

Avoiding the Slip and Slide

Safe Handling Techniques for In-water Treatment

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Not all individuals seeking aquatic participation are able to be totally independent in mobility. While handling techniques and equipment for assisting with dressing, toileting, and transportation to the pool are the same as for any other land-based activity, once that individual is ready for water entry, safe handling becomes an entirely different situation. Moving between deck and water, as well as handling while in the aquatic medium, can be very safe – or very dangerous – depending on the thought and care given preparation for the process.

Moving from Deck to Water

There are many choices for having a client move between deck and water. They range from completely independent entry over the side or down a traditional pool ladder to completely dependant entry on a plinth controlled by an I-beam Hoyer lift. The method chosen will depend on the capabilities of the individual, as well as characteristics of the facility. Each method will have advantages, as well as disadvantages.

Method	Description	Advantages	Disadvantages
Over the side deck.	Individual slides into the water directly from the side of the pool.	Easiest from a flush deck pool.	The individual must first lower him or herself to deck level. To get out, once on the deck, the individual must then rise to a stand or re-enter a wheelchair.
Pool ladder	Individual climbs down a vertical ladder.	Does not require any additional equipment. Most pools have ladders.	Individual must have standing balance, ability to ladder climb, good grasp and arm strength.
Transfer tier	A stepped platform. The individual transfers from a wheelchair seat to the top of the platform and then lowers him or herself down the platform steps to the deck. Then an over the side deck entry is used.	Platform is easily moved into place.	Individual must have arm strength for transfer and for going back UP the steps after activity.
Walk in steps	A stairway leading into the pool, railings on at least one (right going down) side.	Easier than using a ladder. Compares with stair walking on land.	Individual must be able to stair climb. Takes away use of the side pool area adjacent to the ramp. Lifeguard must guard "over" the ramp. Walking or wheeling up hill for water exit may be harder.
Walk in ramp	A ramp leading into the pool, wide enough for an individual to walk or a wheelchair to roll.	Easier than steps or a ladder.	Takes away use of the side pool area adjacent to the ramp. Lifeguard must guard "over" the ramp. Walking or wheeling up hill for water exit may be harder.

Ramp with stairs cut in	A wide ramp leading into the pool. Down the center of the ramp are stairs cut into the ramp.	An individual can use either ramp or stairs, which ever are easier.	Ramp with stairs takes more space. Takes away use of the side pool area adjacent to the ramp. Lifeguard must guard "over" the ramp. Walking or wheeling up hill for water exit may be harder.
Chair lift	A lift with a seat. Controls are used independently by the individual, who sits in the chair and then uses controls to lower chair into water.	Some are portable and can be rolled into position as needed. Individual can be totally independent if they have chair transfer skills.	Takes deck space for storage. Units are usually large. Some may required an electric power source.
Overhead hoist	A heavy-duty motor, mounted on an I-beam over the deck and pool. A fabric sling seat is suspended and the individual sits in that seat. The motor is moved along the I-beam over the water, and then is lowered into the water. Some overhead lifts can also lift and move a plinth.	Used for individuals with more severe disabilities. Sling seat can be placed under the individual during dressing. Sling seat molds to configuration of the individual's body. Then seat is hooked to lift on the deck. Also useful for above ground pools.	An in-water assistant must assist the individual to exit the sling seat and/or get into the seat to leave the water.
Two, Three, or Four Person Lift	Assistants lift and move the individual from the deck into the water.	This method can be used when none other is available. It also works well for children who can be picked up and held in arms.	Unless this is for a child, it violates the law regarding independent accessibility. Physical handling is also dangerous because a wet body can be very slippery.

A variety of commercial products are available for each type of mechanical lift. Prices vary greatly. Factors to consider when making a selection include –

- Is this equipment designed to be used in a pool area? Will it rust, corrode, or degrade from continual contact with pool water?
- How much does the equipment weigh? Staff will be moving the equipment, as well as the individual. Is the weight manageable?
- What is the size and weight of the individuals who will be using the equipment? There are distinct variations among children, adults, and bariatric clients.
- What is the size of the deck where the equipment will be used? Some pools have very narrow deck space. Can the equipment be used and still have enough space for others to move safely?
- What electrical contact is needed? Power lifts need grounded outlets and a way to obtain power without cords crossing the open deck.
- Can an individual operate the lift by him or herself? Independence means self-operation if the individual is capable.
- Where will the lift be stored? If the equipment is not permanently installed, where will it go when not in use?

