

❖ BODY MECHANICS

Transferring, lifting, moving, and positioning care recipients can be a major safety problem unless you learn how to use good body mechanics. 'Body Mechanics' involves how you stand, move, and position your body to prevent injury, avoid fatigue, and make the best use of your strength. Understanding the principles of good body mechanics and applying them to your everyday routine, whether at home or at work, enables you to feel better and less tired at the end of the day.

What are the principles of body mechanics?

Body mechanics involves using good posture, balance, and the strongest and largest muscles of the body to perform the work. You can lift and move easier, no matter what your size is. You need to be concerned with both your own body mechanics and that of the care recipient.

The major movable parts of the body are the head, trunk, arms, and legs. The way in which they are aligned with each other is known as posture or body alignment. Proper body alignment allows us to move and function efficiently and with strength whether we are standing, sitting, or lying down.

Base of support is the area upon which an object rests. In humans, this is the feet. We need a good base of support in order to maintain balance. Standing with one's feet apart wide enough as own shoulders gives a wider base of support and, therefore, more balance and stability.

The strongest and largest muscle groups of the body are located in the shoulders, upper arms, hips, and thighs (**NOT** in the back.) By using smaller and weaker muscles to move heavy objects, you strain them, causing fatigue and injury. Use the strong muscles of your thighs and hips by bending your knees and squatting to lift a heavy object. Avoid bending from the waist when lifting, as this involves the small muscles of the back. Holding objects close to the body and base of support involves using upper arm and shoulder muscles. When lifting an object or a care participant, encourage them to help as much as possible. When lifting, also remember to bend knees and hips, and keep your back straight throughout the movement. Holding an object away from the body exerts strain on the smaller muscles of the lower arms and your back. Always lift with your legs, **NOT** your back. Do not twist your back as you lift. To turn when lifting, pivot your feet and move as a whole body to avoid bending or straining your back.

Follow these guidelines when lifting, moving, and transferring care recipients:

1. Stand close to the care recipient.
2. Create a base of support by placing your feet shoulder width apart.
3. Make sure the area is safe for a move or a lift.
4. Bend at your hips and knees with your back straight.
5. Push up with your leg muscles to a standing position. Turn with your whole body or pivot with your feet while remaining a straight back.
6. Back injuries are not usually the result of one incident but of the constant use of smaller back muscles.
7. Get as close to the person as possible while still allowing him/her to lean forward as needed to assist with the transfer.

DON'T Lift With Your Back, Lift With Your Head!!!!!!

Transfer Tips

Fully Dependent Transfer Tips

(Caregiver is standing)

1. Position care recipient appropriately for transfer. Ensure gait belt is in place and snug around care recipient waist.
2. While standing in front of care recipient, maintain proper posture with your back straight and knees bent. Hold a strong abdominal contraction.
3. Position your body close to care recipient to decrease strain on your back.
4. Before movement, contract your abdominal muscles to protect your back.
5. Use your knees and your lower body during transfer to decrease strain on your back.



Assisted Transfer Tips

(Caregiver is kneeling)

1. This is an alternative position that can be assumed when care recipient is able to assist.
2. While kneeling, maintain proper body mechanics, including keeping your back straight and keeping care recipient close to your body.
3. When lifting on a count of 3, pivot-turn self and care recipient while maintaining a straight back and using your leg muscles, pivot with your feet.
4. Sit the care recipient safely on a surface that is secure and not moving.
5. Avoid twisting your back throughout the motion.

❖ TURNING AND POSITIONING

Care recipients who are bedridden must have their position changed often. Learn how to give proper support and how to align the body properly in order to help them maintain or recover the best possible state of health. For instance, any open skin will heal more quickly if pressure is reduced and air is allowed to circulate around it.

If the care recipient has unsteady gait, remember – ALWAYS use a gait belt for safety and ensure the surfaces from which they rise and sit back on are locked and secured in place!

