

Knees

- Sitting upright on a firm chair or stool, hold in your abdominals and straighten your right leg out in front of you with your toes pointing upwards, so your foot lifts off the ground. Feel the muscles in the front of your thigh (quadriceps) tightening. Hold for 10 seconds and repeat X 5–10 with each leg. (see picture 9)



Picture 9. Strengthening knees

- Lying on your front, bend your right knee and bring your heel in towards your right buttock. If you can, reach behind you and hold onto your right foot with your left hand. This stretches the muscles at the front of your right thigh. Hold the stretch for 10-20 seconds and repeat on the left leg. (see picture 10)



Picture 10. Quadriceps stretch

Ankles and feet

- Sitting with your knees together, heels apart and resting on the floor, sweep your feet outwards and lift your little toes towards the outside of your ankle. Sweep your feet inwards and lift your big toes up towards your inner ankles. Repeat X 5–10.



This information has been produced by PARE Manifesto as part of World Arthritis Day 2006, which promotes better quality of life for people with arthritis.

For more information about the PARE Manifesto, visit www.paremanifesto.org

For further information about World Arthritis Day, visit www.worldarthritisday.org

Acknowledgements

Developed in consultancy with Professor Mike Hurley, Professor of Physiotherapy, King's College, London, UK and reviewed by Professor Anthony Woolf, Department of Rheumatology, Royal Cornwall Hospital, Truro, UK. With many thanks for their contribution.

World Arthritis Day is sponsored by an unrestricted educational grant from Pfizer



Disclaimer Whilst every care has been taken in preparing these materials the authors and producers of this booklet/fact sheet do not accept responsibility for any injury caused as a result of undertaking any of these exercises or activities. It is recommended that medical advice is taken if there is any doubt about the suitability of these exercises for an individual.

Exercise for people with osteoarthritis

Take Action

Osteoarthritis (OA) is a condition that usually develops gradually and is associated with wear and tear on the joints. It typically affects older people, but younger people, even teenagers, can develop it. In OA, cartilage, the protective layer covering the ends of bones, becomes thinner and the bones thicken, so the ends of the joints rub together causing pain. The amount of synovial (lubricating) fluid can increase, causing the joint to swell. Sometimes bony outgrowths develop, which make the joint look knobby and become stiff and painful to move. It is most commonly found in knees, hips, hands and spine. OA in hands can cause loss of grip.

Other factors that can precipitate OA are:

- Being overweight, which puts additional stress on joints
- Joint injury, an operation or other joint damage may lead to OA in later life
- Some forms of OA run in families

Keep active

People with OA are often concerned that exercise will cause further damage to their joints, but strengthening muscles helps to protect joints and keep you mobile. Appropriate exercise can help ease pain and aid weight loss.

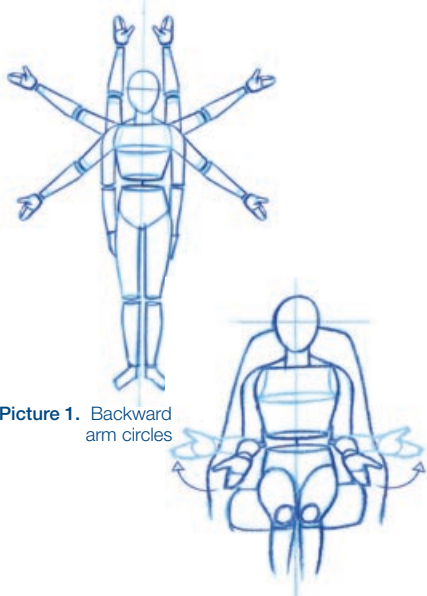
- Swimming and exercises in a heated pool are good for people with OA
- Balance exercise with rest – pace yourself
- Rest your joints when they are particularly painful, but remember, too much rest can make them stiff

- Shoes with thick, soft soles act as shock absorbers
- Keep exercise moderate, rather than strenuous. Walking and cycling can be good
- Pain medication can help relieve pain and stiffness, giving sufficient relief to allow you to exercise
- Strengthening the muscles around a joint that is going to be replaced will make your recovery after the operation easier
- After surgery you will be given physiotherapy in hospital, but it is important to keep exercising when you get home. Your physiotherapist will recommend what's best for you
- **Avoid** hard repetitive activities and exercises, and exercising too soon after you have had a joint injury.

As we are all different, exercises that would help one person might not be suitable for another. Always check with your doctor, specialist or physiotherapist before commencing an exercise programme.

Shoulders

- Circle your shoulders smoothly backwards X 5–10
- Start with your arms relaxed by your sides. Keeping your shoulders down, slowly raise your arms up in front of you until you are reaching upwards. Slowly lower them to the side and behind you. Repeat X 5–10 (see picture 1)



Picture 1. Backward arm circles

Picture 2. Shoulder rotation

- Bend your arms at a right angle with lower arms parallel in front of you, palms upwards. Tuck your elbows into your waist and slowly move your lower arms outwards as far as they will go. Hold for 5 – 6 seconds and take them to the starting position. Repeat X 5–10 (see picture 2)



Picture 3. Shoulder mobiliser

- Roll up a small towel and hold it as if you were drying your back. Gently pull the towel up and hold for 5-6 seconds, then down and hold for 5–6. Repeat X 5–10 and swap hands to work the other side (see picture 3)
- Finish the exercises with your shoulders relaxed down and back.

Hands, wrists and elbows

- Curl your fingers into a fist and then stretch them out again, spreading your fingers wide. Repeat X 5–10
- Circle your thumbs back and forwards X 5–10 each way.

Side bends

- Sitting or standing with your spine lengthened, tilt your upper body over to the right so you feel a stretch up your left side. Hold for 5-10 seconds and come slowly upright. Repeat to the other side. Repeat X 2–5 each side. (see picture 4)



Picture 4. Side bends

Waist turns

- Keeping your hips facing forwards, breath out and gently rotate your upper body to the right as far as it will comfortably go. Hold for 5-10 seconds, breath in and release back to your starting position. Repeat to the left. Repeat again X 2–5 times on both sides. (see picture 5)



Picture 5. Waist turns

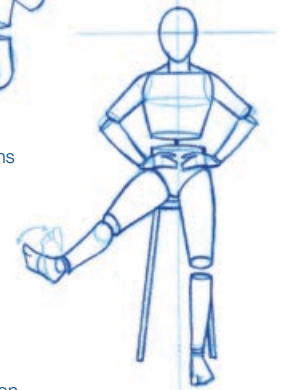
Hips

- Lie on your right side, slowly raise the top leg about 60cms, but do not let your hip roll back. Slowly lower your leg and repeat X 10. Turn over and repeat with the left leg (see picture 6)



Picture 6. Hip Strengthener

- Sitting upright on a firm chair, straighten your right leg out in front of you and lift it a little way off the floor. Slowly rotate the thigh outwards from the hip, then rotate the thigh inwards from the hip. This is a small movement and you should not feel any stress in your knee. Repeat X 5–10 with each leg. (see picture 7)



Picture 7. Hip rotation

Abdominals

- Lie on your back with your knees bent. Breath out slowly whilst tightening and pulling in your abdominal muscles. Breathe in and release. Repeat X 5–10. Add extra resistance by lifting your head and shoulders and sliding your hands up your thighs so you are curling up a little way. Repeat X 5–10. (see picture 8)



Picture 8. Abdominal curl