



FUNDAMENTALS OF LIFTING FOR HOME CARE PATIENTS

Reprinted From Exceptional Parent Magazine





Dear Home Care User:

The purchase of your home care patient lift may be one of the most important decisions you ever make. Why? Because a patient lift is a piece of medical equipment you may be using many times each day, and the comfort and safety of both patient and caregiver are at stake.

Our company has sponsored this 3-part series of articles in *EXCEPTIONAL PARENT MAGAZINE* in order to assist you through the process of selecting the right lifting solution, plus slings and accessories, to fully meet the clinical, ergonomic and ambient environmental requirements of both you and your patient.

If you require additional information about any of the points covered in this series, or if you have clinical application questions, please do not hesitate to give us a call or send an e-mail to pwohlander@likoinc.com. Or simply contact your nearby Liko dealer. We're happy to be of service to you! And good luck with your purchase.

Sincerely,

LIKO Inc,

A handwritten signature in black ink that reads "Gary David Nowitz".

Gary D. Nowitz
VP, Home Care Operations

p.s. You may be interested in visiting one or more of the web sites below for further information on this important topic.

www.patientinfo.com
www.patientsafetycenter.com
www.cdc.gov/niosh/ergopage.html

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Lift Systems At Home

PART ONE



Accommodating homes for mobile and overhead lift systems can help change the quality of life for individuals with special needs.

Recent studies have shown that up to 40 percent of all nurses working in hospitals and nursing homes have reported suffering back injuries or related musculoskeletal disorders caused when lifting patients. As a result, the healthcare industry has witnessed a significant increase in the adoption of safe lifting programs as a means of avoiding injuries to caregivers and patients. Without question, the recent global emphasis on safe lifting has improved patient handling and has dramatically reduced caregiver back injuries caused when lifting or transferring patients. Much of what has been learned on the institutional front is also applicable to

home caregivers as well. With the necessary products and accommodations, home caregivers can avoid injuring themselves and can significantly increase the safety and comfort of their patients or loved ones.

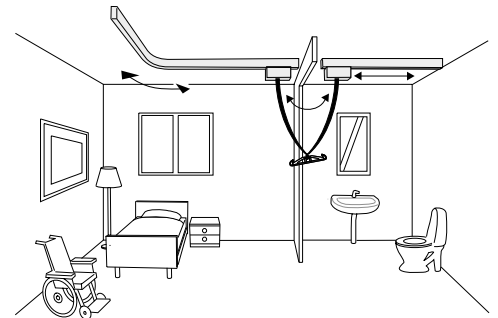
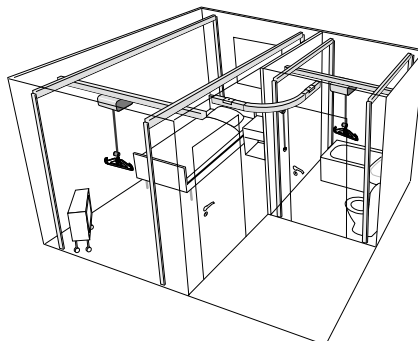
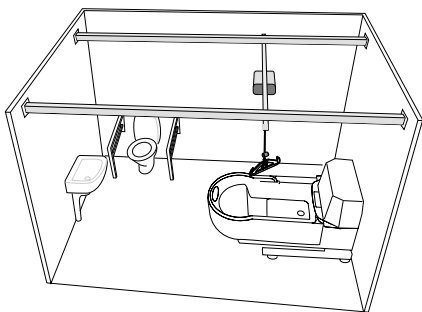
When deciding on which lift system is best for a specific individual and their needs, caregivers are faced with two main options—mobile vs. ceiling lifts. It is extremely important that one becomes aware of the advantages and disadvantages of mobile or floor lifts versus ceiling mounted lift systems.

Mobile Lift Accessibility Issues

Most competitive home care lifts are restricted

to the immediate environs of the patient's primary living quarters. As a result, both home caregivers and home care patients can be limited in their ability to travel outside their immediate dwelling due to lifting constraints. In general, floor lifts are less expensive and offer the advantage of transporting the patient to virtually any location within the confines of a given floor. However, they may be limited in their ability to transfer patients to the toilet or bathtub, and rolling over deep pile carpets can be difficult.