The successful practice of body alignment means that all parts of the body are in their proper positions in relation to each other. For instance, the shoulders and the hips should be at the same height and angle.

Care recipients can be positioned in many different ways, depending on their diagnosis, condition, and comfort. Remember that care recipients, might not stay in the correct position for a couple of hours even though they usually cannot move without help. Check their position often and reposition every 1-2 hours to prevent pressure ulcers from developing and promote comfort. On page 68 of this manual, diagram showed various points of pressure that may develop pressure ulcers if not repositioned frequently to relieve the pressure from the site.

Some general guidelines of positioning include the following:

1. **Position and support only nonfunctional parts of the body**, leaving the rest of the body to move freely so that blood can circulate. These may include: shoulder blades, hips, hands, arms/elbows, or legs.
2. **DO NOT** place anything under the knees when lying on the back.
3. **Any swollen limb should be kept higher than the heart** where possible so that gravity will help the extra fluid drain from the limb.
4. **A rolled up washcloth makes an excellent support for the hand.** Different sizes of pillows or pieces of foam can be used to support other parts of the body.

To make turning and positioning a safe procedure for both you and your care recipient, remember the following basic rules:

1. Always explain to the care recipient what you are going to do and why.
2. Encourage the care recipient to help as much as possible.
3. Always remember to lock the wheels on the bed or chair.
4. When safety rails are not provided on the bed, use common sense to provide safety measures during a procedure, such as moving the bed against a wall.
5. If possible, raise the bed to a comfortable working height before performing a procedure and lower it when completed.
6. Always provide privacy when performing a procedure.
7. Use good body mechanics.
8. Remember to protect any surgical tubing or drains, if present.
9. Give the most support to the heaviest parts of the care recipient's body. Usually, this is the trunk of the body, shoulders to hips.
10. For the most support, hold the care recipient close to you when lifting.
11. Move smoothly. Do not jerk.
12. Tell your care recipient to move on the count of three when he/she is able to help you.
13. The care recipient should be centered on the bed.
14. Use pillows or rolled up blankets or towels to help with supporting various pressure points and holding position of comfort.
15. Make sure the care recipient is comfortable before you leave.

Sitting Up

When care recipients are eating, watching television, visiting, reading, or if they have a heart or respiratory disorder, they will need to be positioned in bed sitting up.

Good body alignment is very important. This involves keeping the spine straight and supporting the head with a small pillow. Place pillows elsewhere, such as under the hands, for further comfort.

When care recipients do not have a hospital bed, raise them using an arm lock and then position pillows behind the back to the desired level.

Positioning on the Back

Lying on the back is called the supine position. Align the care recipient's body with the spine straight. Normally, all that is needed is a pillow under the head and, maybe, a rolled up washcloth for the hands. Be sure to loosen the top sheet and blanket to relieve pressure from the toes.

If the care recipient has nonfunctional body parts, more support will be needed. Nonfunctional means those parts of the body that cannot move due to paralysis from a stroke, resulting in a 'weak' side. This side requires more support and may include putting the following on that 'weak' side:

1. Small, folded hand towel under the shoulder blade.
2. Folded bath towel under the hip.
3. Rolled washcloth in the hand.
4. Arm and elbow on pillow so they are higher than the heart.
5. Small pillow under the calf of the leg, with the heel hanging off the mattress edge.
6. **DO NOT** place anything under the knee.

Turning

Sometimes, to prevent complications from bed rest and to receive care, bedridden care recipients must be turned. The direction in which they are moved will depend on the specific circumstances and conditions.

