



REHABILITATION CENTRE
Celebrating Recovery

WHAT YOU SHOULD KNOW ABOUT FALL PREVENTION



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Overview

Falls are preventable, if you take the necessary precautions and stay active!

Being a cancer survivor, you may have higher risk of falls compared to normal individuals. The cancer symptoms or the treatment side-effects can affect your body functions that help in preventing falls. Examples include muscle weakness, difficulty in balance and walking resulting from chemotherapy or hormonal therapy treatment.

If you have any of these difficulties, you should be assessed and be guided by a rehabilitation professional to reduce your chance of falls. A thorough evaluation is important because the issue is complex – falls are rarely caused by a single reason; they are often caused by multiple reasons.

This booklet will provide you with strategies on how to reduce your risks of falls, such as improving your physical mobility and how to keep your environment safe.



What you should know about Fall Prevention

What should you know about falls?

Definition of Fall

To many, falls are associated with a hard landing on the floor resulting in injuries such as a bruise or broken bones. A soft landing on their buttocks is often not considered a fall to many.

The World Health Organisation defines fall as "an event which results in a person coming to rest suddenly on the ground or floor or other lower level."



Consequences of Falls

Depending on the severity of the fall, the experience of falling may be traumatic and it may adversely affect one's quality of life. Consequences of a fall may include:

Effect on physical function:

- Soft tissue injuries (e.g. skin laceration or muscle injury)
- Fractures
- Head injuries

Other consequences:

- Developing a fear of falling
- Restricted mobility
- May require to stay in a long term care facility

What you should know about Fall Prevention

Risk Factors for Falls

Studies have shown that cancer survivors with functional impairments are more prone to falls than persons of similar ages without cancer.



Find out if you are at a risk of falls

Put a tick in the circle if you meet the description

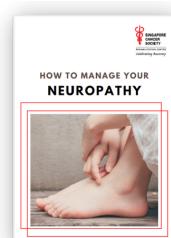
- Are you 60 years old and above?
- Did you have at least one fall in the past 1 year?
- Do you have weakness in your legs?
- Do you have difficulties with your balance and / or walking?
- Did you receive chemotherapy resulting in numbness in your feet?*
- Do you feel giddy when you stand up and walk?
- Do you have any vision and/ or hearing difficulties?
- Are you feeling depressed and moody?
- Do any of your outdoor shoes cause you problems when walking?
(e.g. poorly fitting, worn out soles, high heels)
- Is your home environment messy?
(e.g. loose mats, clutter)

The more ticks you have, the higher your risk of falls.



It may be useful to check with your doctor to find out if you are at risk of falls based on your medical history and medications that you are taking.

*If you experience numbness as a result of chemotherapy, you may wish to refer to our booklet on "How to manage Neuropathy".



What you should know about Fall Prevention

Preventing Falls

Remove any hazards

- Remove loose floor mats and replace with non-slip mats.
- Tape down and secure electrical cords.
- Reduce clutter as much as possible.
- Ensure that the paths to light switches are clear of any obstacles



Rearrange your items

- Put commonly used items within reach. These items may include your clothing, plates and utensils, and food items.
- Avoid reaching overhead or squatting low to reach for items. You should not be climbing onto stools if you are at risk of falls.
- Move any light furniture or items away from areas where you commonly walk. For example, in the living room, check if there are any coffee table, chairs or dustbin which might cause you to fall. In the toilet or kitchen, make sure the pails or mops are secured along the walls.



