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### Introduction

People use wheelchairs for a variety of different reasons. Some people have a spinal cord injury. Others have a birth defect or genetic condition. Still others find they need more support as they age. Just as the reasons for using a wheelchair may differ from person to person, the solutions you need in your home will differ, too. In this book you will learn about the different solutions available for adapting your bathroom. When looking at adaptations, there are three main categories to consider. First, you should look

at the room itself. Is the space accessible? How wide is the door? Are there places to install grab bars? Then, your bathing options, such as showers and bathtubs. Finally, you should look at toileting, which includes toilets, sinks, and taps

In this ebook you will find an overview of what is available to you, so that you can make the best choice for your situation. Take into account that it is not a construction manual.

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# **Doorways and Turning Radius:** Is There Enough Space?



The first step in making sure your bathroom is accessible it to make sure you can access it. Is your bathroom door wide enough for you to pass through? Does your bathroom have enough space to allow you to turn around inside? Is there room to install grab bars near your toilet or roll up to your sink? Measuring and checking the geometry of the room will help you answer these guestions.

### **Doorways and Passages**

Doors should be a minimum of 90cm wide, with the door open at 90 degrees. The real test is if there is enough space for your walker or wheelchair to pass through. There also must be enough space between each bathroom fixture to allow you to pass between, approach, and use each one. So the end decision should depend on what type of mobility aid you are using, and your maneuvering skills,

Along with wider doorways and spaces, the flooring should also be flush to the ground. The entrance to the bathroom should have a zero threshold. If you can't avoid having a threshold (e.g. your bathroom is tile and your hallway is wood) then make sure is beveled to avoid catching on your mobility device. Also, limit it to 1,5 cm or

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less in height. This is usually a reasonable height for most wheelchair users to navigate over.

Also, the general location of the bathroom should be considered. If you are in a multi-level home, the ideal place make an accessible bathroom is the ground floor. Even if you have a lift or currently have the ability to get yourself up the stairs, there may come a time when it is impossible to navigate stairs independently. In this case it is much easier to do all your living downstairs.



### **Turning Radius**

Once inside the bathroom, you need to have clear floor space that allows for your turning radius. Whether you use a walker, manual wheelchair, or electric wheelchair, you should have enough room to:

- Close the door with both yourself and the mobility aid inside the bathroom
- ▶ Easily approach and use fixtures such as sinks and toilets
- Turn all the way around with your mobility aid, so that you can exit the bathroom without having to back up

How much space will you need? The average manual wheelchair needs a minimum of 77cm  $\times$  122cm. But depending on the size of your manual chair, or if you have an electric wheelchair, you may need up to 92cm  $\times$  153 cm of clear floor space.

The same amount of space, in terms of width and length, will be needed for the space adjacent to all bathroom fixtures. So plan for another minimum of 77cm x 122cm next to things like toilets and sinks. You may need even more if you use an electric wheelchair, a reclining wheelchair, or a scooter.

Vertical grab bars are most commonly used in front of showers and tubs. Short grab bars work just fine, but longer ones are more accommodating for height differences. If you are the only person using the grab bars in your bathroom, then it doesn't matter. But if you want to make it accessible for anyone, the longer one is preferable. Grab bars help you enter and exit the tub safely by preventing you from reaching out to grab towel racks, shower doors, or other unstable bathroom fixtures. Inside the shower or tub you may want to use horizontal or diagonal bars. The horizontal bars add stability when standing and the diagonal bars provide support when lowering yourself to sit down on a shower seat.

### **Suggested Products**

The <u>Stileo H171</u> is a great option for someone who needs a simple stability solution. The Stileo has a vacuum lever, so no special equipment is needed for installation. Because it requires no structural changes to the home, it also works well for temporary or immediate adaptation needs. The Stileo also has an ergonomic shape and structured surface, which ensures a secure grip and protects against falling.

#### **Grab Bars**

Grab bars are an important feature in an accessible bathroom, and you need to make sure there is room to install them. Near the toilet, grab bars are used to assist in sitting and standing. They can be installed either horizontally or diagonally. Horizontal bars are more ergonomically correct. The put less strain on your wrist and offer a grip at varying heights. The only problem with diagonal bars is, depending on the length, they may not reach between the studs. If this happens, you can mount the bar with mounting anchors instead.





