The Oswestry Standing Frame: A Users Guide



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Introduction

You have been given a standing frame by your physiotherapist who will have shown you how to use it and made sure that it is the correct size for your height.

This information booklet will remind you of the training given to you by the physiotherapist and provide information and advice to help you use the Oswestry standing frame correctly in your own home. It will enable both you and your standing assistant to easily check on queries or concerns you may have if you need to.

Please read this booklet carefully before you begin using the frame. If you are still unsure about any aspect, then please contact your physiotherapist who will be happy to explain further about using the frame.

Physiotherapist: ……..

Contact details: ……..…….

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Information for the Standing Assistant

Thank you for assisting with using the standing frame.

Your role is to:

- Move the frame into the correct position in the room.
- Safely assist the person to stand in the frame and sitdown after standing, if needed.
- Ensure that safety issues are checked before, during, and after standing.
- Understand how to check for faults and report any faults.
- Take care of yourself and adhere to safety procedures.
- Contact the physiotherapist if any changes occur to your own health which prevents you from assisting.

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How to use the Oswestry Standing Frame

(You may need help from a standing assistant with some or all of these steps)

Standing up

1. The standing assistant slides the frame into position, allowing space around the frame for easy access.

2. The frame has three straps: 1) an ankle strap at the bottom, 2) a knee strap and 3) a hip strap at the top.

3. Undo the top (hip) and bottom (ankle) strap – leave the middle (knee) strap done up, as tight as possible.

4. Take off the footplates, if possible, and push your wheelchair into the frame (or walk into the frame if you are safe and secure to do so), as far as it will go so that your knees are touching the knee strap. The knee strap should now be adjusted up or down so that it sits just below your knee caps.

5. Ensure your feet are flat on the ground, directly under the knees, hip-width apart and facing forwards. Well-positioned feet make standing much easier and more comfortable.

6. Make sure your knees are apart –use a rolled-up towel between them if necessary.

7. Make sure that any catheter bags or tubing are pushed to one side of your knee before standing.

8. Fasten the ankle strap behind your heels. This strap stops your feet moving backwards as you stand, and is especially important to secure in place if you experience leg spasms.

9. Place your hands on the rails of the frame and move forward in the chair if possible.

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10. If someone helps you to stand, they will say "READY?" "SET," "STAND". On the 'stand' command pull yourself into a standing position, with help if necessary from the standing assistant.

11. The standing assistant then fastens the hip (top) strap behind your bottom. You may find leaning forward over a pillow on the table is helpful while the hip strap is being done up. The strap should go across the middle of the bottom. Do not sit on the strap.

