

# Appendix C

# Lifting and Positioning Training

(Equipment Specific)

# Table of Contents

**Purpose of this Training .....3**

**Lifting and Positioning Overview .....3**

**Safe Client Handling and Movement.....4**

**Safe Client Handling and Movement: .....6**

**Mechanical Lifts: Hoyer .....7**

**The Sling .....8**

**Positioning equipment.....12**

## Purpose of this Training

1. Define correct body mechanics and posture when lifting/transferring / positioning clients
2. Identify and prevent environmental risks factors that can lead to client/staff injuries while lifting/positioning
3. Understand and demonstrate correct use of lifting devices
4. Understand and demonstrate correct use of positioning/mobility devices

**Note:** *This training provides equipment-specific instructions for operating lifting and positioning/mobility devices. These instructions will apply to all of the individuals who utilize these devices. However, some clients may require “special considerations” that are in addition to the following operating instructions. These considerations are detailed in the client’s individual profiles.*

The development of this training manual was informed and guided by the following: Health Care Hazards Module, Back Injury Guide for Health Care Providers (California OSHA branch), Ergonomic Guidelines for Nursing Homes (all developed by the Occupational Safety and Health Administration (OSHA) at [www.osha.org](http://www.osha.org)), Client Care Ergonomics Resource Guide: Safe Client Handling and Movement, developed by the Client Safety Center of Inquiry (Tampa, FL), Veterans Health Administration and Department of Defense, the “Guidance of Safe Moving of Clients,” issued by the Occupational Health and Safety Commissioner, and SOCP zero lifting policy.

## Lifting and Positioning Overview

Many of the clients living at SOCP require staff assistance with lifting, moving and handling (e.g. being turned during the night, being lifted in and out of bed, transferring from a seat to a wheelchair or from a wheelchair to a toilet, being pushed in a wheelchair and so on). The sheer volume of these activities can lead to fatigue, muscle strain and injury. To ensure the continued safety and health of the individuals living at SOCP, as well as the staff, SOCP is committed to a zero-lifting policy of not manually lifting or transferring clients unless there is no alternative. The goal of the zero-lift program is to create a safer environment for staff and individuals, reduce the physical strain needed to perform lifting tasks and improve the level of care offered in the homes.

**Mechanical Lifts:** A key component to complying with SOCP’s zero-lift policy is the utilization of mechanical lifts. Currently, SOCP primarily utilizes the Hoyer for these types of lifts. Understanding how to correctly operate these mechanical lifts is key to ensuring the health and safety of clients and staff and will greatly reduce the prevalence of injuries.

**Positioning Equipment:** Many of the clients at SOCP utilize a variety of positioning equipment from sidelyers to crawligators. Utilizing this equipment helps to counteract medical problems like weight gain, constipation, muscle contractures, and skin breakdown. In addition, some of the equipment promotes opportunities for the clients to experience self

initiated movement and gain benefits in the areas of cognition, self esteem, and environmental awareness. As with the use of mechanical lifts, understanding how to correctly operate and utilize the various positioning equipment is key to ensuring the health and safety of clients and staff, will greatly reduce the prevalence of injuries, as well as, increase the client's overall quality of life.

## Safe Client Handling and Movement

### Maintaining correct body mechanics and posture

**Body Mechanics:** Body mechanics is a term used to describe the ways we move as we go about our daily lives. It includes how we hold our bodies when we sit, stand, lift, carry, bend, and sleep. Poor body mechanics are often the cause of back problems. When we don't move correctly and safely, the spine is subjected to abnormal stresses that over time can lead to degeneration of spinal structures like discs and joints, injury, and unnecessary wear and tear.

The following are key body mechanic principles that are important to employ when lifting/transferring/positing clients:

#### Posture

Good body mechanics are based on good posture. Good posture means the spine is in a "neutral" position - not too rounded forward and not arched back too far.

#### To maintain good posture follow these few steps:

- Stand with your feet apart.
- Create a small hollow in your lower back by tucking the tailbone in and tilting your pelvic bone slightly forward. Be careful not to arch too much.
- Pull the shoulders back and lift your chest.
- Lift your chin until it is level and relax your jaw and mouth.

