



Creating bathrooms that aid stroke rehabilitation

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CREATING BATHROOMS THAT AID STROKE REHABILITATION

Stroke happens every five minutes in the UK. It is the fourth single largest cause of death across the nation and second in the world.

Around 100,000 people have a stroke each year in England, Scotland and Wales, which is approximately one stroke every five minutes, with around 33,000 stroke-related deaths in 2021 alone¹. In fact, the UK alone is home to over 1.3 million stroke survivors².

Those who do survive are likely to have to live with the impact of stroke and half of all survivors have a disability. Over a third are left dependent on others for their daily care, while approximately 8,000 are discharged from hospital to a care home after stroke every year.

However, worrying research has revealed that stroke survivors entering nursing or residential homes can miss out on crucial rehabilitation and the Stroke Association has warned they are being “written off”. As a result, the charity is urging those who plan and provide care to take action to ensure the individual needs of stroke survivors are properly met. In particular, it is vital that thought is given about how the bathroom environment can be adapted to support recovery. This guide has been put together to support people in doing so.

What is stroke?

Stroke is a serious, life-threatening medical condition that occurs when the blood supply to part of the brain is cut off. As the blood supply is restricted brain cells begin to die, potentially causing brain injury, disability or death. Ultimately, stroke can affect the way the body works physically, as well as how one thinks, feels and communicates.

Different types of stroke



Ischaemic

A blockage caused by a blood clot that stops the blood supply to the brain. As much as 85 per cent of stroke cases are ischaemic.



Haemorrhagic

Bleeding in or around the brain caused by a burst weakened blood vessel.

Transient ischaemic attacks (TIA), otherwise known as “mini-strokes”, are a related condition and occur when the blood supply to the brain is temporarily interrupted. They can last between 30 minutes and several hours, and are extremely serious as they are frequently a warning sign of an imminent full stroke. Indeed, approximately 15 per cent of all ischaemic strokes are preceded by a TIA.

Although there are different types of stroke, damage to the central nervous system always occurs, although it can be more or less extensive in different people. Some stroke survivors can retain most of their abilities, while others can be significantly cognitively disabled or completely paralysed down one side of their body.

It is important to remember that stroke itself does not damage the musculoskeletal system, only the brain. Rehabilitation aims to enable the parts of the brain not affected to learn the skills that were previously controlled by these now-damaged areas. Rehabilitation is therefore not about strengthening muscle groups to compensate for weaker limbs – but to retrain the brain.

It is vital to assess each individual's needs carefully and adopt a person-centred approach to design to provide the best solution for them.





What causes stroke?

There are a number of elements that can increase the possibility of stroke, including hypertension, diabetes and high cholesterol, but age is the single most important risk factor. Indeed, the likelihood of having a stroke doubles every decade after the age of 55, with one in five women and one in six men having stroke by the age of 75. Accordingly, it is easy to see why bathrooms that can accommodate the elderly as well as stroke survivors are more important than ever.

WHAT CHALLENGES DO STROKE SURVIVORS FACE?

While the physical and cognitive abilities of stroke survivors can vary vastly from one person to the next, they are often left with problems that can change the way they use the environment and space around them. The bathroom and bedroom, in particular, can be complex spaces to negotiate if the rooms have not been adapted to cater for the user's needs. Typical challenges stroke survivors can expect to experience include:

- Difficulty in transferring between items of furniture, for example on and off the toilet
- Problems getting in and out of baths and showers
- Altered visual perception
- Feeling overwhelmed or psychologically confused.



DESIGN THAT ENCOURAGES REHABILITATION AND WELLBEING

Why is it important for bathrooms to be adapted for stroke survivors?

It goes without saying that bathrooms should be suitable for multiple users with a broad range of physical and mental capabilities, but why is adapting for stroke survivors particularly important? Many people survive strokes but find themselves living in homes that do not suit their changing requirements. The development of this set of design principles, although designed with stroke survivors in mind, are often inclusive for those living with other illnesses as well.

Making the environment a user-friendly space for someone who is post-stroke also makes it user-friendly for people with arthritis, dementia and other neurological conditions, for example.

Three key points when designing for stroke survivors



With the challenges in mind, the following three points can be used to form the basis of a design strategy that protects the individual and allows care home residents to remain as independent as possible for as long as possible.

1

Keep it strong

Many stroke survivors have balance difficulties and anyone who feels off-balance is likely to use their surroundings and elements within them to provide physical support. If a room contains a basin or chest of drawers, these are most likely to be leant on if the resident feels weak or unsteady. As a result, it is critical that all furniture and items installed in a living space are strong enough to withstand the weight of a person and are stable enough to stay upright and not tip, especially if they are pushed on with only one hand.

