

Handling wheelchairs in and out of vehicles

What is the problem?

Moving wheelchairs in and out of vehicles has been associated with musculoskeletal injuries to workers.

What are the risks?

Workers may be at risk of injuries to the back and shoulders when moving wheelchairs in and out of vehicles, particularly when lifting, reaching, pushing, pulling, bending and exerting high forces in awkward postures.

The common sources of risk include:

Wheelchairs

- Size and weight
- Awkward shape
- Rigid or collapsible type
- Inflatable or rigid tyres

Task

- Moving or lifting a wheelchair
- Disassembling a wheelchair into component parts to assist with transportation

Vehicles

- Lack of appropriate transport, space or attachment points, specifically:

Vans/buses/taxis

- Positioning wheelchairs in the vehicle
- Attaching a wheelchair to points inside vehicle (eg in floor tracking, A frames or mini A frames)
- Inadequate space to manoeuvre (eg when attaching front wheels to security straps).

Cars

- Lack of equipment to lift wheelchair in and out of car
- Positioning a wheelchair in the boot
- Type of car/boot access
- Lifting a wheelchair up high to avoid damaging car panels.

These issues should be considered during the initial assessment of the client's need and if they pose a risk to workers, should be controlled prior to the provision of service.

What are solutions to the problem?

Implement a system to regularly seek information from the worker to check if the work environment, tasks, equipment or client's needs have changed, or need to change.

If changes have been made or need to be made, employers should complete a re-assessment of the worker's tasks, equipment and environment.

Fix any safety issues as soon as possible so the worker's and client's needs are safely met.

The risk of injury can be eliminated or reduced by the following safety measures:

Equipment

- Provide the lightest wheelchair that is suitable and safe for the client and activity.
- Provide manual wheelchairs that are collapsible with quick release wheels.
- Never lift electric wheelchairs or motorised vehicles such as a scooter. These should only be moved in a wheelchair accessible taxi or bus fitted with a hoist or a specially adapted vehicle.

Task

- Develop operational procedures that identify the safest sequence of actions for:
 - disassembling the wheelchair into small parts (eg removal of quick release wheels)
 - moving and lifting wheelchairs, including the identification of parts of the wheelchair to be used as leverage/lifting points.
- Develop a pre-trip assessment checklist that includes detailed accessibility questions relating to the specific requirements of clients.
- Complete a venue checklist for all activities.
- Hire manual wheelchairs and scooters at shopping centres to eliminate the need to transport a wheelchair. Contact the shopping centre prior to a visit to check:
 - hiring conditions
 - the condition and suitability of the chair (eg tyre pressure and brakes)
 - the environment (eg ramps and access to car park).

Vehicles

Employers should assess vehicles as suitable for the task and/or provide appropriate transport to reduce risks to the worker and client. Vehicles include:

- the service provider's specially adapted vehicle (eg rear entry accessible vans)
- the client's specially adapted vehicle
- the service provider's car
- suitably trained transport providers
- bus fitted with a hoist
- the worker's own car.

Vans/buses/taxis

- Install vehicle attachment points by qualified and accredited professionals to approved safety standards.
- Develop operational procedures that identify the safest sequence of actions for:
 - loading/unloading
 - securing the wheelchair during transit.
- Provide workers with information, instruction and supervision in documented work procedures.
- Obtain approval from the Vehicle Assessment Signatory Scheme (managed by VicRoads) where any modifications have been/will be made to a vehicle.
- Use wheelchair accessible taxis to transport manual and power wheelchairs and scooters. Note: Taxi drivers may provide assistance with boarding and securing the wheelchair or scooter but may not be required to assist.
- Scooter loaders fixed to the floor of the vehicle that use an electric drive to lift and lower the scooter and rotating arm to swing it into the luggage compartment or boot. Some loaders can be used with a range of scooters and power wheelchairs.

