



GETTING IN A POSITION TO LEARN

Handling and positioning are instructional methods for many students with physical disabilities. Proper handling and positioning are needed to give many students the best control possible over their own movements. This allows students to focus their attention on the instructional program and to participate in and perform program activities. Thus, positioning and handling methods are necessary throughout the student's day not merely during a "therapy period". It is also important to move students the right way, so staff do not risk hurting the students or themselves.

Handling refers to the approach, physical manipulation, touching, or any other interaction with a student. Proper handling attempts to:

- Normalize muscle tone and reflexes,
- Facilitate normal movement,
- Achieve appropriate alignment of joints and body parts.

Effective handling is essential to achieving optimal positioning.

Positioning is a process in which specific body parts, or the entire body are manipulated and aligned so as to obtain the most desirable postures and to maintain function. It is a means to accomplish a functional goal.

Using Handling and Positioning

Because of the vast differences between students with physical disabilities staff will need to learn the handling and positioning appropriate for each student. This in-service offers some general ideas for handling students with physical disabilities. It is important, however, for staff to get the specific facts from each student's parents, physical therapist, PMT and occupational therapist.

Staff need to ask parents and therapists questions about:

- Special equipment,
- Placing and handling methods,
- Any positions which the student should not be placed in
- The student's ability to do things for herself and to help you

Staff may know all the handling methods the parents and therapists describe, but it can still be helpful to ask parents and therapists to show staff the methods. There may be subtle differences in a positioning or a handling method to accommodate a student's specific problem.



General Guidelines

Before moving any physically handicapped student remember to:

Dress for the Job

- Wear flat shoes that slide easily. Avoid clogs, high heels, and floppy sandals that might cause you to trip or lose your balance when carrying a student.
- Likewise, wear comfortable clothing that will not get in your way when you are moving the student.

Plan the Move

- Before lifting a student to move her anywhere, check to be sure that there is nothing in your way (ie. toys, furniture, newspapers, etc.)
- Also make sure that the area, piece of furniture, or equipment is "ready" for the student. This means doing such things as locking the brakes on the wheelchair, pulling the bed down, and putting the "special seat" on the toilet. You should do these things before lifting the student - not with her in your arms.
- Finally, take a minute to think through the steps you will be taking to move the students to the new place.

Tell the Student

Students of any age or ability level should be told that they are about to be moved or re-positioned. Being grabbed and moved without any warning may scare or upset the student. Surprise moves also do not let the student get ready for the move or help you. Surprise moves may cause some students to feel as if they are not in control themselves.

Ask the Student to Help You

Many physically handicapped students will be able to help you with the move (ie. by shifting their weight, holding onto a chair or holding onto you) if asked to do so. For example, you might tell a student "I am going to take you out of your chair now so you can spend some time on the rug. Can you lean forward, please?" Always have the student do as much as (the parents say) she can do on her own. Keep in mind that some very physically handicapped students may need as long as 15 seconds to make a simple movement (ie. reach out and grasp something.) It can take that long for their brain to tell their body how they need to move. They should be given a chance to do things on their own as often as possible.



Positioning

The goals for good positioning of students are as follows:

- Provide an optimal opportunity for learning and interaction by having child positioned as close to upright as they can tolerate
- Prevent deformity or pressure sores resulting from bad alignment
- Maximize comfort

Dangers of Poor Positioning

Students who cannot change positions on their own may end up spending long periods of time in the same position. Too often physically handicapped students end up sitting in a wheelchair most of each day. This can become very uncomfortable for the student. Over a period of time, it can also lead to some very serious problems, such as pressure sores, shrinking of muscles, and deformities.

Pressure sores are like bedsores. They occur when parts of the body press against something for long periods of time. An open sore forms because of poor blood circulation. Shrinking muscles occur when certain muscles are not stretched often enough. The muscles eventually shorten. This shortening limits the child's range of motion for good. Other deformities (i.e. curvature of the spine) may be caused by not moving the student correctly into a number of different positions each day. Children who do not have the motor control to hold themselves up against gravity need the outside supports of assistive devices to keep them aligned for functional activities and to prevent deformity.

It is important that all physically handicapped students spend time in a number of different positions each day. Not only will this prevent physical problems, it also gives the student a chance to view the things around her from a number of different angles. It also allows the student to use all of her muscles. It gives her a chance to try using muscles that are not as well-developed. For example, placing a student in supported sitting gives her a chance to practice head control.