***Being aware of your posture during all of your daily activities is the best way to ensure you are using good body mechanics.***

Pushing	DO NOT
<ul style="list-style-type: none"> <li>✓ Push whenever possible:               <ul style="list-style-type: none"> <li>• Keep head up</li> <li>• Knees bent, and</li> <li>• Back straight</li> </ul> </li> <li>✓ Keep the load in front and use both hands</li> <li>✓ Remain close to the item being pushed</li> </ul>	<ul style="list-style-type: none"> <li>✗ Pull when you can push</li> <li>✗ Twist your body</li> <li>✗ Lean forward</li> </ul>

## Carrying objects

- ✓ When carrying objects:
  - Test load first
  - Use a transfer device whenever possible
  - Pivot with your feet - don't twist at waist
  - Take multiple trips
  - Use both hands
  - Keep objects near your body and directly in front of you
  - Ask for assistance with heavy items

## DO NOT

- ✗ Carry with one hand
- ✗ Twist body
- ✗ Carry with a bent-over, stooped posture

***GET HELP IMMEDIATELY!  
If items are too heavy.***

## Reaching

- ✓ When reaching for an object:
  - Keep back straight
  - Reach with two hands
  - Face the object
  - Stand on a stable step-stool to reach high items
  - Bend knees slightly

## DO NOT

- ✗ Overreach by standing on toes
- ✗ Reach with one hand
- ✗ Twist at waist
- ✗ Stand on an unsafe surface
- ✗ Reach with legs locked in straight position

## Lifting

- ✓ When lifting objects, always:
  - Use a mechanical lift device when feasible
  - Keep objects close to your body and directly in front
  - Keep feet at least shoulder width apart
  - Test the load before lifting
  - Squat, bending your knees and hips
  - Keep your head up and back straight
  - Tighten stomach and lift with leg muscles
  - Request help with heavy items

## DO NOT

- ✗ Lift in a bent-over, stooped position
- ✗ Twist at waist
- ✗ Lift with one hand
- ✗ Lift with outstretched arms
- ✗ Keep feet together
- ✗ Lift above shoulders or below knees when feasible

## Safe Client Handling and Movement:

### Identify and prevent environmental risk factors

Prior to lifting/positioning a client, take the time to prepare the environment, organize the equipment and client, and finally, yourself.

#### Prepare the environment:

- ✓ Clear a working area
- ✓ Eliminate any obstacles (chairs, tables, rugs)
- ✓ Ensure adequate lighting
- ✓ Ensure that the floor is dry
- ✓ Minimize distracting noises

#### Prepare the equipment:

- ✓ Adjust position of the equipment (bed, sidelyer, wheelchair, hoyer, etc)
- ✓ You may need to make adjustments to the client's wheelchair: include locking brakes, removing arm rests, and positioning the wheelchair at an appropriate angle
- ✓ You may need to make adjustments to the client's bed include locking brakes, putting down side rails, or adjusting bed height.
- ✓ Ensure all devices are in good working order including belts, lifts, and slings.
  - Do the lift brakes work?
  - Are any of the straps frayed on the sling?
  - Is the lift battery charged?
  - Do all of the buttons work on the lift?
  - Is the lift making strange noises?

#### Prepare the client:

- ✓ Explain what you are about to do with the client
- ✓ If necessary move/reposition any personal medical devices (IV tubing, etc.)

#### Prepare yourself:

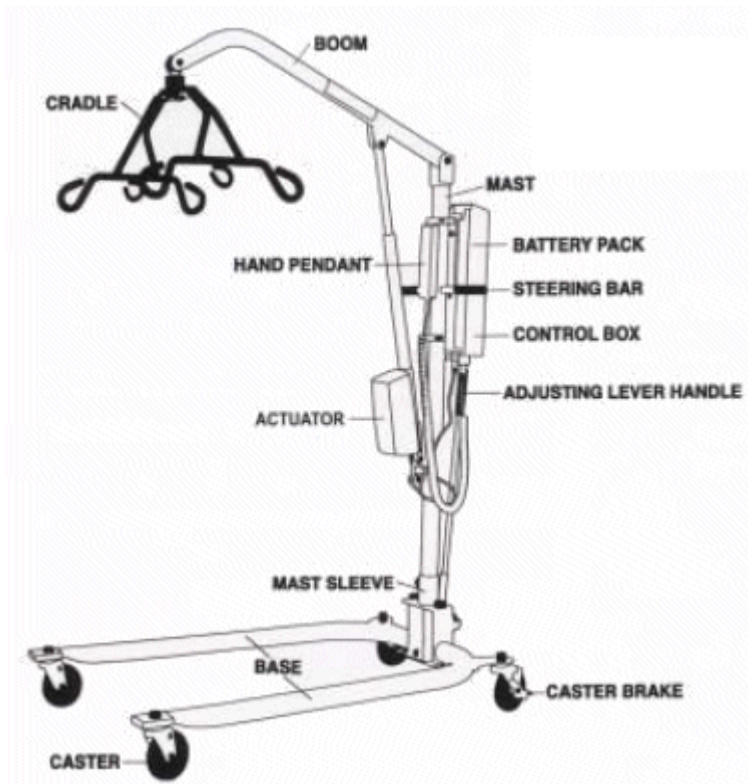
- ✓ Discuss the plan with lifting partners
- ✓ Use simple instructions/one step commands
- ✓ Be prepared for the unexpected.
- ✓ Postpone the lift/transfer if the client is resistive, uncooperative or aggressive
- ✓ Ask for help. Ask for help before you begin the move or transfer. While you wait for someone to come and help you with a transfer, finish preparing yourself, the environment and the client for the transfer, so when help comes, you are completely ready.
- ✓ Know how to do the transfer that is being used. Is it safe? Can you do it safely?