A Health and Safety Solution

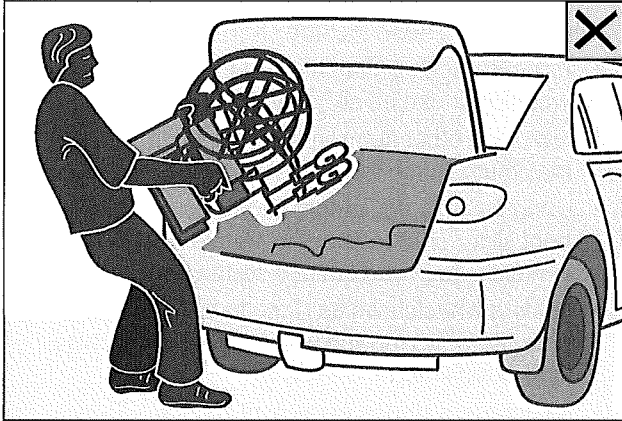
Cars

- Use aids to reduce risks such as:
 - wheelchair carriers mounted to the tow bar of a vehicle. Other options allow the wheelchair to be rolled onto the carrier with minimal lifting or require the wheelchair to be lifted and hung off hooks
 - electrically operated wheelchair hoists with a winch to raise and store the wheelchair on the back or in the boot of a vehicle
 - wheelchair ramps to allow a wheelchair or scooter to be loaded into a van or station wagon. Ramps can be freestanding or mounted to the tow bar
 - scooter and wheelchair trailers allow transport without the need to disassemble the equipment. Scooter trailers have a tilting deck to enable a scooter or power wheelchair to be driven on and off the trailer
- If none of the above is practicable, general guidelines should apply for foldable manual wheelchairs. These include:
 - using a wagon or hatch vehicle where the folded wheelchair can be slid straight into the boot
 - removing other items in the boot to provide maximum space for a wheelchair
 - using suitable equipment such as a wheelchair boot slider or slide sheet to lift foldable wheelchairs in and out of a sedan boot
 - holding wheelchairs as close to the body as possible when moving wheelchairs to minimise load when lifting
 - seeking assistance of another person
 - introducing aids and/or attachments to prevent the wheelchair moving further into the boot during transport.

Any movements or actions involved with using aids and equipment to assist in moving unoccupied wheelchairs should also be assessed to address manual handling risks and ensure these risks are controlled. For example, lifting and manoeuvring ramps into position for wheelchairs can also cause injuries.

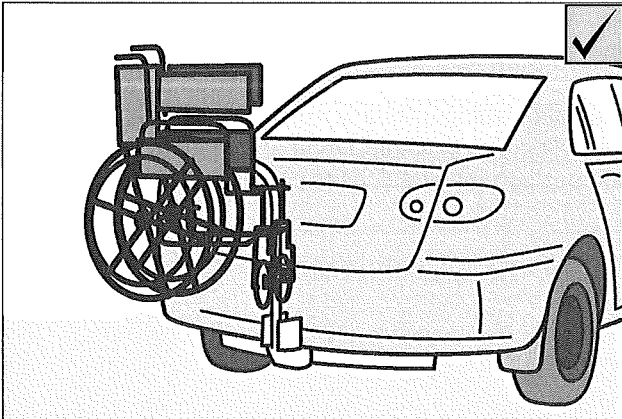
A Health and Safety Solution

The problem



Lifting heavy and awkward wheelchairs without assistance puts the worker at risk of injury to the back and shoulders.

A solution



Wheelchair carriers mounted to the tow bar of a vehicle reduces lifting and reaching for the worker.

Further Information

WorkSafe Advisory Service

Toll-free 1800 136 089

Email info@worksafe.vic.gov.au

worksafe.vic.gov.au

Related WorkSafe Health and Safety Solutions

- *Moving and supporting people with a disability*
- *Supporting people with personal hygiene care*
- *Assisting people in wheelchairs*
- *Occupational violence*
- *Moving/lifting objects*
- *Vacuuming*
- *Mopping*
- *Cleaning bathrooms*
- *Making beds*
- *Work related driving: Transporting people and moving equipment*

Related publications

- *Victorian home care industry occupational health and safety guide, 2005*

Available from

worksafe.vic.gov.au and health.vic.gov.au

Australian Standards

- *AS/NZS 3856:1998, Hoists and ramps for people with disabilities – Vehicle-mounted – Product requirements*
- *AS/NZS 2640:1994, Portable ramps for vehicles*
- *AS3693 – Wheelchairs—Nomenclature, terms and definitions*
- *AS3695 – Wheelchairs—Product requirements*
- *AS3696 – Wheelchairs*
- *ISO 10542-1:2001, Technical systems and aids for disabled or handicapped persons – wheelchair tie down and occupant – restraint systems*