Procedure for Turning and Positioning

1. Wash your hands.
2. Explain to the care recipient what you are going to do.
3. Provide privacy.
4. Raise the bed to a comfortable working height.
5. Lower the head of the bed as flat as possible.
6. Raise the side rail on the opposite side from where you are working.
7. Move the care recipient to the side of the bed near you.
8. Cross the care recipient's arms over chest and nearest leg over the farthest leg.
9. If turning away from you, stay on this side of the bed. If turning the care recipient toward you, move to the other side of the bed. Remember to pull side rail up.
10. Use good body mechanics with your feet separated, knees bent, and back straight.
11. Place one of your hands on the care recipient's shoulder and the other on the hip.
12. Gently roll care recipient toward you or push them away from you.
13. Make sure care recipient is in good alignment.
14. Place pillows in appropriate areas for comfort and support:
 - Against the back
 - Under head and shoulder
 - In front of bottom leg
 - Top leg on a pillow in a flexed position
 - Under care recipient's arm/hand
15. Lower the bed.
16. Wash your hands.

❖ TRANSFERRING

Some care recipients will need assistance with transferring or moving from one place to another. This may include getting into a sitting or standing position and moving from the bed to a chair and back. It is important that this is done with the least amount of stress to the care recipient and to you. Care recipients will have confidence in you when you know your strength and your capabilities and stay within those limits.

Care recipients should be allowed to do as much as possible for themselves. As they become stronger, the amount of help you provide will decrease; but, stay with them, give directions, and help where needed. Be alert for problems such as weakness or dizzy spells, which could cause them to fall. Older people often get dizzy when changing positions, so do the procedures slowly, allowing them time to adjust to the position changes.

A transfer belt, or gait belt, can help with the work of transferring, especially with heavier care recipients. A transfer belt is made out of canvas or leather and is fastened around their waist. It should be wide enough and heavy enough for the care recipient you are using it on. The belt is used by you to grasp with your hands to assist with moving or transferring.

Remember that you and the care recipient must use good body mechanics when doing these procedures to make sure they are done safely. Have a good base of support, keep the back straight, and bend the knees.

When helping the care recipient to sit in a chair, first think about the type of chair you should use.

Consider the following points:

1. **Does the chair provide good support to the care recipient's back?** A straight back chair is often the best.
2. **Which chair gives the care recipient the most independence?** One with arms is easier to get in and out of. Both a reclining chair and a low chair are difficult to get out of.
3. **What types of chairs are available?** Varieties of chairs include living room chairs, kitchen/dining room chairs, and wheelchairs.
4. **Which chair is the safest?** Chairs with arms, stable legs, no loose parts, etc. are safest.
5. **Can the care recipient sit with the feet resting comfortably on the floor?** If not, a shorter chair may be more appropriate.

A wheelchair can provide good support and allow the care recipient freedom to move around the house. Always remember to lock the brakes on the wheelchair when moving to or from it. Make sure moving to or from the chair will be safe by considering where the leg extenders and wheels are located, how to operate the wheelchair, and safety considerations for the care recipient using it. Be careful when going over bumps and inform the care recipient prior to going over a bump to warn them. You always want to look ahead and so should the care recipient when they are in the wheelchair. Only time is when going down an incline it is best to have the care recipient facing backwards, and you holding the wheelchair in front and slowly walking down with it. You may encourage the care recipient to lean uphill to reduce the likelihood of tipping over backward, as you go downhill. As with any time the wheelchair is moving backward, it is important to proceed slowly with frequent shoulder checks and to avoid sudden stops that can cause rear tips.

Procedure: Using a Transfer Belt or Gait Belt

1. Wash your hands.
2. Explain to the care recipient what you are going to do.
3. Assist the care recipient to a sitting position.
4. Apply the belt around the care recipient's waist over clothing. **Never** apply the belt over bare skin.
5. Tighten the belt so it fits snugly. Provide only enough room for your fingers to fit under it. The buckle should be at the side or front of the care recipient.
6. Stand in front of the care recipient and grasp the belt from underneath and at the sides. Use good body mechanics.
7. Have the care recipient push up with hands from the bed or chair on count of three.
8. Brace your knees and feet against the care recipient's body.
9. Raise and lower the care recipient using good body mechanics.
10. Wash your hands when completed.