General Guidelines for Moving and Handling

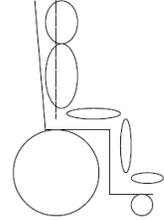
- You should change the student's position throughout the school day. Students who are able to move themselves may just need to be reminded. An hour is the longest period of time a student should ever stay in the same position. Talk with your students' therapist about various options for positioning.
- Move the student slowly and smoothly into the next position.
- Always support the student at the "key points" (ie. the head, shoulders, and hips). It is easiest to control abnormal body patterns from these three points.
- Tell the student of what you are going to do (ie. "I am going to put you on the floor so you can pick up your toys.") Being moved without warning can cause a startle reflex or an increase in tone that make the move even more difficult.
- Ask the student to help you every step of the way.
- Be patient. Never force a joint to bend or stretch. If a client with cerebral palsy stiffens up on you (ie. stiffly stretches out her body), break up this pattern by bending her at "key points" such as bending the student at the trunk to relax. For example, if the student has stretched out her legs so that you cannot bend them at the knees and ankles, slowly bend her at the hips. This will cause the rest of each leg to relax.
- Students with very severe cerebral palsy may go into "total extension". This means that the student stiffens with her head and shoulders arched backward, her arms and legs straight and together, and her toes pointed. If this happens, bend the student over at the hips until the rest of her body relaxes.
- If the student has any abnormal patterns of movement or positioning, try to position her in opposite patterns. For example, if the student crosses her legs like scissors when sitting in a chair, separate the legs and place something between them.



Seating a Child in a Wheelchair (or other adaptive seat)

The goal of good seating is to have the head over the shoulders, the shoulders over the hips, and the hips and knees at 90 degree angles:

This can be harder than it sounds when children have very rounded backs or can't hold their heads up. Good posture and head control starts with good positioning at the hips, so getting the child's pelvis properly aligned in the chair is critical. We start there and work our way up.



Steps for Good Seating Positioning:

- Push the student's hips all the way back in the chair. Bend them to a 90 degree angle. If the student's hips slide forward (or do not make it all the way back in the seat after you move her into the chair), lean the student forward against you. Place your hands under her bottom and push the hips back.
- Fasten the seat belt snugly across the student's hip bones. Bring her shoulders and upper arms inward and adjust the chest straps. Use pelvic straps if required.
- Separate the student's legs. Place her feet squarely on the foot rests and secure the straps.
- Secure chest harness if there is one.
- Make sure students head is appropriately placed in headrest. Have child position their own head if possible.

Positioning a Student in a Side Lying Position

- Roll the student on her side and up against something (ie. a couch, wall, foam block etc.).
- Bend the student's upper leg to a 90 degree angle at both the hip and knee.
- Place a pillow or wedge under the head and bend her head forward (toward the chest).
- Bend the lower arm comfortably. Move her upper arm forward so it is free to move around.

Placing a Student in Supported Sitting (from a lying position upward).

- Roll the student on her side.
- Place one arm across the student's back, holding up both her head and shoulders.
- Place your other hand on the student's hip (which is pointing upward).
- Push down on her hip (moving her bottom to the floor) while lifting her upper body forward into a sitting position.
- Sit behind the student keeping her hips bent at a 90 degree angle.
- Give the student the smallest amount of help needed for her to keep her balance.
- Do not let the student slump forward or backward.

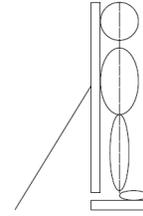
Placing a Student Over a Wedge (bolster, etc.)

- Place the student on her stomach.
- Lift the student's upper body by placing your arm across her chest and holding the arm furthest away from you back to the child's body.
- Place the student over the wedge so that both arms are forward and over the edge of the wedge. The student's hands or forearms should touch the floor.
- Sidelying: bend the student's upper leg to 90 degrees or more at the hip and knee, bend the student's head forward, and place the upper arm so it is free to reach.
- Supported sitting: bend the student's hips to 90 degrees or more and sit behind the student. Provide the smallest amount of support needed for the student to maintain her balance.
- Over a wedge: move both of the student's arms forward so that her forearms touch the floor.

Placing a Student in a Stander

Prepare the stander by having it in the most horizontal position possible, so that gravity helps you get the child secured.

Good postural alignment is critical for safe comfortable use of a stander. Ideally, the head should be positioned over the hips and the hips over the feet. If a child has orthotics (MAFO's etc.) make sure he or she is wearing them in the stander.



If a child has bony deformities, getting the knees and feet properly aligned can be difficult. Consult with the child's therapist for strapping options to attain good alignment. Also, if a child has a leg length difference, a foam wedge will need to be added to the footplate under the shorter leg, so that alignment is not thrown off higher up. Make sure straps at pelvis are attached right on top of hip bones and not across the abdomen. Only move stander to upright position after all straps are secure and the child's body is in good alignment.