There are several factors that should be taken into consideration when accommodating for an at-home mobile lift. First, throughout the home, sufficient space must be provided



Above: Diagrams display overhead lift system capabilities in various rooms in the home.

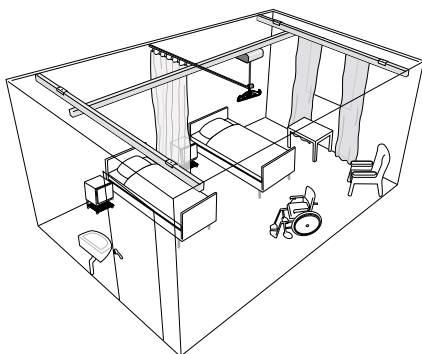
ed for the caregiver to maneuver the lift. Caregivers must then ensure that there are adequate doorway widths with no thresholds, enabling the lift, the user, and the caregiver the ability to travel from room to room. Carpeting can also be an issue so the removal of any deep pile carpets is recommended. Frequently used furniture such as beds, toilets, and baths must also be considered and should be selected to be compatible with mobile lifts.

Overall, mobile lifts can be extremely helpful in daily living. The convenient storage capabilities, where the lift can be placed out-of-sight and charged in a garage or other area, and the increasing availability of commercial grade equipment that is strong, easy to use, and flexible are among the positive aspects of using this system at home.

Overhead Lift System Accessibility Issues

Ceiling lifts require less effort to maneuver, can easily accommodate transfers to a toilet or bathtub, and do not occupy a significant “footprint” within the room. With a stationary or overhead lift system, you can lift and transfer patients with minimal effort and maximum safety, regardless of how the room is furnished.

When deciding to install an overhead lift system in a home, caregivers should be aware of a few issues to better utilize their lift. First, when choosing a lift, weight limitation must be taken into account. One should select a model that can accommodate their current weight. The style of the lift is also an important decision. Overhead lift systems are available freestanding, allowing for relocation, or ceiling mounted, which do not take up any floor space. Systems can even be installed in the home above the ceiling, con-



Lift System in Action

The use of a lift system has not only made life easier for the family of 16-year-old Caroline, it's also improved her health and self esteem.

The family tested out a lift system after first seeing it at a special needs exposition in Boston in 2001, and immediately knew it was something they needed to have. “As a mother, I was initially concerned about her safety,” said Linda, Caroline’s mother. She was getting bigger, but still needed to be lifted by someone everywhere she went. Born with cerebral palsy and deafness, Caroline can now be lifted easily from her bed to the shower to her wheelchair, and anywhere else she needs to go.

With the lift system, which is installed in the family’s main room, Caroline’s bedroom, two bathrooms, and a few other rooms in the house, Caroline is not limited to sitting in a wheelchair around the house. In the main room, for example, there are three stationary tracks on the ceiling, and also some that move, which allow her to move freely about the entire room, not just in a rectangle. She can play on the floor with her golden retriever, Dakota, and also snuggle on the couch with her family.

Physically, the lift system has had a huge impact on Caroline. Because she is not limited to sitting all day, she has strengthened muscles in her legs, and is able to stand with assistance using the lift. Being able to stand, in turn, helps her digestive track as well. Being more able to participate in the daily activities of her family has also improved her self esteem. She is able to lift herself to eye level of others, instead of always being seated while they are standing up. What she likes best, though, is that with the lift system, she can fly above everyone else, something they cannot do. It is so important for her, according to Linda, because she has a great sense of humor.

“After buying the lift system, we realized there were so many more benefits than we originally thought,” said Linda. “It really increased her quality of life.”



ceiling them when not in use. Options are also available regarding the various track setups. Single tracks, multi-directional tracks, and multiple tracks are all available and each offer specific benefits. Single tracks are ideal for those who will only be transferred from an initial point, such as from a bed to a wheelchair. Multi-directional tracks are for those who need to be in different directions—not along a straight path. Multiple tracks are for those in need of accessibility to multiple floors in their homes.

