



# **Wheelchair Clinic**

at Dodd Rehabilitation Hospital



**THE OHIO STATE UNIVERSITY**  
WEXNER MEDICAL CENTER



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For a digital copy of this book, please visit [go.osu.edu/pted3451](https://go.osu.edu/pted3451).

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**This book is for informational purposes only. Talk to your healthcare provider if you have any questions about your care.**

For more health information, go to [wexnermedical.osu.edu/patiented](https://wexnermedical.osu.edu/patiented) or contact the Library for Health Information at 614-293-3707 or [health-info@osu.edu](mailto:health-info@osu.edu).

# Welcome

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We will assess your mobility needs before you leave Dodd Rehabilitation Hospital. If you need a wheelchair, you may be referred to our Wheelchair Clinic for evaluation and fitting.

**You will visit the clinic 3 to 5 times during your stay to get the best fit and type of wheelchair for you and your lifestyle.**

During your visits to the clinic, you will:

1. Decide whether a custom or rental wheelchair is the best option for you.
2. Choose a wheelchair supplier. We will help you get the facts you need to make this decision, including helping you check on your insurance coverage.
3. Be measured and have a mat evaluation by a therapist.
4. Have an initial meeting with your supplier.
5. Trial wheelchairs.
6. Have a pressure mapping assessment to check which wheelchair cushion provides the most pressure relief, if needed.
7. Have a final meeting with your supplier.

## If you order a custom wheelchair

Your supplier will give you a loaner wheelchair until your wheelchair is approved and delivered in 2 to 3 months.

Outpatient Rehabilitation Assistive Technology in Martha Morehouse Outpatient Care can track your order and take care of any needed follow up appointments. Call 614-685-5600 for more information.

Contact your supplier if you have any issues with the wheelchair or need repairs or replacement parts.

## If you order a rental wheelchair

Return your rental wheelchair within 12 months so that your insurance does not purchase the wheelchair for you.

If you are still in need of a wheelchair after 6 months, call to schedule an appointment with Assistive Technology at 614-685-5600. They can help you order a custom wheelchair.

For more information, please visit <https://wexnermedical.osu.edu/physical-therapy-rehabilitation/assistive-technology>.

# Choosing a Wheelchair

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As a patient, you have the final say when it comes to choosing who you would like to work with to obtain a wheelchair. Listed below are things to consider as you make this decision. If you have any questions or concerns, please ask us for help.

## Check with your health insurance provider

Ask for their list of approved suppliers for wheelchairs. If you choose not to use a supplier from this list, your out of pocket costs will be higher.

## Visit these websites to find wheelchair suppliers in your area

- National Registry of Rehabilitation Technology Suppliers (NRRTS), [nrrts.org](http://nrrts.org)
- Rehabilitation Engineering and Assistive Technology Society of North America (RESNA), [resna.org](http://resna.org)

## Ask suppliers these questions

- Is the supplier a **Certified Assistive Technology Professional (ATP)** or a **Certified Rehabilitative Technology Supplier (CRTS)**? These certifications mean that they are equipment specialists and have had education and training to ensure equipment decisions are made with your long term satisfaction in mind.
- Does the supplier have a service location close to your home?
- What is their service and repair policy? Does the supplier take care of adjustments or changes as you use the wheelchair? Does the supplier provide a temporary replacement if your wheelchair needs repaired?
- Does the supplier provide in home services?
- What amount of the expense of the wheelchair and its component options are covered by your insurance plan? What will be your out of pocket expenses? When will you be eligible for another wheelchair?

If the suppliers you are considering all meet the same criteria, ask what makes them special:

- Does the supplier offer special programs?
- What processes are in place to ensure that wheelchairs and components are delivered in the least amount of time?
- How does the supplier stay informed about the most up to date information in wheelchair and component technology?
- What is the supplier's history of performance? Ask for a list of recommendations.
- How long will it take to get the wheelchair?

## Now what?

Tell Dodd Rehabilitation Hospital staff what wheelchair supplier you would like to use. If you are unsure, we are happy to talk with you about your options.

We often work with these suppliers:

☐ **Millers:**

Phone: 330-753-8600

Website: [millers.com](http://millers.com)

☐ **National Seating & Mobility:**

Phone: 833-289-1020; 614-294-3689 (Columbus West); 614-781-1390 (Columbus)

Website: [nsm-seating.com](http://nsm-seating.com)

☐ **NuMotion:**

Phone: 800-500-9150; 614-515-2156 (Columbus)

Website: [numotion.com](http://numotion.com)

# Home Evaluation


Please fill out this form to help us find the best equipment for you that takes into account your needs and lifestyle. If you need help filling out this form, please ask a family or staff member for assistance. A therapist or other member of your health care team will discuss this information with you and your family.

