

**A positive approach to**

# *movement*



for people with  
neurological conditions

## Introduction

Everyone can benefit from regular exercise and a positive approach to physical activity. It is particularly important for those with a neurological condition. Lack of exercise can have health consequences ranging from constipation to pressure sores. It is important to prevent these problems.

Exercise programmes can promote a sense of achievement and well-being. Even if you cannot move parts of your body without some help, you can enjoy the benefits of exercise.

This booklet focuses on showing your helper how to move and gently stretch your arms and legs. These exercises may help to prevent the muscles shortening and tightening.

Some joints may already be tight either due to your condition or to other causes such as arthritis.

**If you have any queries regarding the information contained in this booklet, please contact your therapist.**

**Name:**.....

**Contact No:**.....

## ●————| **Some precautions for all, both obvious and not so obvious** |————●

1. Wear clothing that doesn't restrict movement.
2. Don't let your helper force any part of your body. If pain occurs, stop. Check with your physiotherapist before trying that movement again. The shoulder joint can be particularly prone to trauma if not moved correctly. If any discomfort occurs, ask to go back to a movement that's easier.
3. It's important to distinguish between pain and the feeling of stretch. Talk to your helper when they are moving your limbs. A feeling like stretching a tight elastic band is okay; pain is not.
4. Remember to breathe evenly and relax throughout each movement. There can be a tendency to hold the breath during movement.
5. Experiment with times of day. Some people find morning best; some find it helpful to break exercise sessions into two parts: one in the morning and the other in the afternoon.

## ●————| **Some added safety instructions for the helper** |————●

1. If the person you are helping is in an electric or hospital bed, raise the height of the bed to a comfortable level so that you are not putting strain on your back.
2. If the person is in a normal bed, sit or kneel in a comfortable position.
3. Don't try to "fight" a spasm or tight muscle. This could result in injury to both of you. Move slowly, to allow tight muscles to relax and spasms to reduce. Sometimes holding a position will allow the spasms to pass. Moving quickly can increase stiffness. (For more information on this, see page 14)
4. You may be able to incorporate some of these movements if you are washing or dressing the person.
5. Keep communication open. Look at and listen to the person you are helping.
6. Hold each stretch for several seconds. Then gently return to the starting position. Repeat each exercise 2-3 times.

# Shoulder Exercises

## Exercise I – Arm Lift



### Instructions for Helper

#### **Starting position:**

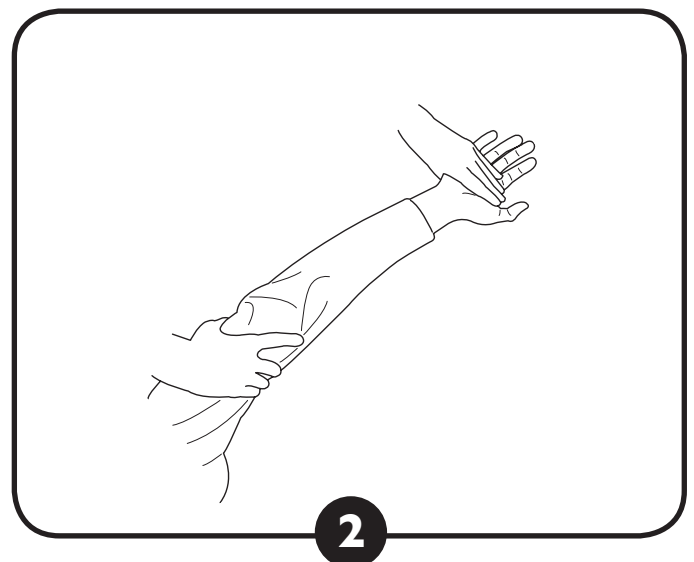
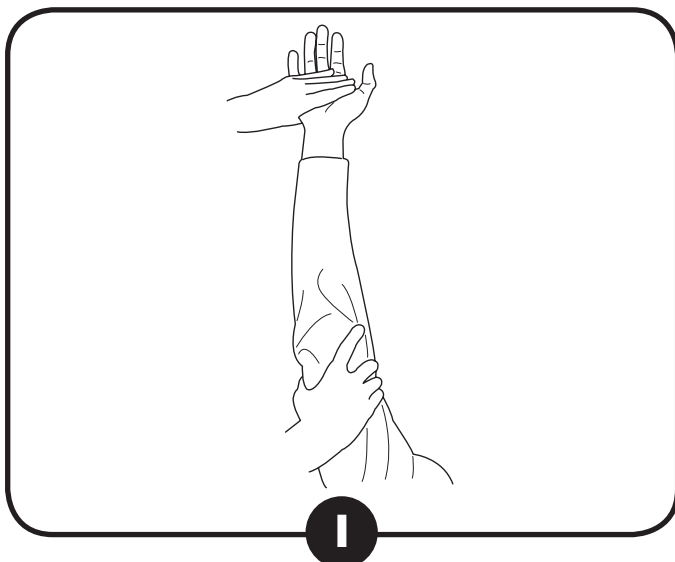
Person lying on back, arm at side, palm turned towards body. Take the person's hand and place the other hand under the shoulder to stabilise it.

#### **Step 1:**

Keep the elbow straight and lift the arm until the hand points towards the ceiling.

#### **Step 2:**

Continue to move the arm back until it rests on the bed next to the person's head or until you meet resistance. The arm may be bent at the elbow if the headboard of the bed will not allow the arm to be carried all the way back.



# Shoulder Exercises

## Exercise 2 – Arm Out to Side



### Instructions for Helper

#### **Starting position:**

Person lying on back, arm at side. The helper places one hand under the shoulder to stabilise it. With the other hand hold the wrist

#### **Step 1:**

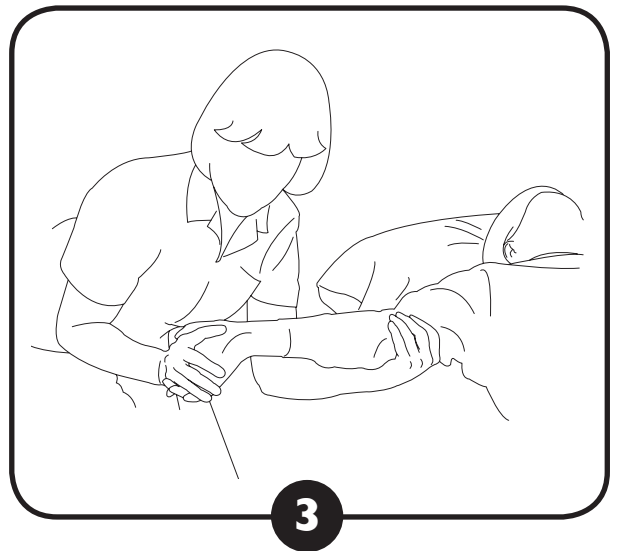
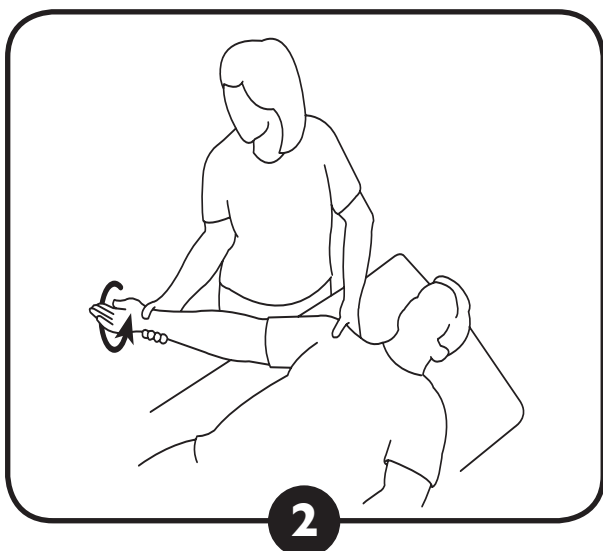
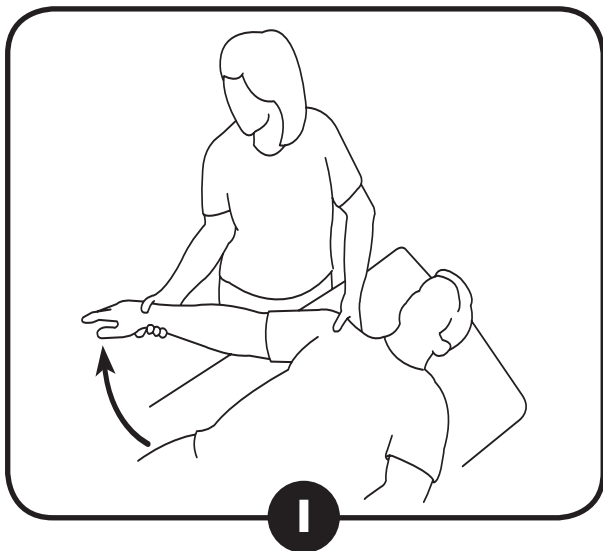
Keep the elbow straight and move the arm out, away from the body.

