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## PREVENTION & REHABILITATION:SELF-MANAGEMENT: PATIENT SECTION

# Sparing your spine<sup>☆</sup>



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Lower back pain or sciatica can be disconcerting. There are many promised panaceas, but like the common cold none seem to be a cure. The most important thing is to avoid interventionism by first seeing a Clinician who, after appropriate assessment that rules out rare, but sinister “Red Flags” like a tumor, infection, or fracture will be able to **reassure** you that your problem is “mechanical” (Carragee et al., 2009; Deyo, 2009a, b, 2014). Your clinician will follow a step-ladder conservative care approach the cornerstone of which is **reactivation** advice that shows you simple, yet powerful self-care strategies you can learn to do for yourself (Deyo, 1998, 2007; Liebenson, 2002).

Most acute episodes run a time-limited course. The best way to prevent a chronic, disabling problem is to learn about self-care (Von Korff et al., 1998; Liebenson, 1999, 2000). Sometimes you may need medication, manual therapy, or other conservative modalities. However, self-care should always come first so that you -

- avoid becoming dependent on palliative approaches
- address the cause of the pain
- and, avoid merely “chasing the pain”.

Self-care often includes exercises to stabilize your back. But, at least as important is learning how to spare your spine. Sparing strategies can be as simple as learning how

to move more efficiently or naturally. This will allow you to be able to stay active without feeling threatened by your condition.

Staying active has minimal downside risk or side effects. Whereas interventionism through unnecessary imaging, prescription medications (i.e. steroids, opioids), injections, and long-term physical therapies (i.e. massage, chiropractic, physical therapy) all carry with them high potential for an escalating cascade of more aggressive and costly treatments (Carragee et al., 2009).

This handout details a simple procedure for learning to move in a safe, spine-sparing manner. This is important since a slumped forward posture when transitioning up and down from the floor or a chair can be a mechanism for injury for the low back, slowing down your recovery (Liebenson, 2003; Liebenson, 2006; McGill, 2006).

### Reverse lunge (Liebenson, 2013) (see Fig. 1)

- Stand tall and wide (see Fig. 1a)
- Step back on to the balls of your rear foot (see Fig. 1b)
- Step back a little further (see Fig. 1c)
- Kneel on your back knee while keeping your torso tall and wide — Half Kneeling Position (see Fig. 1d)

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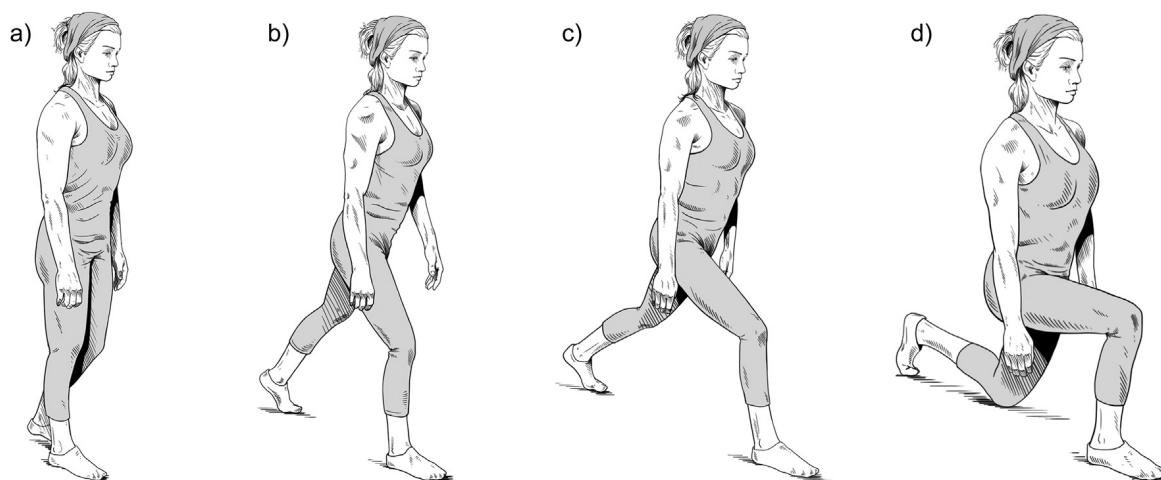


Figure 1 Reverse lunge. a) Standing posture; b) Reverse lunge shallow; c) Reverse lunge deep; d) Half kneeling position.