Generally, an overhead lift is always there when you need it, and it's safe and easy to use both for the patient and the caregiver.

Comfort at Home

A home care patient lift can be an invaluable tool, but like any other tool it requires proper selection to ensure the safest possible operation for each individual and each location. Research, knowledge, and attention to detail can help lead caregivers and their loved ones towards higher levels of accessibility at home—a vital step in improving quality of life.

Safety records of suppliers are available on web sites such as www.fda.gov and www.patientsafetycenter.com.

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Lifting Solutions and the Home Caregiver

PART TWO



When selecting a patient lift, it's not uncommon to overlook the physical characteristics of the home caregiver and the multitude of tasks he or she must perform. That's because most of the attention tends to be focused on providing the best possible lift for the patient. However, experience has shown that the best total health care solution takes into consideration the caregiver's situation in addition to the lift equipment, the ambient environment, and the patient's clinical condition. Thus what once seemed like a straightforward equipment decision, namely one based on product features, now becomes much more complex.

Much of what has been learned on the institutional front is applicable to home caregivers as well. Without question, the recent global emphasis on safe lifting in hospitals and nursing homes has improved patient handling and has dramatically reduced caregiver back injuries. With a few simple ground rules, home caregivers can avoid injuring themselves and can significantly increase the safety and comfort of their loved ones. Following are

some guidelines for home caregivers to review, particularly for inexperienced or first time users. They represent the first step toward ensuring a successful long-term patient handling strategy.

■ Start by conducting an ergonomic assessment

No, you don't have to be an ergonomic specialist to conduct this assessment. However, feel free to contact your lift supplier who should be very willing to help out. Ergonomics is about fitting the job to the caregiver. An ergonomic assessment simply applies the knowledge of the

Fifty percent of the lift's effectiveness is dependent on the sling, therefore the patient and caregiver should work together toward the best possible application fit.

physical and mental abilities and limitations of humans to the design of the "caregiver system," thus enabling a safe, comfortable and efficient caregiver solution. In other words, take all relevant task limitations into consideration when conducting an evaluation, including all relevant physical, psychological and environmental factors. Remember, the objective is two-fold: to prevent injuries to the caregiver and to ensure the long-term satisfaction for the patient.

When conducting the assessment, be sure to take into consideration the following:

- Patient environment: Safety, comfort, and satisfaction
- Caregiver protection: Injury identification, prevention, risk avoidance

This information will guide you toward an optimal match-up between the patient, caregiver, equipment, and the environment. It will also lead to improved caregiver practices because of the increased awareness of potential injuries during the patient lift and transfer process.

The principal criteria used during the evaluation should be based upon factors such as the following:

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- Caregiver Tasks
- Force (time of task, weight, distance moved)
- Repetition (how often is action/task repeated)
- Posture (position of body with and without lift equipment)
- Load (force application on individual body parts)

Ambient Environment

- Available work space (curtain configuration, equipment turning radius, etc.)
- Lighting
- Ancillary equipment
- Environmental factors (floors, screens, furniture, thresholds, etc.)
- Infection control
- Identification of caregiver cumulative load, fatigue, potential for injury

Caregiver's "Process Procedures"

- Individual steps (actions of the caregiver before, during and after a lift/transfer)
- Assistive personnel (actions assigned to a secondary caregiver)

Patient Profile

- Number and type of transfers per day
- Patient weight and body type
- Patient acuity, rehabilitative needs, etc.
- Medical conditions

■ Sling Selection

This is an area where “close enough” simply isn’t a good answer. The sling is the most vital aspect of injury prevention for the patient who uses a lift system. Fifty percent of the lift’s effectiveness is dependent on the sling, therefore the patient and caregiver should work together toward the best possible application fit. Special usage slings should be utilized for specific tasks such as bathing and toileting, as these maneuvers can prevent various obstacles for both parties.