Diagnosis: \_\_\_\_\_

Form completed by:  Patient  \_\_\_\_\_

Date: \_\_\_\_\_

<b>General</b>	<p>1. Patient lives:</p> <input type="checkbox"/> Alone <input type="checkbox"/> With: _____ <p>2. Patient lives in a:</p> <input type="checkbox"/> House <input type="checkbox"/> Condo <input type="checkbox"/> Townhouse <input type="checkbox"/> Apartment <input type="checkbox"/> Other: _____ <p>3. Patient: <input type="checkbox"/>Owns <input type="checkbox"/>Rents</p>	<p>4. Patient uses the bedroom on the _____ floor.</p> <p>5. Patient uses the bathroom on the _____ floor.</p> <p>6. Is there a bedroom on the 1st floor? <input type="checkbox"/>No <input type="checkbox"/>Yes</p> <p>7. Is there a bathroom on the 1st floor? <input type="checkbox"/> No <input type="checkbox"/> Yes, a full bath <input type="checkbox"/> Yes, a half bath</p>
<b>Entrance to Home</b>	<p>1. Entrance: Which is more accessible? <input type="checkbox"/> Front entrance <input type="checkbox"/> Back entrance</p> <p>2. Driveway surface: <input type="checkbox"/> Inclined <input type="checkbox"/> Smooth <input type="checkbox"/> Rough <input type="checkbox"/> Gravel</p> <p>3. Steps: <input type="checkbox"/> Number _____ <input type="checkbox"/> Height _____ <input type="checkbox"/> Width _____ <input type="checkbox"/> Depth _____</p>	<p>4. Ramp: <input type="checkbox"/> Needed <input type="checkbox"/> Ordered <input type="checkbox"/> Under construction <input type="checkbox"/> In place</p> <p>5. Is a handrail present? <input type="checkbox"/> Yes, left side/right side/both sides <input type="checkbox"/> No</p> <p>6. Door: Width: _____ Threshold height: _____ <input type="checkbox"/> Swings in <input type="checkbox"/> Swings out Patient able to access? <input type="checkbox"/>Yes <input type="checkbox"/>No Adaptive handles? <input type="checkbox"/>Yes <input type="checkbox"/>No</p>

<b>Living Room</b>	<ol style="list-style-type: none"> <li>Are cords from lamps and other objects out of traffic? <input type="checkbox"/>Yes <input type="checkbox"/>No</li> <li>Rugs and runners slip resistant? <input type="checkbox"/>Yes <input type="checkbox"/>No</li> <li>Floor type: <ul style="list-style-type: none"> <li><input type="checkbox"/> Carpet</li> <li><input type="checkbox"/> Tile</li> <li><input type="checkbox"/> Other: _____</li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li>Enough lighting? <input type="checkbox"/>Yes <input type="checkbox"/>No</li> <li>Able to rearrange furniture for power wheelchair? <input type="checkbox"/>Yes <input type="checkbox"/>No</li> </ol>
<b>Kitchen and Dining Area</b>	<ol style="list-style-type: none"> <li>Wheelchair and walker accessible? <input type="checkbox"/>Yes <input type="checkbox"/>No</li> <li>Patient has access to: <ul style="list-style-type: none"> <li><input type="checkbox"/> Small appliances</li> <li><input type="checkbox"/> Refrigerator</li> <li><input type="checkbox"/> Microwave</li> <li><input type="checkbox"/> Oven, stove-top</li> <li><input type="checkbox"/> Dishwasher</li> <li><input type="checkbox"/> Sink</li> <li><input type="checkbox"/> Outlets</li> </ul> </li> </ol>	Comments: _____ _____ _____ _____ _____ _____ _____ _____ _____
<b>Bedroom</b>	<ol style="list-style-type: none"> <li>Wheelchair and walker accessible? <input type="checkbox"/>Yes <input type="checkbox"/>No</li> <li>Door: <ul style="list-style-type: none"> <li>Width of opening for clearance: _____</li> <li>Threshold height: _____</li> <li><input type="checkbox"/> Swings in</li> <li><input type="checkbox"/> Swings out</li> </ul> </li> <li>Bed: <ul style="list-style-type: none"> <li><input type="checkbox"/> Twin</li> <li><input type="checkbox"/> Double</li> <li><input type="checkbox"/> Queen</li> <li><input type="checkbox"/> King</li> <li><input type="checkbox"/> Hospital</li> </ul> </li> <li>Height, top of mattress to floor: _____</li> <li>Mattress type (soft, firm, water): _____</li> <li>Access to dresser? <input type="checkbox"/>Yes <input type="checkbox"/>No</li> <li>Access to closet? <input type="checkbox"/>Yes <input type="checkbox"/>No</li> </ol>	<ol style="list-style-type: none"> <li>Would a hospital bed fit in room, if needed? <input type="checkbox"/>Yes <input type="checkbox"/>No <ul style="list-style-type: none"> <li><input type="checkbox"/> Standard (36x80)</li> <li><input type="checkbox"/> Extra long (37x84)</li> </ul> </li> <li>Write an <b>X</b> on which side of the bed the patient sleeps on: <div style="text-align: center; margin: 10px 0;">  </div> </li> <li>Floor type: <ul style="list-style-type: none"> <li><input type="checkbox"/> Carpet</li> <li><input type="checkbox"/> Tile</li> <li><input type="checkbox"/> Other: _____</li> </ul> </li> <li>Can wheelchair be maneuvered in hallways? <input type="checkbox"/>Yes <input type="checkbox"/>No Hallway width: _____</li> </ol>

