An exercise programme for people with movement disorders

Developed by:
Monica Busse PhD MSCP, Lori Quinn EdD PT,
Karen Jones MSc MSCP, Matthew Townsend MSc
This exercise programme has been developed by physiotherapists specifically for people with movement disorders. Exercise is not without its risks and this or any other exercise programme has potential to cause injury. To reduce the risk of injury, consult your doctor or physiotherapist before beginning this exercise programme. Your physiotherapist should be able to help you identify which exercises will be most beneficial for you or if you should modify or omit any of the exercises in the DVD. The exercises presented here are in no way intended as a substitute for medical consultation; the authors and producers disclaim any liability from and in connection with this program. As with any exercise programme, if at any point during your work out you begin to feel faint, dizzy or have physical discomfort, you should stop immediately and seek medical advice.

Copyright Cardiff University

Acknowledgements:
The contributions of the specialist physiotherapists and occupational therapists to the development of this DVD is gratefully acknowledged. This work was funded by a grant from the Chief Medical Officer for Wales Research Budget, Welsh Assembly Government.

Video production, graphic design and illustrations by Media Resources Centre.
University Hospital of Wales.
About these illustrations

This booklet is intended as a supplement to the DVD - you will need to use the DVD to hear detailed instructions. The diagrams shown illustrate the different exercises that are demonstrated in the DVD; you should use these diagrams to remind you of the correct activities when you work through the exercise programme. The purpose and a few important points relevant to each exercise are shown. Specific instructions relating to the number of repetitions recommended or the length to hold a particular stretch are provided on the DVD.

You will see that the exercises can be performed in standing or in sitting; you should choose the option where you feel most safe. If you are doing the exercises in standing, you should have a sturdy chair close by for balance and support if needed.
Correct Posture

**Purpose:** In order to get the most from the exercises in this programme, it is important to maintain a good posture whilst you are doing them.

**Key points:** Try to achieve a comfortable, upright position. Your back should not be overarched or slouched.

---

Routine to practice getting up and down from the floor using a chair

**Purpose:** It is important that you can get down and back up from the floor safely.

**Key points:** You should only start the mat-based exercises when you feel safe and confident with getting down and back up from the floor; this may take a few sessions of chair to floor to chair practice.
1.0 FLEXIBILITY AND WARM UP

1.1 Neck Stretches

Purpose: These exercises stretch the muscles on the front, back and side of your neck; you should start gently. These stretches are important for maintaining good posture, and mobility in your neck and shoulders.

Key points: Try not to let your shoulders lift during these movements.

1.2 Shoulder Rolls

Purpose: This exercise helps to achieve a good posture, and maintains mobility in your shoulders and upper back.

Key points: Shrug your shoulders up towards your ears. Now slowly roll them backwards and downwards whilst trying to squeeze your shoulder blades together.
1.3 **Horizontal Shoulder Flexion**

**Purpose:** This exercise stretches the muscles in your upper arm, upper back and shoulder.
**Key points:** Take your right arm and gently bring it across your chest at the height of your shoulder. With your other hand, gently hold your right elbow and pull your arm further across. You should feel the stretch across the back of your arm, and your shoulder. Repeat this with your left arm.

1.4 **Arm Circles**

**Purpose:** This exercise helps with flexibility and mobility of the entire shoulder joint, and also helps with your posture.
**Key points:** Keeping your elbow straight, move your right arm in a big circle in a forward direction. Repeat in a backward direction. Now repeat with your left arm in both directions.
1.5 Hand Stretches

Purpose: This exercise helps with mobility of your hands and wrists.

Key points: With your elbows bent, rotate both your hands around in a circle, and repeat in the other direction.

1.6 Ankle Circles

Purpose: This exercise helps with the flexibility of your ankles.

Key points: Standing with a chair nearby for support, make circles with one foot, first in one direction and then the other direction. Repeat with the other foot. If you feel as if you will lose your balance, put your foot down. Once you have regained your balance, try again.
1.7 Calf Muscle Stretches

Purpose: This exercise stretches your calf muscle. It is an important muscle for walking and balance.