Procedure: Assisting with a Standard Sit and Transfer

1. **Remember** as a caregiver, you may assist a family member using a sit and transfer device. You may not use it independently unless trained to operate it.
2. Wash your hands.
3. Explain to the care recipient what you are going to do.
4. The care recipient should be in a sitting position with the transfer belt around the waist.
5. Have the care recipient move forward on the bed or chair and place his/her hands on the chair arms or on the bed. If going to or from a wheelchair, make sure the brakes are locked.
6. Place one of your knees between the care recipient's and the other knee bracing their knee. You should be close to the chair or bed.
7. Grasp the transfer belt and instruct the care recipient, on the count of three, to push down with hands, lean forward and stand. (If not using a transfer belt, grasp them under their arms, circling with your arms at their center of gravity.)
8. Reverse the procedure when assisting the care recipient to sit.
9. When sitting, have the care recipient feel for the bed or chair with the back of his/her legs and to reach back for the bed or chair arms.
10. Make the care recipient comfortable.
11. Wash your hands.



❖ HOYER LIFT

The Hoyer lift is a mechanical lift used to move the care recipient. It might also be called a hydraulic lift or mechanized bath chair. **NEVER use this lift to transport care recipients from one place to another.** It is a safety requirement to have at least 2 trained individuals in using the device as improper use may result in severe injury and/or death of the care recipient.

Guidelines for Using a Hoyer Lift

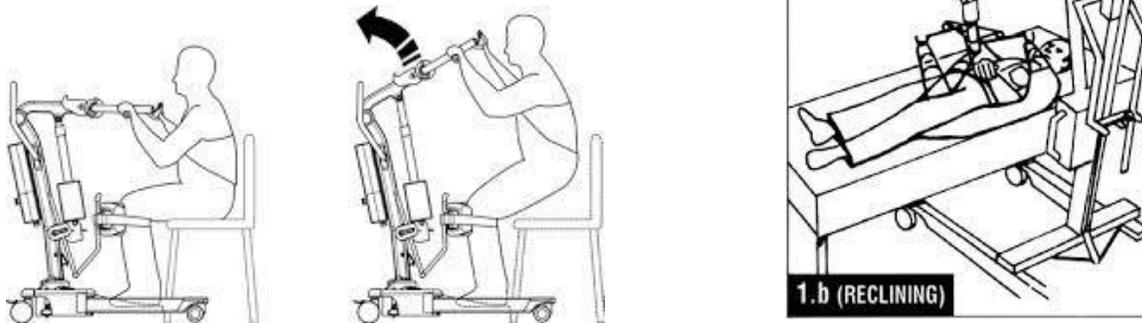
Safety is a major issue when using the Hoyer lift, so consider these guidelines when using it:

1. Check the lift to be sure it is safe to use—containing no loose parts, working properly, etc.
2. Make sure the sling is safe with no rips, etc.
3. Use the right size of sling for your care recipient.
4. The sling should reach from the shoulders to the knees.
5. Get as many wrinkles out of the sling as possible.
6. When attaching the sling, the hooks should point away from the care recipient's body.
7. When positioning the lift in place, spread the base, or legs, for better support.
8. Lock the wheels once lift is in place and before lifting the care recipient. Be sure to relock them when lowering the care recipient.
9. Have the care recipient fold arms across the chest.
10. Check the security of the sling as you raise the lift to be sure the connections have not come loose.
11. Use care when lowering the lift to protect the skin and the feet.

AS A CAREGIVER, YOU DO NOT USE OR OPERATE A HOYER LIFT!!!

