After evaluating each sit-to-stand device and talking to nursing home staff and residents who used each piece of equipment, it was determined that some features were the most critical to consider before purchasing. This is based on the use of the device in a long-term care unit in a skilled nursing facility. Below is a description of each critical feature.

1. **Price** – Expect to pay somewhere between $4000 and $5500 for a new sit-to-stand device with a built-in scale (used to weigh patients/residents) or $2900 to $3700 without a scale. The scale is an important feature since the resident can be weighed during a regularly scheduled transfer without having to perform an additional transfer just for weighing.

2. **Weight Capacity** – A weight capacity of at least 300 lb. is recommended to accommodate transferring very heavy residents.

3. **Lifting Mechanism** – Sit-to-stand devices typically have a hydraulic lifting mechanism that is powered by an electric motor or actuator and battery. The electric motor or actuator is an important feature since it eliminates the need to pump or crank the lift by hand. The motor is controlled by a hand control with buttons for up and down. The electric motor also makes the raising and lowering of the resident a smooth, continuous movement without jerky or rapid accelerations that are common with older hand crank or pump lifts. Some manufacturers’ lifts also come with a two-speed motor, with slow and fast speeds.

4. **Battery Portability** – Battery portability is a feature that allows a dead battery to be quickly exchanged with a fully charged battery. Some manufacturers use a portable battery system as a standard, whereas others offer it as an option. Those that offer a portable battery as an option use a nonportable system as a standard, which requires the lift to be directly plugged into an outlet to be recharged.
5. **Hand-Held Control** – A hand held control is typically a push button control used to raise or lower the boom. An important feature is the ability to quickly place the control on the sit-to-stand device during the transfer process. This will free up the caregiver’s hands to assist or position the resident. For this reason, a control with a magnetic attachment is preferred over a clip since it allows the control to be placed almost anywhere on the lift, including the boom.

6. **Emergency Shut-Off Control** – This control stops the motor in case of an emergency and is a separate control from the hand-held push button that activates the power. This safety feature serves as a back up to the hand-held control. It could be used in a situation where the resident grabs the hand-held control and the caregiver needs to quickly shut off the power to protect the resident from harm.

7. **Manual Override Control** – In a situation where the battery loses power during the transfer, it will be important that the resident can be safely lowered using an override control. These controls are usually a manual crank, although one manufacturer provides a release lever that can be pulled that lowers the resident automatically. Another manufacturer provides a bit that can be attached to a powered screwdriver that substitutes as the manual crank.

8. **Turnaround for Replacement Parts/Country Lift Made in** – If the lift requires repair or a part needs to be replaced, how soon will the lift be back in service? Most manufacturers can provide replacement parts within one or two days. Since many of the manufacturers’ sales representatives also service the lifts, they will have a stock of replacement parts on hand. If they don’t, the part may have to be ordered from the manufacturer in which case a U.S. manufacturer can usually provide the parts faster.

9. **Manufacturer’s Sales Representative** – Most sales representatives also service their lifts, so finding a reliable representative that serves your geographic area is an important consideration.

9. **What are some additional features to consider before purchasing a sit-to-stand device?**

   There are many additional features that may need to be considered before purchasing, some may be more important depending on your facility’s unique needs. For instance, you may prefer a sit-to-stand device with a sling made out of a particular material or a sit-to-stand that comes with a battery that can be recharged in three hours or less. A list and description of these additional features is provided below.

   Whatever the case, don’t just rely on the information in this document before you purchase. **TRY BEFORE YOU BUY!** All of the manufacturers listed here should allow you to try their sit-to-stand in your facility for a trial period (at least a week) before you purchase. Using the equipment in your facility is the best way to get feedback from employees and residents and find out what works and what doesn’t in your particular facility.

10. **Type of base** – All sit-to-stand devices have adjustable bases that allow the legs to fit around chairs, commodes, etc. All sit-to-stand devices evaluated utilized a “V” base where the base legs pivot around a central point when spread apart thus forming a “V”. Power means the base legs are spread in and out through the use of the hand control and the electric motor. With a manual base, the legs are spread with a bar that’s moved by hand or a foot control.

11. **Base length** - This is the length of the base from the mast to the end of the legs. This feature may be important when the device is used in tight spaces such as the bath or shower room.
12. **Base width adjustment range** – All the devices have an adjustable base where the legs can be moved in and out to allow the lift to be positioned around chairs, commodes, etc.