Key points: In standing, step back with one leg, bend your front knee and lean forward. Keep your back knee straight, and you should feel a stretch in the back of your calf. Taking a wider stance will make this stretch more intense. If you do this in sitting, wrap a towel around the ball of your foot, pulling your upper foot towards your body. Feel the stretch in the back of your calf.

1.8 Hamstring Stretch

Purpose: This exercise stretches the hamstring muscles, at the back of your thigh.

Key points: Lying on the floor, wrap a towel around your foot and pull your leg up towards your body, keeping your knee straight and your foot bent. You should feel the stretch in the back of your leg.
1.9 Lying Supine Twist

Purpose: This exercise helps with mobility of your trunk and your hips.

Key points: Bend both of your knees, keeping your feet flat on the floor. Spread your arms out to the side. Drop your knees over to one side, and turn your head in the opposite direction. Now drop your knees to the other side, and turn your head in the opposite direction.

1.10 Thigh stretch

Purpose: This stretches the quadriceps muscle in the front of the thigh. It is an important muscle for such activities as rising from a chair, and climbing stairs.

Key points: Whilst lying on your stomach, place one hand at the ankle and bend that knee so that your heel comes towards your bottom. Gently pull that leg until the front of thigh stretches. If you can’t reach your ankle, use your other leg to help move your heel toward your bottom. Feel the stretch in the front of your thigh.
1.11 **Prone Press Ups**

**Purpose:** This exercise promotes mobility of your low back, and counter-balances the effects of sitting and being in a forward flexed position for long periods of time.  
**Key points:** Start lying on your stomach. Place your hands at your sides near your shoulders, and press up by straightening your arms. When doing this exercise; be careful not to lift your hips or legs up off the floor. Do not do this exercise if it hurts your back, or if you feel any pain going into your buttocks or your legs.

1.12 **Kneeling Child’s Pose**

**Purpose:** This exercise stretches out your spine and improves the flexibility of your hips and knees.  
**Key points:** Start by lying on your stomach, move onto all fours, then gently sit back on your heels. Keep your arms stretched out in front of you. Try to sit all the way back on your heels.
2.0 BALANCE AND CO-ORDINATION

2.1 **Standing with feet together, eyes open and then closed**

**Purpose:** This exercise aims to improve your standing balance and your balance during walking.

**Key points:** In standing, try to maintain your balance. If you feel comfortable in this position, close your eyes for up to 10 seconds, but be sure your hands are near to the chair for support if you need it.

2.2 **Standing on one leg**

**Purpose:** This exercise aims to improve your standing balance and your balance during walking.

**Key points:** In standing with support, bend one knee so you are standing on one leg. If you lose your balance, put your foot down, regain your balance and try again. If you feel comfortable in this position, let go of the support while keeping your hand nearby.
2.3 **Tandem Standing**

**Purpose:** This exercise will improve your standing balance and your balance during walking.

**Key points:** Place one foot in front of the other. If you can, put the heel of your front foot against the toe of your other foot. If you are unable to keep your balance in this position, put your front foot to the side but as close to the other foot as is comfortable. If you feel comfortable in this position, let go of the support while keeping your hand nearby.

![Tandem Standing Illustration](image)

2.4 **Forward Lunges**

**Purpose:** This exercise works to strengthen the quadriceps muscle that is important for walking.

**Key points:** Standing with a chair near to your side, take a step forward with your right leg, hold for a second, and then return to the starting position. Use the chair to help you keep your balance if you need support.

![Forward Lunges Illustration](image)
2.5 **Side Lunges**

**Purpose:** This exercise works to strengthen the hip as well as the quadriceps muscles of the leg that are important for walking.

**Key points:** Standing with the chair at your side, take a comfortable step out to the side, bending your knee over your ankle. Use the chair for balance if needed.
3.0 CIRCUIT RESISTANCE TRAINING

3.1 Sit to stand repetitions

**Purpose:** This is an important exercise to help improve your ability to get in and out of chairs easily, as well as strengthen your quadriceps muscles, which are important for stair climbing and walking.

**Key points:** From a sitting position, lean forward over your thighs and come to a standing position. Once you have your balance, carefully lower yourself back into the chair.