12. Always secure the end of the strap through the loop.

13. When the top strap is secure, stand up as straight as possible. Try not to lean backwards if you can.

14. Keep the wheelchair (or a chair) behind you in the frame with the brakes on while you are standing.

Sitting down

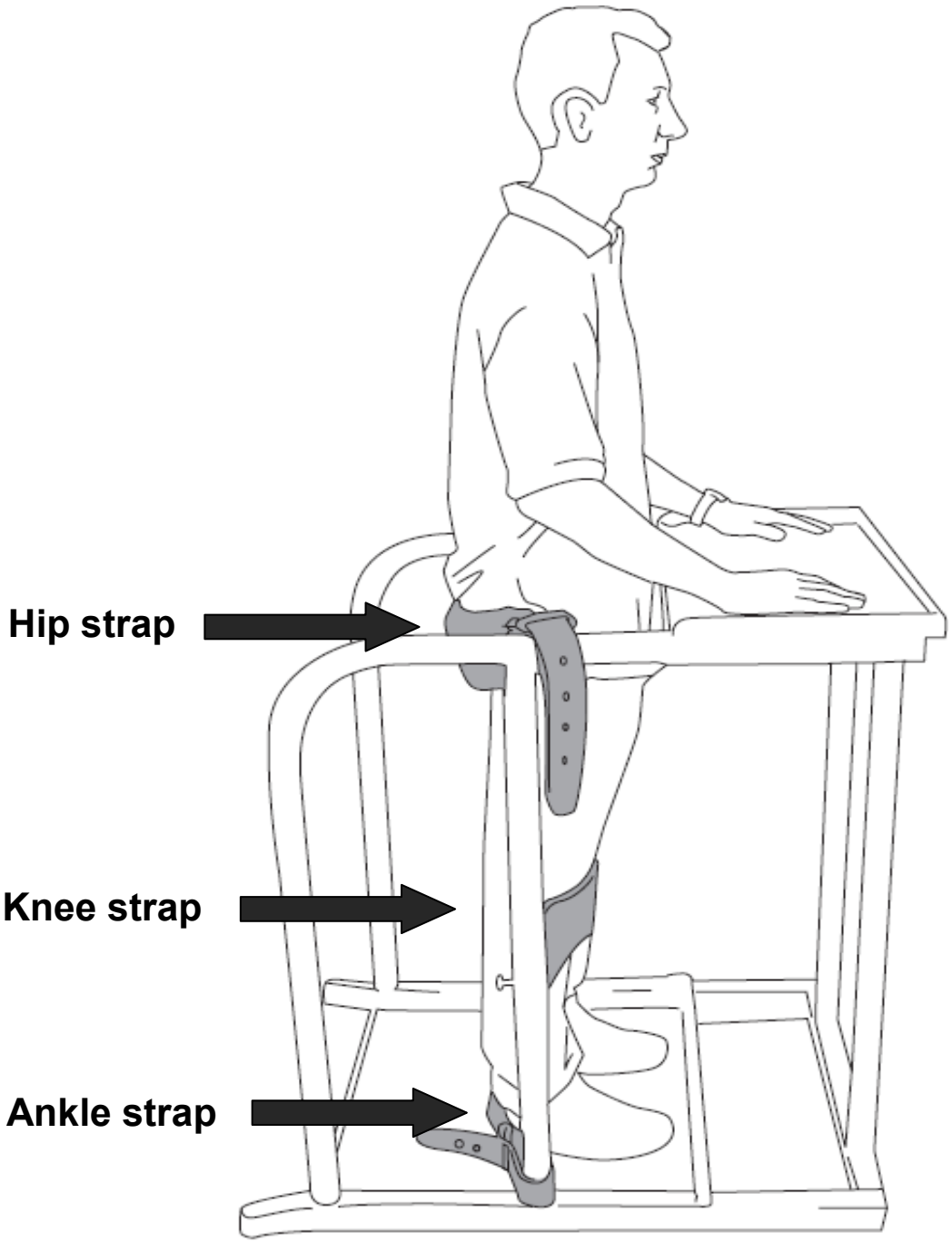
1. When you are ready to sit down, lean forwards slightly over the table of the frame to take the weight off the hip strap. Use a pillow to lean on if necessary.

2. The standing assistant should then undo the top (hip) strap.

3. Gently lower yourself down into the wheelchair, with help if necessary from the assistant to guide the hips.

4. Undo the bottom (ankle) strap before then taking the brakes off and wheeling the chair backwards out of the frame. Or remove the chair and walk out of the frame using your usual method of walking.

5. The standing assistant will return the frame to its storage place by sliding it gently over the floor.



Standing in an Oswestry standing frame

Schema adapted from: Stevenson, VL and Jarrett L.(2018) *Spasticity management: A practical multidisciplinary* guide. CRC Press.

Safety issues

There are very few risks associated with using a standing frame if you follow the instructions provided by your physiotherapist and this booklet. However, please be aware of the following potential hazards when using the frame:

Check the frame before each stand

- Ensure that the structure of the frame is sound.
- Ensure that the stitching and rivets on the straps are secure and that the holes for the buckle-pin are not torn.

Person using the frame

- Do not stand if you feel very tired or are unwell.
- Sit down if you begin to feel faint or light-headed.
- Make sure you keep cool as heat can make you tired.

Standing assistant

- Always keep the curves in your spine when assisting the person to stand.
- Face the way you are moving, do not twist.
- Slide the frame rather than pull it into position.
- Ensure that the hip strap is positioned across the middle of the person's bottom. If it is too high, the person could jack-knife under the strap; if it is too low, they could sit on the strap which could cause it to tear.
- Ensure that all straps are done up and 'locked' by placing the end of the strap through the loop.
- Keep the wheelchair in the frame with the brakes on, or a chair in case you need to sit down.