### Common mistakes

- Lunging forward instead of backwards
- Bending forward or slouching at the waist
- While lengthening your spine and widening your collar bones feel a stretch in your middle back between your shoulder blades

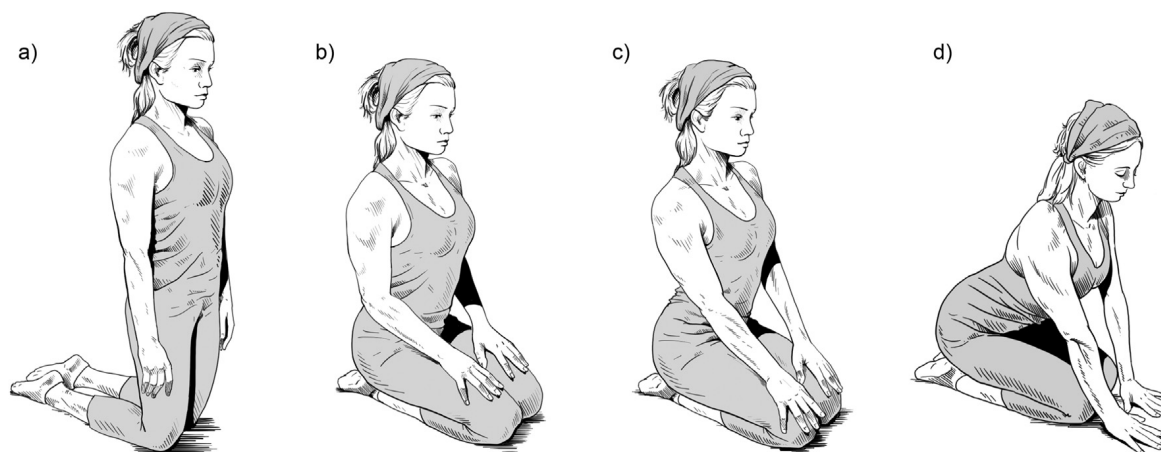


Figure 2 Kneeling Hip Hinge. a) Tall kneeling position; b) Kneeling on heels; c) Walk out with hands; d) T4 (mid back) sphinx.

### Kneeling Hip Hinge (see Fig. 2)

- Starting from the Half Kneeling Position on one knee move to the Tall Kneeling Position on both knees (see Fig. 2a)
- Sit back to heels (see Fig. 2b)
- Walk your hands down your thighs towards your knees while keeping your torso tall and wide (see Fig. 2c)
- Perform a Kneeling Hip Hinge up and down (2 Repetitions) (see Fig. 2a and b)
- While sitting back walk your hands forward until your palms are on the floor in just in front of your knees – the T4 (or mid back) Sphinx (see Fig. 2d)