#### **Step 2:**

Rotate the person's arm so that the person's palm faces up.

#### **Step 3:**

Take the person's hand as though you are shaking hands with them and gently stretch the wrist back.



# Shoulder Exercises

## Exercise 3 – Shoulder Twists



Starting position

### Instructions for Helper

#### Starting position:

Person lying on back. The helper places one hand under shoulder with thumb of that hand on top of shoulder. With other hand, hold wrist, making sure that the elbow rests on the bed and the palm faces up.

#### Step 1:

With your hand supporting at the wrist, keep the person's elbow bent and slowly move forearm down, palm down, until it rests on the bed, or you meet resistance.

#### Step 2:

Return to the starting position

#### Step 3:

With your hand still supporting at the wrist, slowly move the forearm back, palm up until it rests on the bed, or you meet resistance.



1



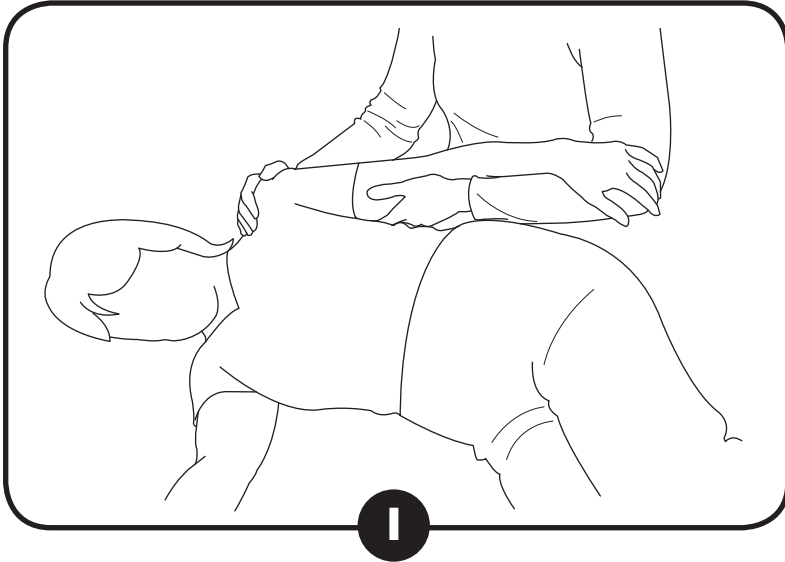
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# Shoulder Exercises

## Exercise 4 – Stretching Arm Back



### Instructions for Helper

#### **Starting position:**

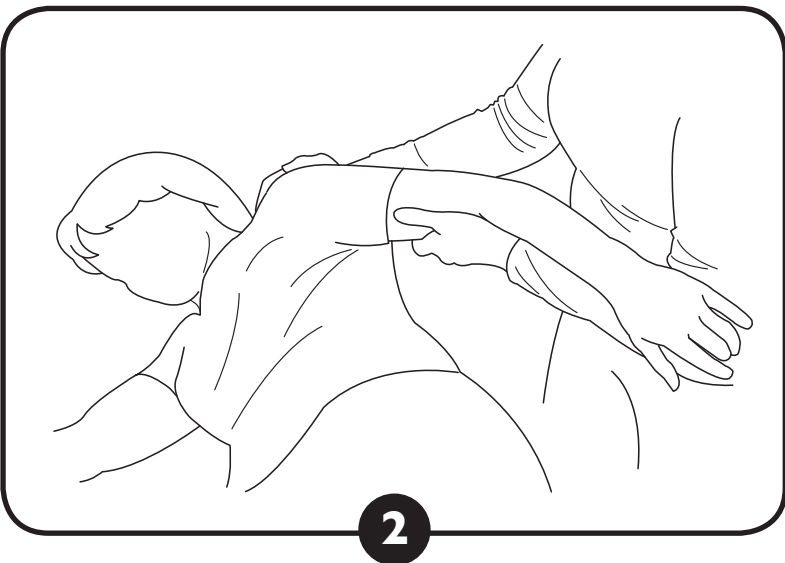
Person lying on their side or sits in a chair.

#### **Step 1:**

Stabilise shoulder with one hand and cup around the arm just above the elbow with the other hand.

#### **Step 2:**

Move arm straight back, supporting the forearm. Hold and move arm back to starting position.

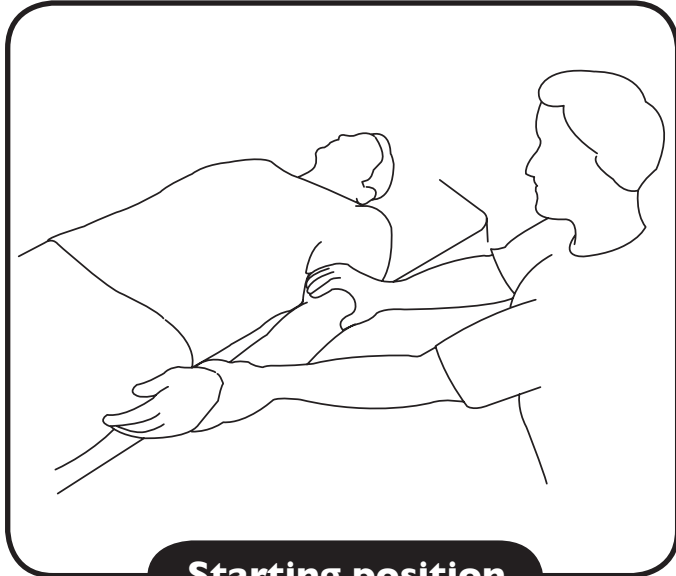


### Comments

# Elbow & Forearm Exercises

## Exercise 1

The following exercises can be done lying down or sitting up.



Starting position

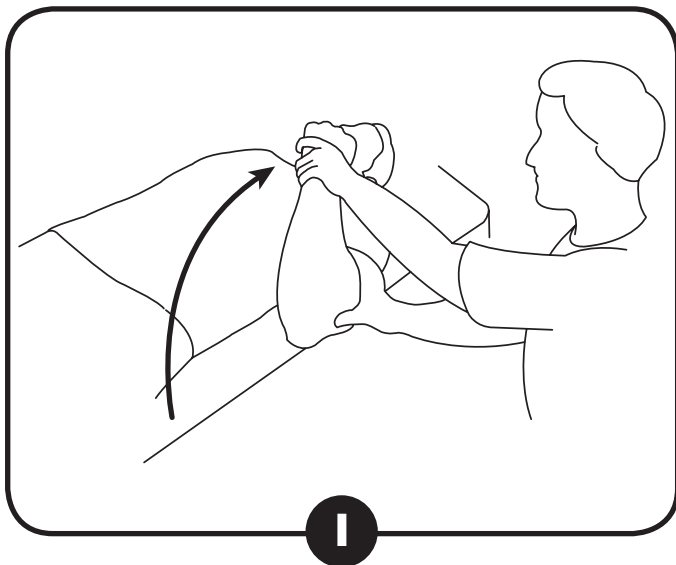
### Instructions for Helper

#### Starting position:

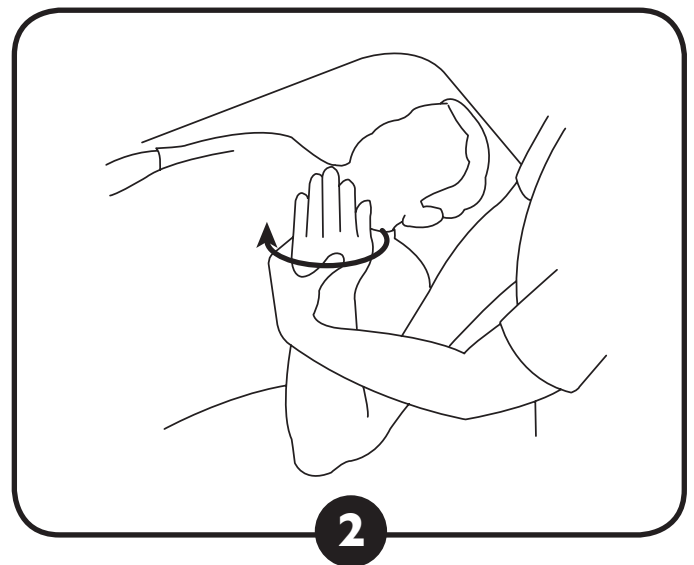
Person lies on back, arms at sides, palms turned towards body. Hold wrist and hand with one hand and hold the elbow with your other hand.

**Step 1:** Gently raise hand as close to the shoulder as possible, keeping elbow and upper arm on the bed. Return to the starting position.