3.2 Shoulder press with weights

**Purpose:** This exercise strengthens the shoulder and back muscles, which are important for all daily activities. Remember to stand with a good relaxed and upright posture.

**Key points:** Hold one weight firmly in each hand. Bend your elbows so that your hands are near your shoulders. Slowly push your arms straight up into the air. Be careful not to arch your back. Slowly return the weights to shoulder height.
3.3 **Squatting**

**Purpose:** This exercise helps to strengthen the quadriceps and gluteal muscles which are very important for many daily activities such as sitting down and standing up from a chair, walking and climbing stairs.

**Key points:** Start by standing near a sturdy chair, facing away from it as if you were going to sit down in the chair. Gently bend your knees and squat down, as if you were going to sit on the chair. Come as close as you can to the chair without actually sitting on it. Now stand up while squeezing your buttocks.

---

3.4 **Shoulder abduction with weights**

**Purpose:** This exercise strengthens the shoulder muscles and back muscles, which are important for all daily activities. Remember to stand with a relaxed and upright posture, with your knees slightly bent.

**Key points:** Holding a weight in each hand, keeping shoulders relaxed and elbows straight, move your arms out to the side until shoulder level then return back to the starting position.
3.5 **Trunk rotations & reaching with weights**

**Purpose:** This is an important exercise for strength of the trunk and to help with balance.  
**Key points:** Holding a weight in each hand, reach with your right hand across your chest to the left side. Turn your body as far as you can comfortably move. Return back to centre, and then repeat to the other side. You can also do this exercise in sitting.

3.6 **Step Ups**

**Purpose:** This is an important exercise to strengthen the muscles of the hip and thigh.  
**Key points:** Standing facing a stair, bring your right foot up and step up onto the stair. Follow with your left foot. Now step back down onto the floor, leading also with your right foot. Now repeat, leading with the left foot. Make sure there is a railing for support if needed. If you don’t have stairs at home, you can march on the spot bringing your knees upwards towards your chin. Make sure there is a chair nearby for support.
4.0 STRENGTHENING

4.1 Bridging

Purpose: This exercise strengthens your buttocks and your leg muscles. This is particularly important for balance and walking.
Key points: Bend both of your knees so that your feet are flat on the floor. Gently tilt your pelvis, as if you are imprinting your back into the floor. Now, lift your hips up into the air, while still holding your pelvis level.

4.2 Alternate Arm and Leg Raises

Purpose: This exercise strengthens your back muscles and helps with your posture.
Key points: Lying on your stomach, turn your head to one side so that you are comfortable. Slowly lift your right leg into the air. You should be able to raise your foot a few inches from the floor and hold for a short while. Repeat with the other leg. Progress by lifting the left arm with the right leg; then the left leg with the right arm.
4.3 **Plank**

**Purpose:** This exercise strengthens your back and stomach muscles.

**Key points:** Lying on your stomach, prop yourself up onto your elbows. Now, curl your toes under and lift yourself up onto your feet, while staying supported on your elbows. Try not to lift your hips up too high in the air. Hold this position for as long as you can (up to 10 sec). Rest as needed and then try again.
5.0 COOL DOWN AND RELAXATION

5.1 Cat/Camel stretch

Purpose: This exercise helps to stretch your spine and helps with improving the mobility of your trunk.

Key points: Start on your hands and knees, with your knees directly underneath your hips, your hands underneath your shoulders and back flat. Lay your hands out flat. Now as you take a deep breath in, arch your back, pulling your belly button away from the floor and bending your head so that you look at your stomach. Now exhale and move your spine in the opposite direction, pushing your belly button towards the floor and lifting your head up to look towards the ceiling.
5.2 **Trunk Rotations**

**Purpose:** This exercise helps with mobility of your trunk and your hips.

**Key points:** Bend both of your knees, keeping your feet flat on the floor. Spread your arms out to the side. Drop your knees over to one side, and turn your head in the opposite direction. Now drop your knees to the other side, and turn your head in the opposite direction.

---

5.3 **Breathing exercises**

**Purpose:** Breathing exercises help with relaxation after exercise.

**Key points:** Lying on your back, with your knees bent, place your hands on the lower part of your stomach, and inhale deeply through your nose, then exhale though your mouth, and relax.