Procedure: Using Hoyer Lift

1. Gather Equipment
2. Explain to the care recipient what you are going to do.
3. Wash your hands.
4. Place the sling under the care recipient.
5. Hook the sling to the lift.
6. Spread the base of the lift and lock the wheels.
7. Raise the care recipient slowly until clear of the bed. (Follow the safety guidelines mentioned previously).
8. Move the lift and position it over the chair.
9. Lock the wheels and lower the care recipient slowly to the chair.
10. Unhook the sling and move the lift away.
11. Make the care recipient comfortable.
12. Return equipment to the proper place.
13. Wash your hands.



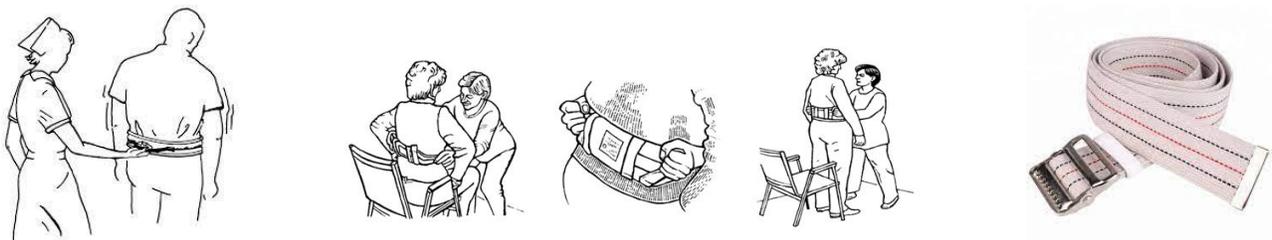
❖ ASSISTING IN THE USE OF SPECIFIC ADAPTIVE EQUIPMENT

Assisting in the use of specific adaptive equipment, such as a mechanical lifting device, if the worker will be working with clients who use the device.

An **assistive device** is an object or piece of equipment designed to help an individual with activities of daily living, such as a walker, cane, gait belt, adaptive utensils and equipment, or a mechanical lift. Adaptive tools or equipment allow the care recipient to enhance their independence and be able to perform self-care independently. Some examples of adaptive tools can be utilized during feeding with specifically adaptive utensils, hearing aids to hear, long plastic hook to put on shoes, or even safe transfer in the home with the use of bars attached to the wall in showers. Assistive devices also allow the caregiver to transfer and move patients in a way that reduces risk of injury to themselves and the care receiver that can be used to help transfer them in and out of bed and within the bed.

Gait Belt or Transfer Belt

Used to **ensure a good grip on potentially unsteady client**. The device provides added stability when transferring an individual. It is a 5mm (2 inches) wide belt, with or without handles, that is placed around a care recipient waist and fastened with Velcro or metal belt-like-clips. The gait belt must always be applied on top of clothing or gown to protect the individual's skin. A gait belt can be used with clients in both one-person or two-person pivot transfer, in transfer with a slide board and during ambulation. **It is important to utilize a gait belt with care recipients who have unsteady gait to prevent falls**, help the caretaker have more stability during ambulation and support for the care recipient to promote independence.



Mechanical Lifting Device

A mechanical lift is a hydraulic lift, or Hoyer lift, usually attached to a ceiling or can be on wheels, is used to move a person who cannot bear weight, who are unpredictable or unreliable, or who have a medical condition that does not allow them to stand or assist with transfer at all, causing them to be bed bound otherwise. *As a caregiver with European Services at Home, you do not use this lift under any circumstances.* Misuse and untrained use of the lifting device may result in **serious injury** and even **death** of the individual in it. The use of the mechanical lifting device, such as Hoyer lift, should always be used with two trained individuals at a minimum and at all times.