**Step 2:** Raise forearm, gently turn hand, and palm towards and then away from person's face.



1



2

### Comments



# Hand & Wrist Exercises

## Exercise I – Wrist Bends

The following exercises can be done lying down or sitting up.



**Starting position**

### Instructions for Helper

#### Starting position:

Hold person's hand comfortably with one hand and hold wrist with your other hand.

**Step 1:** Bend wrist forwards until you feel resistance.

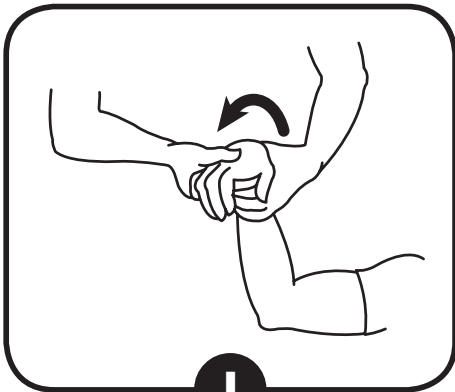
**Step 2:** Bend wrist back until you feel resistance.

**Step 3:** Return to starting position.

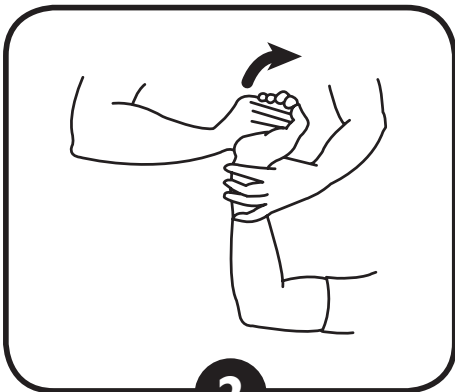
**Step 4:** Bend wrist sideways as far as possible in the direction of the little finger until you feel resistance.

**Step 5:** Bend wrist sideways as far as possible in the direction of the thumb until you feel resistance.

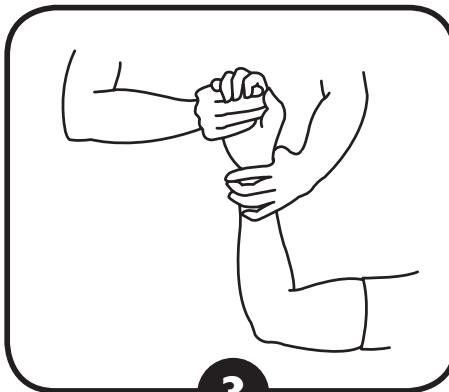
Return to the starting position.



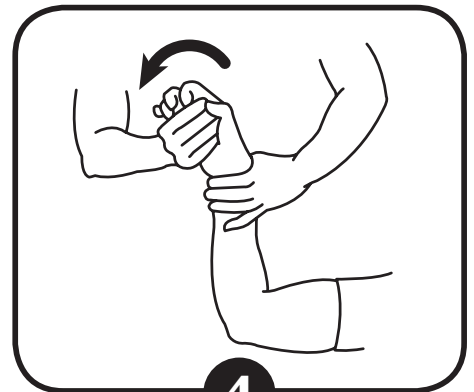
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# Hand & Wrist Exercises

## Exercise 2 – Thumb Movements

The following exercises can be done lying down or sitting up.

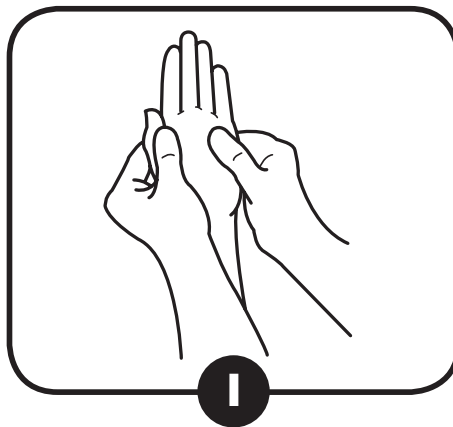
### Instructions for Helper

#### Starting position:

Holding the hand steady with one hand.

**Step 1:** With other hand move thumb across palm and away from palm.

**Step 2:** Move thumb towards index finger and away.



## Exercise 3 – Finger Movements

### Instructions for Helper

#### Starting position:

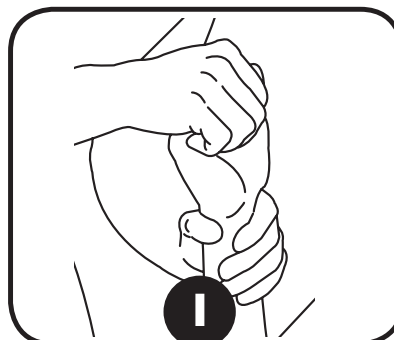
Hold the hand to steady the wrist.

#### Step 1:

Fold fingertips to palm getting all the joints to bend.

#### Step 2:

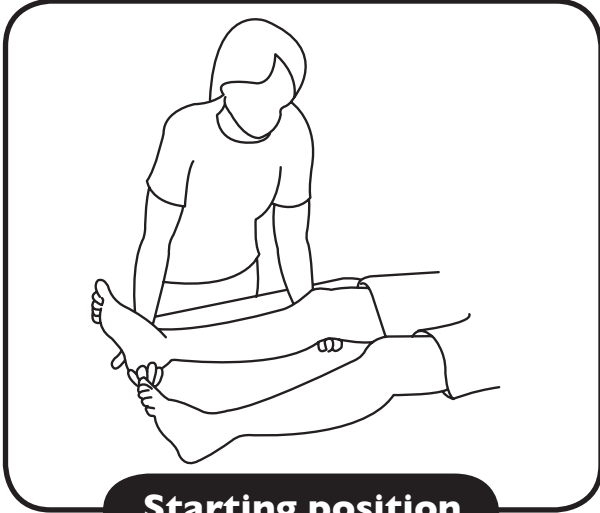
Then gently open out the hand and straighten the fingers as far as possible.



### Comments

# Hip & Trunk Exercises

## Exercise I – Hip & Knee Bend



**Starting position**

### Instructions for Helper

#### **Safety tip for Helper:**

Be careful not to bend too far over the person. Remember to adjust the height of the bed if able, or place your knee on the bed to give yourself more support.

#### **Starting position:**

Person lying on back. Place one hand under knee, and cup heel in your other hand.

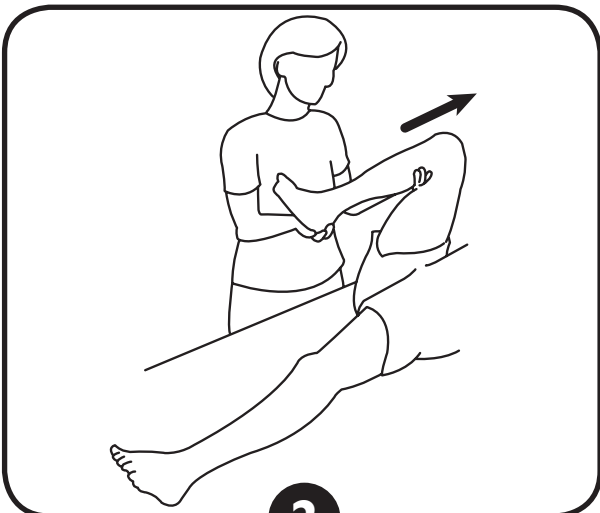
**Step 1:** Lift the leg, bending it at the knee and hip.

**Step 2:** Continue to move the leg, bringing the knee towards the chest so that the knee and the hip are bent as far as they will go without pain. Other leg should remain as flat as possible on the bed.

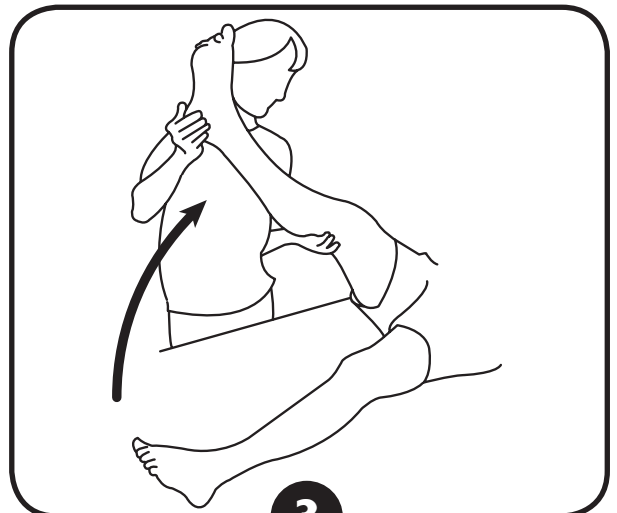
**Step 3:** Lower the leg onto the bed, then keeping the knee as straight as possible, slowly lift the foot up, stretching the back of the thigh.