## Mechanical Lifts: Hoyer

**Hoyer Lifts** allow a person to be lifted and transferred with a minimum of physical effort. Before attempting to lift anyone practice with the lifter by using a helper, not the client. You must know and understand how the lifter will feel with a client in it. Be certain to explain the lifting sequence to the client before attempting to lift them the first time.

The Boom of the lift does not swivel. The client's weight must be centered over the base legs at all times. Do not attempt to lift client with the mast/boom assembly swiveled to either side. Always keep the client facing the attendant operating the lifter.

### Typical Hoyer Client Lift diagram:



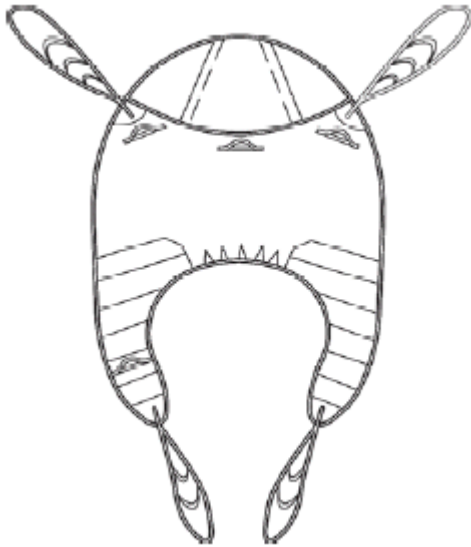
**Manual and Powered Hoyer Lifts operate similarly.** The manual versions have hydraulic cylinders and a hand-pump, the powered lifters use rechargeable battery packs and a pushbutton hand control. All lifts share the same nomenclature names as pictured (above).

- **To raise the client** the base of the Hoyer Lifter must be spread to its widest possible position to maximize stability.
- **To lower client** open the hydraulic pressure release knob by turning it counter-clockwise, not more than on full turn. The release knob is located on pump near pump handle. Battery powered “lifters” have a button on the hand control for lowering the client.

## The Sling

The **U-Sling** is the most commonly used sling for transferring a client. These U-Slings wrap around the thigh and cross between the legs. This gives the client a secure feel and prevents them from sliding out of the sling.

Below is a diagram of a typical padded **U-Sling**.



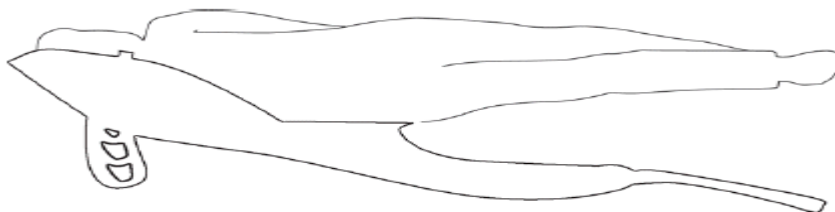
**Typical U-Sling**



**Sling in Use**

### **Applying the Sling (For transfers from the Client's bed):**

1. The client should be in center or one side of their bed
2. Roll the client on the side away from staff. (Raise side rail, if equipped, on side opposite staff)
3. Place wider piece (seat) under the client's thighs so the lower edge of the seat is up to the client's knees. Place narrower piece (back) just above small of the back.
4. Roll the client towards the staff. Pull sling through
5. Pull the leg loops forward and under the thigh.
6. Cross the loops