<b>Bathroom</b>	<ol style="list-style-type: none"> <li>1. Wheelchair and walker accessible? <input type="checkbox"/>Yes <input type="checkbox"/>No</li> <li>2. Door: Width: _____ Threshold height: _____</li> <li>3. Bathtub: <input type="checkbox"/> Modern tub <input type="checkbox"/> Claw-foot tub <input type="checkbox"/> Sliding door <input type="checkbox"/> Shower curtain <input type="checkbox"/> Overhead shower head <input type="checkbox"/> Hand held shower head Height floor to bathtub rim: _____ Height bathtub bottom to rim: _____</li> <li>4. Stall shower: Height and width: _____ Door width: _____ Threshold height: _____</li> <li>5. Sink: Height and width: _____</li> <li>6. Toilet: Height from floor: _____ Distance from toilet to side wall: _____</li> <li>7. Grab bars: <input type="checkbox"/>Yes <input type="checkbox"/>No If no, type of wall material (plaster, plasterboard, etc.): _____ _____</li> <li>8. Equipment needed for bathing: _____ _____ _____</li> </ol>	<ol style="list-style-type: none"> <li>9. Equipment needed for toileting: _____ _____</li> <li>10. Non-skid mats/surface present? <input type="checkbox"/>Yes <input type="checkbox"/>No</li> <li>11. Floor type: <input type="checkbox"/> Carpet <input type="checkbox"/> Tile <input type="checkbox"/> Rugs <input type="checkbox"/> Other: _____</li> <li>12. Can wheelchair turn around in bathroom? <input type="checkbox"/>Yes <input type="checkbox"/>No</li> <li>13. Draw a floor plan. Mark the location of doors, bathtub, shower, sink, grab bars, etc.</li> </ol> <div style="border: 2px solid black; height: 250px; width: 100%; margin-top: 10px;"></div>
<b>Other Concerns</b>	<ol style="list-style-type: none"> <li>1. Emergency phone numbers posted on or near phones? <input type="checkbox"/>Yes <input type="checkbox"/>No</li> <li>2. Smoke detectors present and working? <input type="checkbox"/>Yes <input type="checkbox"/>No</li> <li>3. Alternate/emergency exit? <input type="checkbox"/>Yes <input type="checkbox"/>No</li> <li>4. Laundry area accessible? <input type="checkbox"/>Yes <input type="checkbox"/>No</li> <li>5. Patient responsible for child care? <input type="checkbox"/>Yes <input type="checkbox"/>No</li> <li>6. Hallways well lit? <input type="checkbox"/>Yes <input type="checkbox"/>No</li> <li>7. Inside, will the patient have to use the stairs? <input type="checkbox"/>Yes <input type="checkbox"/>No If yes: How many stairs? _____ Is a handrail present? <input type="checkbox"/>Yes, left side/right side/both sides <input type="checkbox"/>No Is there a landing? <input type="checkbox"/>Yes <input type="checkbox"/>No</li> </ol>	

Therapist/team member's signature

Date

# Manual Wheelchairs

There are many types of manual wheelchairs. We will help you find the best type for you and your needs. Please ask if you have any questions or concerns.



Type of Wheelchair	Pros	Cons
<b>Transport</b>	<ul style="list-style-type: none"> <li>• Lightweight</li> <li>• Inexpensive</li> <li>• Easy to push and transport</li> <li>• Great for traveling</li> <li>• Folds for storage</li> </ul>	<ul style="list-style-type: none"> <li>• No ability to self propel</li> <li>• Lacks support</li> <li>• Flimsy construction</li> </ul>
<b>Standard</b>	<ul style="list-style-type: none"> <li>• Less expensive</li> <li>• Sturdy</li> <li>• Good for short term use</li> </ul>	<ul style="list-style-type: none"> <li>• Heavy and hard to propel</li> <li>• Little ability to adjust for comfort</li> <li>• Fixed arm rests and footplates</li> </ul>
<b>Light weight</b>	<ul style="list-style-type: none"> <li>• Foldable versions are great for traveling</li> </ul>	
<b>High strength light weight</b>	<ul style="list-style-type: none"> <li>• Can be used as both a self propel and a transport wheelchair</li> <li>• Sturdy and light weight</li> </ul>	
<b>Ultra light weight</b>	<ul style="list-style-type: none"> <li>• Foldable versions are great for traveling</li> </ul>	

Type of Wheelchair	Pros	Cons
<b>Heavy duty</b>	<ul style="list-style-type: none"> <li>• Great for patients over 250 pounds</li> <li>• Wider seat width</li> <li>• Foldable versions for easier transport</li> </ul>	
<b>Extra heavy duty</b>	<ul style="list-style-type: none"> <li>• Great for patients over 300 pounds</li> <li>• Wider seat width</li> </ul>	
<b>Reclining</b>	<ul style="list-style-type: none"> <li>• Reclining may be a more comfortable position for some patients</li> <li>• Good option for those who like to be able to sleep in their wheelchairs</li> </ul>	<ul style="list-style-type: none"> <li>• Weighs more</li> <li>• Can cause skin to break down due to poor positioning in the wheelchair</li> </ul>
<b>Tilt in space</b>	<ul style="list-style-type: none"> <li>• Relieves pressure</li> </ul>	
<b>Hemi height</b>	<ul style="list-style-type: none"> <li>• Has a lower seat to floor height for foot propulsion</li> </ul>	

## Model options

Most manufacturers offer both rigid and foldable options for the different types of wheelchairs (standard, light weight, heavy duty, etc.).

### Rigid

- Pros: Less hardware, so a lighter wheelchair. A good choice for active users. It has more component options available.
- Cons: Not foldable. Can be prone to tipping.

### Foldable

- Pros: Easy storage and transportation. It has swing away leg rests.
- Cons: Not as durable as a rigid frame. Less ability to adjust the wheelchair for comfort. Not a good option for sports. Less component options offered.

# Manual Wheelchair Components

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Depending on the wheelchair type you select, you will need to make decisions regarding a variety of wheelchair components available from the manufacturer. Consider what options best fit your lifestyle and provide the best comfort. We are here to help as you make your selections.

## Push handles

Push handles allow your caregiver to push the wheelchair and negotiate stairs and curbs. They can also be used as a place to suspend tote bags, backpacks, and purses.

