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Get Moving! PLUS



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 **Arthritis**
NEW SOUTH WALES

Get Moving! PLUS

Disclaimer

The content in this booklet contains general information and advice. Every effort has been made to ensure that the information is accurate and reliable. The content is not a substitute for individual treatment advice of your doctor or health care professional. Always consult with your doctor or health care professional to obtain individual medical, treatment or management advice.

Kat has demonstrated only a few repetitions (reps) of each exercise. Start with the number of reps that you are comfortable with and slowly increase over time. Additionally, Kat has demonstrated some exercises from various angles for the purpose of illustrating technique only. You do not need to change your position mid-way through a set as Kat has done.

For your safety, it is advised that you READ and understand the accompanying exercise information sheet before participating in the exercises shown, and seek advice if needed.

Get Moving! PLUS

Get Moving! PLUS is not an exercise library for 'fitness' purposes *per se*, instead, it's an exercise library dedicated to promoting and improving the mobility and strength of joints and muscles that are affected by arthritis and other musculoskeletal conditions. Many of the mobility exercises included are low risk of injury and are easy to perform, though some are a little complex. For example, some require a resistance band, towel or other equipment, other exercises are self-assisted (using your hands to create force or a block, or to promote a specific direction of movement), while some require a certain range of motion (ROM), balance and/or coordination ability.

Unlike the *Get Moving!* Series, there are no 'fitness' profiling levels, which means that anyone at any age can perform the exercises given their circumstance and ability. These exercises are not to get you 'fit' but to get your joint 'fit' in a specific context, ie. pre and/or post rehabilitation settings, severe arthritis and/or pain. Exercises are grouped by joint and mobility attribute with a range of regressed and progressed exercises that can be used for a variety of purposes.

Please note: we highly recommend that the use of this resource is a collaborative one, ie. you work with your allied healthcare professional for exercise recommendation and assistance.

Why was it created?

Get Moving! PLUS was created out of both demand from consumers wanting exercises for specific joints and the need for freely available, high quality, joint specific mobility exercises. *Get Moving! PLUS* may be used to complement treatment from a physiotherapist, exercise physiologist or myotherapist for either prehabilitation or rehabilitation from a joint replacement (or other) surgery, chronic pain and/or restricted movement in the context of arthritis.

Get Moving! PLUS in focus

Key focus 1: Mobility

Broadly speaking, mobility is an umbrella term used to describe the act of stretching, moving and strengthening a variety of tissues that surround the joint and the joint itself. Mobility is an indication of how well and efficiently we move. Flexibility, strength, coordination, and body awareness are all attributes of mobility. Thus, mobility of a joint can be promoted a number of different ways, eg. by 'traditional' stretches (active static and dynamic stretches or movements), passive stretches or mobilisations (where a musculoskeletal therapist does the movement for you), balance and strengthening exercises. In this booklet, 'mobility' indicates the exercises targeted at mobilising the joint.

Benefits of mobility

Regularly performing and practicing mobility attributes is key to maintaining and promoting the health of joints, regardless of their condition. In particular, mobility exercises are significant for those with arthritic conditions (especially if they have loss of motion), those who may be waiting for a joint replacement (or anything similar), and those who have undergone a joint replacement or some other kind orthopaedic surgery to treat arthritis or other musculoskeletal condition. Movement at this point is critical; engaging in exercise post-surgery can predict the outcome of quality and quantity of joint ROM in the following ways:

- facilitate range of motion and technique
- help improve and maintain joint health and function
- can be used as a warm-up routine or an active recovery exercise
- may help reduce pain and feelings of stiffness or discomfort
- potentially reduce future injury.

Key focus 2: Rehabilitation

When you have knee or hip replacement surgery, your doctor will suggest you do physical ‘rehab’ afterward. Once at home, you will likely see a physiotherapist regularly to receive rehab treatment as well as do exercises on your own. Your home exercise program will include activities to help reduce swelling and increase the ROM and strength in the muscles around your new joint. This will help you move more easily and get back to your normal activities more quickly. *Get Moving!* PLUS includes exercises that can be used in this capacity. We highly recommend you ask your physiotherapist to help choose exercises appropriate to your individual circumstance and stage of post-surgery rehab.

