

Mechanical Back Pain Exercise Handouts

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Last update: 07/04/2022



Low back pain is one of the most common health issues that affect about one-fourth of the population globally. However, it is also a condition that often tends to occur. It is because some people are just prone to back pain due to certain lifestyle choices and weaknesses.

There could be many causes of low back pain, but mechanical injury is the most common cause. Thus, such pain would often have an acute start. For example, it may occur after lifting a heavy weight. As the name suggests, it is an injury to low back due to mechanical reasons.

Mechanical injury is most likely to affect the most mobile part of the back, that is, the lumbar spine. In addition, it may affect surrounding muscles, ligaments, soft tissues, bones, or intervertebral disks.

In mechanical low back pain, staying active is highly recommended. Thus, special exercises focusing on the lower back can help. Stretching and strengthening exercises may help, but one should avoid lifting heavy weights or jerky movements. Many such exercises can be done readily at home without specific equipment like the ones listed below.

- **Supine bridge**

Step 1 – Tighten your abdominal and buttock muscles by pushing your low back to the ground.



Step 2 – Raise your hips to create a straight line from your knees to your shoulders. Next, tighten your abdominal muscles and draw your belly button toward your spine.



Step 3 – Hold for 25 to 30 seconds and lower the hips to return to the initial position.

- *Repeat 8-12 times*
- *3 sets in a row*
- *Once-daily*
- *5 days a week*

- **Supine posterior pelvic tilt**

Step 1 – Lie on the floor with bend knees and feet on the floor. In this more or less neutral position, the natural curve of the lumbar spine will elevate the lower back somewhat off the floor.



Step 2 – Exhale and gently rock your hips toward your head. As you do this, you will feel your lower back pressing into the floor.



Step 3 – Stay here for a few seconds. Then, inhale and return to your initial position when you are ready.



- *Repeat 6-10 times*

- *3 sets in a row*
- *Once-daily*
- *5 days a week*

- **Supine lower trunk rotation**

Step 1 – Lie straight on your back with knees bent and feet resting on the floor



Step 2 – Maintain a flat back while bringing your knees slowly toward the floor until you feel a stretch in your trunk.



- *Repeat 8-12 times*
- *3 sets in a row*

- *Once-daily*
- *5 days a week*

- **Supine piriformis stretch with Foot on Ground**

Step 1 – Lie on your back with both knees bent and feet resting flat on the ground.



Step 2 – Bring one leg over the opposite, crossing at the knees, and interlace your fingers behind your back thigh.



Step 3 – Pull the bottom leg in the direction of the shoulder on the same side gently. And hold it here for nearly 20- 30 seconds.



- *Repeat 6 times for each side*

- *3 sets in a row*
- *Once-daily*
- *5 days a week*

- **Supine single knee to chest stretch**

Step 1 – Lie straight on your back.



Step 2 – Now bend one of the legs to ensure that the knee touches your chest. Use both hands to support the motion.



Step 3 – Hold in a place for 3-5 seconds, and repeat with the other leg.

- *Repeat 6 times for each leg*
- *3 sets in a row*
- *Once-daily*
- *5 days a week*

- **Side plank on elbow**

Step 1 – Lie on one of your sides, legs extending and fixed from hip to foot. Now get into the side plank position, ensuring that the elbow is below the shoulder. Make sure that your head is in a straight line with your spine. Your other arm can rest on the body.



Step 2 – Engage your abdominal muscles, drawing your navel toward your spine. Exhale as you raise your knees and hips off the mat. There is no sagging or bending in your torso, which is straight. Now, hold the position. The goal should be to hold for 45-60 seconds.



- *Repeat 5 times for each side*
- *3 sets in a row*
- *Once-daily*
- *5 days a week*

- **Supine double knee to chest**

Step 1 – Lie straight on the back.



Step 2 – Bend your knees and tighten your lower abdomen so that your knees touch your chest and you feel a stretch in the lower back.



Step 3 – Hold in the position with the help of both hands for 5 seconds.