## Wheelchair backs

### Sling Back

- Most common wheelchair back, made of either non-breathable synthetic material or washable nylon (better option)
- Prone to fatigue and wear over time
- Can contribute to kyphosis or forward rounding of the back

### Solid Back

- Comes in a variety of heights, depths, and contours
- Easy to mount and remove

### Tension Adjustable Back

- Has horizontal straps at preset intervals
- Straps can be loosened or tightened for trunk stability and lumbar support

### Custom Back

- Custom made wheelchair back for hard to fit patients
- Side supports can be attached to improve trunk stability

## Wheelchair seats

### Sling Seat

- Can wear down over time
- Can promote skin break down and pressure sores

### Solid Seat

- Promotes better posture
- Allows cushions to sit properly in wheelchairs

## Arm rests

Options include:

- Tubular
- Height adjustable or fixed
- Detachable, fixed, or swing back
- Desk or full length
- Full or half lap trays – can be used for upper body support

## Axle

### Quick Release Axle

- Standard on rigid chairs for easier transport in cars – wheels detach with the push of a button

### Threaded Axle

- Standard on foldable chairs
- Wheels do not detach from the frame of the wheelchair

## Struts

### Mag Strut

- Heavier and more durable

### Spoke Strut

- Lighter and less durable

## Push rims

Options include:

- Aluminum
- Friction

## Tires

### Solid Tires

- Polyurethane tire needs the least maintenance but it lacks tread
- Best suited for indoor, non-carpeted surfaces

### Pneumatic Tires

- Lighter
- More responsive
- Provide the best cushioning from impact
- Need maintenance and are prone to punctures
- Come in a wide variety of sizes, diameters, and treads

### Semi-Pneumatic Tires

- Heavier
- Less shock absorbent
- Need little maintenance

## Brakes

Options include:

- Push to lock
- Pull to lock
- Scissor

## Leg rests

Leg rests are often standard equipment on reclining and tilting wheelchairs, options include:

- Standard leg rests
- Elevating leg rests with calf pads to lift legs to desired position

## Foot rests

Foot rests are often removable and swing away. Options include:

- Choice of foot plate styles to support the feet
- Choice of foot rest hangers, so lower legs are at a comfortable angle

## Cushions

Wheelchair cushions relieve pressure, prevent skin break down, and improve stability and comfort. Different types include:

- Foam
- Foam with gel inserts
- Gel
- Floam
- Honeycomb
- Fluid
- Air
- Hybrid

# Caring for Your Manual Wheelchair and Cushion

Preventive maintenance is key to your satisfaction and safety with using your wheelchair.

## Who to contact and the role of your team

### Your Occupational Therapist (OT) or Physical Therapist (PT)

- Your therapist works with your insurance company to get you a wheelchair that best meets your needs. They can also adjust your wheelchair to improve its comfort, use, and safety.
- You can also contact your therapist if you have concerns about:
  - Skin breakdown
  - Your independence
  - Pain or discomfort you are having



### Your Wheelchair Supplier

- Your supplier provides your wheelchair and helps you with its upkeep, service, and repairs as needed, including ordering replacement parts.
- If problems occur, your supplier can work with your therapist to find solutions.
- **Contact your supplier to set up a yearly screening for needed repairs that your insurance is likely to support.** When to complete: \_\_\_\_\_.
- **Contact your therapist or supplier if you need adjustments or changes, as you use your wheelchair.**

## How to care for your wheelchair and cushion

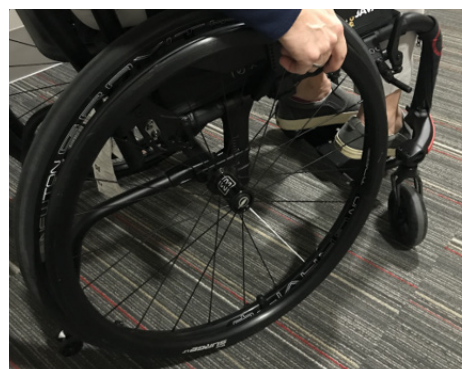
- **Check your brakes** to make sure they are snug when locked. If they are not snug, check that your tires have enough air and tire tread. If you are still having problems, **contact your supplier** for an adjustment.



- **If you have air filled tires, check the tire pressure every 2 weeks.** You can fill these tires by using a bike pump. Other types of tires will not need air.
  - Keep your tires at a good pressure to be sure they perform well. Well filled tires also help you to use the least effort when propelling your wheelchair.
  - Recommended inflation is \_\_\_\_ psi.



- **Check the wheels for signs of wear.**
  - **Contact your supplier** if tire tread is low or if your wheels or casters show signs of wear.
  - **Contact your supplier** to replace the tires every year. Ask them to also check the castors to see if they need repairs.



- **Clean your wheelchair regularly, using mild soap and a towel.**
- **Check your cushion regularly.**
  - **Replace your cushion every 3 years or as needed. Contact your insurance company** and ask how often they pay to replace cushions. Many replace every 3 years.
  - **Contact your supplier** if your cushion needs to be repaired or replaced.
  - **Contact your therapist** if you have positioning concerns, feel discomfort, or feel a lack of support.
  - **Wash your cushion cover regularly.** Do not put it in the dryer.

**Contact your therapist at Outpatient Rehabilitation Assistive Technology at 614-685-5600**, if you have any concerns about the health and safety of your wheelchair as you use it.

Make yearly follow up appointments with the:

- Ohio State Seating Clinic to support funding of repairs or replacement parts
- Supplier for repairs or replacement parts

# Power Wheelchairs

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A power wheelchair may be a good option if you are unable to propel a manual wheelchair or if you are concerned about upper body muscle strain. A power wheelchair has many component options, cannot easily be broken down, and requires special transportation. To qualify, you must be 100% safe driving the wheelchair.