Benefits of rehab

- restores normal movement in your joint
- builds up strength in the joint and surrounding muscles
- helps to ease pain and swelling
- lets you get back to your normal activities
- helps with circulation, particularly right after surgery, so you don't have problems with blood clots.

Rehabilitation once you get home

You should aim to exercise and/or be physically active for 20–30 minutes, two or three times every day, or as much as your doctor/healthcare professional suggests. Walking may help. Start with 5 minutes and work up to 20–30 minutes, several times a day. Whether you work with a therapist or on your own, stay active for your overall health.

Pre-operative rehabilitation

Pre-operative rehabilitation is exercise-based intervention prescribed before undergoing surgery. It is also known as prehabilitation or prehab. Prehab may help you to recover more quickly from the surgery, have a positive effect on pain pre and post-surgery, and improve post-operative function. This could potentially result in a faster return to work. It is often used before hip and knee joint replacements and can be performed independently or under physiotherapy supervision. A pre-operative exercise program should consist of both strength/resistance training and cardiovascular (cardio) components. The *Get Moving!* PLUS series includes exercises that can be used in a prehab context, although, if you require more challenging exercises then check out the *Get Moving!* exercise library.



Tips on how to perform mobility exercises

Pain

1. When rehabilitating from a recent surgery (total hip or knee replacement, anterior cruciate ligament replacement, shoulder reconstruction, other joint/tissue replacement or arthroscopy), injury or you have arthritis (non-inflammatory and inflammatory), pain and discomfort in or around a joint is common, especially during movement and exercise. You can still exercise! You can expect to feel pain, however, when moving through an exercise, slow down or stop at the point of initial pain or discomfort, unless told otherwise. The pain will likely reduce with the number of repetitions performed and/or when you move out of a certain position adopted to perform an exercise. Pain will also reduce over time as you heal.
2. You don't need to be afraid of the pain, especially since you should expect it. Experiencing pain is never pleasant but, in most cases, you don't need to worry that you are doing further damage to your said condition. Pain is normal in this context, however, it should really only last about 24–48 hours post exercise. If you experience severe pain that lasts longer than 48 hours and your condition changes and/or worsens, eg. fever and inflammation, then seek medical attention.
3. If an angle, oscillation or arc/range of movement causes extreme pain or discomfort, regress the movement, reduce the range or change the angle slightly.
4. Use a visual analogue scale (VAS) to measure and monitor your pain. By rating your pain on a scale from 1 (nothing at all) to 10 (extreme pain), you can monitor your pain experience so that it doesn't reach above a 7 or 8 when exercising, or otherwise advised by your healthcare professional. See the Strength exercises section below for further details.

Speed and other performance tips

1. Try avoiding moving too quickly with your in and out movements. Gently and with control, move in and out of a movement or a stretch so it feels good for you.
2. Keep a normal steady breath throughout the exercises. Try not to hold your breath excessively throughout the exercises.

How the exercise should feel and exercise parameters

Stretches

1. The objective is to increase range of motion by targeting the soft tissue surrounding the affected joint.
2. A stretch shouldn't hurt or be painful *per se*, however, a little discomfort is ok. You need to stress the joint and surrounding tissues a little to ensure you illicit an adaptive response.
3. *Hold a stretch for 15–30sec and perform 3–5 times*, or otherwise prescribed. When you first start out, you may find you can only hold a stretch for 5 seconds before you need to release it. That's ok. Slowly and progressively build the time you can stay in one position. Likewise for the range of a stretch, that is, slowly and progressively move further into the stretch when it's comfortable for you to do so.
4. Stretches can be performed frequently. Every day is safe or as needed. In fact, you may be told to stretch many times per day, every day of the week depending on your situation.

