

## Bending forward with osteoporosis (flexion)

**Who:** These adaptations could be for you if:

- you have been diagnosed with osteoporosis
- you are at an increased risk of fracture and want to ensure that movements involving forward bending are safe, and won't cause a spinal fracture
- you are looking to find out if you need to modify or avoid some moves because you have had spinal fractures or broken other bones easily in the past

Bones lose strength as we get older so if you are over 50 these adaptations are worth considering. Regardless of whether you have

had any previous fractures, you'll find these recommendations useful to reduce your chance of injury and pain in the future.

**Why:** There are some myths about exercises or movements that cause spinal fractures. Having a low bone density, a previous broken bone or a diagnosis of osteoporosis doesn't mean every movement or activity is going to cause a broken bone. Bending forward is generally safe and won't cause a spinal fracture but you may 'over-flex' your spine if you push yourself to the limits. This is especially true with uncontrolled, repetitive or sudden

movements or if you are putting some load or strain on your spine in a curved position. This could put uneven pressure on the front parts of your spine which may increase the risk of a spinal fracture.

**When and how:** For movements that carry that risk, there are adaptations which are safer and will achieve the same results. Follow these instructions to help you adapt your technique. When doing any exercise remember to take it easy, move in a smooth and controlled way - especially between moves - and work within your comfort range.

1

### Touch your toes

- This exercise stretches your back and the backs of your legs. However, the concern with touching your toes is that your back is in a flexed position. The load of your unsupported upper body puts pressure on your spine which could potentially increase the risk of a spinal fracture.
- If you have osteoporosis but are very flexible and have been doing this exercise regularly with ease and without pain or problems, you could continue. You are likely to be hinging from your hips and keeping your back straight when you bend. It's not advisable to add a load, such as lifting a weight, when you are in this position. If you are at all unsure about this position, the recommendation is to use alternative exercises to be on the safe side.
- If you have had spinal fractures or have osteoporosis or an increased fracture risk, and aren't very flexible, the recommendation is to use alternative exercises to stretch your back and leg muscles. You could use the hamstring stretch, back and chest stretch or calf stretch.



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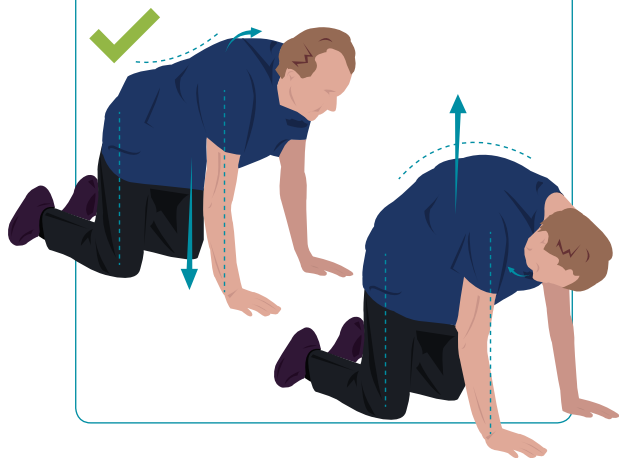
This fact sheet forms part of a range of nine fact sheets on exercise for osteoporosis and bone health. Further resources including general information about osteoporosis and bone health are available at [theros.org.uk](http://theros.org.uk) or call 01761 471771

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2

### The Cat

- This exercise is sometimes thought to be 'unsafe' for the spine.
- There is no concern with The Cat; it is a safe exercise to do with osteoporosis as you are moving in a controlled way and not pushing yourself into a position beyond your comfort range.
- The Cat is often used to help with back pain by gently stretching your back muscles.



It's important not to give up on exercise. Learning 'how to' carry out moves safely is much better than stopping altogether. There will always be a modification or alternative that suits you.

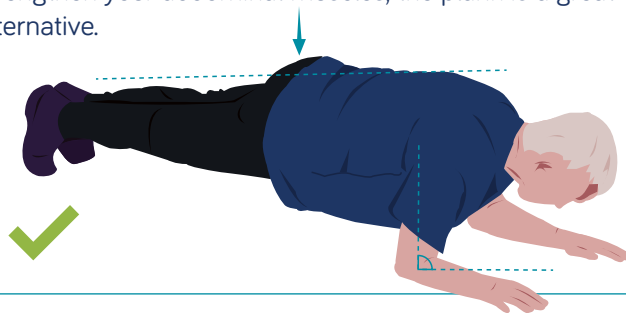
See the accompanying video to these exercises at [theros.org.uk/exercise/BendingForward](https://theros.org.uk/exercise/BendingForward)

Remember that these recommendations are just 'to be on the safe side' and to help you feel more positive and in control. Try not to think of them as strict rules or feel anxious about every move you make. Learning exercises to improve your core muscle strength,

3

### Sit up

- This exercise strengthens your abdominal muscles by lifting your back up. However, the concern with the sit up is that your back is in a flexed position and is pulling up the load of your upper body against gravity - putting uneven pressure on your spine.
- If you have osteoporosis or an increased fracture risk - but have very strong abdominal and back muscles because you have been doing this exercise regularly with ease and without pain or problems - you may decide to continue. If you are at all unsure or have had spinal fractures, the recommendation is to use alternative exercises to be on the safe side.
- If you have osteoporosis or an increased fracture risk, the recommendation is to use an alternative exercise to strengthen your abdominal muscles; the plank is a great alternative.



around your trunk, will help to support your spine. You could try out our *Moving and lifting safely* fact sheet (7) [theros.org.uk/exercise/MovingAndLifting](https://theros.org.uk/exercise/MovingAndLifting)

**Tip:** Some exercises in Pilates or yoga risk over-flexing the spine, especially if you are not using the correct technique or you are new to these forms of physical activity. There are modifications recommended for some moves. You may find it useful to look at our *Pilates with osteoporosis* fact sheet (9) [theros.org.uk/exercise/Pilates](https://theros.org.uk/exercise/Pilates).