What you should know about Fall Prevention

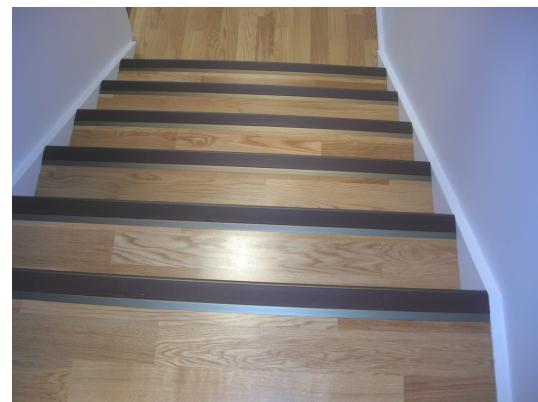
Increase contrast and improve lighting conditions so that you can see clearly

With cancer treatment, your vision might be compromised. They may feel “blurry”, dry, teary or even sensitive to light. Depending on how your eyes perceive lighting conditions, you can make changes to your environment to see more clearly and to avoid eye fatigue.

- If you have steps or stairs at home, ensure that you have tactile contrast strips to increase contrast in order to avoid tripping or falls.



Contrast strip placed on step curb



Contrast strips on stair nosing

- Turn on the lights before going up or down stairs. Hold onto grab bars or handrails for safety.



Hold onto grab bars or handrails

What you should know about Fall Prevention

Increase contrast and improve lighting conditions so that you can see clearly

- Reduce glare at home. Glossy floors tend to cause more glare than those with matte finishing. Use blinds or curtains to reduce glare in your room during a bright sunny day.



Matte flooring



Curtains



Blinds

- Place a lamp within the reach of your bed for any middle-of-the-night needs. If not, place a night light in the bedroom.



- It may be helpful to paste a sticker of a high contrast colour which glows in the dark on the switches.



What you should know about Fall Prevention

Look out for potential areas for falls

- It is good to check if your toilet floor is slippery when wet or soapy. You may consider getting your floor treated with a layer of anti-slip coating. Otherwise, non-slip mats may be useful as well.



- Grab bars are useful when getting up from the seat more easily or getting across kerbs safely. It may be useful to install grab bars near the toilet seat, showering area and near the kerbs.



Speak to an occupational therapist if you need advice regarding the location to install your grab bars.

What you should know about Fall Prevention

Look out for potential areas for falls

- You may consider sitting down to do tasks for your safety.

For example, sitting down to shower on a shower chair may be a safer option. This will prevent you from falling as you bend down to wash your feet.



- Be extra careful when you mop the floor. Also, be prompt in clearing any spills such as liquids or food.



What you should know about Fall Prevention

Home Safety Checklist

Falls may happen as a result of hazards around the house – these are often overlooked but are easy to fix. Fill up this checklist to ensure that your home is safe and fall-proofed.

Floors

- Y/N When you walk around your room, do you have to walk around any furniture?
 - Y/N Are there any loose mats or rugs on the floor?
 - Y/N Are there any loose objects on the floor (e.g. books, boxes)
 - Y/N Do you have to walk over any loose electrical cords (e.g. extension cords, cords from lamps)
-

Kitchen

- Y/N Are the items you use regularly on the higher cabinets or shelves?
-

Bedroom

- Y/N Is the light switch near your bed difficult to reach?
 - Y/N Is the path from your bed to the bathroom dark?
-

Bathroom

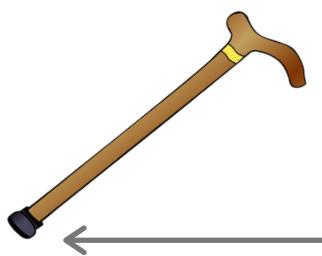
- Y/N Is your shower floor slippery?
 - Y/N Do you need some support when you get up from the toilet?
-

Speak to your occupational therapist if you have selected "yes" to any of the above. It is important to fix any potential hazards in your home so that you are safe and independent.

What you should know about Fall Prevention

Using assistive devices for your mobility

- If you are unsteady walking on level ground, you should get the rehabilitation team to assess and recommend appropriate relevant assistive device(s).
- If you are using a walking aid that is not prescribed by a therapist previously, get your therapist to check if it is suitable and positioned at a correct height. Be sure to check your walking aid regularly for any wear and tear, e.g. replace the rubber stoppers if they are worn out.