Strength exercises

1. The objective is to increase muscular strength and coordination.
2. Strength exercises (isometric and isotonic exercises, body weight and weighted) must be challenging to illicit muscle adaptation. However, timing is key. Strength needs to be built progressively and in this context, when your joint (and related tissues) are ready. Your physiotherapist, or other healthcare professional, will give you the green light when it's ok to start lifting heavier weights.
3. When you engage in strength training, you may find your muscles feeling fatigued and may struggle a little to finish your reps/sets. You may even find your breathing and heart rate increases, and/or you may experience discomfort or slight pain. These are good signs that the weight you are using is challenging, that is, challenging enough to achieve the benefits of strength training.
4. Using a Visual Analogue Scale (VAS) can be helpful to monitor discomfort/pain felt when exercising. Very briefly, a VAS score of 1–2 will feel very easy, no pain or discomfort. On the other hand, a VAS score of 9 or 10 may be extreme pain where you cannot go on or perform the movement – it's too much that you have to stop. Generally, you want to keep your VAS score around 6-8. You want to feel discomfort or a little pain, as if the exercise is 'doing' something; as if you're working the muscles.

5. When performing a strength exercise, eg. squat or hamstring curl, try performing *2–3 sets of 10–15 reps or as otherwise prescribed*. Initially, you may find you can only perform one set or only 5 repetitions and that's ok. Slowly and progressively build the number of sets and reps.
6. For exercises where the position is held still while under tension, try performing *2–3 sets of 5sec holds, then 10sec, 20sec, 30sec* and so on as you progressively increase time held and/or increase the set range, or as prescribed.
7. Depending on context, strength exercises should be performed at least 2–3 days per week. Unlike stretches or mobility exercises, it's important to have at least one full day rest between strength sessions.

Mobility/range of motion

1. The objective is to increase joint range of movement by targeting the joint itself.
2. Similar to stretching exercises, mobility exercises shouldn't cause excessive pain but can be uncomfortable, and that's ok. You need to stress the joint and surrounding tissues a little to ensure you illicit an adaptive response.
3. Try performing *2–3 sets of 10–15 reps or as otherwise prescribed*.
4. As compared to strength training, rest is less important with mobility exercises and so can be performed every day, multiple times if needed.

Balance exercises

1. The objective is to improve movement, control and proprioception.
2. Like strength exercises, balance exercises need to be challenging to illicit adaption.
3. You don't need to always perform specific balance exercises to gain benefits. Depending on your situation, standing from a seated position, walking up and down stairs, squatting or lunges all require balance ability
4. You can hold certain positions for time or perform *2–3 sets of 10–15 reps or as otherwise prescribed*. To make any exercise challenging, close your eyes. Your healthcare professional may give you other ideas to help make balance exercises harder.
5. It's ok if your joint, eg. ankle joint, wobbles a little when performing a balance exercise (or any other exercise). That's a good sign your ankle is working hard to stabilise you. If, however, your whole body wobbles and you feel like you're going to fall, ensure you have something stable to hold on to and/or reduce the complexity of the task.
6. For safety reasons, ensure there is a stable prop, bench or wall nearby to use for support.
7. Rest is less important and so, like mobility/range of motion exercises, balance exercises can be performed every day if needed.

Important

1. Your doctor/surgeon or physiotherapist may not want you rotating or moving a recently reconstruction joint in a certain direction or degree and with force/resistance. If you are unsure about what mobility exercises to do and how to perform them safely, please do not attempt the included exercises and ask for professional guidance first.
2. The guidelines provided here are conservative so they can be generalised for a variety of conditions/contexts. Please clarify with your physiotherapist or exercise physiologist about time, sets and repetition (rep) parameters for any and/or exercises in the Get Moving! PLUS exercise library.

TERMINOLOGY

- Supine: position whereby you are lying on your spine ie. face up
- Prone: position whereby you are lying on your stomach ie. face down
- Isometric: strength exercises where your muscles contract while you hold a still position
- Isotonic: strength exercises where your muscles are contracting – shortening and lengthening
- Repetitions (reps): a rep is the number of times you perform a specific exercise
- Sets: a set is the number of cycles of reps that you complete, eg. you may complete 10 reps of bicep curls (on each arm) and repeat that rep range 3 times (sets).