The patient’s weight and potential for fluctuation in weight should also be considered. Lift systems are to be accommodated based on the size of the individual, and a failure to recognize this could result in injury. The caregiver should plan accordingly.

Improperly sized slings or inappropriate

sling selection for the application can lead to unsafe conditions, even resulting in dropping the patient or causing the caregiver to sustain an injury when unexpectedly attempting to prevent a fall. General purpose slings or one-size-fits-all slings may not provide an ideal solution. Today’s home caregiver should be aware of the importance of proper sling selection—in particular the proper size, the strength and durability of fabrics, sanitization requirements, and the comfort of the patient while in the sling—and should also take full advantage of the lift manufacturer’s sling application guidelines in order to ensure an optimal selection to meet the patient’s unique physical characteristics and medical condition.

■ Space Considerations

Space is another key issue in preventing injury. Small rooms and tight spaces have more injuries and are more labor intensive than spacious rooms. Room size and congestion hamper lift usage. If at all possible, limit the amount of furniture in the room and store items like wheelchairs outside the room when not in use. Room congestion and carpeting can lead to upper back pain as new muscle groups are being used. It is important that the caregiver learn techniques to easily maneuver lifts and to move furniture to facilitate lift use. There should be continuous, easy-access to the lift.

■ Lift Maintenance

Periodic inspection of the entire lift is highly advisable, including slingbars, slings, fasteners, links, batteries, chargers, and any other components that might cause a problem. Furthermore, while the caregiver is conducting the periodic inspection, it’s a good idea to perform an overall cleaning and maintenance of the lift as well. Wipe down the entire lift with a sanitizing solution, clean lint out of wheels, and lubricate any components per the manufacturer’s recommendations. Avoid selecting lifts with plastic components that might fracture or deteriorate over time. The first step in ensuring the safety of the caregiver involves the selection of the lift system. Together, the patient and the caregiver should choose an easy and accommodating system that fits their specific needs. Serious injuries can occur during lifting, transfers, and positioning activities. Equipment should be strong, lightweight, attractive, and durable.

■ Responsible Care

Responsible patient care means being aware of any ongoing potential to enhance the patient’s dignity and improve his or her medical condition. In the case of sit-to-stand lifts, for example, there may be therapeutic advantages whereby the lift can be used to strengthen the skeleton, stimulate circulation, or improve continence. In addition, check into the availability of cushioning pads and other devices designed to prevent chafing of the patient’s skin.

A home care patient lift can be an invaluable tool, but like any other tool it requires proper selection to ensure the safest possible operation for each individual and each location. It also requires awareness of proper maintenance and sanitation. Know the basics and follow them, for the benefit of your patient as well as your back!



Relief for the Caregiver

Judy Isaacson is a 70-year-old wife and caregiver to her husband, Keith, who has multiple sclerosis. His condition has progressed over 30 years to the point that, as Judy explains "I do everything for him except feed, shave and brush his teeth for him."

For four years Judy has relied on her foldable, portable and lightweight, battery-powered lift to help her in the daily care of her spouse. For Keith and Judy their lift fits them because "the legs spread so that Keith can be transferred from his scooter to an easy chair. The sling we use allows me to put him on the commode without being undressed," she explains.

Measuring in at six inches shorter and 30 pounds lighter than her husband, she requires aid when helping him. They made the decision to purchase a lift after Judy tore her shoulder lifting her husband to transfer him from one place to another, an act she performed a minimum of six times a day. "The plus side of this was I didn't have to go to the gym to work out," she jokes.

For Judy, her lift helps her avoid serious injury and ensures that the couple is not impeded from their daily activities. Quality of life is enhanced for both parties. When asked if she would recommend her lift system to others she simply replied, "you bet!"



Basics of Sling Selection and Use for HOME CARE Patient Lifting PART THREE

Why is a patient lift like a computer? Because neither one will work effectively without the right software and operating skills.