The environment

- Leave space around the frame for easy access and that there are no trip hazards.
- Make sure there is adequate light in the room.
- Ensure that pets or children do not play with the frame.

Exercises, stretches and balance activities

Early days

When you first start standing in the frame you may find it very tiring, so the aim is to gradually build up the time you spend standing. You may wish to begin with short stands of 5 minutes. Gradually, you may find that you can tolerate standing for longer periods. At first, just stand upright in the frame to get used to the position. After a while see if you can progress to doing some of the exercises, stretches or balance activities outlined below.

Using your hands to balance

Initially, you may find that you have to hold on to the rails or the table to maintain an upright position. You may find that if you let go, you tend to lean forwards. As you get stronger and more accustomed to standing, you may find that you can begin to stand for short periods using only one hand and then no hands. This may take some time to achieve but trying to let go may help your trunk muscles to strengthen. Put a pillow on the table in front of you if you are frightened of toppling forwards. If you do topple, then use your arms to help push yourself back into the upright position (or ask for help if you need to).

Exercising the trunk – strength and balance

The exercises below are designed to increase the strength of your trunk and arms and improve your balance. You can progress the number of times you do these as you feel able, as time goes by. If you can do one of the exercise stages easily, then try the next set of exercises:

Stage 1 - holding on with 2 hands

1. Brace your shoulders back, head up, pull your tummy and bottom in as much as possible and hold for a slow count of 3. Relax.
2. Lean forwards slowly, come back up straight, and then lean backwards. Only go as far as is comfortable.
3. Lean slowly to your left, then come up straight to the middle; then lean slowly to your right and back to the middle again.
4. Twist your head and body from the waist to look over your left shoulder. Come back to the middle then turn to look over your right shoulder.
5. Try and move your weight from one leg to another by moving your hips from side to side.

Stage 2 – letting go with one or both hands

1. Stand up straight, tuck your tummy and bottom in as much as possible. Hold on with one hand, lift the other arm slowly up in the air as high as possible then bring it to hold on to the rail. Repeat with the other arm.
2. Stand up straight, lift both arms up to shoulder height keeping the elbows straight.
3. Using only one hand to hold on or no hands at all lean forwards slowly as far as you can go and then backwards.
4. Twist at the waist and look over one shoulder then twist to look over the other shoulder.
5. Lean sideways slowly then come up and lean to the other side.
6. Hold one or both arms straight out in front of you and, pretending your index finger is a pencil, draw small circles in the air.
7. Take the arm(s) out to the side, repeat the arm circling exercise as above.
8. With your right arm, lean forwards slightly to touch the front of the table on the left side. Do the same thing with the left arm but touch the right side of the table.

Stage 3 – working more strongly in the frame

Only do these exercises if you feel safe standing in the frame without holding on.

1. Using a walking stick (or a small weight in each hand) lift both arms as high in the air as possible.
2. Lift the walking stick or weights to shoulder level and twist to the right and left.
3. Lift the walking stick or weights to shoulder level and lean forwards slowly, straighten up and then lean backwards.
4. Whilst standing, try throwing and catching a ball in the air.
5. You can also undertake other arm exercises such as biceps curls and triceps curls if you feel safe to do so.

Stretches in standing

Standing upright can provide an excellent position for stretching some of the muscles in the leg. To increase the stretch on these muscles, try the following:

1. Place a pillow on the table. Lean as far forward over the pillow as possible to stretch the muscles down the back of the leg (hamstring muscles).
2. Hold on with both hands and lean gently backwards as far you can comfortably go. This will stretch the muscles at the front of your hip (hip flexor and abdominal muscles).

If possible, hold these positions for a few minutes each time you stand. Gradually increase the time spent stretching if possible.