Embrace technology

If you have a high fall risk and are staying alone at home, technology may be useful for you:

- Consider getting surveillance cameras installed in non-private areas of your home. These areas include living room, dining room and kitchen. This can be useful for your family to ensure that you are safe at home.
- Consider getting a call bell. If you need to go to the toilet at night, but are at a risk of falls, a portable call bell can be used to alert other family members when you need help.

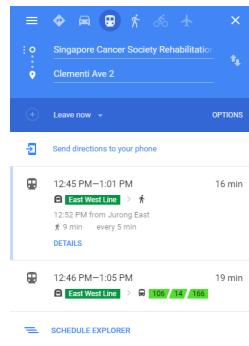


What you should know about Fall Prevention

Be cautious when you are outdoors

Be vigilant when you are outdoors, especially if you are able to walk but still at risk of falling. The environment outside your home tends to be unpredictable. It is important to take these necessary precautions:

- Get someone to accompany you if you are going outdoors. This is important if you have been staying at home mostly.
- If you are going to an unfamiliar place, it is also recommended that you get yourself familiar with the new route and the place. Give yourself ample travelling time so you do not have to rush.
- Check the weather forecast before you leave home. Take extra precautions if it is raining or about to rain. You should bring an umbrella with you, and be cautious of slippery floors.



- Try to avoid crowded places if possible. You may wish to visit these places during off-peak periods. Otherwise, try to stay close to the walls and do not walk through areas with high traffic.
- Use the handrails when climbing stairs. Be careful when using the escalator. Use a lift if it is available.

What you should know about Fall Prevention

Footwear

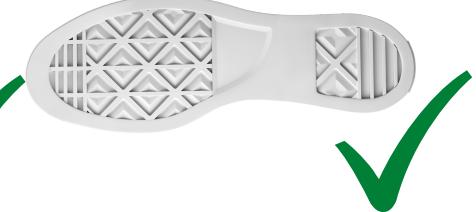
If you have numbness in your feet as a result of chemotherapy, you should avoid inappropriate footwear such as:

- Slip-on shoes like slippers or sandals
- Poorly fitting shoes (e.g. too long or wide)
- Shoes with worn out soles
- Shoes without flat or stable heels



It is important to wear covered, well-fitting and comfortable shoes. Here are some points to note for good shoes:

- A good fit, which should not be too loose or too tight for your feet
- Sole should be firm and not too thick for better sensation of your foot position
- Slip resistant soles
- Shoes with adjustable fastener at the front such as shoe laces or Velcro



What you should know about Fall Prevention

Work

- It may be helpful to let your colleagues know that you are at risk of falls so that they can assist you with work tasks that are more physically demanding.
- If you are still experiencing muscle weakness or imbalance and your job requires you to do some physical tasks, you may need to speak to your HR representative or supervisor to modify your job tasks. Speak to the SCS team if you would like some advice on this aspect.



What to do after a Fall

Step-by-step guide: Recovering from a fall



1

After a fall, seek help immediately. If you are at home, try to call your family member to check on you. Always make sure that your phone is near and accessible. If you are outdoors, get help from the passers-by. Do not try to get up on your own if you are hurt (e.g. feel pain or dizzy, unable to move your body) as this can result in more injury.

Find a stable piece of furniture, such as a heavy chair or a firm sofa. Roll over onto your side and see if you can push your upper body up. Give yourself some time to recover from the shock and steady yourself. Take several deep breaths.

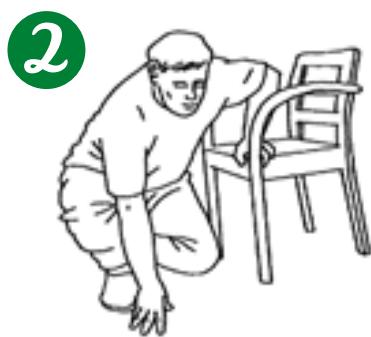
2

Get yourself into a half kneeling position as shown in the illustration above - place your hands onto the seat of the chair for support, bring your stronger leg forward and place it flat on the floor. The other leg should be bent with the knee on the floor.

