

Plus-Size: Home adaptations

The physical environment plays a critical role in the pathway of care for the plus-size person, not only inside the house but also outside. There are a lot of obstacles to overcome and take into consideration, but existing research into room designs in a plus-size care environment can help understand the different considerations to keep in mind.



Knowledge bank

Outdoor

It is recommended for plus-size people to have their living environment on street level or on the ground floor. This will allow easier access into and out of the house and it will also have a more supportive floor. A 3x3 m room with a solid concrete floor can take approximately 2000 kg. Other levels of a building (e.g. an apartment) will take less weight because of the construction. It is important to keep in mind that medical aids for plus-size people are bigger, stronger and for that reason, heavier. Adding some furniture in the room will take it quickly over the 1000 kg (Rush and Cookson, 2011).

The outdoor space of the living environment should ideally be as flat and accessible as possible with limited obstacles, to make the transfer for the individual from their home to a transportation device as easy as possible.

Things to consider in the physical environment that can influence the accessibility and mobility of a plus-size individual are:

- **Manoeuvrability in small spaces**
- **Potential obstacles**
- **Doorway and small entrance access**
- **Ascending and descending obstacles: up and down kerbs or pavements**
- **Inclines and declines**
- **Side slopes**
- **Different terrains: grass, loose stones etc**

By adding ramps or grab bars in the outdoor environment (if possible) can help overcome obstacles.

Indoor

The minimal size of a single room should be at least 16.61 m² according to a functional space experiment run by Loughborough University.

Other studies state the room should be at least 3.1 m x 3.7 m. The Bariatric Room Design Advisory Board concluded that the optimal width should be 4.27 m and the depth be 4.57 m.

These are only experiments done to find out the minimal functional space for a room and are merely indications. They do not support normal daily activities for the family, storage space or room to accommodate special hygiene requirements.

For an individual in a home environment, it will not always be possible to create the ideal dimensions so choices and compromises will have to be made to keep it safe and liveable.

Other guidelines for space planning are available through many organisations, such as American Institute of Architects (AIA) and the Bariatric Room Design Advisory Board.

- **Doorways in general are recommended to be at least 1220 mm wide and if the individual uses a wheelchair, a turning circle of 1830 mm should be considered.**

Recommendations for door/corridor widths vary, however, studies emphasise the importance of including the individual when choosing equipment (bed, wheelchair or walker) along with the caregiver/family member to understand the total width required for clearance. (Andrade, 2004; Barista, 2005; Hoover & Smidth, 2005; Tizer, 2007; Collignon, 2008; Muir, 2009). It is important that the weight of every device or adaptation that is brought into the house or room is checked to make sure the flooring can take the extra weight.

Bedroom

A bed adapted to a plus-size individual can exceed 1200 mm with some beds expanding to 1500 mm when side rails are in place. The width of the bed is a key point to consider when setting up a bedroom, as well as its maximum user weight, to make sure it is suitable. A key recommendation is to ensure there is sufficient space between the bed and any other obstacles, as during falls, there is a risk the individual will hit or try to grab hold of something if objects are too close together.

Additional considerations for the bedroom

● Manoeuvrability

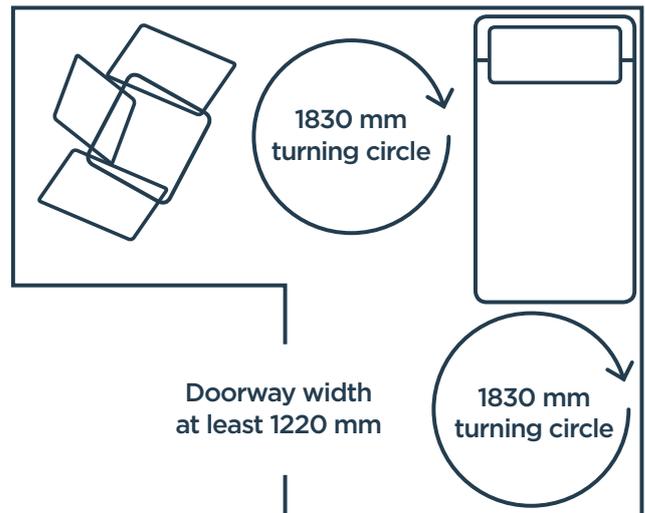
Attention needs to be paid to movement and manoeuvrability, not only for the individual but also for the care team or family members, so they can safely and ergonomically assist the person. If the individual uses a wheelchair, the turning radius of the chair can be up to 1830 mm, whilst a walking frame will take up less space.

● Access

Storage and easy access of medical aids in the room will also require space. This can leave room for extra furniture very limited.

● Independence

To increase independence for the individual, small aids like grab bars and non-slip floors can make a big difference and keep the person mobile for as long as possible.



Support with transfers

Getting in and out of bed is a challenging task when carrying extra weight, so there are specialised bariatric beds available with electrical functions to support the individual when transferring in and out of bed. If doing a transfer independently is not possible, a lifter can help the caregiver or family members.

Ideally a ceiling lift could be installed giving the caregiver access to all sides of the individual whilst being lifted. It can also reduce caregiver injuries by up to 60% (Collins et al., 2006). If this type of installation is too costly or not possible, a mobile hoist is an option.

Seating

When choosing bariatric seating furniture, the following general guidelines should be considered:

- Steel reinforcement depending on the person's weight and the maximum user weight of the chair
- A seat width that fits the individual
- The seat height should not be too low to enable people to easily get out of the chair
- The height should not be too high otherwise it will be difficult for the individual to get onto the seat
- Armrests, with something to grab on to at the front of the armrest to help the person to get up - this construction should also be strong enough to hold the weight
- The seat angle can be 1° forward to assist the individual when getting up
- The seat itself should be firm

Bathroom

● Doorways

It goes without saying that the route to the bathroom should be easily accessible with wide doorways and hallways. Sliding doors or two swinging doors can be installed but there must be at least 2740 mm of opening, however, this does provide more wall space. In a home environment, this adaptation is not always possible.

If a mobile lift is being used in the bathroom, there needs to be enough room for the mobile lift and the caregiver(s) to pass into the room. If space is too limited for a mobile lifter, there is the option to transfer the person to a shower commode chair.

● Toilet

The toilet and sink should be mounted to the floor instead of hanging on the wall due to weight limits.

The toilet seat should be larger than a regular-sized toilet seat and have the capacity to take the additional weight. It is also important that the toilet isn't placed directly against the wall, to give the individual room to sit as comfortable as possible. If someone is assisting, there should be additional room for that person(s) to help with the transfer. Lastly, make sure that everything needed when on the toilet is within reach.

● Shower

For the plus-size person, a shower is recommended rather than a bath for safety and hygienic reasons.

The size of the shower will have to accommodate manoeuvring and handling and requires less energy than a bath. If the individual has no mobility, other medical aids are available, such as a shower commode, however, this will take up extra space. It is also advised not to enclose the shower between walls and some people may prefer to opt for a wet room instead.

The use of a long hand-held shower nozzle will help to reach certain areas of the body when showering, plus grab bars in the shower itself are very important as a fall is more likely to occur on wet floors.

● Manoeuvrability

In the bathroom, open space is required for turning and manoeuvring, with or without aids, to keep the environment safe and comfortable.



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