- *Repeat 10-12 times*
- *3 sets in a row*
- *Once-daily*
- *5 days a week*

- **Marching bridge**

Step 1 – Begin on your back with your hands by your sides and your palms up. Your feet should be about twelve inches from your buttocks. When your knees, pelvis, and shoulders are in a straight line, plant your heels firmly into the ground and lift your pelvis.



Step 2 – Hold your bridge while you lift your right knee toward your chest until your hip is 90 degrees. Next, lower the heel to the ground and lift your left knee. When bending and straightening your knees, avoid letting your pelvis sink or your back arch.



- Repeat 6 times
- 2 sets in a row
- Once-daily
- 5 days a week

- **Cat-camel to child's pose**

Step 1 – The initial position must be like quadrupeds by coming on hands and feet and ensuring that knees are directly under the hips while hands are under the shoulder.



Step 2 – **Cat** - Now sink your back towards the floor and at the same time lift your head up, thus making a curve in your spine and taking breathe out at the same time.



Step 3 – Camel Now, just make the opposing motion by arching your back to mimic



the camel hump

Step 4 – A child's pose is a restful pose in yoga, also called "Balasana" in yoga. It involves bending the knees and doing nothing for a few seconds.



- Repeat 20 times alternating between cat and camel
- 3 sets in a row
- Once-daily

- 5 days a week

- **Supine Dead bug with leg extension**

Step 1 – Lie on a mat with your arms extended straight over your chest to form a perpendicular angle with your torso. Next, raise your feet off the ground while bending your hips and knees 90 degrees. Your torso and thighs, as well as your thighs and shins, should make a perfect angle. This is the position to get started. Use your core to maintain contact between your lower back and the floor/mat. Ensure that your spine supports this steady and neutral position throughout the exercise.



Step 2 – Then, while keeping your left leg and right arm in place, slowly reach your left arm back, over your head, and toward the floor. At the same time, concurrently extend your right knee and hip, reaching your right heel toward the floor. Avoid twisting or moving your hips or abs while performing the extensions; instead, move slowly and steadily while breathing in. Just before your arm and leg reach the ground, stop your movement.



Step 3 – Put your right leg and left arm back in their original positions by reversing the motion. Exhale as you go steadily and gently.



Step 4 – Perform the same movements to the opposite sides, keeping your left arm and right leg steady as you extend your right arm and left leg.

Step 5 – Do the same number of repetitions on each side. Then, simply return your feet to the ground and sit up when you complete a full set.

- *Repeat 10-12 times*
- *3 sets in a row*
- *Once-daily*
- *5 days a week*

- **Curl up with Reach**

Step 1 – Lie down on the floor with legs bent and arms resting straight





Step 2 – Now, raise your upper body by contracting abdominal muscles. Only use the abdominal muscles to curl up

Step 3 – Now carry out one extra motion, as if trying to reach for something with both arms. This will add contraction to abdominal muscles, and stretch to the lower back, spine, and hips, thus extending the range of motion.



- *Repeat 20 times*
- *3 sets in a row*
- *Once-daily*

- 5 days a week

- **Oblique bicycle crunch**

Step 1 – Lie flat on the floor, your lower back hard-pressed to the floor, and your hands behind your head. Contract your core muscles, drawing in your abdomen to stabilize your spine.



Step 2 – Pull your shoulder blades back while holding your head gently in your hands. Next, carefully elevate your knees to a 90-degree angle, elevating your feet off the ground.



Step 3 – Exhale slowly and begin by pedaling like a bicycle, keeping both legs elevated higher than your hips and bringing one knee up to your armpit while straightening the other. Rotate your torso so you can touch your elbow to the opposite knee as it comes up.



Step 4 – Alternate to twist the other side while drawing that knee towards your armpit and extending the other leg until your elbow touches the alternate knee.



- Repeat 12-20 times
- 3 sets in a row
- Once-daily
- 5 days a week

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Last review and update: 07/04/2022*