Achieving a more Comfortable Standing Position

Problem	How it presents	What to do
1. Stretching tight muscles and other soft tissues	Muscles and soft tissues that haven't been moved for a while may cause pain or aching especially in the back, hips or knees. This often comes on with standing but should disappear shortly after sitting down and ease after a couple of weeks.	• Build standing time up slowly over a number of weeks. • Make sure the knee strap isn't pressing on the knee-caps – it should be just below. • Gently move the body forwards and backwards or side to side in the frame to ease the tight muscles. • Relaxing the knees so that they are slightly bent in standing may help. • Try padding the knee strap with a folded towel if the knees are sore. • Try changing the posture in standing (see below). • Off-the-shelf painkillers may help.
2. Arthritis	Stiff joints that haven't been moved for a while may cause pain when held for periods in a new position or with weight-bearing. This type of pain usually presents as an ache and often disappears shortly after sitting down.	• Movement in the frame may help to ease arthritic pain such as leaning forwards and backwards, side to side or twisting the trunk. • Try moving your weight from one leg to the other in standing. • Off-the-shelf painkillers or anti-inflammatories may help.

3. Fracture	This is very rare, however if severe pain comes on quickly and does not clear with sitting, seek medical assistance immediately in case of osteoporotic fracture.	• Seek medical advice. • Stop using the frame until the pain has been investigated. • Inform your physiotherapist as soon as possible.

"Getting the Posture Right" – some helpful tips to pain-free standing

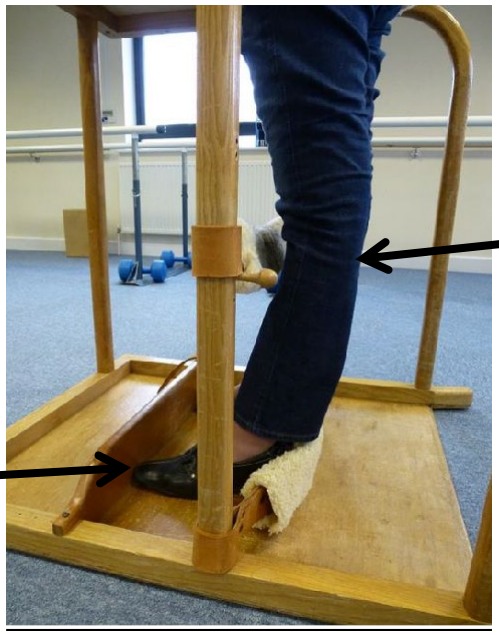
Getting the posture right is important. If the position of the pelvis, hips, knees and feet are out of line in standing, this can lead to uncomfortable aches and pains. Try the following if you are finding that standing is uncomfortable.

Foot position

Getting the feet in a good position often leads to a better posture in standing. Always make sure the feet are well placed before standing in the frame. They should be facing forwards, with the toes pointing very slightly outwards, and should be approximately hip-width apart. It is very important to make sure that the ankles are directly under the hips. Don't push the feet up to the bar on the base on the frame if this takes the feet too far forwards. If the feet have a tendency to move out of position as you stand, use firm, rolled up towels to keep them in position.

Knee position

Some knee joints have a tendency to bow backwards when people stand. This is very common in people with MS who have weak thigh muscles. This 'bowing' of the knees (Figure 1) can force the hips to become more bent which, in turn, makes the back more 'rounded'. This posture can quickly lead to pain in the knees, hips and back.



Knee joints bowed backwards.

Feet too close to the bar on the base of theframe.

Figure 1

Potential Solutions

This bowing of the knees may be happening because the feet are too far forwards. If so, sitthe person down again and place the feet further back so that the ankles are directly underthe hips.

Another way to keep the knees in a better position is to move the ankle strap up so that it rests higher up around the back of the calves (Figure 2). This will help to keep the knees in a neutral or very slightly bent position and may also help to correct the posture of the hips and the trunk.