A Sit to Stand

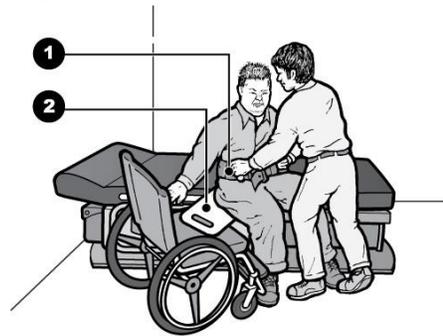
A **sit to stand** device is a mechanical device, can be electronic or manual. This device is used in clients who are able to hold on to the bars and have some strength to assist in standing and maintain a standing position with the assistance of the device. It is used to assist an individual from a sitting to standing position. A sit to stand machine *requires a trained individual* to utilize due to risk of injury to the care recipient if used improperly, thus, caregivers with European Services at Home do not use this device independently.



Transfer Board

A **transfer board** (not to be confused with a slider or stretcher board) are small pieces of rigid wood or plastic used to bridge the gap between two surfaces and aid in safe transfer. For example, between wheelchair and a bed.

Referring to the image on the right, when a care recipient is initially learning to use a transfer board, one to two healthcare workers or caregivers may use a **gait belt** (1) to assist and ensure a safe transfer using the **transfer board** (2). Eventually, the individuals are able to transfer independently from wheelchair to a bed and vice versa using a transfer board. Individuals who may be using it could have medical conditions where the need for it may arise for safety and to promote independence, in cases of amputation of lower extremities or other medical conditions.



Remember these vital points in utilization of adaptive equipment during transfer

1. Use assistive device only if properly trained in their safe use. Improper use may result in injury and/or death.
2. Always tell care recipient what you are about to do, and how they should/can assist you in the procedure.
3. Always perform a care recipient risk assessment or mobility assessment prior to using any assistive device. If the client appears unstable or unable to assist, do not force them, get help to prevent falls or injury.
4. Use proper body mechanics when using assistive device during transfer to reduce risk of injury to self.

❖ AMBULATION

Ambulation is the action of walking for which the care recipient may need your help. The physical therapist may set up a plan for both of you to follow.

The different types of equipment used to help support people when walking include canes, crutches, and walkers. Each device is adjusted by the physical therapist for a specific and unique needs of the care recipient. The place where the individual holds the walking device should be at a level with the hip, with the elbow slightly bent, and cane or walker length at the care recipient wrist. The cane, for example, should be on the individual's stronger side, thus opposite from the weak or injured leg. **NEVER** readjust the devices yourself.

Mobility means to move from place to place. Ambulation devices increase mobility and ensure safety. Sometimes, these devices are not enough to allow the care recipient mobility. A wheelchair may be needed instead in cases of longer distance that the care recipient is able to ambulate independently or with the use of supportive ambulation equipment.

The use of a wheelchair involves some special considerations. Remembering to lock the brakes on the wheels when transferring the care recipient into and out of it is very important to prevent falls. Always push the wheelchair from behind except for in an elevator and going down a ramp when you should pull the wheelchair. If the person is in the wheelchair, you're moving upward—for example, up a curb—pull the wheelchair backwards. With wheelchair assistance it is important to know how to use the wheelchair, how to position the care recipient and how to position self to ensure smooth transfer and safety.

And remember - **if the person starts to fall during transfer, don't try to stop the fall. Bend your knees and slowly lower them** to the chair, bed, floor, or other safe surface. **Call for help.**

Whatever means are used for ambulation or mobility, remember to follow these basic safety rules:

- **Always use good body mechanics and think of safety.**
- **Check your care recipient's abilities and what he/she is physically able to do.**
- **Know your own strength and ask for help if you need it.** Use common sense.
- **Remember the importance of good communication.**
- **Establish a workable routine,** using the same procedure each time you assist the care recipient.
- **Realize that many procedures can relate directly to many others.** Apply your knowledge from one procedure to another. (The sitting and standing ones apply to ambulation, too.)
- **Ambulation devices are **NOT** used to help the care recipient get up from a sitting position.**
- **NEVER** readjust the devices or use them on another person.
- **Check the devices often for safety** – rubber tips, bolts, screws, etc.
- **Use safety devices where needed** – grab bars, handrails, raised toilet seat, and non-skid rugs.
- **The care recipient should have shoes on with non-skid soles.**
- **The care recipient's clothes should fit well.** Too long or very loose clothes can interfere with the movement of ambulation devices.
- **Make sure the home is free of wet floors, or obstructive furniture or cords.**
- **Follow the physical therapist's plan or Service Plan for ambulation.**