2

Keep it logical

Repetition is one of a stroke survivor's greatest tools in relearning behaviours that allow them to be independent. As a result, keeping products in the most logical places and in the areas where anyone would expect to find them naturally – for instance, keeping shower gel in the shower and soap on the basin – will allow users, particularly those with apraxia, to understand what the items are for and enable them to carry out the tasks for themselves automatically, which is a vital part of rehabilitation.

3

Keep it simple

Remove anything in a room that is not necessary. Clutter and redundant objects or pieces of furniture will serve only to make the environment more challenging and overwhelming for the stroke survivor. The only things that should be in the room are the objects and products that the user will need on a daily basis. Equally, keep patterns on soft furnishings to an absolute minimum.

DESIGN SPECIFICATION GUIDANCE FOR STROKE SURVIVORS

Bedroom and bathroom suites need to include various pieces of essential equipment and that is no different for rooms that will be accommodating stroke survivors. Nonetheless, there are a number of considerations that need to be looked at in line with the resident's physical and cognitive abilities to ensure the right products are installed to create a room that is best suited to them.

Toilets

- Toilets should be higher than is traditionally the norm or raised on a plinth to make it easier for residents to get on and off safely
- When toilets are higher than usual, including a footstool by the toilet is advisable so users can put their feet on it while using the toilet to allow the bowels to open properly
- Make space around the toilet for wheelchairs or hoists
- Avoid fitting a toilet up against a wall on one side
- The flush must be easy to reach to prevent users from stretching.



Tiling

- Muted block colours are best
- Avoid patterned tiles as this can cause visual confusion
- Contrast can be good to distinguish between different surfaces.

Basins

- The back of the basin should be big enough to accommodate the products and equipment the user will need to wash with. If that is not possible it is important to install a shelf directly above the basin
- Avoid freestanding units and only install those that can be fixed securely to the wall
- Inspect basins regularly to check they are not shifting or coming away from the wall
- A perching stool can be useful for some stroke survivors who are unable to stand for the length of time they will be using the basin. Others will require wheelchair access.



Shower screens

- Anything that is unstable is not advised – avoid shower curtains for this reason
- If a screen is essential, using solid, strong and fixed shower screens that do not move when they are leant on are best as they may be used as a support by the user.



Towel rails

- Towel rails should be installed close enough to the shower so that the user does not need to exit the area to get their towel
- They need to be strong enough to take a person's weight.



Alarms

- Alarms should be on the person rather than in the room, with wrist alarms being ideal
- Not all stroke survivors will be able to understand and operate such systems.



Heating

- Underfloor heating is ideal to avoid any exposed pipework or radiators
- Opt for low surface temperature radiators to prevent burn injuries.

DESIGN SPECIFICATION GUIDANCE FOR STROKE SURVIVORS

Doors

- Must fit firmly and close well
- Should not be too heavy
- Doors that open both ways enable the user the most privacy, while still allowing easy access
- Long lever door handles are usually easiest to operate.



Storage

- Storage should be limited as it is best to have what is needed left out for the user, and cabinets can sometimes get in the way of safe and free movement
- If cabinets are needed, install them at a height that can be accessed whether the user is standing or sitting
- Make sure all cupboards are fixed securely to the wall.



Taps

- Hot and cold taps must be clearly and obviously marked, as well as being identified with both colour and letters
- The user's needs should determine the type of tap specified. For example, two separate taps may be no good for a stroke survivor who has paralysis on one side, while a mixer tap could be confusing for someone with significant cognitive damage
- Traditional crosshead or lever taps are typically easier to get a grip on rather than round head taps.

Lighting

- High light levels will help users see clearly
- Limiting the number of lights and switches is advised to prevent users from having to move around the room more than they need to
- Put switches inside the room as outside can cause confusion
- Leave the bathroom light on at night-time to reduce the risk of falls or trips.



Signage

- Simple and clear signs that do not try to be clever are always advisable
- Any signage needs to say exactly what it is for – for example, a sign that just says "bathroom" in a space where there is also a toilet can cause confusion for some.



Flooring

- Clearly marked wet and dry areas are useful to show the resident where it is safe to put their belongings
- Non-slip flooring is essential
- Avoid patterns or flecks as this can be visually challenging – a block colour is recommended
- Loose mats can be risky – if using a mat, make sure it is put away immediately after use and keep a long handled grabber nearby for picking it up.

DESIGN SPECIFICATION GUIDANCE FOR STROKE SURVIVORS



Accessories

- A mirror behind the basin is helpful to enable users to see what they are doing without having to twist or turn away from the sink
- Dropdown grab rails with toilet roll holders are ideal
- Grab rails should be installed on both sides of any furniture and should be the type that can be put away flat against the wall if needed.