13. **Height of base legs** – This height may be important if the sit-to-stand needs to be positioned under a very low bed or stretcher. Some devices can be lowered further with smaller casters.

14. **Lift range** – This is the vertical distance the device moves the resident from a seated to a standing posture. All sit-to-stand devices were capable of transferring a 5’ 10” resident sitting in an 18” high chair to standing or near full standing posture.

15. **Number of different sized slings** – Most of the manufacturers only offer one or two sizes of slings which should fit practically all residents.

16. **Sling attachments** - Most slings use a simple loop as an attachment point from the sling to the boom. The sling loop attaches around a J or C shaped hook on the boom. A few manufacturers use a key lock system, which has plastic end-attachments that snap in place to secure the sling to boom.

17. **Sling color-coded** – Many of the slings are color coded by size (e.g., yellow = small, red = medium, etc.) either by trim on the sling, color-coded sling handles, loops, or tags.

18. **Sling material** – A variety of materials are used, including sheepskin as a cover to help protect the resident from skin abrasions around the arms and axilla. Most of the slings have foam inserts in the back portion of the sling to help provide additional padding against the resident’s back.

19. **Sling laundering** - Depending on the material, the sling may have certain laundering restrictions. For those nursing homes that send their slings to a laundry service this may be an important consideration.

20. **Adjustable foot plate** – Some manufacturers provide an adjustable foot plate that can be adjusted vertically to accommodate very short residents.

21. **Peak push force** – The peak force is the force required to initially push the sit-to-stand. Once the device is moving, even less force is required.

22. **Height of handles** - This is the height from the floor to the bottom and top of the handles used to push/pull the sit-to-stand. Longer vertical handles (those with the greatest distance between the top and bottom of the handle) will accommodate a larger percentage of shorter and taller caregivers.

23. **Minimum storage space** - This is the minimum amount of space needed to store the sit-to-stand (with the boom lowered and the base retracted fully). The amount of space needed could be important in facilities with limited storage area.

24. **Diameter of casters** - The diameter of the casters was measured because in general, larger casters require less force to push/pull and maneuver. It was also noted if there were single or dual wheels.

25. **Brakes** - Brakes are used to lock the rear wheels in place during certain transfer situations.

26. **Battery type** - Rechargeable lead acid or gel cell batteries are used in all of these sit-to-stand devices.

27. **Battery recharge time** - Depending on the battery, it can take anywhere from one to six hours to fully recharge. Some batteries can also be recharged in 5-10 minutes to get a few more lifts if needed.
28. **Battery life** - The number of transfers per charge is highly dependent on the weight of the resident transferred and if a powered base is used (powered bases require additional battery power to adjust the legs in and out). Therefore, the number of transfers per charge is very approximate. The total life of the battery also depends on usage and varies from nine months to seven years.

29. **Low battery indicator** - All sit-to-stands were equipped with a low battery indicator, although the amount of charge left in the battery when the indicator came on varies. In general, the devices have either a lighted indicator or auditory warning or both.

30. **Battery replacement cost** - This is the cost to purchase a new battery once the original(s) can no longer hold a charge. Ask the vendor if the battery can be purchased at a retail store rather than only from the vendor. If the battery can be purchased at a retail store it's often cheaper.

31. **New sit-to-stand delivery time** - Depending on where the sit-to-stand is manufactured and assembled, delivery time can vary from one day to six weeks.

32. **Warranty** - Some manufacturer warranties cover all parts for a standard period, whereas others only cover certain parts for certain periods.

33. **Repair parts from** - Some sales representatives stock their own parts, whereas others rely on the manufacturer to supply parts.

34. **Average repair time** - Average repair time was based on the sales representative’s estimate of how long a typical repair takes maintenance staff once the replacement part is delivered.

35. **Loaners available** - Loaners are available in case extensive service or replacement is required.

36. **Zero-lift program offered** - In addition to selling sit-to-stand devices, most manufacturers also offer additional assistance to facilities to reach the goal of zero or no lifts. This assistance can be in the form of an audit or evaluation of the facility to determine the ideal quantity of devices, in-service on the use of the devices, recommendations on additional needs to reach zero lift, etc.

37. **Leasing** - Leasing is also an option if the up front cost of a sit-to-stand(s) is prohibitive.

NOTE: THIS PUBLICATION HAS BEEN MODIFIED FROM THE ORIGINAL VERSION