## Types of power wheelchairs

### Front Wheel Drive Power Wheelchair

- Easier operation, including turning tight corners
- Closer access

### Mid Wheel Drive Power Wheelchair

- Better turning radius
- Better traction
- Popular with customers

### Rear Wheel Drive Power Wheelchair

- Best stability and speed

### Power Assist System

- Provides power assist to a manual wheelchair

## Accessory options

### Joystick

- Mounted on the left or right side
- Knob options include: small ball (standard), T-bar, U-shaped, large ball, rubber dome, mushroom head, chin cup, finger tube, straight bar, wrist plate, stadium post, or custom

### Power Tilt

- Relieves pressure to help prevent skin break down and pressure sores

# Caring for Your Power Wheelchair and Cushion

Preventive maintenance is key to your satisfaction and safety with using your wheelchair.

## Who to contact and the role of your team

### Your Occupational Therapist (OT) or Physical Therapist (PT)

- Your therapist works with you to find a wheelchair that best meets your needs. They can also adjust your wheelchair to improve its comfort, use, and safety.
- You can also contact your therapist if you have concerns about:
  - Skin breakdown
  - Your independence
  - Pain or discomfort you are having



### Your Wheelchair Supplier

- Your supplier provides your wheelchair through insurance and helps you with its upkeep, service, and repairs as needed, including ordering replacement parts.
- If problems occur, your supplier can work with your therapist to find solutions.
- **Contact your supplier to set up a yearly screening for needed repairs that your insurance is likely to support.** When to schedule: \_\_\_\_\_.
- **Contact your therapist or supplier if you need adjustments or changes as you use your wheelchair.**

## How to care for your wheelchair and cushion

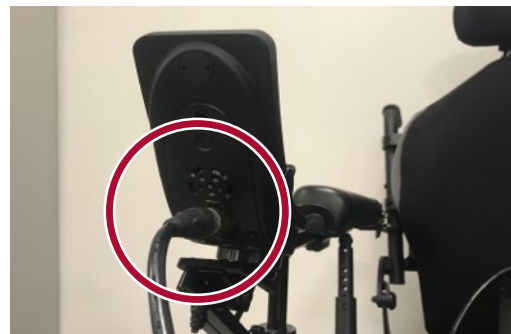
- **Watch for problems or abnormal noises from your wheelchair's motor. Contact your supplier** if there are any problems.
  - Error messages, which may appear on your screen, can have a variety of causes.



- **Check the tires and castors for signs of wear.** **Contact your supplier** if tire tread is low or if your tires or castors show signs of wear. Replace every 1 to 2 years.



- **Charge your battery** every night or at least every 2 weeks.
  - › **Watch for changes in the battery life** of your wheelchair. **Contact your supplier** if the battery's charge is not lasting long.
  - › **Contact your supplier** to replace your battery each year.



- Clean your wheelchair regularly, using mild soap and a towel.
- Check your cushion regularly.
  - › **Replace your cushion every 3 years or as needed.** **Contact your insurance company** and ask how often they pay to replace cushions. Many replace every 3 years.
  - › **Contact your supplier** if your cushion needs to be repaired or replaced.
  - › **Contact your therapist** if you have positioning concerns, feel discomfort, or feel a lack of support.
  - › **Wash your cushion cover regularly.** Do not put it in the dryer.

**Contact your therapist at Outpatient Rehabilitation Assistive Technology at 614-685-5600**, if you have any concerns about the health and safety of your wheelchair as you use it.

Make yearly follow up appointments with the:

- Ohio State Seating Clinic to support funding of repairs or replacement parts
- Supplier for repairs or replacement parts

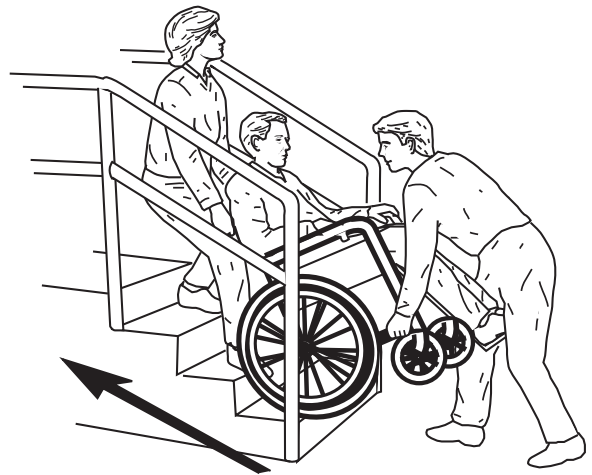
# Taking a Wheelchair Up and Down Stairs and Curbs

Please note: If the wheelchair has anti-tippers to keep it from tipping over backwards, they will need to be removed before moving the wheelchair up and down stairs and curbs. Remember to put the anti-tippers back on the wheelchair when you are done.

## Going up the stairs

**2 people are needed to get the wheelchair up the stairs. Do NOT try this with 1 person.** It is unsafe. The stronger of the 2 people should be behind the wheelchair. This person will do most of the lifting.

1. Back the wheelchair up to the stairs.
2. Get into position:
  - 1 helper gets on the stairs and holds the handles. **Make sure that the handle grips do not slip off.** Have 1 foot on the step above the wheelchair and the other foot on the next higher step.
  - The other helper gets in front of the wheelchair and holds onto its frame just above the front wheels. **Do NOT hold onto any parts that can come off, such as the footrests or armrests.**
  - Both helpers should bend their knees and arch their backs before lifting.
3. Together, both helpers tilt the wheelchair back, finding the balance point where only the back wheels are on the step.
4. Gently lift and roll the wheelchair up onto the next step. If the person in the wheelchair is able to help, he or she should pull back on the wheels.
5. The helpers should reposition themselves on each step after each lift.
6. After going up all the steps, keep the chair tilted back until the front wheels clear the top step. Gently lower the wheelchair so that all 4 wheels are on the ground.

