

## ERGONOMICS: PUSHING WHEELCHAIRS

Pushing and maneuvering patients in wheelchairs can be physically demanding and may result in employee injury when performed without appropriate planning, technique, or equipment. Risk is higher when tasks require awkward postures or high force, and when patient, environmental, or staffing factors limit safe control.

### Common Risk Factors

- The patient makes sudden or unexpected movements.
- Staff lack training or appropriate patient-handling equipment, or equipment is unavailable or poorly maintained.
- Space is limited or support personnel are insufficient.
- The patient cannot assist, creating “full body weight” handling.
- The employee has a pre-existing back or musculoskeletal condition that may be aggravated.

### Pre-Move Assessment

- Before transfer or transport, assess the patient’s abilities, your abilities and condition, the environment, and available resources (equipment and/or assistance). Select the safest approach and implement controls based on the assessment.
- Obtain consent before handling the wheelchair and confirm the destination and any preferences or needs.



### Safe Wheelchair Handling

- Set brakes when the wheelchair is stationary and brace your opposite hand on a stable surface when applying or releasing brakes.
- Do not proceed if you cannot maneuver the wheelchair safely given the patient’s size and weight and your own limitations.
- Push the wheelchair rather than pulling it whenever feasible.
- Use neutral posture with slightly bent knees and push using your legs and arms to reduce strain.
- Maintain a secure, comfortable grip, and start and stop gradually.
- Navigate thresholds, elevator gaps, and small transitions slowly, and apply controlled downward force on the push handles to reduce load on the front casters.
- Ensure the patient’s feet are supported on the footrests before moving.
- Keep heavy bags or equipment off the back of the wheelchair to prevent tipping or imbalance.
- Descend ramps and slopes slowly while maintaining control from the handles. For steep ramps, walk backward and do not control the wheelchair from the front.
- Confirm the path is clear before moving and manage obstacles in advance.



### Additional Resources

- <https://ehs.yale.edu/sites/default/files/files/patient-handling-ergonomics.pdf>