Procedure: Using a Cane

1. Wash your hands.
2. Explain to the care recipient what you are going to do.
3. Make sure care recipient is appropriately dressed.
4. Apply a transfer belt and help the care recipient to stand.
5. Have the care recipient grip the cane for support.
 - ☺ Single point cane – usually held with strong side
 - ☺ 3 – 4 point cane – usually held with weak side
6. The care recipient moves the cane forward, usually about 12”.
7. The care recipient moves the feet forward – usually weak leg first, then strong leg.
8. Assist the care recipient as needed.
9. Wash your hands after completed with procedure.

Procedure: Using a Wheelchair

10. Wash your hands.
11. Explain to the care recipient what you are going to do. Remember, transferring in and out of wheelchair requires strength and coordination.
12. Move the wheelchair as close as possible to where you are moving the person.
13. Transfer on the stronger side of the person's body.
14. Lock the wheelchair, and keep it locked while the person is moving into or out of it.
15. Have the foot pedals and / or leg rests moved out of the way.
16. Use a gait belt to prevent injury to the person.
17. Protect your back: bend your knees during the transfer and maintain a natural curve in your back.
18. Have the person seated with their legs at a right angle (90 degrees) at both the knees and hips.
19. Have the person seated with their feet flat on the floor, unless they have been directed otherwise.
20. Instruct the care recipient, on a count of three, to push off the handle bars from the wheelchair and rise up. Assist them while holding on to the gait belt to do a pivot turn to sit on the bed or sofa, or instruct to hold on to the walker if they are going to ambulate.
21. Ensure the care recipient is safe and comfortable. Wash your hands once the procedure is complete.

Procedure: Using Crutches

1. Wash your hands.
2. Explain to the care recipient what you are going to do.
3. Make sure care recipient is appropriately dressed.
4. Apply a transfer belt and help the care recipient to stand.
5. Care recipient grasps the crutches. There should be a two-finger width between the armpit and crutch arm. Their arm is slightly bent and crutches held 6 – 8” away from the heel.
6. Swing Through Gait – no weight bearing on one leg.
 - a. Place crutches 6 – 12” ahead
 - b. Lift and swing body slightly ahead of crutches
 - c. Bring crutches in front of body and repeat
7. Four Point Gait – can bear weight on both legs.
 - a. Move right crutch forward 6 – 8”
 - b. Move left foot forward
 - c. Move left crutch forward
 - d. Move right foot forward
 - e. Repeat
8. Going Down Steps
 - a. Put crutches down on step first
 - b. Bring strong leg down, then weak leg
 - c. Repeat until at bottom of steps
9. Going Up Steps
 - a. Crutches and legs on same step

- b. Move up strong leg and put weight on it
 - c. Move up crutches and weak leg
 - d. Repeat until at top of stairs
10. Wash your hands when completed with procedure.

Procedure: Using a Walker

1. Wash your hands.
2. Explain to the care recipient what you are going to do.
3. Make sure care recipient is appropriately dressed.
4. Apply a transfer belt and help the care recipient to stand.
5. Have the care recipient hold firmly onto the side grips of the walker.
6. Lift and move the walker 8 – 12” forward, using the arms to lift, not the back. Feet should be kept still.
7. The care recipient then moves the feet forward, while holding the walker still with his/her hands. Move a weak leg first.
8. Assist the care recipient as necessary.
9. When completed with procedure, wash your hands.

Resource

European Service LLC. *Pre-Service Training Manual*, 2023, Page 71-92.