What you should know about Fall Prevention

What to do after a Fall

Recovering from a fall



3

Slowly push yourself up using your hands and legs at the same time. Turn your body to sit on the chair. Give yourself some time to rest.

Note:

- If the fall is due to new, unexpected symptoms (e.g. leg weakness or dizziness), you should seek medical advice immediately.
- If the fall is due to an accident (e.g. tripping over a kerb or slippery floor), it is good to reflect on how the fall happened so that future falls may be prevented. Take note of when, where and how you fell.

What you should know about Fall Prevention

Falls Prevention Exercises

Exercise has been shown to reduce the likelihood of falls. In addition, regular exercise has several benefits, such as improving your strength and fitness, and improving or maintaining your bone health. Most importantly, exercise helps you to stay physically active and happy, so that you can continue to do what you enjoy.

Important things to note when doing exercises:

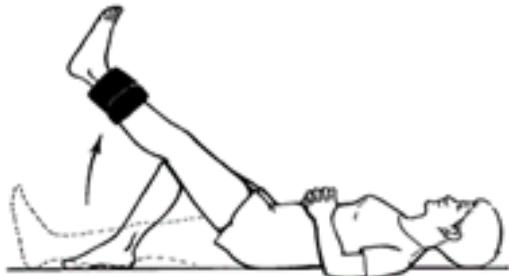
- Perform **only** the exercises that have been prescribed for you by your therapist.
- Ensure a **safe** environment to exercises. Use a strong support like a sturdy table, work bench or window ledge for stability as advised by your therapist.
- Your therapist may recommend some form of supervision or assistance for certain exercises.
- As these exercise are meant to challenge your balance, it is very important to follow your therapist's instruction in order to avoid any accidents or falls. If you have any questions about these exercises, you should ask and clarify with your rehabilitation team.



What you should know about Fall Prevention

Strengthening Exercise for Lower Limbs

Straight Leg Raise



Hold for 5 - 10 seconds and slowly lower down.
Perform 15 times. Repeat 2 sets.

Lie on back with one knee straight and the other knee bent. Keep the leg completely straight, then raise it about 4 - 6 inches.

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Clam Shell

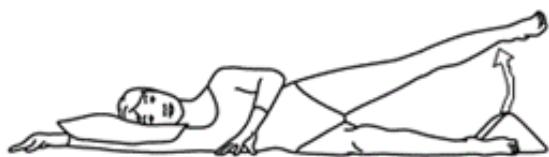


Perform 15 times. Repeat 2 sets.

Lie on your side ensuring that your hips do not rotate backward. You may choose to lie against a wall/support to ensure this. Bend your hip and knee. Keep your ankles together while you lift up the top knee like opening up a clam shell.

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Hip Abduction



Hold for 5 seconds and slowly lower down.
Perform 15 times. Repeat 2 sets.

Lie on your side ensuring that your pelvis does not roll backward or forward. Lift up the top leg about 4 - 6 inches.

What you should know about Fall Prevention

Strengthening Exercise for Lower Limbs

Bridging



Hold for 5 seconds and slowly lower down.

Perform 15 times. Repeat 2 sets.

Lie on your back with your hip and knee bent. Squeeze your buttock to lift up your hips to make a bridge with your body.

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Sit to Stand



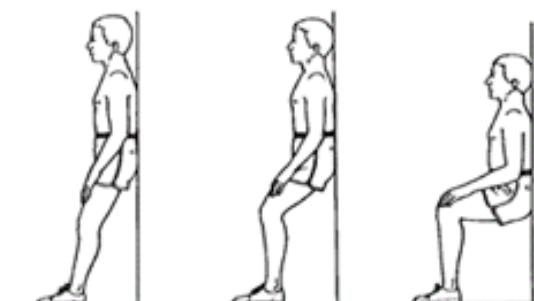
Perform 15 times. Repeat 2 sets.