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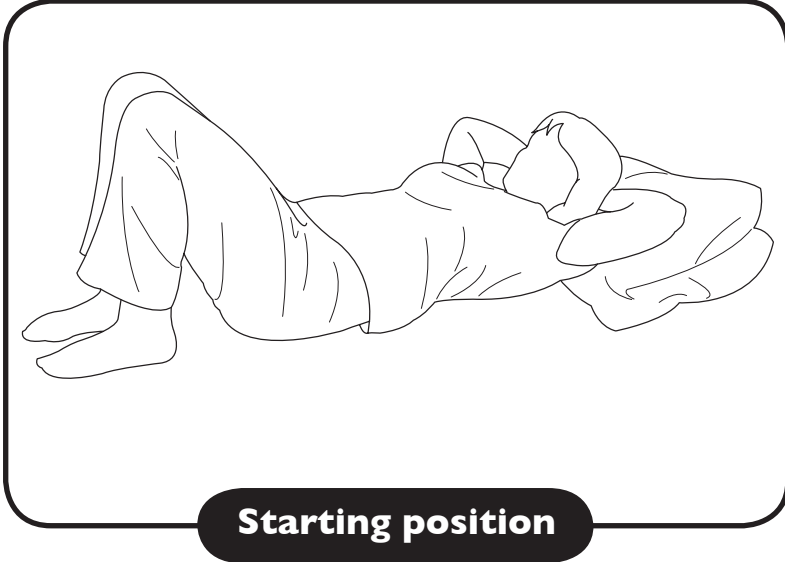
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# Hip & Trunk Exercises

## Exercise 2 – Knee Rolling

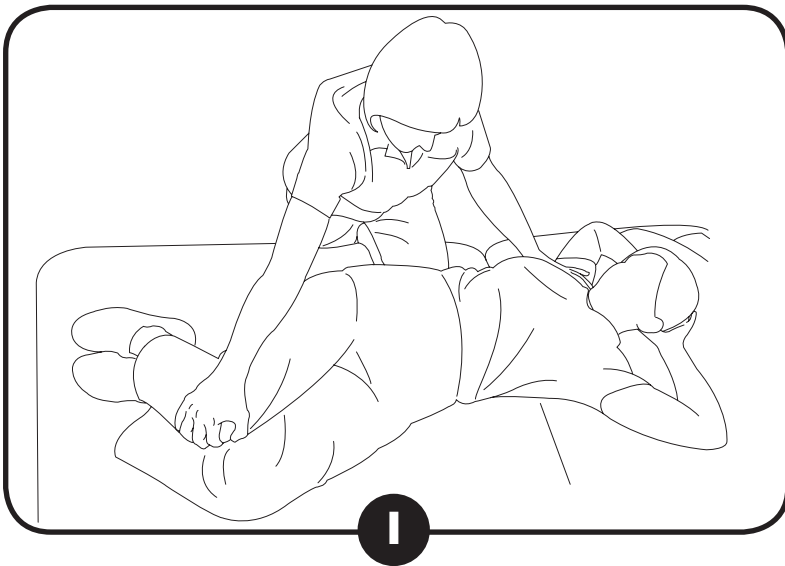


### Instructions for Helper

#### **Starting position:**

Person on back, looking up. Arms may be as shown or lying at the sides. Try and keep shoulders on the bed during this stretch. Bend knees up one at a time, and place feet flat on the bed.

**Step 1:** Slowly roll knees to one side. After this stretch bring the knees back up to starting position, then to the other side. The goal is to stretch the trunk and hips, not to touch the knees to the bed.



# Hip & Trunk Exercises

## Exercise 3 – Knees Apart

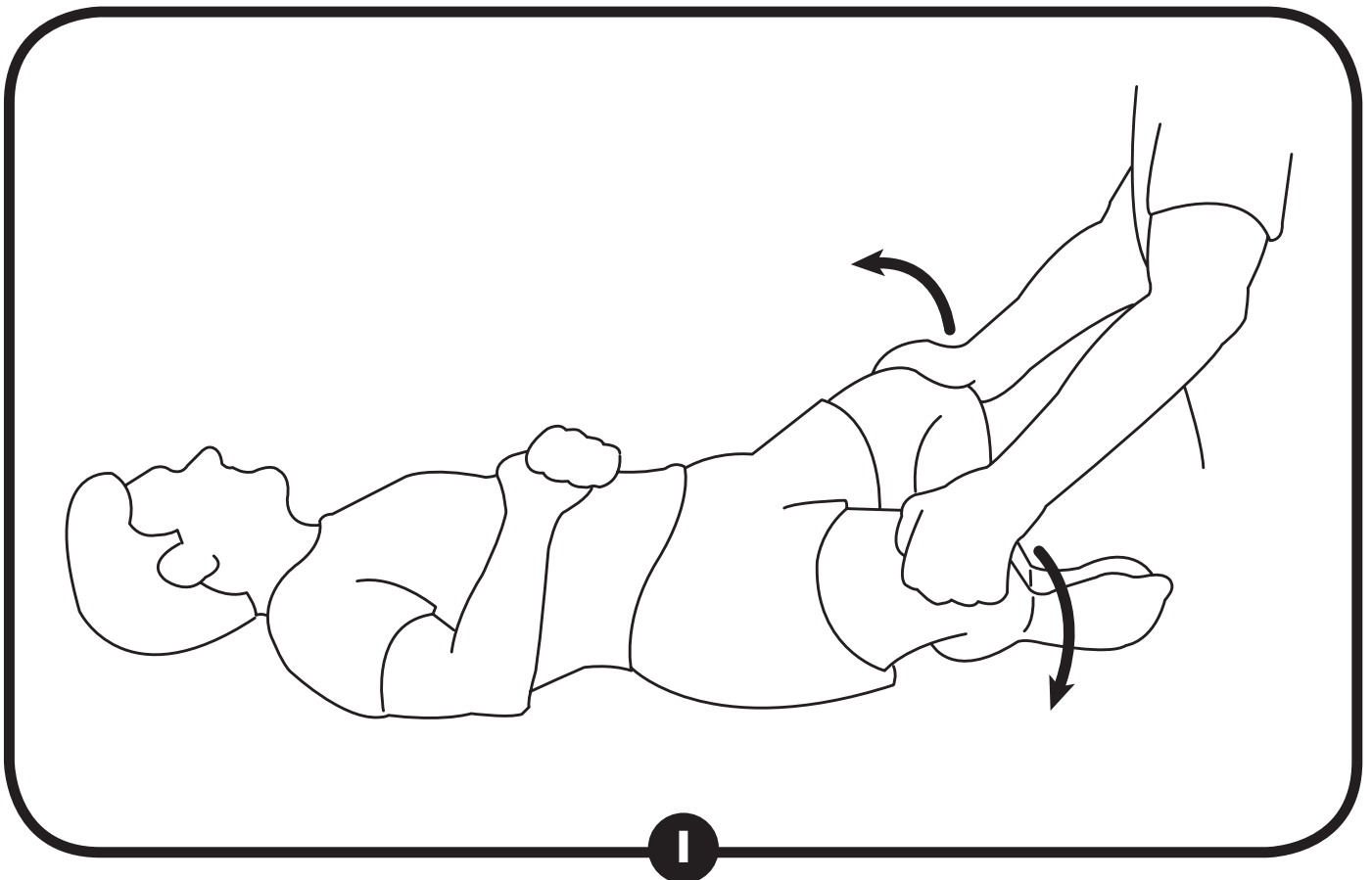
### Instructions for Helper

#### **Starting position:**

Person on back with knees bent and feet flat.

**Step 1:** Slowly spread knees apart by gently applying pressure to inside of knees.

**Step 2:** Slowly return to starting position.



### Comments

## Ankle & Foot Exercises

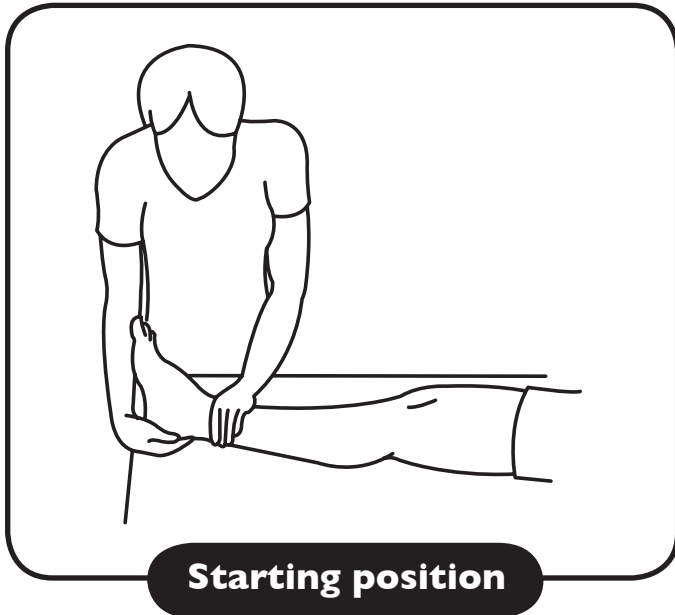
### Exercise 1 – Ankle Stretch

The following exercises can be done lying down or sitting up.