Slings are the patient lift industry's "software." They are the components that come into contact with the patient, cradle him or her in their grasp, gently lift them upward, and comfortably hold them airborne in gravity-defying security and confidence. Just as your PC won't run without the appropriate software, neither will your lift operate effectively without the appropriate sling and an informed operator. And just as you found it necessary to conduct a thorough assessment before selecting the most appropriate patient lift hardware, so should you conduct a clinical needs assessment of your patient in order to ensure selection of the most appropriate sling. The reason is simple. "The sling represents 50 percent of the effectiveness of the total lifting solution, and you can't achieve maximum sling effectiveness without proper selection, sizing, and skills!"

Use a decision tree for basic sling selection

A basic decision tree is an ideal tool to use when conducting an assessment of your patient's needs. The tree will provide a structured pathway to help ensure you are taking into consideration all of the patient's relevant clinical and functional needs. Each question in the tree will help you to narrow down the selection. For example,

■ How will the sling be used? (Bed-to-chair? Ambulation? Repositioning?)

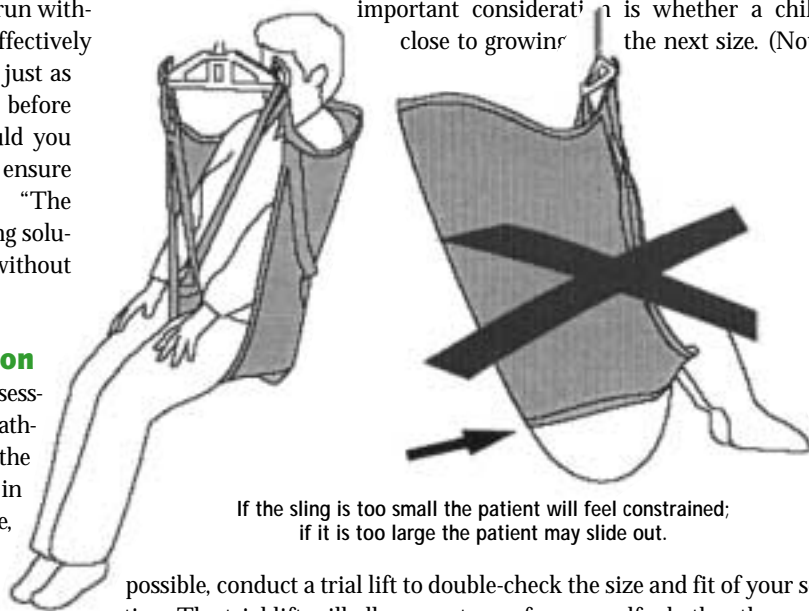
- Does the patient need full back support?
- Does the patient have clinical limitations?
- Can the patient participate in the lift?
- Is the patient an amputee?
- Will the sling be used in the bathtub?
- Will the patient remain in the sling for long periods of time?

Depending on the answers to these typical questions, and following the decision tree, you'll narrow down the selection until you get to THE most appropriate sling for your patient. Of course, there are other considerations as well such as size selection and choice of fabrics. If you don't feel comfortable making the evaluation, or if you require technical assistance, your lift supplier can help you navigate your way through the process.

Sling Sizing

Choosing the right size of sling is essential for proper functioning of the sling as well as for the safety of the patient. If the sling is too large, there is a risk the patient may slip out of it. If it is too small, it will be tight,

and may exacerbate the patient's condition. Start by assessing the patient's size. Weight is the key factor. The other important measurement is hip-breadth, or measurement around the widest point of the patient's hips. Once those measurements have been determined you will be able to use the sling manufacturer's guidelines to help you select the proper size. You should also be aware that certain clinical conditions of the patient may dictate going up or down one size; for example, muscle wasting or a large buttocks. Another important consideration is whether a child is close to growing the next size. (Note: if



If the sling is too small the patient will feel constrained; if it is too large the patient may slide out.

possible, conduct a trial lift to double-check the size and fit of your selection. The trial lift will allow you to see for yourself whether the posture is appropriate for the patient or whether the back support is high enough to support the head. The trial will also give you an opportunity to solicit the patient's personal inputs regarding fit and feel.)