Handling in the Water

Getting into the water is just the first step in a safe aquatic session for someone who needs hands on assistance. On land, inappropriate handling can result in falls, bruises, bumps, sprains, broken bones, and spinal injuries – for both client and therapist. In water, similar injurious consequences can also result, including, but

not limited to those same falls, bruises, bumps, sprains, broken bones, and spinal injuries. In addition, a water fall can also result in water up the nose, fear of drowning, and an actual drowning event.

While water might seem like a “soft” landing, pool walls can be just as hard as floors. Twisting, turning, slipping, and trying to avoid a fall can have the same poor results as that action on land. Add to that, a nose or mouth full of water and the experience has gone from an injury to a fear-producing event. In the water environment, safety in providing personal hands-on assistance to others is even more important than it is on land. In water, an additional consequence could be drowning.

Here are some water-specific suggestions for maintaining safety for yourself and your client, while at the same time providing quality hands-on assistance. Whenever you are handling or supporting someone else in water —

- Be sure there is a safe size and weight ratio between you and your client. You can injure yourself by attempting to handle a client that outsizes and/or out weighs you. Do not be fooled by the buoyancy of water. It takes just as much strength to handle a large person in water as it does in land. While gravity does not play as big a part, you will be moving that individual against the resistant force of the mass of water. Because water is constantly moving, the task is even more difficult.
- The individual should take a soap shower and rinse well before entering the water. This will insure any body lotion has been washed off. A body surface with lotion, or left over soap, will be very slippery.
- Determine the breath control and swim ability of the individual ahead of time. While you might not be able to actually assess these abilities, asking the individual if they can float and stand up, can hold their breath, can perform any swimming strokes, and are generally comfortable in water is very useful information in an emergency.
- Be sure you are standing well balanced, both feet on the bottom of the pool while providing any and all hand-on assistance.
- If you are moving through the water, stop and stand still before changing hand positions, change hand positions, and then resume movement.
- Grasp and handle with your entire hand, not just your finger tips. You will have better body control.
- Work in water no deeper than your shoulders (measured with your feet flat on bottom).
- Be aware turbulence can cause unexpected movement of the individual’s body. Wave action caused by others in the pool, as well as turbulence caused by you can cause a body to drift in ways unplanned for. This drift can put painful stress on affected joint areas.
- Assess comfort level by maintaining eye contact, as well as physical contact. Fear can be a safety hazard, as can actual inappropriate handling or movement.
- Be ready to assist an individual who loses his or her balance, or slips out of your hands. Do not assume the individual will be able to assist him or herself. Even very good swimmers may be unable to regain a safe position if their health or mobility is compromised by illness, accident, surgery, or disability.

Safe handling also means safe and appropriate use of buoyant aids. No buoyant equipment is ever an appropriate or safe substitute for hands-on assistance. A buoyant aid does not take the place of a lifeguard or other professional surveillance. If a buoyant aid is being used because it is appropriate to the activity –

- Be sure the size and fit of the equipment is appropriate for the size and ability level of the individual. Equipment that is too large can fall off or enable an individual to slip out. Equipment that is too small will not provide necessary support.
- Explain any equipment to the individual prior to use. Include qualifiers regarding when this type of equipment can be used and for what purpose. Provide all safety precautions.
- Be sure the equipment is secured and worn according to manufacturers specifications. Improvisation may solve immediate problems, but in the long run create an unsafe environment that others will duplicate, thinking it is all right.
- Frequently check the equipment to determine it has not shifted or loosened during use.
- Maintain all buoyant equipment in sound working order. Air filled equipment can leak. Foam equipment can flake.
- Use only enough buoyancy to lift the individual to a level appropriate for treatment. Lifting a body part above water will cause inappropriate chilling (through evaporation) and negate the good effects of movement in water.
- Maintain proper body alignment when using any buoyant aids. Moving body parts out of alignment in order to accommodate a buoyant aid compromises treatment protocols.
- In moving the individual, touch and handle the person, not the buoyant aid. The individual needs to know you are in control of the situation. Pulling or moving an individual by pulling the equipment causes insecurity because the individual cannot tell what is happening or who is causing the action.

Safe handling of an individual during aquatic activity takes thought, care, and planning. Just as you plan activities and treatments, you should also plan ahead for any hands-on assistance. Make changes as you proceed, based on individual comfort and specific activities. But, always keep in mind safety is the most important consideration. A safe participant will be comfortable and gain much from the activity. That's your goal. Avoid the slip and slide of a handling accident. Be safe, handle carefully, you and your client will benefit.