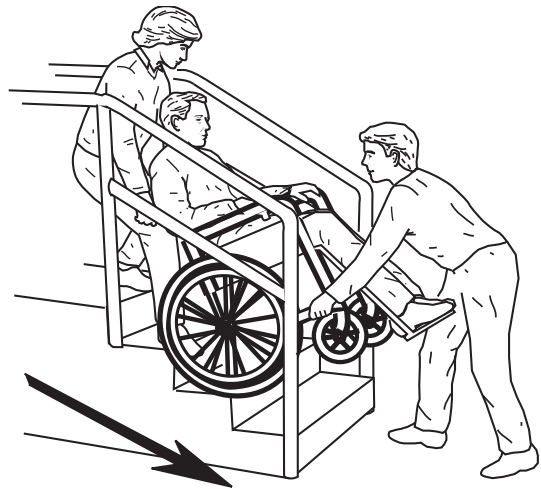


## Going down the stairs

**You will need 2 people to get the wheelchair down the stairs. Do NOT try this with 1 person.** It is unsafe. The stronger of the 2 people should be behind the wheelchair. This person will do most of the lifting.

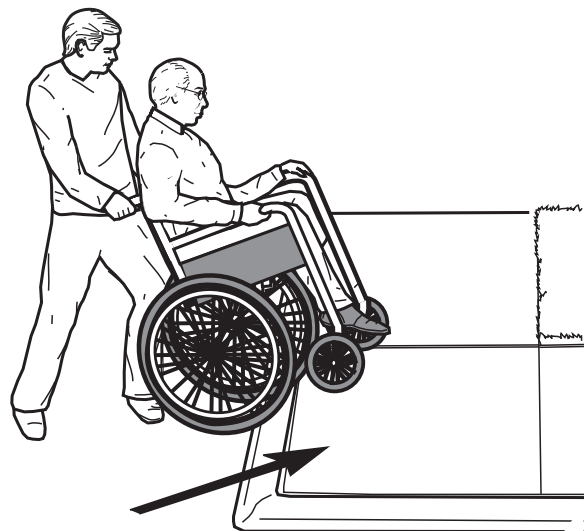
1. Roll the wheelchair forward to the stairs.
2. Get into position:
  - 1 helper gets in back of the wheelchair and holds onto the handles. **Make sure that the handle grips do not slip off.**

- The other helper gets on the stairs in front of the wheelchair and holds onto its frame just above the front wheels. **Do NOT hold onto any parts that can come off, such as the footrests or armrests.** Have 1 foot on the second step and 1 foot on the third step.
  - Both helpers should bend their knees and arch their backs before moving the wheelchair.
3. Together, both helpers tilt the wheelchair back finding the balance point where only the back wheels are on the step.
  4. Gently roll the wheelchair down each step.
  5. The helpers should reposition themselves on each step after each lift.
  6. When the chair is at the bottom of the stairs, gently lower the wheelchair so that all 4 wheels are on the ground.



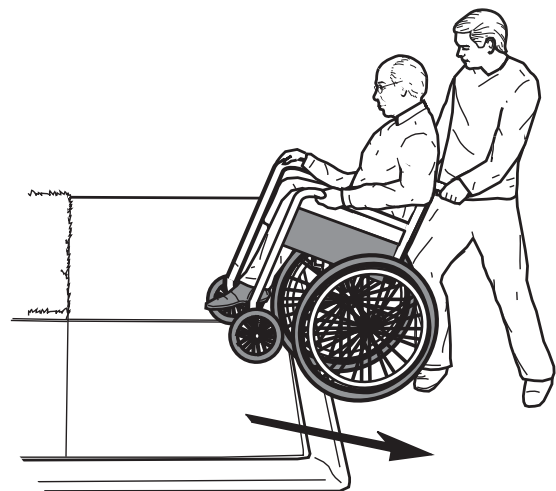
## Going up a curb

1. Push the front wheels of the wheelchair straight up to the curb.
2. Tip the wheelchair back and put the front wheels up on the curb.
3. Push the wheelchair forward until the back wheels are in contact with the curb.
4. Use your hip on the back of the wheelchair to push it forward and up onto the curb.



## Going down a curb

1. Turn the wheelchair around facing away from the curb.
2. Step carefully off the curb.
3. Slowly roll the back wheels off the curb, blocking the back with your hip.
4. Maintain a wheelie as you back the front wheels and legs away from the curb. Once cleared, slowly lower the front wheels and turn the wheelchair around to go forward.



# How to Adapt an Entrance for a Wheelchair

If you use a wheelchair, you may need to change the entrance of your home for easier access. You may need to have sidewalks, ramps, platforms, and lifts installed. Check with your city about the building codes, rules and regulations that may affect installation. **Building permits may be required.**

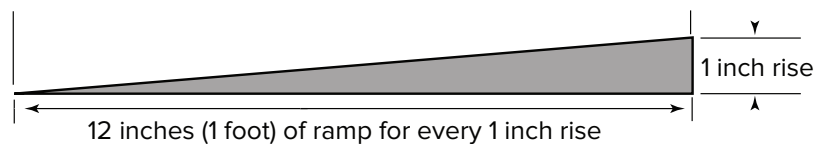
## Sidewalk leading to a ramp

Sidewalks are recommended to be at least 36 inches wide to accommodate the average width of a wheelchair of 27 to 29 inches.