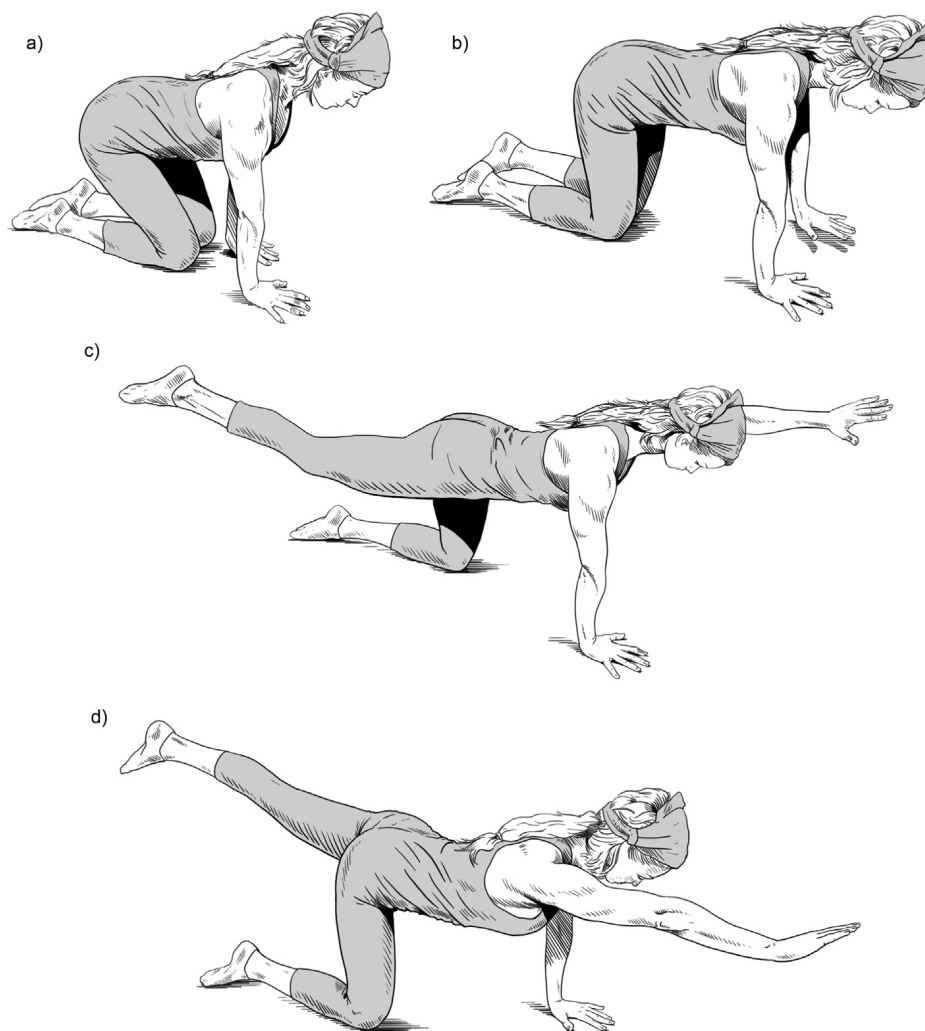
### Common mistake

- Allowing your spine to become slouched or slumped forward

### Quadruped (Liebenson, 2010) (see Fig. 3)

- Starting from the T4 Sphinx position walk your hands forward (see Fig. 3a) until you are in a Quadruped position (see Fig. 3b)
  - your hands should be under your shoulders and your knees under your hips

- allow your spine to stay relaxed so that it doesn't round upwards pointing towards the ceiling
- While keeping your back locked reach with your opposite arm and leg away from your body – the Bird Dog (see Fig. 3c and 3d)
  - avoid any twisting, rounding upwards or sagging of your back
  - look with your eyes down so that you don't cause a wrinkle in the back of your neck by poking your chin
- Return to the Quadruped position (see Fig. 3b)
- Once you are fully on your forearms in the Sphinx position just rest there and allow your back muscles to relax (see Fig. 4c)
- Then, come up into a Front Plank position tensing your buttocks and abdominals while breathing in through your nose and out through your lips (see Fig. 4d)
- Repeat the Sphinx position (see Fig. 4c) and then begin to extend your arms (see Fig. 4e) until you are in a Cobra or Press-Up position (see Fig. 4f)



**Figure 3** Quadruped. a) Walk into quadruped; b) Quadruped position; c) Bird dog – left arm/right leg; d) Bird dog – right arm/left leg.

### Common mistakes

- Rounding your back
- Poking your chin

### Sphinx and Cobra (Liebenson, 2005) (see Fig. 4)

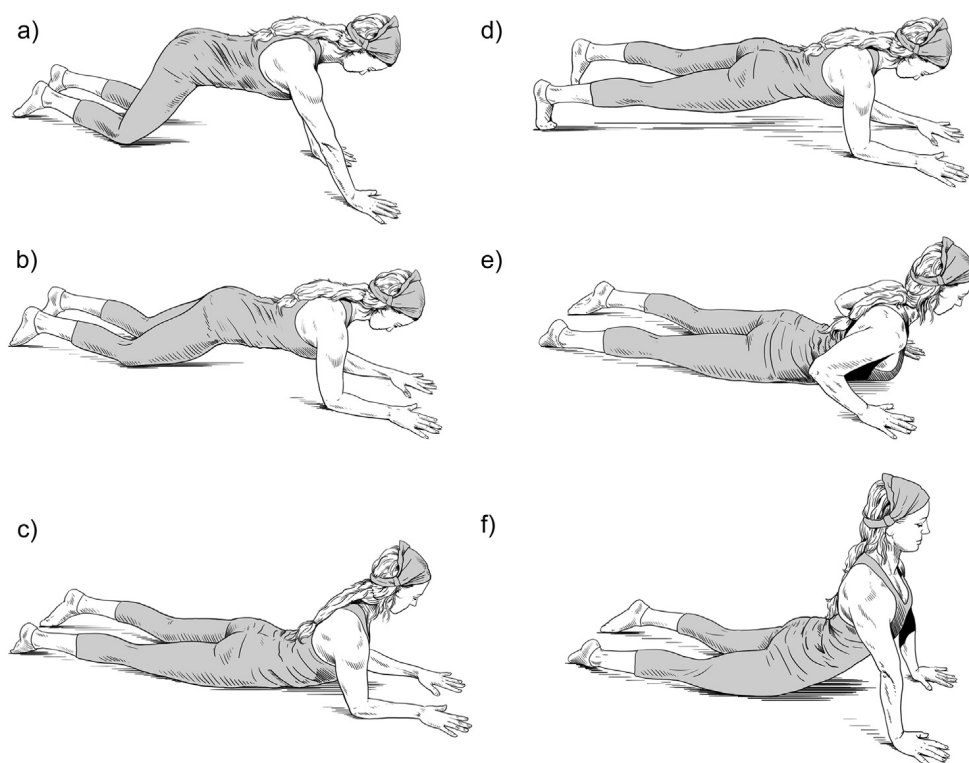
- Starting from the Quadruped position begin walking your knees back (see Fig. 4a) and rest on your forearms (see Fig. 4b)