Fabric Selection

Selection of the optimum sling material is more a question of the fabric's functionality than its appearance. Depending on the manufacturer's recommendations and material selections, you may find yourself choosing between materials such as nylon, cotton, polyester, specialty plastic net, or fleece padding. The principal determinants will be factors such as bathing, whether the sling will be laundered frequently, how long the patient will remain in the sling, or whether there are special hygiene considerations. In addition, you may wish to include optional padding depending on your patient's clinical condition.

Sling Bars and Accessories

The final item needed to complete the lift is called a sling bar or spreader

bar. This item is what connects the sling to the lift arm. It also spreads the sling straps for maximum patient comfort and safety. Numerous sizes and configurations are available to meet your exact application requirements. The sling bar you choose will be determined primarily by the sling you have selected along with the manufacturer's recommendations. Different sling bar configurations will accommodate factors such as the size and pressure sensitivity of the patient, desired posture, head support, shoulder width, etc.

■ The Basic Procedures Involved In Lifting

Now that you've come up with an optimal combination of hardware and sling components, it's time to begin lifting the patient. Let's go through the procedures involved in a typical home care lift and transfer operation, taking the patient from his/her bed to the toilet, then from the floor at playtime, and finally into a wheelchair. But first, some ground rules:

■ Safety Instructions

- Plan the lifting operation carefully so that it is safe, secure, and convenient.
- Determine whether one or more caregivers are required.
- Ensure that sling straps are properly attached to the sling bar and are correctly and evenly extended before the patient is lifted from the underlying surface.
- Never lift a patient higher than is necessary to complete the lift.
- Never leave the patient unattended during a lifting situation.
- Make sure the wheels of the wheelchair, bed, gurney, etc., are locked during the lifting operation.

■ Transfer from Bed

• **Step 1: Position Sling**—There are two commonly accepted methods of placing the sling under your patient: 1) Supine position, Logroll method—Roll up the sling to approximately half its width; turn patient toward you to prevent risk of falling from bed; position sling so lower edge is even with patient's tailbone; turn patient gently back onto sling and unroll it; raise backrest. 2) Seated method—Raise backrest of bed; place sling behind patient and slide it down until its lower edge reaches the tailbone; position upper portion of sling behind patient.

• **Step 2: Position Leg Supports**—Slide leg supports underneath patient's thighs. Check that sling fabric lies flat and reaches completely around thighs. Check to ensure the sling is snugged up around buttocks, removing any slack from behind eliminates any skin shear.

• **Step 3: Connect Sling Straps**—Hook upper lifting straps onto sling bar first, then hook on lower lifting straps. Slowly lift the patient while ensuring all sling elements are properly positioned.

■ Transfer to Toilet

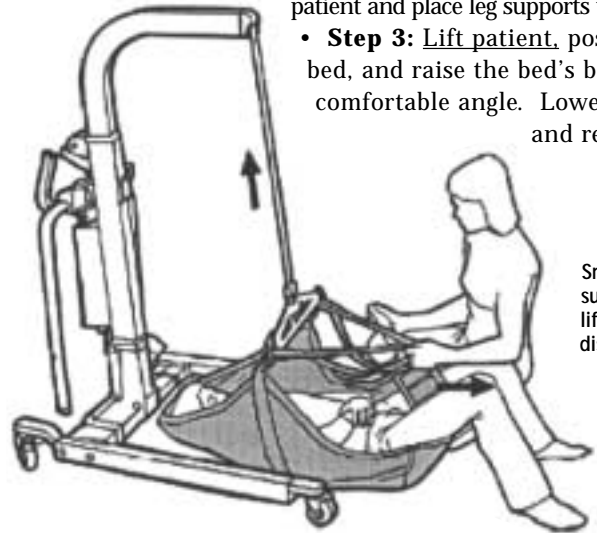
- Lift patient and position over toilet.
- Slide patient's garments down as far as possible.
- Lower patient to toilet, remove leg supports and draw garments farther down to free patient's legs.

■ Lift/Transfer from floor

• **Step 1: Position Sling**—Place a pillow under the patient's head for comfort; roll up sling to half its width; roll patient onto side and place lower edge of sling even with tailbone.