## **Bathing And Showering:**

### What are My Options?



The solutions for bathing and showering range from simple to complex. The option that will work best for you will depend on how mobile you are, what type of assistance you might need, and what your existing bathroom features are like. Some bathrooms may need only small modifications while others may need complete remodeling.

### **Bathtubs**

One of the simplest solutions for the bathtub is the bathtub board. A bathtub board sits across the top of the bathtub. It eliminates the need for lowering yourself down into the tub or having to pull yourself out. Bathtub boards are designed to be non-slip. They are porous so that the water will drain through. Bathtub boards are made to be adjustable, so they fit virtually any bathtub. The boards come in different sizes and include a variety of features, such as hand grips or shower head holders.

Bathtub seats are another simple option. They have two basic styles. Some bathtub seats sit down in the tub and require lowering yourself down to sit. Other seats are attached to the side of the tub and swivel out for ease of transfer. The swivel seats are similar to the bathtub board

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in that you do not have to lower yourself down into the tub, you are sitting above it.

If you want to submerge yourself fully in the tub, but have concerns about your ability to safely lower yourself up and down, a bath lift is a wonderful solution. Bath lifts provide absolute safety and by lowering you in and out of the tub and the push of a button. Features such as back and neck rests as well as swiveling bases add to the comfort and stability.



Walk-in tubs are the most complicated and expensive option, but it may be something you prefer. Walk-in-tubs are like bathtubs with tall sides and doors. With these tubs you can walk in, shut the door behind you, and then lower yourself onto a built in bench or bathtub seat. There are many options for walk-in-tub features, and what you get depends on your needs and the price you can afford. Walk-in-tubs will require professional installation.

### **Showering**

An accessible shower is going to be curb-less. That means the shower should have a flush transition between the shower stall floor and the bathroom floor. This will make it easy for those who use a wheelchair or rolling shower chair as well as those who can walk, but may have trouble navigating over thresholds. These showers can be designed with sides and doors or with curtains only.

Shower heads are another important element to make accessible. While it's possible to use a traditional shower head, it does make it more difficult to clean your entire body. A removable, adjustable shower head is necessary. Adjusting the height of the shower head makes for a more comfortable water flow. Being able to remove the shower head lets you to point the flow of water toward areas it wouldn't easily reach while you are stationary.

And in a traditional tub or shower, soap dishes are ledges are often designed at a height or location that is out of reach for someone who is seated or stationary. Bath caddies for people with disabilities should have an adjustable element, so they can be customized to fit your situation. Some caddies also come with more than one basket or shelf. These are ideal because you can use the different levels for supplies other than just soap and shampoo. Having a place to set your washcloth or store medical supplies on can come in handy.

Inside the shower you can choose to design a built-in shower bench or you can purchase a separate shower seat. These seats come in fixed, folding, or wall-mounted.

### **Toilet and Shower Chairs**



Inside the shower you can choose to design a built-in shower bench or you can purchase a separate shower seat. These seats come in fixed, folding, or wall-mounted. A fixed shower chair sits in the shower like a regular chair. To move it, you have to pick up the entire chair and place it somewhere else. The folding chairs are the same, but you can fold them and more easily put them out of the way if someone else wants to use the shower. Wall-mounted seats are another good space-saving option. They are mounted to the wall, but fold up and out of the way when not in use.

Shower chairs that you push provide much more stability, and they allow you to move from toilet to shower, seamlessly. If you need assistance, a pushable shower chair is the perfect solution. These chairs are also usually made with more options for security, such as seat belts, harnesses, and arm and back rests. The base of these chairs may be wider, for stability. They may also be large enough to straddle your toilet.

Shower chairs that you propel look more like manual wheelchairs, they are just made of waterproof materials. They can be made with built-in toilet seats or with solid seats. Arm rests and backrests come standard on these chairs, as well as footplates. Shower chairs that you can propel give the maximum level of independence to wheelchair users.