Showers

- The controls need to be simple to understand and easy to use with one hand operation
- There should be obvious up and down buttons for temperature and flow control
- A shower that allows the temperature and flow to be set and left for future use is ideal
- Level access showering or wet rooms are best suited for maximum safety
- A shower that does not come on cold and take time to warm up is optimal so the user can walk in or transfer on a dry floor and not be hit with a blast of icy water
- Height adjustable or wheeled shower chairs are preferable over wall-mounted units.
- Shower riser rails should be securely fitted to the wall and strong enough to take a person's weight in case they are used for support.

BEDROOM DESIGN FOR A SAFE AND COMFORTABLE SPACE

Most of the principles that can be applied in the bathroom can often be transferred to other areas of the home. For example, in a bedroom it is always best to avoid low surfaces, with the bed often needing to be higher than a standard chair. It is also important to keep floors and rooms as clear as possible of any unnecessary items or equipment to promote safe and easy movement. Other things to consider are touch or voice activated lamps over fiddly switches, moving a commode next to the bed at night-time and away during the day, and keeping shelves and windowsills clutter-free to avoid bombarding the user's cognitive senses



10-POINT QUICK FIRE RECAP

- 1 Avoid low surfaces
- 2 Do not encourage pushing or pulling to standing unless necessary
- 3 Make sure supports or aids are on both sides of furniture
- 4 Be flexible
- 5 Remove clutter
- 6 Make sure items are strong and fixed securely to the wall
- 7 Eliminate obstacles, such as pipework or unnecessary cabinets
- 8 Keep things in the same logical places to encourage repetition
- 9 Help stroke survivors to help themselves
- 10 Always be mindful of privacy and dignity.



If you adapt a room for a stroke survivor you are not going to disadvantage somebody who isn't, as the design concepts generally make an area more accessible for most people and most abilities.

DESIGN THAT ENCOURAGES REHABILITATION AND WELLBEING

While this guide provides a comprehensive overview of the principles of designing for stroke survivors, it should not be used in isolation, but rather alongside advice from the qualified neurological Occupational Therapists who support stroke survivors in hospital following stroke. It is vital that family/and or those in a caring capacity speak to the hospital staff to get a definitive account of the bespoke rehabilitation programme that has been assigned to each individual so that this can be carried on and built upon when back at home. Equally, it is important to work closely with an experienced adapted living solutions provider, such as AKW, for the best expert guidance on ensuring accessibility.

It is essential to remember that there is often the capacity for some positive change for people following stroke. Giving clear, short & simple instructions as well as the space needed to perform tasks can really help to create improvements. Too much help too early on can prevent that positive change and cause the stroke survivor to become deskilled and lose the ability to do what they have been taught to do during rehabilitation. Ultimately, it is vital to provide people with the tools to do as many day to day activities themselves as possible because the more active they can be, the more activity there is in the brain, which means more blood flow and a greater chance of recovery.

Talk to the experts

If you would like more information about how to design bathrooms that accommodate the needs of stroke survivors, contact us today to book a bathroom consultation with a member of our 60-strong team of sales and surveying experts. They can tailor a solution to your specific resident, building and budget needs. You can request a visit at www.akw-ltd.co.uk or alternatively contact us using the details below.

Tel: 0800 078 7051 **Email:** marketing@akw-ltd.co.uk **Fax:** 01905 823297

Address: AKW, Pointon Way, Hampton Lovett, Droitwich Spa, WR9 0LR

www.akw-ltd.co.uk

About AKW

AKW is the leading designer and manufacturer of accessible bathroom and kitchen products having supplied this specialist market for over 25 years. We supply the majority of social landlords, local authorities and care and nursing home groups in the UK as well as customers internationally. We work closely with OTs and other healthcare professionals when designing our products to ensure they meet the specific needs of our end users. Our broad range of products include:

- Specialist care showers (electric and mixer showers)
- Wet room (level access showering) kits
- Low level shower trays
- Safety shower screens and curtains
- Raised height sanitaryware with paddle flushes and seats designed for side transfer
- Geberit shower toilets
- Lever taps
- Grab rails
- Doc M packs
- Accessible kitchens with optional ActivMotion[®] rise and fall units.

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Terri Grant is a Senior Lecturer in Occupational Therapy at the University of Worcester's Institute of Health and Society. She has spent nearly two decades of her career to date as an Occupational Therapist, including 14 years as a Specialist Occupational Therapist in the field of stroke rehabilitation. Terri has been involved with setting up services to improve the quality of rehabilitation for people following stroke, and educates other clinicians in the field to further raise awareness and enhance facilities. She is also a member of the College of Occupational Therapists and the COT Specialist Section – Neurological Practice.

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Sources: ¹ NHS, 2023

² www.stroke.org.uk