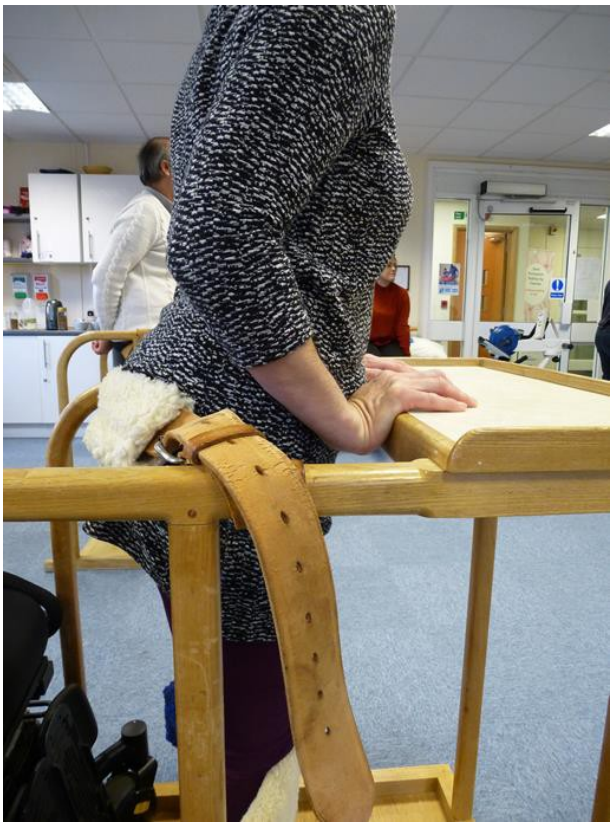
Ankle strap moved up around the back of the calves so that the knees are now straight or very slightly bent.

Ankles positioned under the hips.

Figure 2

Hip and pelvis position

The hips and pelvis also need to be in a good position to allow standing to be comfortable. Just as with the knees, if the hips are not in a neutral position this can lead to extra strain on soft tissues and muscles which can lead to pain. If the hip strap is too high, this can cause the bottom to stick out and the back will then overarch. This could lead to back ache and perhaps even neck ache. Conversely, if the hip strap is too low the person will 'sit' on the strap which can cause their back to slump. Again, this can lead to back and neck ache.



Strap too high causing the bottom to stick out and over-arching of the back.

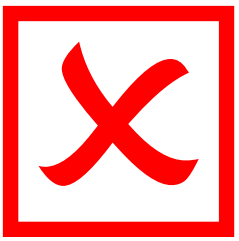


Figure 3

Potential Solutions!

Make sure the hip strap goes across the middle of the buttocks so that the pelvis is not tilting forwards or backwards but is held in a 'neutral' position.
Sometimes the pelvis has a tendency to fall forwards which makes the back overarch (Figure 3). A piece of foam or a folded towel placed between the person's tummy and the table may help to hold their pelvis in a better position (Figure 4 and 5) especially if the tummy keeps falling forwards against the table (Figure 3).



Tighten the hip strap across the middle of the buttocks so that the pelvis is not tilting forwards or backwards but is in “neutral’.

Figure 4



Figure 5

Hopefully, some small adjustments to the position of the feet, knees and pelvis will allow the body to get into a better standing position and relieve the pain.

Risks and Adverse events
What are they and who do I contact?

This section describes the possible risks and adverse events associated with using a standing frame and what to do if they occur. Be reassured, however, that standing frames are used by physiotherapists regularly in their work and there are very few risks associated with them.

1. Pain or discomfort

Some people experience mild discomfort when they first begin standing such as muscle stiffness, back ache or a stretched feeling in the leg muscles. These are normal when you are trying a new physical activity or resuming standing after a breakand should pass fairly quickly. If these continue for more than a few days please do not continue to use the frame and contact your physiotherapist as soon as possible.

2. Falling out of the frame

As long as the hip strap is positioned correctly, it should be impossible to fall out of the frame. Please ensure that the straps are correctly positioned and that the stitching is secure.

3. Increase in spasms

Occasionally people find that standing temporarily increases spasms. This usually disappears after the first few days of using the frame. Moving slowly and gently often helps to minimise or prevent these spasms. If these persist, contact your physiotherapist to see if there are some changes in position which may help alleviate these.

4. Back pain (standing assistant)

It is important that the standing assistant only gives minimal help to the person standing and that they apply correct moving and handling principles at all times: keep the curve in the low back as you move, face the direction of movement, do not lift and twist and push the frame rather than pull it into position. The physiotherapist will check that you are doing this during their home visit.

If you have a problem please contact: …….

Caring for the frame

General Conditions when the frame is provided through the NHS

The standing frame provided to you remains the property of the NHS and is loaned to you on the following condition:-

1. The equipment is for your use only and must not be used by anyone else or for any purpose other than for which it was provided.