• **Step 2: Unroll Sling**—Turn patient to other side and unroll sling. Check that sling is symmetrical under patient and place leg supports under thighs.

• **Step 3: Lift patient**, position over bed, and raise the bed's backrest to a comfortable angle. Lower onto bed and remove sling.



Smooth out leg supports before lifting to prevent discomfort

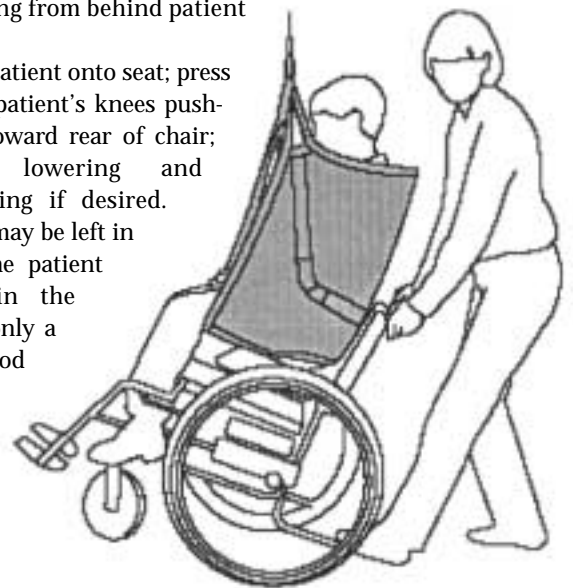
■ Transfer to Wheelchair

• **Step 1: Lock Wheels** on the wheelchair

• **Step 2: Position Patient**—Two methods of positioning the patient in the chair are commonly accepted: 1) Lower patient onto seat; using your foot on the anti-tip bar, tilt chair back slightly until patient's hips slide toward rear of chair; return chair to normal position and remove sling from behind patient if desired.

2) Lower patient onto seat; press gently on patient's knees pushing hips toward rear of chair; complete lowering and remove sling if desired.

The sling may be left in place if the patient will be in the chair for only a short period of time.



Position patient's buttocks toward rear of chair for best posture and comfort

Liko Supplies A Full Range of Home Care Patient Lifts...

■ Mobile

Easy-to-use Liko mobile lifts are designed to meet the varying day-to-day needs of both patients and home caregivers under a wide range of circumstances. Models can lift up to 660 lbs and feature industry-leading ergonomic design, trouble-free operation, and outstanding all around performance.

■ Sit-to-Stand

Liko Sit-to-Stand lifts are designed to assist people who have difficulty standing or walking. They can also be used for lifting frail patients or for therapeutic purposes such as to stimulate lower extremity circulation or to improve weight-bearing capability. Models can lift patients up to 440 lbs.

■ Portable

The unique LikoLight portable lift offers an advantage not found in most other lifts – its ingenious foldable design allows users to quickly and easily collapse the lift and take it with them when they travel away from home. Weighs only 53 lbs yet has a lifting capacity of 308 lbs.

■ Overhead

Liko is the industry pioneer in overhead lift systems. These rail type systems can be ceiling mounted or free standing and feature powerful dc motors, patented safety features and a wide variety of options and accessories. Lifting capacities range to more than 1,000 lbs.

■ Slings and Accessories

Liko's unsurpassed selection of slings includes more than 200 different models to meet the specific needs of virtually any patient size or condition. From pediatric to bariatric patients, whether lifting from the floor, to or from toilet or wheelchair, into the shower, gait training, etc. – Liko has you covered.