#### CAUTION

Do this stretch slowly to prevent muscle spasms.

If you feel one starting, stop and allow the leg to relax and then repeat the exercise more slowly.



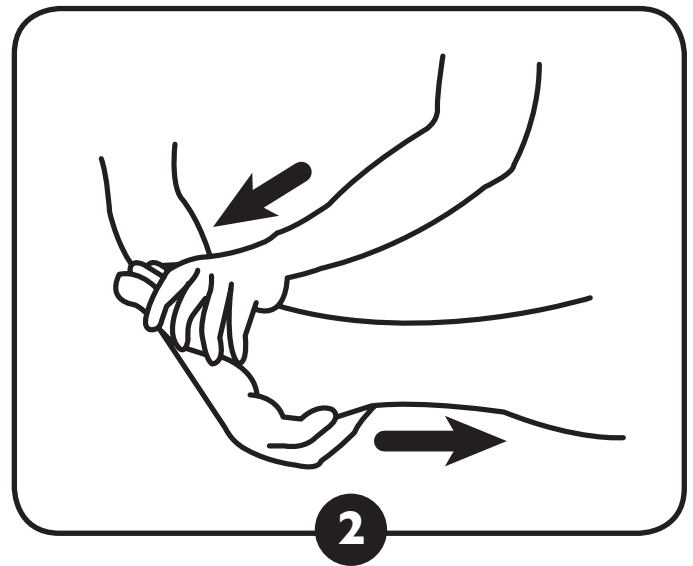
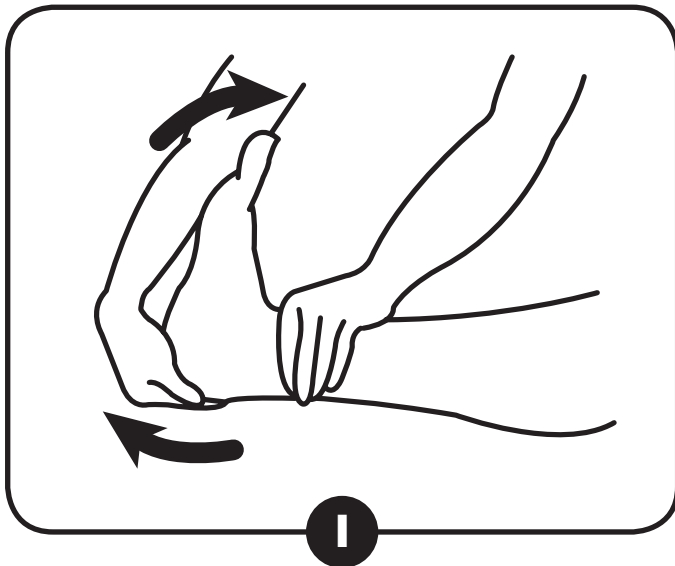
#### Instructions for Helper

##### Starting position:

Person lying on back or sitting well supported. Cup the heel with one hand, your forearm resting against the ball of the foot. Steady the ankle by placing your other hand on the leg just above the ankle.

**Step 1:** Press your arm against the ball of the foot (not the toes) bringing the foot up.

**Steps 2:** Move your hand to top of foot then gently point the foot down towards the floor.



## Ankle & Foot Exercises

### Exercise 2 – Foot Twist

The following exercises can be done lying down or sitting up.



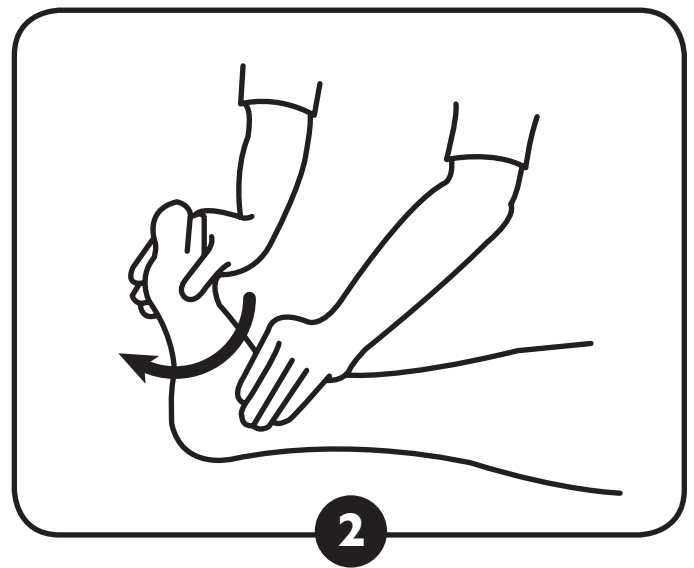
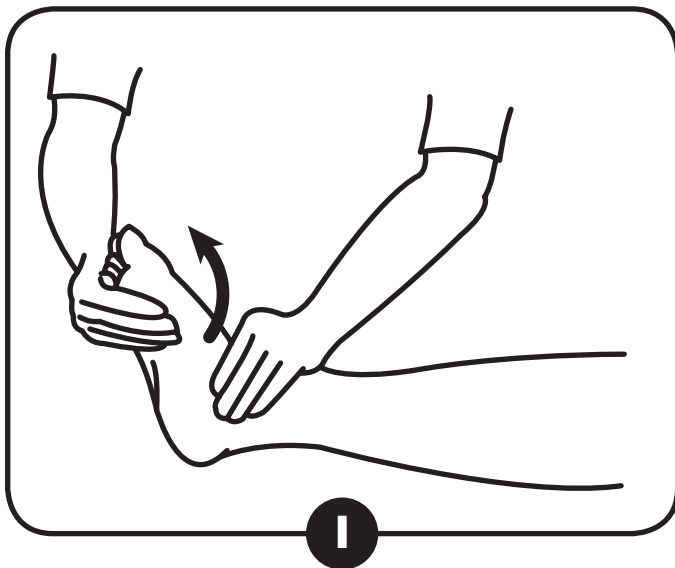
#### Instructions for Helper

##### **Starting position:**

Hold person's foot with one hand, palm of your hand against ball of foot. Hold the ankle firmly with your other hand.

**Step 1:** Turn the foot in so that the sole of the foot faces towards the other foot.

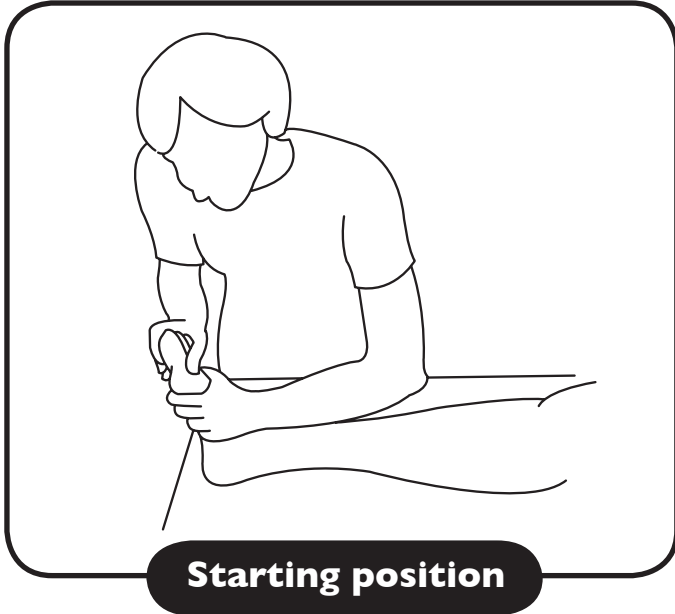
**Step 2:** Turn the foot out so that the sole faces away from the other foot.



## Ankle & Foot Exercises

### Exercise 3 – Toe Stretches

The following exercises can be done lying down or sitting up.