**Applying the sling while the client is lying**



## Transferring from a Client's Bed:

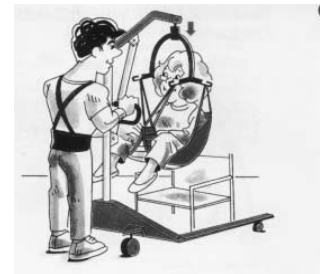
- Roll the base as far under the bed as possible locating the cradle over the client. Be careful not lower the frame onto the client. The parking brakes (caster locks) should not be on when lifting the client, let the lift move a little with the weight adjustment.
- When both sides of the sling are attached to their respective sides of the cradle, raise the client slowly. If client is in a hospital bed it will help to raise the head section slightly.
- Raise the client until buttocks are just above the mattress. The self-leveling cradle will bring client into a sitting position. Grasp client's legs and turn client so their legs dangle off side off the bed. Do not push or pull client off of bed. Lower bed if you need more clearance.
- Grasp steering handles and move lifter away from the bed. Move client into position over the seat of wheelchair. Make sure wheelchair brakes are on.
- When moving the client lift away from the bed, turn the client so that he/she faces assistant operating the client lift.
- To lower client open the hydraulic pressure release knob by turning it counter-clockwise, not more than one full turn. The release knob is located on pump near pump handle. Battery powered Lifters have a button on the hand control for lowering the client.



Positioning the Lift for Use

## Transfer to Wheelchair or Chair:

1. Position the lifter so that the client will be as far back in the chair as possible (always be sure to lock the wheelchair brakes, if transferring to a wheelchair).
2. Slowly lower the client into the chair.
3. To gain appropriate positioning, gently push on the client's knees with your right or left hand while simultaneously lowering the client.



## Applying the Sling (For transfers when the client is in a seated position):

If the client is in a chair/wheelchair, you can place the sling under them without lifting by following these few simple steps:

- Have leg flaps open.
- Standing in front of the client, have them lean forward slightly (if unable, gently lean them forward). Put the seat part of the sling behind the client and press it down until it touches the seat of the chair.
- Grasp leg flap on one side of the client and, while holding against knee, pull leg flap forward; repeat with other side until sling is in correct position.
- Pull the leg loops forward and under the thigh.



## Lifting the client from the floor:

1. Apply the sling as described above (transferring from the client's bed).
2. Position the lifter behind the client with a pillow over the base to support their neck and head. The lifter should be positioned with the lifter arm over the client.
3. Lower the cradle so that the straps reach the hooks of the sling.
4. Raise the client's knees and attach the sling.
5. Lift the client up above the floor. Turn the client to face the staff and place their feet on the base of the lifter, straddling the mast for extra stability.



## Lowering the client to the floor:

1. Apply sling as appropriate.
2. Place a pillow on the base support legs
3. Lower the client to the floor, minding the position of their extremities.



## Removing the Sling:

1. Disconnect the sling from the lifter.
2. If the client is sitting, stand in front of them and gently lean them forward.
3. Pull the sling flaps to the side, out from under the client's thighs.
4. Still standing in front of the client, reach back and pull the sling up from behind the client.
5. Reposition the client in their chair.



## SAFETY PRECAUTIONS:

- **Never exceed** the maximum weight capacity of the lifter
- **Never push or pull on the boom**—this may cause the lift to tip over
- **Pay attention to the client's attire.** If they are wearing slippery garments they may slide out of the sling if they are not positioned properly. Always position the client so that their knees are slightly above their waist.
- **Do not move the lift and client over** shag or deep pile carpeting, thresholds, unpaved surfaces, outdoors or over other obstructions that can cause wheel stoppage and a tip over.

## Positioning equipment

### Wedges, Leg Abductor, Cans:

Are types of positioning equipment that help to provide stability and support for clients who lack a degree of body control. In many cases, pillows can be used in place and/or in addition to these devices. They come in a variety of shapes and sizes, but are similar to the ones pictured below.



Can



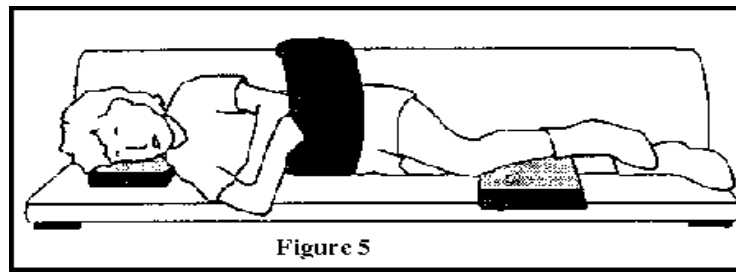
Wedges



Abductor

### Sidelyer

Sidelyers can help to relax the body, make joints more flexible, decrease spasticity, and improve head movement. Elevated sidelying may be good for eating, visual activities, and general care giving. In general, sidelyers are similar to the figure below.