Sit with your feet placed as far under the seat as possible.

Lean forward and slowly get up to standing position. Slowly sit back down again.

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Wall Squats



Hold for 5 seconds and slowly stand up.

Perform 15 times. Repeat 2 sets.

Stand against wall. Place your feet about 3 steps away from the wall and shoulder width apart. Slowly squat down ensuring that the knees do not cross the toes. For safety purposes, it is recommended that you stand next to a support.

What you should know about Fall Prevention

Strengthening Exercise for Lower Limbs



Hip Extension



Hold for 5 seconds.

Perform 15 times. Repeat 2 sets.

Stand with your feet shoulder-width apart. Lift one leg backwards while maintaining balance. You may use support as needed and as advised by your therapist. Repeat with the other leg.

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Hip Abduction



Hold for 5 seconds.

Do 15 times. Repeat 2 sets.

Stand with your feet shoulder-width apart. Lift one leg sideways while maintaining balance. You may use support as needed and advised by your therapist. Repeat with the other leg.

What you should know about Fall Prevention

Stretching Exercise for Lower Limbs



Calf stretch (sitting)



Hold for 30 seconds.

Perform 5 times. Repeat 3 sets.

Sit on floor with towel placed around foot as shown. Pull top of foot toward your body so that you feel the stretch.



Calf stretch (standing)



Hold for 30 seconds.

Perform 5 times. Repeat 3 sets.

Position your body against a wall with one foot behind as shown. Point toes directly toward wall and hold heel down. Lean onto wall as shown so that you feel a stretch at the back of your leg.



Quadriceps stretch



Hold for 30 seconds.

Perform 5 times. Repeat 3 sets.

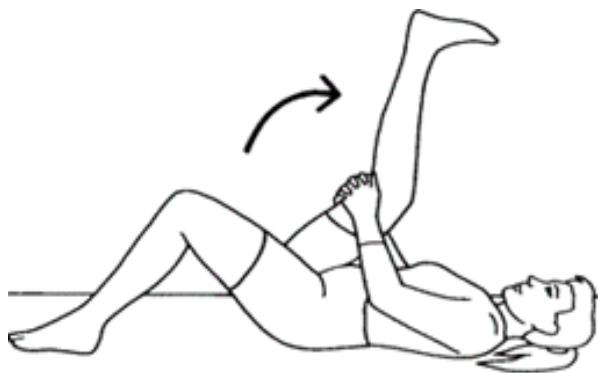
Stand supported holding the ankle of one leg as shown. Bend the knee upward so that you feel a stretch in the front thigh. As you bend the knee ensure that the thigh stays in line with your body as shown (do not let it point forward).

What you should know about Fall Prevention

Stretching exercise for Lower Limbs



Hamstring stretch (lying)



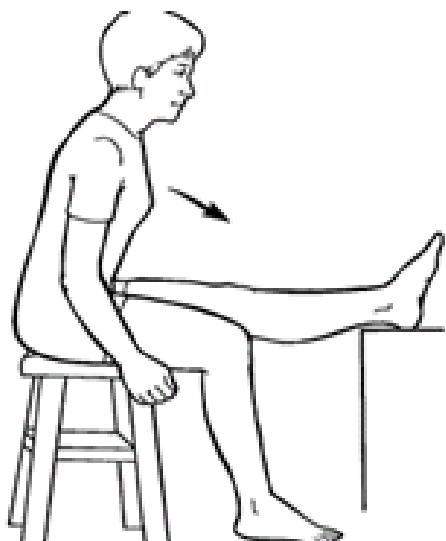
Hold for 30 seconds.

Perform 5 times. Repeat 3 sets.

Lie down on your back. Hold the back of your thigh. Straighten your knee slowly until you feel the stretch at the back of your thigh. Keep the other leg on the floor.