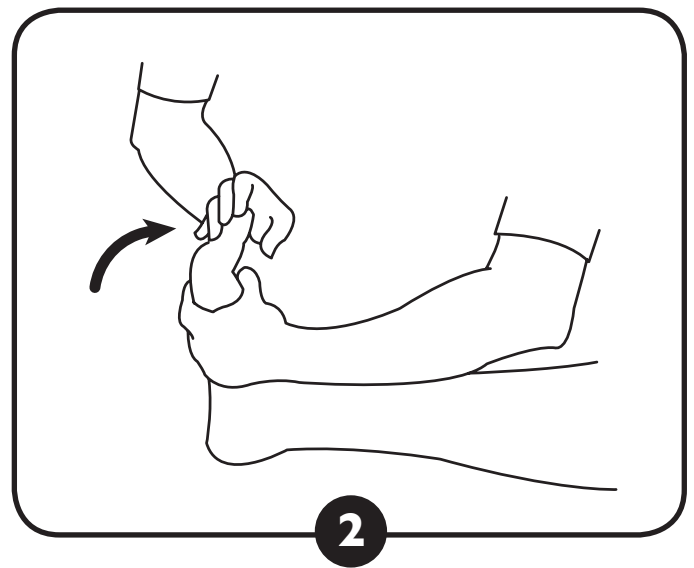
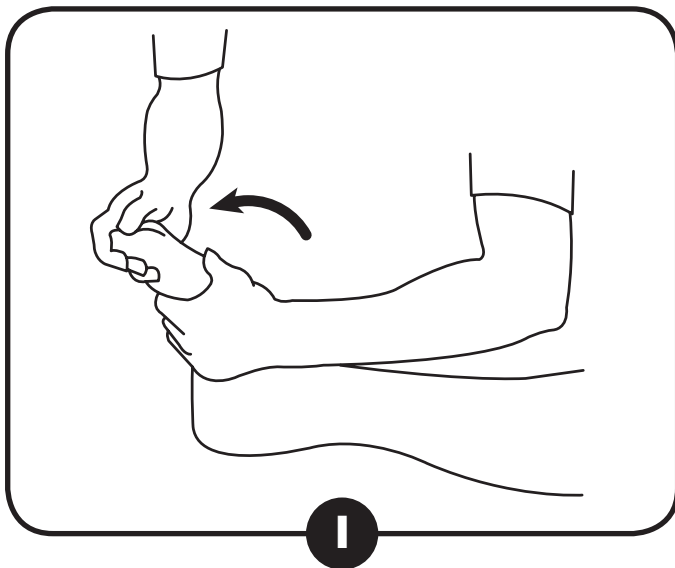
#### Instructions for Helper

##### **Starting position:**

Person lying on back or sitting well supported. Hold the toes with one hand. Hold the foot firmly with your other hand.

**Step 1:** Curl the toes down

**Step 2:** Straighten the toes and gently stretch them back.

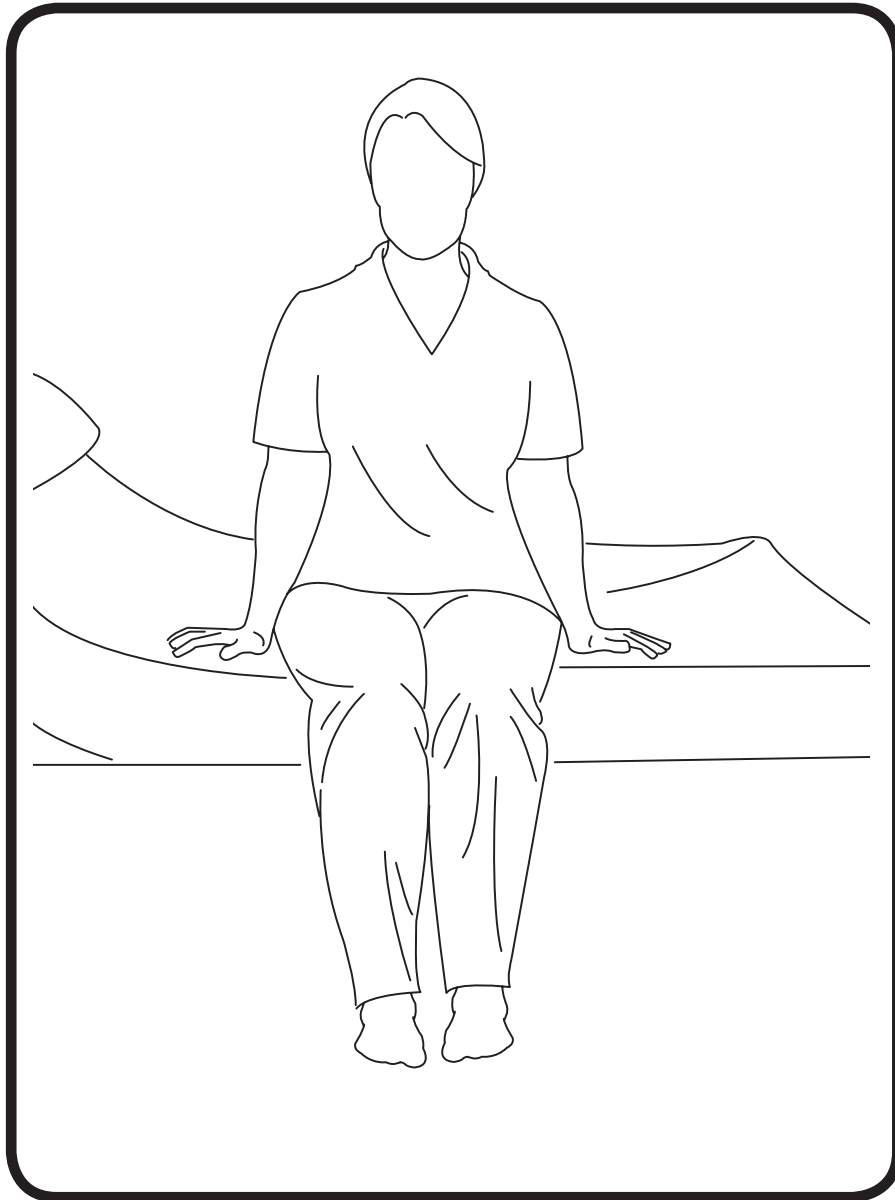


**Comments**



**A positive approach to**

# *posture*



**for people with  
neurological conditions**

## Introduction

When you have a neurological condition it is really important to think about your posture throughout the whole day and overnight. Therapists call this 24 hour posture management. The aim is to limit problems, prevent new ones arising and keep you as physically able as possible. Poor posture and positioning can lead to muscle and joint problems.

### | What is muscle tone? |

In order to move, our bodies need a certain amount of muscle tension. When we are relaxed that tension may be low; when stressed the tension may be higher. This is normal. In neurological conditions, however, there can be problems with muscle tension. It may be excessively low (hypotonicity) or excessively high (hypertonicity – we will call it spasticity).

These problems can make it difficult for us to carry out our daily activities in our usual way. Sometimes pain can be experienced, particularly if spasms (involuntary muscle contractions similar to cramp) occur.

\* If you have trouble with muscle tension affecting your daily life then you should seek specialist advice from your therapist or GP.

#### **Low tone (hypotonicity)**

It is important that if a part of your body is “floppy” and perhaps limiting your function, that it is well supported whatever position you are in. If an area is “floppy” then it could be injured easily, so care needs to be taken.

#### **Spasticity**

The limbs can be resistant to bending, straightening, moving in and out from the body or turning movements. There are many factors that may affect spasticity, such as pain, constipation, infection, pressure sores, ill-fitting splints. If you think any of these may be a problem please seek advice.

Spasticity may help some movements, e.g. standing if the legs are weak. As there is so much to consider it is important to get specific advice about managing spasticity. Spasticity may sometimes cause muscle shortening so a good management programme is important.

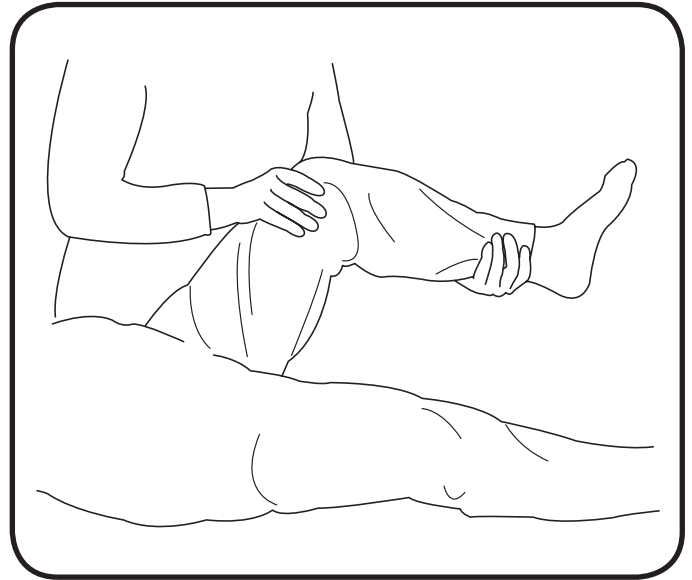
The key to helping spasticity is to support the body parts, giving them the chance to relax.

# Types of high tone-spasticity

## **Flexor tone**

This is when part of your body tenses and **bends** more than you want it to e.g. the hips and knees curl up towards the chest. It is helpful to straighten out and support the part to relax it.

Sometimes there can be a lot of tension when trying to straighten the leg. Position one hand above the knee and the other supporting the lower leg.