Positioning for Learning

Many times, we are so focused on positioning a child in a device that we do not take the time to think about how we are going to position the activity or device that the child is going to work on. The placement of a visual stimulus such as a toy or book can make all the difference in terms of a child's ability to effectively interact. Children who have a very rounded posture may need worksheets or communication boards placed on a slant board vs flat on a desk. When children are in prone or sidelying, it is helpful to have boxes or wedges on which to place activities so that they can continue to interact with their environment. Some children need learning materials placed to one side of their desk or another due to visual issues or hand function. Therapists and teachers should share information about optimal placement of learning materials so that the student has the best chance of being successful when engaging in an activity.

General Guidelines for Carrying

Carrying children is never an optimal solution for mobility in a school environment, but at times, it cannot be avoided.

- Use the student's wheelchair or other equipment (ie. scooter board) to avoid carrying as often as you can.
- When carrying is needed, keep the student as close to your chest as you can.
- Keep your back straight and move your body as a unit. Do not arch your back (either forward or back). Be careful not to twist your body.
- Keep a firm hold on the student. If your grasp starts to slip, rest the student against something that will not move (ie. a wall or counter) while you get a better grip on him.
- When carrying a student up or down stairs, put your whole foot on each stair. Stay close to the wall. Use the wall if you need to rest the student against something for a moment. When carrying a student upstairs, bend slightly forward at the hips. When carrying a student downstairs bend your knees slightly. This will help you keep your balance.
- Do not hurry! Take short steps to keep your balance.
- When lifting the right way, you should bend at the knees and hips, keeping your back straight and your bottom down; and,
- Whenever you can, carry the student so he can see where he is going.

General Guidelines for Lowering

- Make sure you have a firm hold on the student
- Tell him what you are going to do (ie. I'm going to put you on your bed now.)
- Stand close to the bed, sofa, or other area where he is to be placed. If you are lowering the student into a wheelchair, begin by facing the side of the chair.
- Spread your legs to shoulder width. Bend slightly at your knees and hips. Keep your back straight, even if you are bending far forward.
- Straighten your arms downward and bend your legs. Use your legs, not your back, to lower the student. Lower him in a slow, steady manner. Keep him as close to your body as possible.
- If you need to turn, step around. Move your body as a unit, rather than twisting at the shoulders or waist.



Transfers

Floor to Wheelchair Moves

- Move the wheelchair close to the student.
- Lock the brakes. Also, the arms and footrests of many wheelchairs swing to the sides and/or can be removed. Getting these out of the way may be helpful.
- Tell the student what you are about to do (ie. I'm going to put you in your wheelchair now.").
- Bend down near the student's level using good lifting posture (ie. keep your back straight and your bottom down).
- Place one arm across the student's back, holding up his head. Place the other hand on his hip.
- Push down on his hip, moving the student's bottom to the floor. At the same time lift his upper body to a sitting position, bending his hips to a 90 degree angle.
- Move the student as close to your body as you can. Then, lift him off the mat in a seated position.
- Come to a half-kneeling position and then to a standing position. Use your stronger leg for leverage.
- Keeping the student in a seated position, move to the side of the wheelchair.
- Lower him into the wheelchair using good lowering posture (ie. keep your back straight and your bottom down). Then, seat him properly in the wheelchair.

Wheelchair to Toilet Transfers

- Move the wheelchair close to the toilet, facing the side of the toilet. Lock the brakes.
- Tell the student what you are going to do (ie. "I'm going to put you on the toilet now.").
- Stand on one side of the chair
- Unfasten all straps
- Put one arm behind his shoulders. Put the other arm under his legs just above knees.
- Bend down in a proper lifting position and lift the student out of the chair in a seated position.
- Move to the side of the toilet. Remember to step around if you need to change directions. Do not twist your body.
- Lower the student onto the toilet, using good lowering posture (ie. keep your back straight and your bottom down).
- Unfasten the belt, fasteners, etc. on the student's pants. Then, squat down in front of the student and lift him forward so that he is leaning on your shoulders. Then, pull his pants down.
- Reseat the student and position him properly (i.e. hips bent to 90 degrees, feet flat on floor or a foot rest, head centered). Give him as much help as he needs to keep his balance.

Hints

- Therapists often provide written or videotaped descriptions of methods. Make these available to all staff. Have a staff in-service and review and practice the methods.
- Develop a checklist of the steps in a method. Attach it to equipment or post it in the area where an activity will occur. label all the parts of equipment.
- Take photographs of students correctly positioned and attach the photos to the equipment or close by. This is getting easier thanks to inexpensive digital cameras
- Give your student's therapist feedback about problems with their positioning program.