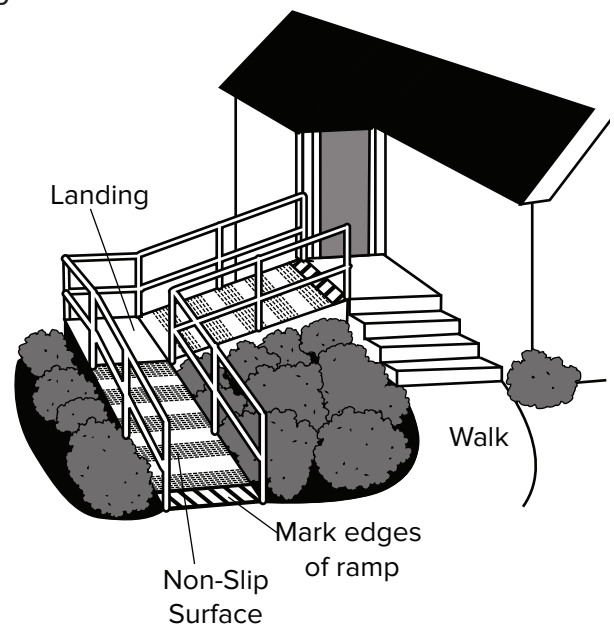
- Use solid materials for the sidewalk, such as cement, brick, or wood. They provide a smooth surface for the wheelchair to travel over and make snow removal easier in the winter.
- Make the sidewalk slightly higher than ground level so that water will drain.

## Ramps

Plan for a ramp to be 3 to 4 feet wide. The length of the ramp depends on the total height of your entry steps (ground to threshold rise). The standard ratio for ramps is 1:12. This means each inch above the ground (rise), you will need 12 inches or 1 foot of ramp length.



- Ramps longer than 30 feet will need a landing for safety. Mark the beginning and ending of each ramp section with contrasting paint or tape for safety.
- Use solid materials for the ramp, such as wood, cement, or metal.
- Use a non-slip surface on the top of the ramp, such as a “brushed” surface on cement. A commercial non-slip floor covering or safety treads may be preferred for other surfaces. Paint mixed with sand is another option to provide a non-slip texture.
- Add lighting to make the ramp safe for night time use.
- Avoid building over stairs, to allow guests stairway entry.
- Improve curb appeal by adding shrubs and landscaping near the ramp.