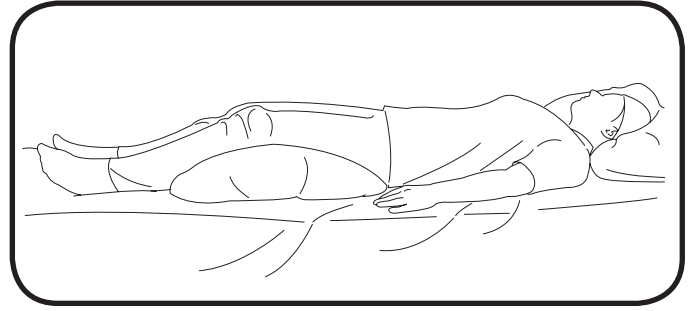
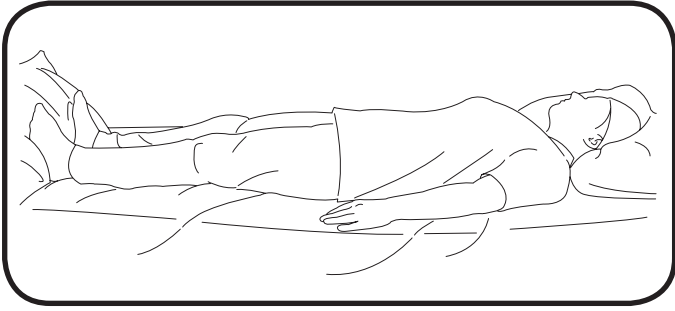


## **Extensor tone**

This is when the part of your body has too much tension and may **straighten** outwith your control. If you have extensor tone then try to regularly get into positions that bend problem parts of your body.

### **Comments**

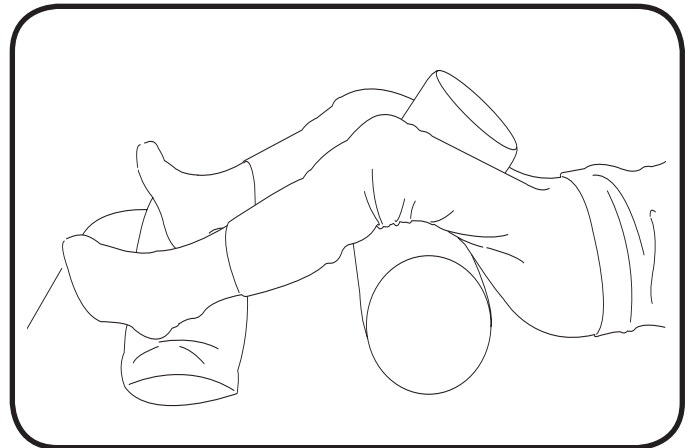
## Supported positions to try



Surprisingly, lying flat may not relax your body. Support the problem part with pillows, T-roll or a wedge. Try to have the arms relaxed and supported.



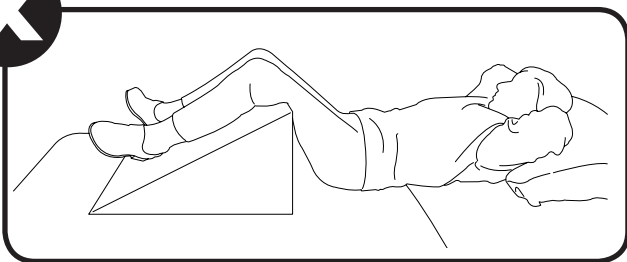
No support when lying down may lead to problems.



T-roll under knees provides support.



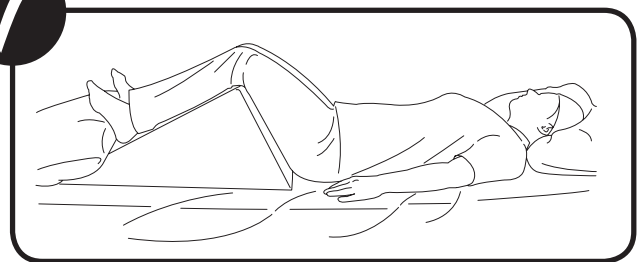
**WRONG!**



Wedge in the wrong way doesn't fully support the legs



**CORRECT**



Wedge in the correct way gives maximum support to the legs.

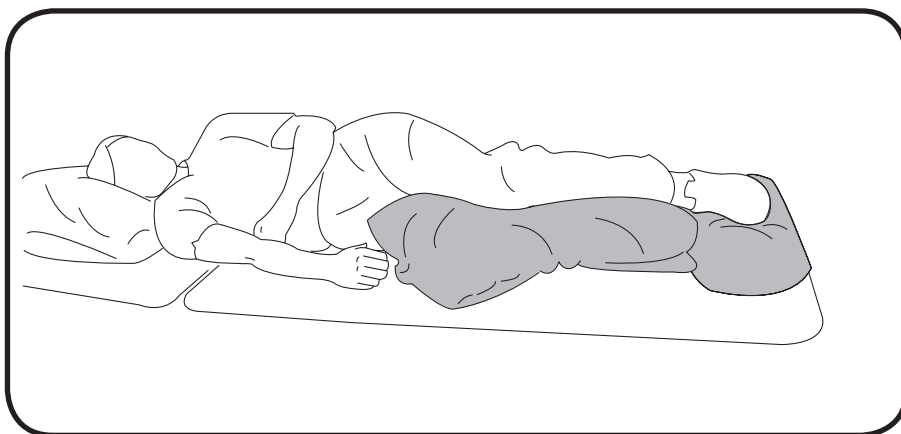
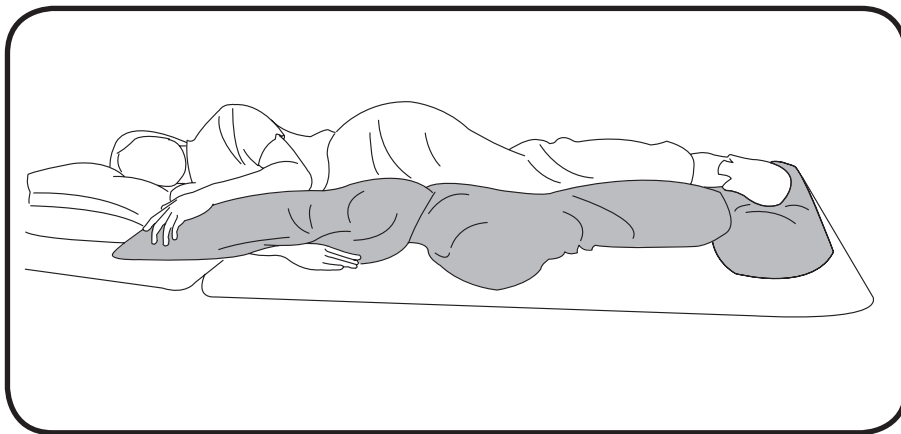
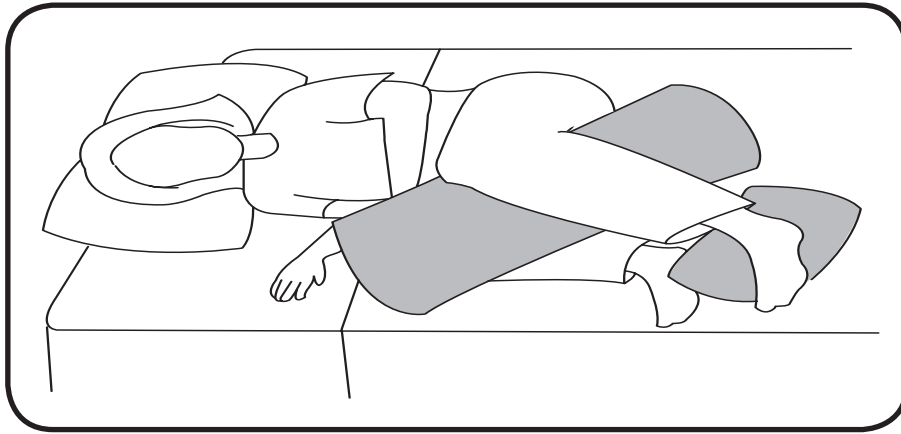
**Comments**

# Lying

## Lying on your side

Sometimes lying on your side eases the tension. Try lying with the top leg bent over the bottom one. Pillows or beanbags can help support this position.

Think about support for your arms too.