Hamstring stretch (sitting)



Hold for 30 seconds.

Perform 5 times. Repeat 3 sets.

Sit with leg propped as shown. Relax, letting the leg straighten. Lean forward, keeping the back straight. You should feel the stretch at the back of your thigh.

What you should know about Fall Prevention

Balance Exercises



Stand feet together



Keep your eyes (Open/ close).

Hold for 30 seconds. Perform 15 times.

Stand with your feet placed as close as possible to each other. Follow your therapist's advice regarding need for supervision or support.



Tandem standing



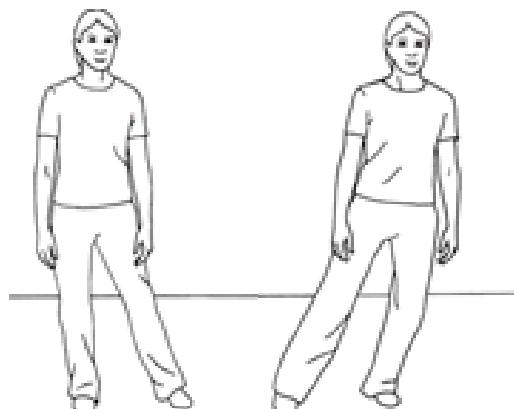
Keep your eyes (Open/ close).

Hold for 30 seconds. Perform 15 times.

Stand with your one foot in front of the other, as close as possible to each other. Follow your therapist's advice regarding need for supervision or support.



Weight Shifting



Perform 15 times. Repeat 2 sets.

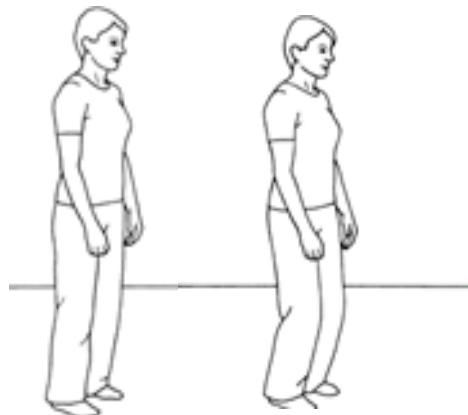
Stand with feet shoulder-width apart. Shift your weight from one side to the other.

What you should know about Fall Prevention

Balance Exercises



Half Squats



Perform 15 times. Repeat 2 sets.

Stand with your feet apart. Bend your knees keeping your body upright. Keep your balance. Follow your therapist's advice regarding need for supervision or support.



Standing Ball Rolling

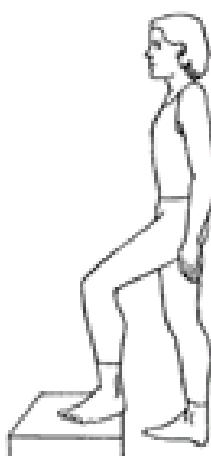


Perform 15 times. Repeat 2 sets.

Stand in front of a support. Place one leg on top of a ball. Move ball in all directions. Keep hands lightly on surface behind you. Follow your therapist's advice regarding need for supervision or support.



Alternate Stepping



Perform 15 times. Repeat 2 sets.

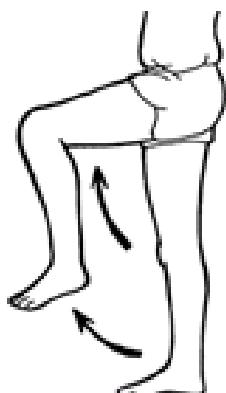
Stand in front of a step. Follow your therapist's advice regarding need for supervision or support. Place your feet on the step and back down using alternate legs.

What you should know about Fall Prevention

Balance Exercises



Single Leg Stance



Hold for 10 seconds.

Perform 15 times. Repeat 2 sets.