### Common mistake

- Avoid rounding your back or poking your chin

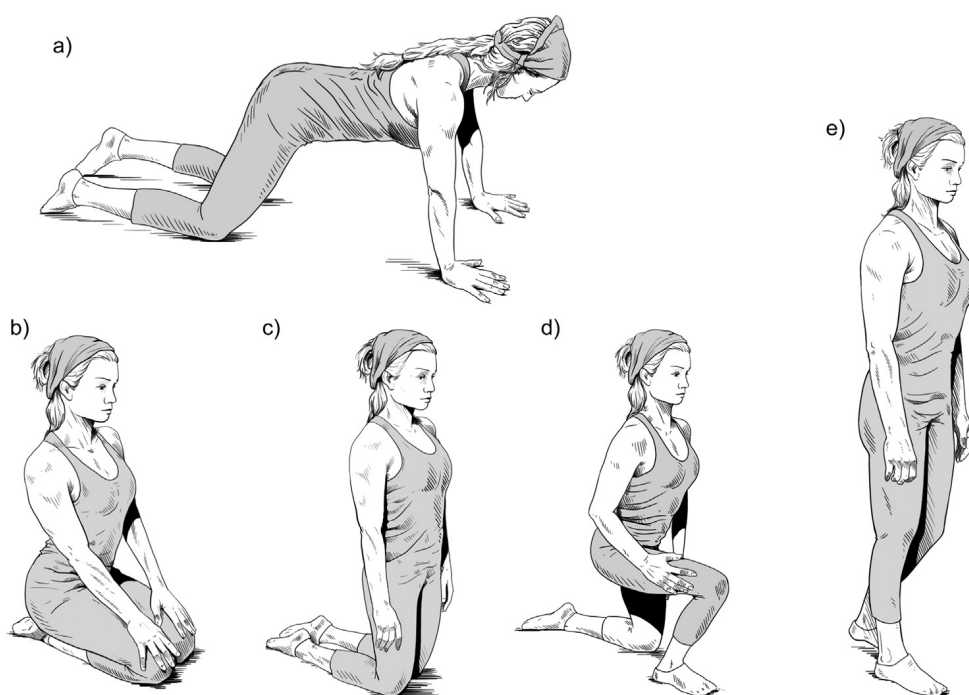
### Returning to Standing (see Fig. 5)

- Starting from the Cobra position walk your hands back while lifting your waist up (see Fig. 5a)
- Walk into a Quadruped position without rounding your back (see Fig. 3b)



**Figure 4** Sphinx and Cobra. a) Walk out of quadruped; b) Support on knees and forearms; c) Prone sphinx; d) Front plank; e) Push-up from sphinx; f) Cobra or Press-Up.

- Continue walking your hands back until they are directly in front of your knees in the T4 Sphinx position (see [Fig. 2d](#))
- Continue walking your hands up your thighs (see [Fig. 5b](#)) and then lift your buttocks up until you are back in the Tall Kneeling position (see [Fig. 5c](#))
- Bring one leg forward, being sure that the front foot is behind your knee (Half Kneeling) (see [Fig. 5d](#))
  - this will make it easier to stand up without leaning forward
  - if necessary do this near a chair for support
- Stand up, tall and wide (see [Fig. 1b](#))
- Finally bring your front leg backwards (see [Fig. 5e](#))



**Figure 5** Returning to Standing; a) Walk up from cobra; b) Kneeling on heels; c) Tall kneeling; d) Half kneeling — modified position; e) Standing posture.

## Common mistakes

- When returning to the upright posture move slowly through each of the steps repeating the same good form as when progressing in the opposite direction
- The only position that is different when returning to upright than it is when going down to the floor is the Half Kneeling position
  - on the way up from the floor the front leg's foot is placed slightly further back to give extra support when lifting the body upwards.

## Practical application

This routine will teach you how to get up and down from the floor in a safe, spine sparing manner. It can also be performed as a sequential exercise to train you in how to stabilize your spine. In the process you will gain both mobility and strength.

## Sets

- One or two sets of the routine

## Frequency

- Twice/day

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