Spine mobility

General exercise parameters

As these are general guidelines, please consult with your allied healthcare professional for individual prescription.

- When performing a mobility exercise, try performing *2–3 sets of 10–15 reps or as otherwise prescribed*. Initially, you may find you can only perform one set or only 5 repetitions and that's ok. Slowly and progressively build the number of sets and reps.
- For exercises where the position is held still, (a stretch or strength exercise) try performing 2–3 sets of 5sec holds, then 10sec, 20sec, 30sec and so on as you progressively increase time held and/or increase the set range, or as prescribed.
- When moving in and out of joint range, eg. self-assisted knee flexion or ankle dorsiflexion, do so with control and with equal speed. Build up to perform *2–3 sets of 10–15 reps or as otherwise prescribed*.
- Keep a normal steady breath throughout the exercises. Try not to hold your breath excessively while exercising.

NB: your doctor/surgeon or physiotherapist may not want you rotating or moving a recently reconstructed joint in a certain direction or to a degree and with force/resistance. If you are unsure about what mobility exercises to do and how to perform them safely, please do not attempt the included exercises and ask for professional guidance first.

Cervical spine: Seated active range of movement

FLEXION EXTENSION



1. Sit tall if not supported, or sit in a chair that supports your back.
2. Try to keep your shoulders and torso steady while moving your neck and head.
3. Ensure movements are controlled and performed at a comfortable speed.

Cervical spine: Seated active range of movement

ROTATION



1. Sit tall if not supported, or sit in a chair that supports your back.
2. Try to keep your shoulders and torso steady while moving your neck and head.
3. Ensure movements are controlled and performed at a comfortable speed.

SIDE FLEXION



1. Sit tall if not supported, or sit in a chair that supports your back.
2. Try to keep your shoulders and torso steady while moving your neck and head.
3. Ensure movements are controlled and performed at a comfortable speed.

Cervical spine: Quadruped

FLEXION EXTENSION



1. Safely get to the floor and set up on your hands and knees.
2. Make 90 degrees with your arms and torso, and thighs and torso
3. With control, 'nod' your head up and down.

Cervical spine

TOWEL ASSISTED ROTATION



1. Seated, place a towel or belt around the back of your neck.
2. Cross your arms and pick up towel ends.
3. Lift one arm and place towel across side of head. The other hand pulls down on the other towel.
4. The lifted arm gently pulls the towel across your body to rotate your neck.

Cervical spine

SELF ASSISTED ROTATION



1. Replace towel with hand.
2. Place your hand/fingers so they reach behind your neck on the opposite side, as demonstrated in the image on the left.
3. Follow instructions below.



1. Seated, place your hand around the back of your neck.
2. Lift your elbow to shoulder height.
3. Elbow initiates and leads neck rotation.

Thoracic spine

QUADRUPED ROTATION



Hand/arm options:

1. **Across chest**
 2. **Behind head**
 3. **Low back**
1. Safely get to the floor and set up on your hands and knees.
 2. Make 90 degrees with your arms and torso and thighs and torso.
 3. Choose hand/arm position. See above.
 4. Rotate and 'open' your chest to the side and return.

Thoracic spine

OPEN BOOK ROTATION



1. On your side, lie in a foetal position.
2. Bend at the hips and knees, stack your knees and ankles perpendicular to your thighs.
3. With your arms straight out in front, stacked on top of each other, create a right angle at the torso.
4. Lift your top arm, slowly rotate your upper back as you 'open' your arm in an arc over your body as far as feels comfortable.
5. Your bottom arm remains on the floor.
6. Look at your arm. Move it through an arc to rest on the floor, turning your head as you follow its path.

Thoracic spine: SEATED EXTENSION



1. Place hands crossed over chest or behind head.
2. Gently lean back over the top edge of your chair.
3. You can also place a rolled up towel (horizontally) behind your back and then perform torso extension.

* Please ensure the chair is stable to lean over.