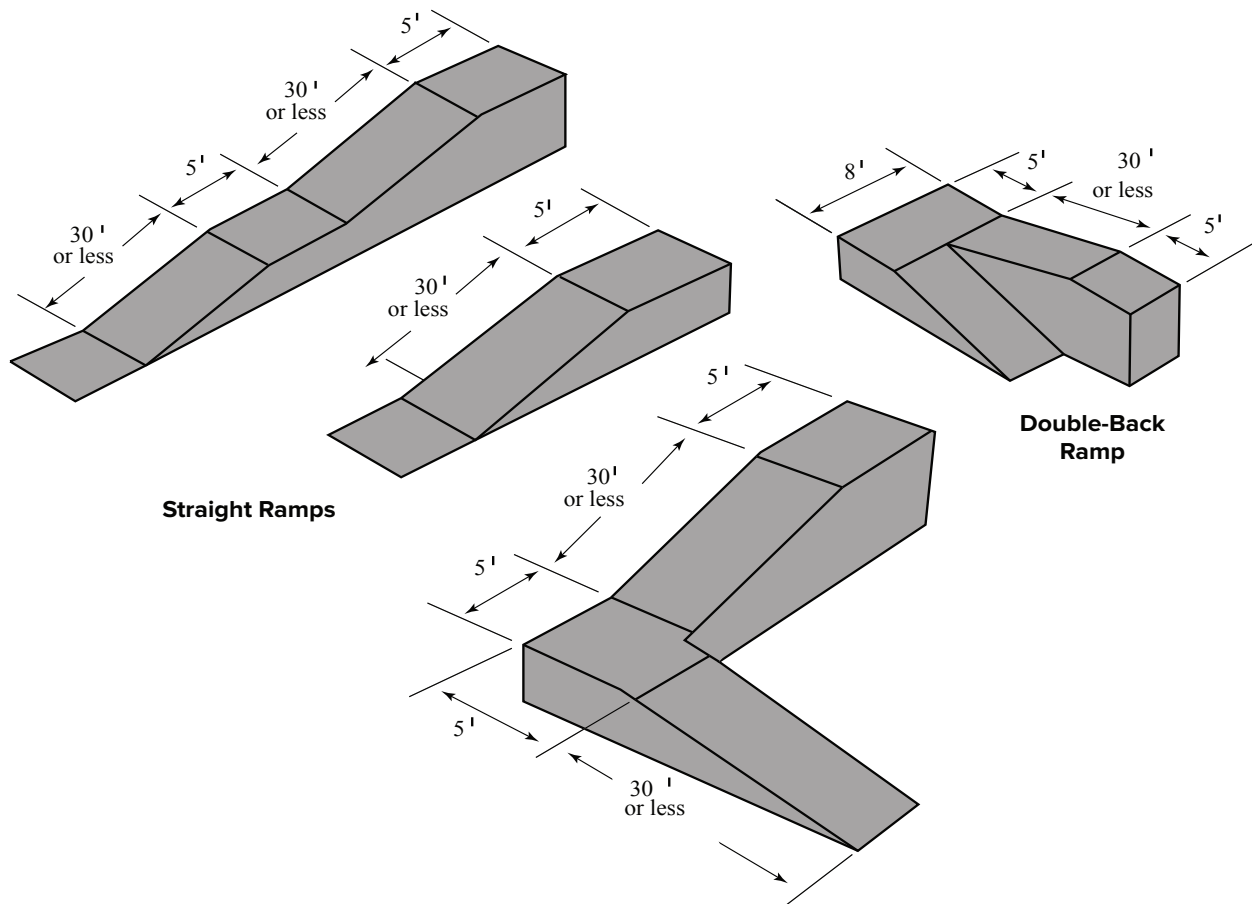


## Landings and platforms

An **entry platform**, level with the threshold, is required at the door. This platform needs to be a minimum of 5 feet wide by 5 feet long.

The **landing at the bottom of the ramp** should be at least as wide as the ramp and at least 5 feet long. If a turn is required at this landing, the minimal size is 5 feet wide by 5 feet long.

**Level platforms are needed** to break up ramps that are longer than 30 feet. If a 90 degree turn is needed, the platform must be 5 feet wide by 5 feet long. If a 180 degree turn is needed, the platform must be 5 feet wide by 8 feet long.

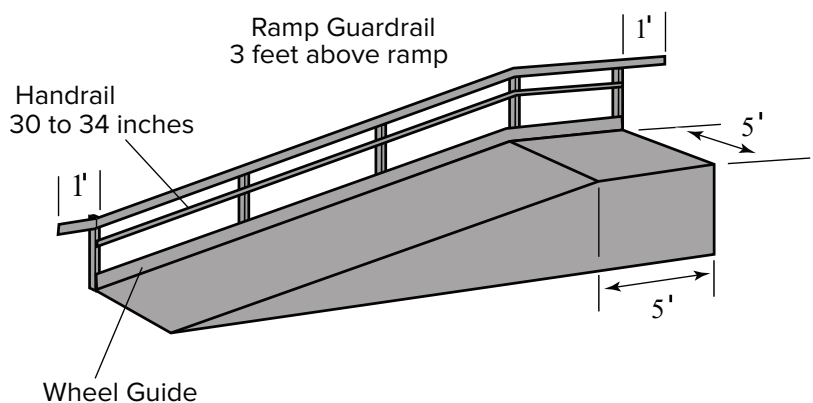


## Handrails

Handrails are required if a ramp has a 6 inch rise or greater or if the ramp is longer than 6 feet (72 inches).

Handrails need to:

- Be 2 inches in diameter (wood) or at least 1½ inches in diameter (metal).
- Extend 3 inches out from the ramp support posts and walls.



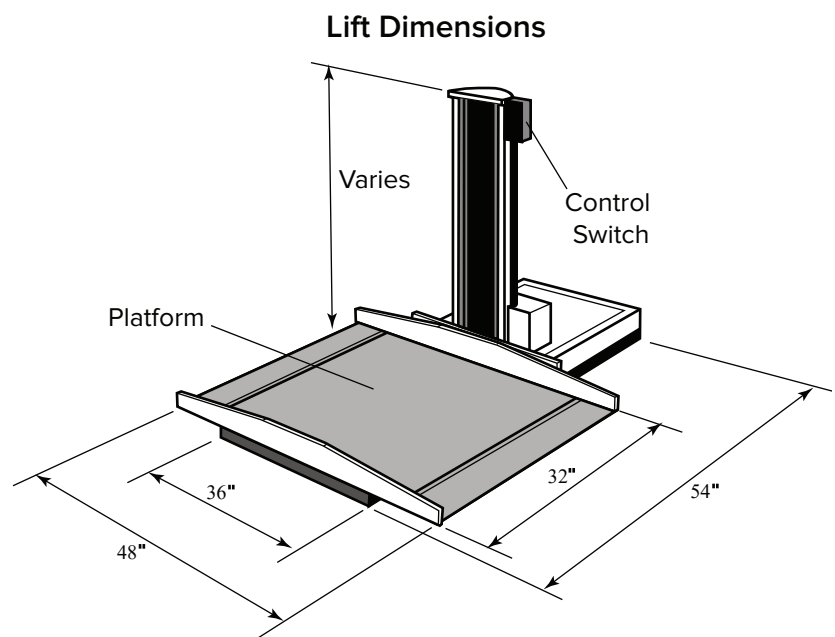
- Be mounted 30 to 34 inches above the ramp surface.
- Extend 1 foot (12 inches) past the end of the ramp and end at a post/wall or be rounded off.
- Have ramp guardrail installed 36 inches above the ramp surface.
- Have a wheel guide installed, at least 2 inches high, along both sides of the ramp floor. This will prevent the front wheels of the wheelchair from slipping off the ramp edge.

## Electric porch lifts

Porch lifts can be more expensive than ramp construction. If there is not enough room for a ramp or if extensive ramping is required, a lift becomes an affordable option. Search for local suppliers online with the search term “wheelchair lifts and ramps.” The lifts are weather proof and have a lock and key for safety and security.

### Lift Considerations

- **Lifts must sit on a sturdy platform of 5 feet wide by 5 feet long.** Cement, bricks, or patio blocks may be used.
- **You will need an outside electrical outlet.**
- **An outside light is needed for safety.**
- **You may need to build a platform “bridge” from the lift (in its raised position) to the entry door.** This platform should be at least 5 feet long.
- **The lift should be able to handle a load of 300 to 400 pounds.**
- Lifts can be ordered or adjusted to meet a variety of heights.







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