2. The equipment must not be altered or any attachments fitted.

3. The equipment must be kept clean, in good working order and protected from damage at all times. Wooden surfaces can be cleaned with a damp cloth or antibacterial disinfectant. Sheepskin covers can be machine washed on a gentle programme.

4. It is the responsibility of the user/carer to ensure mechanical faults with the standing frame are reported to the physiotherapy department as soon as detected.

5. The equipment must be returned or given up for repairs or maintenance work whenever requested.

6. The equipment must not be disposed of in any way or to anyone other than the NHS. If the equipment is no longer required please contact the physiotherapy department to arrange collection.

7. You must let the physiotherapy department know immediately if:

    - You change your address or telephone number
    - The equipment is lost or damaged
    - You no longer require the equipment, for whatever reason.

Frequently Asked Questions

For the person using the frame:

How often can I use the frame?
Once you have got used to standing, you can use the frame as often as you want to and for as long as you feel comfortable. Many people find that standing for 30 minutes, three or four times a week suits their lifestyle and this was the level that was shown to be effective in the SUMS study. But it is about how much you feel able to do, each person is different.

What happens if I cannot stand for that long?
From our experience, we know that it can take a few weeks to get used to standing for longer periods. When you first begin, stand for as long as you can. You may find that this is only a few minutes initially. As the days and weeks go by you will probably find that you can stand for longer periods. Yes, stand for as long and as often as is comfortable for you.

What should I do if standing causes pain?
Initially people often experience mild discomfort in their leg muscles or back as a result of standing. This is common when people start a new exercise programme, or return to standing after a break. It should settle down as your body gets used to the fully upright position. You could take an over the counter pain relief such as Paracetamol or Ibuprofen to relieve the pain. If the problem continues, stop using the frame and contact your physiotherapist.

What happens if I go on holiday or into respite care?
You probably won't be able to take the frame with you so restart the standing programme once you return home. Remember though, it may take a day or two for you to get back into standing regularly again and to stand for as long as you did before the break.

What do I do with the frame when it's not in use?
It is up to you where you keep the frame. Many people store it in a corner of the room. The frame is bulky but it should slide easily across most surfaces so it should be easy to move into position ready for standing.

Can I do activities other than exercise when I am standing?
Yes – use the frame as you wish. For example, you can stand and watch the television, read your book or use your computer on the table. An upturned cardboard box placed on the table will help to get your book or computer in the right position. In fact, you can use the table for any activity you wish, even folding clothes or doing the washing up!

For the standing assistant:

What do I do if the person with MS doesn't want to use the frame?
Try and find out from them what the problem is – it may be they are feeling tired or unwell or they may feel unsafe in the frame. If the problem is related to the use of the frame it may be best to contact the physiotherapist who will check how you are using the frame.

What do I do if the person is suddenly very heavy to lift up into standing one day?
Do not lift the person into a standing position, they should always be doing most of the work. If you begin to help someone into a standing position and you feel that they are very heavy, stop the lift and ask them to sit down in their wheelchair. You could always try again later. There are many things which can make someone with MS feel tired. These may include a bladder or chest infection, but also other things such as following a hot bath or shower or a hot meal or drink, their 'low time' of the day, or when some medications are working at their maximum. If the person is too hot, try cooling the environment, or placing a cold, damp flannel on the back of their neck for a few minutes before trying again. If their tiredness is related to the time of day or their medication, try again at a different time. Do not, however, take risks with your own health – take care of your back at all times.

Can I leave the room when the person is in the frame?
As long as they are standing securely and the straps are tight and in a good position, you can leave the room for short periods. Always leave the wheelchair behind the person, in the frame, with the brakes on in case they need to sit down quickly. Having a call system or leaving them with a whistle or bell can be helpful in case they need you suddenly.

How tight should the straps be?
The knee strap should be pulled as tight as possible to stop the knees buckling. Once that has been placed in position, just below the knee caps, there should be no reason to move it. The ankle strap should be tight enough to stop the feet suddenly moving backwards. When the person first stands up, tighten the hip strap behind their buttocks as much as possible. You may find, however, that it can be tightened again after they have been standing for a few minutes, as the hips straighten.