FOAM ROLLER EXTENSION



1. Lie supine on floor with foam roller horizontal to your spine.
2. With your legs to help, slowly push your body over the roller, rolling slowly back and forth.
3. You can rest and hold extension on any areas you feel are in need.

Thoracic/lumber spine

SEATED ROTATION



1. Sit comfortably.
2. Gently twist your torso from side to side using your arms to create further rotation as need be.

PRONE COBRA EXTENSION



Elbows

1. Lie prone, arms by your side in front of you.
2. With elbows beneath your shoulders, bend them to 90 degrees and lift your torso off the ground.

Hands

1. Same body position as above.
2. Place hands at your head, ear or at shoulder height. Straighten your arms to push your torso off the ground.

Thoracic/lumber spine

SCORPION: SPINE ROTATION



1. Lie prone with arms straight out to the side, making a T shape with body and arms.
2. Keeping your arms on the ground, lift one leg and bend the knee while twisting your torso.
3. Using your foot in the air, reach with it across your body to the floor opposite.
4. Progress to touching your opposite outstretched hand with your foot.



Spine

CAT/COW



1. On your hands and knees, make 90 degrees with your arms and torso, and thighs and torso.
2. Drop your head and look towards your thighs while...
3. Pushing your spine to the ceiling and rounding your back as much as possible then...
4. Slowly lift your head while dropping your stomach to floor.



Spine

STANDING OR SEATED ROLL DOWNS



1. Stand tall
2. The movement starts with tucking your chin into your neck, nodding your head forward and slowly rolling and curling forward.
3. Let your arms drop in front of you and roll down slowly as far as possible to the floor.
4. Reverse the process to stand tall again.

Superman

SPINE STRENGTH, MOBILITY AND BALANCE

1. Safely get to the floor and set up on your hands and knees.
2. Make 90 degrees with your arms and torso, and thighs and torso.
3. With control, lift opposite arm and leg and reach them out as far as you feel comfortable, then lower them to start position.



Prone cobra holds

1. Lie prone
2. Elbows bent, hands by your ears/forehead or have your head resting on stacked arms/hands.
3. Lift chest and arms/hands off floor and hold for 1-5sec then slowly lower.



Chin tuck

CERVICAL SPINE STRENGTH



1. Lie supine, seated or standing.
2. Tuck your chin into your neck and hold.
3. When lying, you can 'squash' a towel or thin pillow with the back of your head when tucking your chin in.
4. Hold for 1-5 sec and release.

Upper trapezius stretch and levator scapulae

Upper trapezius stretch

To stretch right side of your neck

1. Take left ear to left shoulder.
2. Place your left hand on the right side temple of your head and gently pull or add downward pressure on your head/neck until you feel a stretch.
3. Ensure not to rotate your neck, keep your face facing the front.
4. You can also place your right hand under your bottom or behind your back to increase the stretch.
5. Repeat to other side.

Levator scapulae stretch

To stretch right side

1. Take your left ear to left shoulder.
2. Rotate your head slightly to the left so your nose is pointing towards your left armpit crease.
3. Place your left hand towards the back right side of your head/behind right ear and gently pull or add downward pressure on your head until you feel a stretch.
4. You can also place your right hand under your bottom or behind your back to increase the stretch.
5. Repeat to other side.



Anterior neck muscles



Stretch right side neck muscles

1. Place crossed hand over your right collar bone and gently pull down as you...
2. Lift your chin up and rotate your head and neck to the left.
3. Repeat to other side.



Rhomboids

AND OTHER MID MUSCLES

1. Stretch out both arms in front of you, at shoulder height.
2. Layer hands or interlace your fingers.
3. Reach forward with your arms as you round out your upper back and drop your neck forward.



Latissimus Dorsi

WITH SIDE BEND

1. From a kneeling position, slide your arms forward on top of a bench or table, your bottom simultaneously moving in the opposite direction over your feet.
2. Ensure your palms face upwards or you're giving a 'thumbs up' sign to the ceiling.
3. You should feel a stretch under your armpit/side of body.

Options

- you can perform the same stretch from child pose position
- to target a particular side, slightly swing your arms to the opposite side of target stretch side.