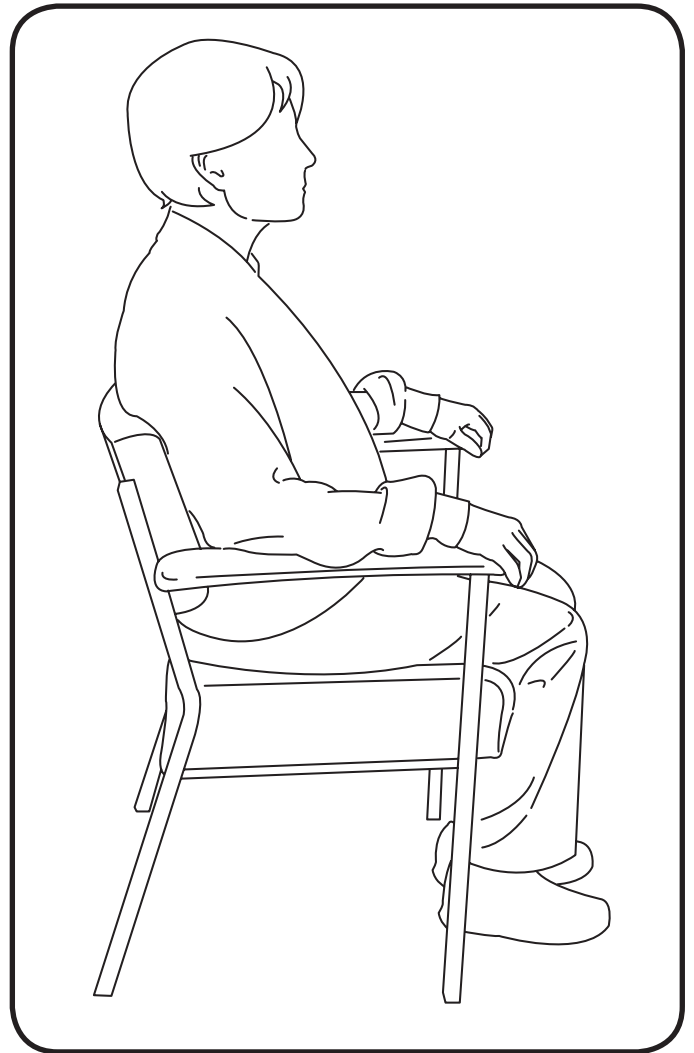
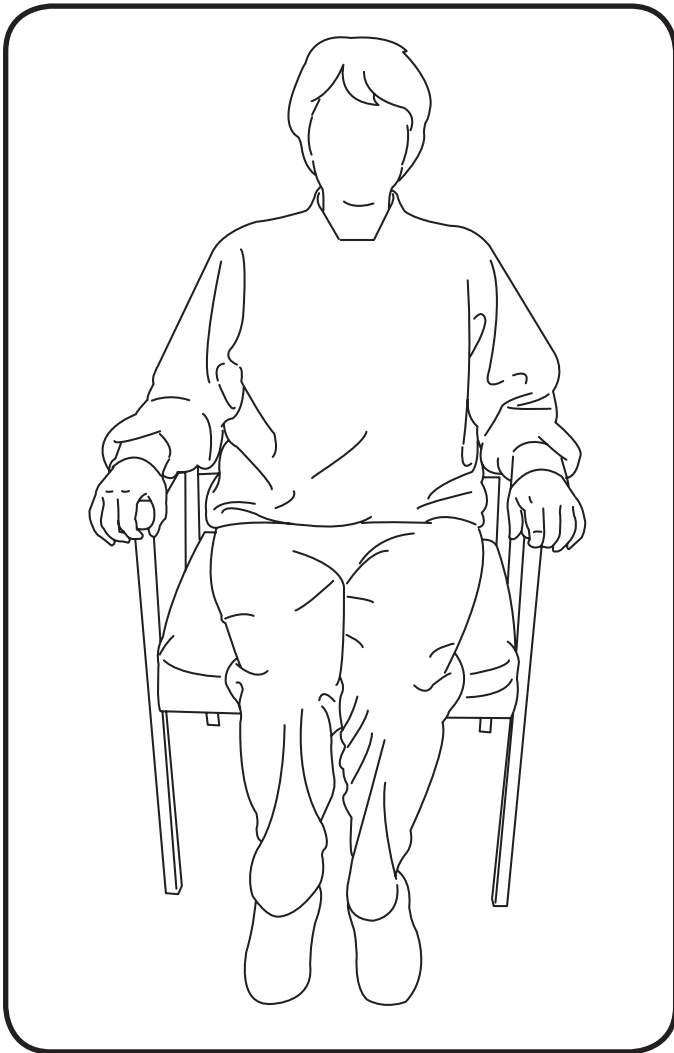
**Comments**

## | Standing |

By getting your weight onto your feet with good posture you may help relax and stretch tense muscles. Try to stand regularly (with your recommended aid/equipment to stay safe). This may improve circulation, relieve pressure areas and help stiffness.

Aim to stand as tall as you can with your feet flat on the floor. Tuck in your bottom.

## | Sitting |



When sitting, your **bottom** should be as far back in the chair as possible, with your hips level.

From this stable base, you want your **thighs** supported along their length and resting side by side.

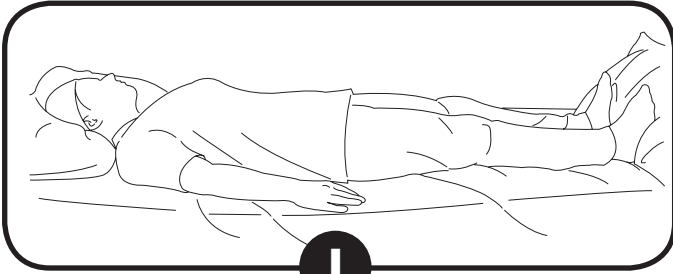
Your **feet** should be as flat as possible, again supported along their entire sole and resting under your knees.

Your **body** should be as symmetrical as possible with your **head** in the middle.

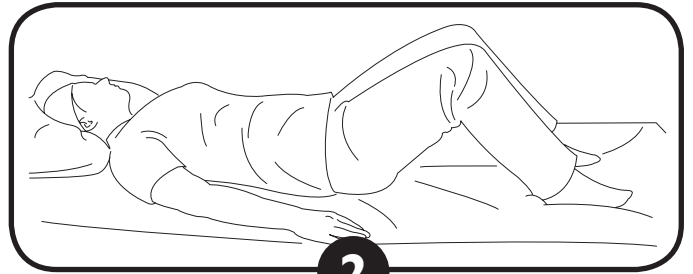
**You can get advice about chairs, wheelchairs and specialist seating from your therapist.**

## Getting out of bed

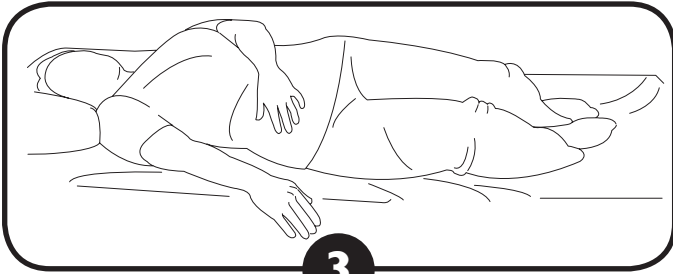
- When getting out of bed, alone or with help, aim to curl up onto your side. Then bring your legs over the bed edge, and sit up using your arms if possible.



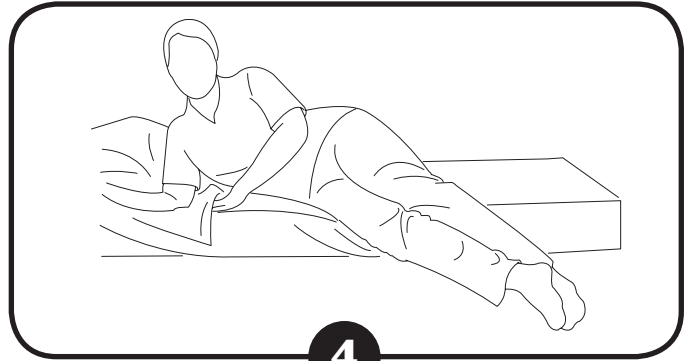
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## Other tips

- If you feel your body tensing up with extensor muscle tone, then try to think about bending. Try to bring your chin to your chest; fold your arms across your body; lean forwards bending at the hips or pull up your toes. Wait till your body relaxes then reposition yourself if necessary to be safe and comfortable.
- You will get to know which positions cause you to tense up and spasm – try and avoid these.
- When moving, take it slowly. Fast movements may trigger your spasticity. Time is often needed for the muscles to settle.
- Your body benefits from a change of position so muscles get the chance to stretch. Avoid staying in the same position for too long.
- **Ankle clonus** - this is when your calf muscle is overactive and makes your foot bounce into a spasm. The ball of your foot is often sensitive and touching it may cause this spasm. This may happen if your foot is poorly supported on your footplate.
  - You can try lifting the heel and then slowly placing it down again.
  - If you are sitting, put pressure on the knee and down through the heel until it settles.
  - If you are lying down, try to bring the toes and ankle up and support with a pillow.

**If you have any queries regarding the information contained in this booklet, please contact your therapist.**

**Name:**.....

**Contact No:**.....