### General procedure:

1. Prepare the environment, the equipment, the client and yourself.
2. Transfer the client onto the sidelyer (Client will need to be on their back).
3. Client will need to be rolled onto their side.
4. Align the client:
  - Remember to maintain the client's midline symmetry (align head with spine)
  - Support the client's head with a pillow or foam block.
  - Shoulder side and hip are on the bottom of the sidelyer
  - Shoulder, back and hips are against the back of the sidelyer
  - Support areas between the underarms and the pelvis by fastening the thoracic strap securely
  - Bottom leg needs to be straight from the hips.
  - Top leg needs to be slightly bent with knees and toes pointing forward.
  - If needed, a pillow or foam block/wedge can be used in between the legs.
  - Arms are not caught under the client's body; these need to be forward.

## **Sidelying:**

Sidelying is similar to utilizing the sidelyer positioning equipment. Most often, sidelying is utilized while an individual is in bed.

### **General procedure:**

1. Prepare the environment, the equipment, the client and yourself.
2. Client will need to be rolled onto their side.
3. Remember to maintain the client's midline symmetry (align head with spine)
4. Make sure that the client is off of the point of their hips and shoulder.
5. Legs should be flexed with a pillow/abductor between their leg and knees to support entire upper leg.
6. Have a pillow tucked behind the individual's trunk (upper body)
7. Place another pillow in front of the client starting under their armpit and extending downward.

**Prone positioner:** This is a positioning device where the client is placed on their stomach. It is typically rectangular in shape with a rounded front end. It usually has an abduction block and/or triangular pad to separate the client's knees once in position. There are several security straps to maintain the client's safety. In addition the positioner may be on wheels, and therefore act as a mobile aid for the client. Overall, the prone positioner is utilized with clients to encourage weight bearing and shifting on hands and knees, develop and strengthen neck, shoulder and arm muscles, improve visual skills, increase tolerance to prone position, develop upper extremity coordination, promote motor development, and/or provide independent locomotion.

### **General procedure:**

1. Prepare the environment, the equipment, the client and yourself.
2. Transfer the client onto the side of the positioner, then roll them onto their stomach.
  - Remember to keep the head supported during the roll.
3. Align the client:
  - a) First align the hips, then the shoulders, head, legs, feet and arms. Remember to maintain the client's midline symmetry (align head with spine)
  - b) Ensure that the client's pelvis and hips are level
  - c) Assist the client in placing their head on either of the sides of the positioner
  - d) Arms may be at the side, slightly bent, or flush with the front of the positioner
  - e) If there is an abductor or pad, ensure that both legs are on either side. If there is none, place a pillow between the client's legs (to separate the knees).
  - f) Secure straps.
  - g) To protect the client's toes place a towel roll or pillow under their ankles.

4. If the positioner has wheels, ensure that the client is wearing shoes and/or slippers to protect their feet.
  - In addition, when the client is moving in the positioner watch to make sure that their hands don't accidentally get pinched.
5. **Note:** If you need to move the client up or down in the positioner to maintain safety assist at the client's pelvis. NEVER pull on the client's legs or arms.

### **Easystand Stander:**

Some of the clients living at SOCP utilize standing devices. These devices come in a variety of models; however the general mechanics of operating these are very similar.

Standers provide a means for clients to participate in passive standing, which has been demonstrated to prevent, reverse, or improve many of the adverse effects of prolonged immobilization. Some benefits of standing include: The prevention of contractures (ankles, knees, and hips), improvement of range of motion (spine, hips, knees and ankles), reduction in spasticity, prevention of pressure ulcers through changing positions, development and improvement of upper body balance and strength, alleviation of pain caused by prolonged or inappropriate positioning, development of standing tolerance and endurance, increase independence, self-image, and inclusion.



### **General procedure (Easystand Stander):**

1. Prepare the environment, the equipment, the client and yourself.
2. Swing the knee block and arm rest out of the way.
3. Ensure that the casters are locked.
4. Transfer client onto the seat of the stander; Ensure that their hips are slid all of the way back into the seat.
5. Place the client's feet in the shoe holders and fasten the straps.
6. Fasten the hip belt.
7. Swing the knee block over the client's knees to secure their lower legs.
8. Fasten the chest harness around the client.
9. Raise the client to a standing position by pumping the hydraulic handle.
10. As the client rises, ensure that their arms are clear and are able to rest on the tray.
11. Once in a standing positioning, ensure that the foot and chest straps are snug and fastened.
12. To return the client to a sitting position, release the hydraulic handle (slowly).
13. Ensure and guide the client's hands as they are being lowered.
14. Remove the straps. Remove the knee block and armrest out of the way.