Liko Caroli Home Care Lift



Capella Sit-to-Stand Lift



LikoLight Portable Lift



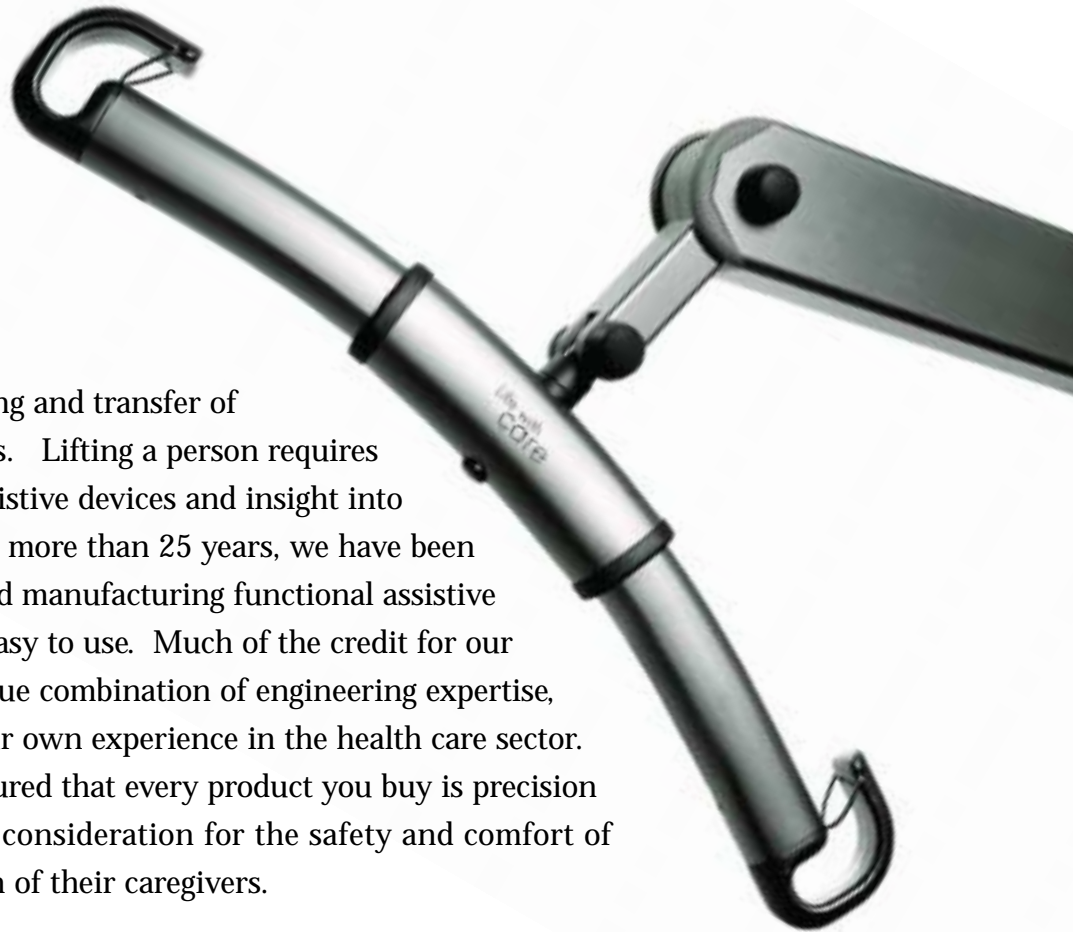
Liko Korall Overhead System



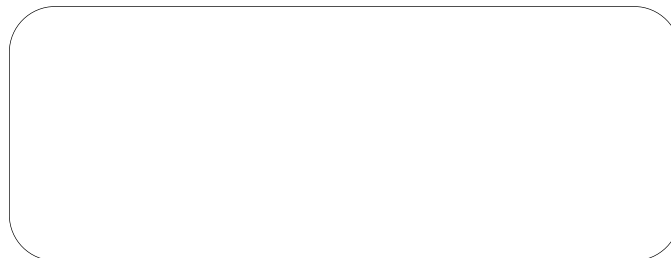
One of Liko's 200+ Slings

About Liko

Liko is a leader in the lifting and transfer of physically disabled persons. Lifting a person requires both technically sound assistive devices and insight into medical implications. For more than 25 years, we have been successfully developing and manufacturing functional assistive devices that are safe and easy to use. Much of the credit for our leadership is due to a unique combination of engineering expertise, medical knowledge and our own experience in the health care sector. With Liko, you can be assured that every product you buy is precision manufactured with equal consideration for the safety and comfort of patients and the protection of their caregivers.



Compliments of Your Liko Representative



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