Stand with legs straight. Bend one knee and hip upward as shown. Follow your therapist's advice regarding need for supervision or support.

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Heel Raises



Hold for 3 seconds.

Perform 15 times. Repeat 2 sets.

Stand with your feet shoulder-width apart. Go up on your toes while raising your heels. Keep your body straight. Follow your therapist's advice regarding need for supervision or support.

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Toe Raises



Perform 15 times. Repeat 2 sets.

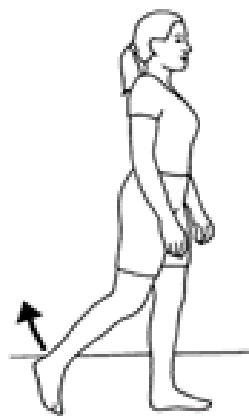
Stand with your feet shoulder-width apart. Lift your toes up without leaning backwards. Follow your therapist's advice regarding need for supervision or support.

What you should know about Fall Prevention

Higher Balance Exercises



Backward walking



Repeat as per therapist's instructions.

Walk backwards along the line. Ensure that you have a safe environment to do this exercise and follow your therapist's advice regarding need for supervision or support.



Alternate Arm and Leg Lifts



Repeat as per therapist's instructions.

Stand facing the wall and stretch one arm up while lifting the opposite leg. You may choose to take support of the wall as needed and advised by the therapist. Repeat with the other arm and leg.



Cross Stepping



Repeat as per therapist's instructions.

Step sideways by crossing one leg over the other. Ensure that you have a safe environment to do this exercise and follow your therapist's advice regarding need for supervision or support.

What you should know about Fall Prevention

Higher Balance Exercises



Tandem walking

Repeat as per therapist's instructions.



Walk heel to toe keeping both feet on the line or as close to each other as possible. Ensure that you have a safe environment to do this exercise and follow your therapist's advice regarding need for supervision or support.

.....



Turning

Repeat as per therapist's instructions.



Practice turning 180 degrees in a circle. Ensure that you have a safe environment to do this exercise and follow your therapist's advice regarding need for supervision or support.

What you should know about Fall Prevention

Higher Balance and Coordination Exercises



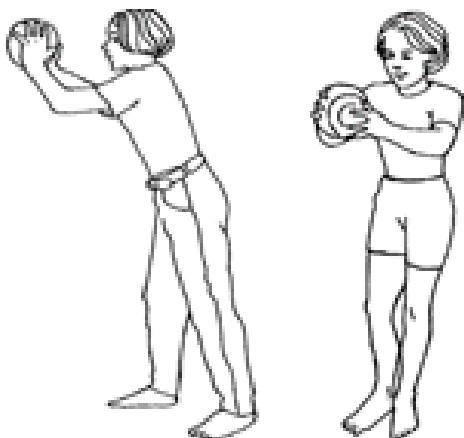
Ball Activities to Improve Reflexes

Repeat as per therapist's instructions.

Activities like playing catch and throw, bouncing and dribbling the ball help to improve reflexes.

Difficulty level may be adjusted by using balls of different sizes i.e. the smaller the ball, the higher the level of difficulty.

Ensure that you have a safe environment to do these activities and follow your therapist's advice regarding need for supervision or support.



Balancing a Tray

Repeat as per therapist's instructions.

Walk from one side of the room to the other whilst balancing a tray with small non-breakable items.

You may choose to increase the difficulty by placing some obstacles in your path e.g. shoe boxes, cushions etc. as advised by your therapist.



NOTES:

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REHABILITATION CENTRE

Celebrating Recovery

SCS Cancer Rehabilitation Centre
30 Hospital Boulevard
#16-02 NCCS Building
Singapore 168153

SCS Cancer Rehabilitation Centre
@ Jurong Medical Centre
60 Jurong West Central 3. Level 3.
Singapore 648346

Singapore Cancer Society
www.singaporecancersociety.org.sg
rehab@singaporecancersociety.org.sg
1800-727-3333