### **Product Examples**

The <u>Pico Commode</u> is a great modular shower chair for someone who doesn't want a large, bulky chair, or an installed unit. The textured surface makes sitting safer by reducing slipping. Rubber feet and height-adjustable legs make the Pico stable and comfortable. It also has a hygiene recess that can be positioned at the front or back that allows you to reach and clean areas that would typically be blocked by a seat.



# **Toileting:** Taking Care of Business... Independently



Being able to use the toilet and sink is the main function of your bathroom. And you will want to do this as independently as possible. How much assistance you need depends on your mobility, but you can at least make sure the the area is equipped to make it an easy process. There are many options for adapting your existing toilet, but your sink may need a little extra remodeling, depending on what type you currently have.

**Toilets and Bidets** 

Regarding your toilet, the type of system you use and the way you transfer on will depend on what type of floor space you have available, as well as your personal preference. Some people need a specific angle for transfer. You may prefer to slide in from the side, or come around the front, stand, and pivot onto the toilet seat.

Toilet seats can be raised in several different ways. The first way is to just use a toilet seat raiser or bidet. The toilet seat raiser sits on top of your regular toilet and adds some height, so you don't have to lower yourself too far down. These raisers can come in plain models, or they can be combination raisers and bidets. The

bidet comes in really handy when it is time to clean up. Many people find them to be essential parts of their independent hygiene routine. Products, such as the <u>Invacare Aquatec Pure Bidet</u> can be added to your

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existing toilet. The warm water spray provides a gentle and effective cleansing solution.

Another way you can raise your toilet seat is by using a toilet frame or a shower chair. A toilet frame fits right over your regular toilet, but provides a fuller surface for sitting, armrests, and a back rest. These usually come with the option to leave the hole open to the toilet, or to place a bucket underneath for collection purposes. Shower chairs work in much the same way, but they have wheels that you can be pushed or propelled from over the toilet into the shower.

**Sinks** 

To access the sink, it is usually more comfortable for a seated user to sit facing the sink. This means there needs to be room for their feet to be positioned underneath. If this is not possible, a wheelchair user can choose to park sideways against the sink and use it that way. However, it is very awkward to have to perform all grooming and hygiene tasks from this angle.

Pedestal sinks are a popular option because they typically allow the user to roll right up in front. The lack of cabinetry underneath gives you that extra space for your feet and knees. If you have the ability to install a pedestal sink near your toilet, some people have them reinforced so that they are able to use the sink to pull up on, like a grab bar. Then they are able to transfer over (or lean over) and wash their hands.

Wall-mounted 'floating' wash hand basins also offer more flexibility and they keep the floor space clear. These floating basis don't have any pedestal underneath. They

can be installed at a height that is appropriate for you, or they can be fitted onto adjustable wall brackets that allow the height to be changed for the different users. Some models also swing or slide to the side, to optimize bathroom space. If you choose this type of sink, it is important to make sure the water and waste system is flexible and installed in a manner that the wheelchair won't catch on the pipework and pull it out of the wall.

To access the sink, it is usually more comfortable for a seated user to sit facing the sink. This means there needs to be room for their feet to be positioned underneath.

### **Fixtures and Fittings**

The taps are also something you should consider. Lever taps are user friendly for those who may have trouble gripping and turning a standard knob. Extended lever taps are also an option. You can buy extensions that make the lever easier to reach from far away, or that make them require less force to move up and down. Then you have infra-red motion sensor taps that are triggered by movement. This would offer the maximum amount of independence for someone who has limited fine motor control.

The temperature is also very important. If you have motor control issues, or reduced sensation, you have to be very careful not to get burned. Many people turn their water heater down at the source. But if that's not practical for you, you can get taps that come in thermostatic versions. They control the heat of the water right at the tap. By not allowing the water to exceed a pre-set temperature, they help you avoid the risk of scalding.

And of course, fixtures such as light switches and outlets should be installed at a height that is easily reached by all users. Light switches are typically installed a little lower, and outlets are installed a little higher. A good height for light switches is about 91 cm, but no higher than 111cm. They should also not be installed behind counters or near any other cabinets or appliances that may make them difficult to reach.



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