



**neurogym**<sup>®</sup>

EVIDENCE-BASED EXERCISES  
FOR BRAIN AND BODY

## INTERMEDIATE EXERCISES FOR THE LOWER BACK

*The following exercises are a progression from beginner exercises for the lower back. They are designed to continue to improve your condition while reducing the risks of recurrent episodes.*

### BIRD DOG

#### Step 1

On all fours, place a tennis ball in the small of your back so that you maintain a natural curve in your lower back.



#### Step 2

Slowly slide your leg behind you until it is completely straight while simultaneously raising your arm. Keep the rest of your body very still.



#### Step 3

Slowly return your leg and arm to the step 1 position.

Repeat steps 2 to 3 five times on each side.

Did you know your brain contains maps of your body and that each and every one of your muscles is connected to your brain via nerve pathways?

## STRAIGHT-LEGS SIDE BRIDGE

An endurance exercise for your side muscles.

### Step 1

Start on your side with your weight on your elbow, hip and legs. Your top foot should be in front of your bottom foot.



### Step 2

Lift your body up into the side bridge position and hold. Ensure your hips are straight and your head is in a neutral position. You should feel this exercise in the side of your back closest to the floor.



Hold for 15 seconds, four times.  
Progress to 30 seconds, twice  
and then one minute each side.

## MODIFIED SIT-UP

### Step 1

Lie on your back with one leg bent and that foot flat on the floor. Place your hands behind the back of your head (not your neck) and relax your head into your hands.



### Step 2

Slowly raise your head, shoulders and upper back off the floor without pulling on your neck. You can brace your abdominal muscles as you do this.



It has recently been discovered that the nerve cell connections in your brain can change over time – this is called neuroplasticity.

### Step 3

Slowly lower your head, shoulders and upper back to the step 1 position.

Repeat steps 2 to 3 ten times

## FORWARD LUNGE

### Step 1

Stand upright with your feet hip width apart.



### Step 2

Take a large step forward keeping your feet hip width apart and maintaining a natural curve in your lower back.



### Step 3

Slowly bend both your knees so that you end up in a lunge position. Keep your body upright or leaning forward slightly.



### Step 4

Slowly return your back leg and body to the step 1 position.

Repeat steps 2 to 4 five times on each side.



Long-term lower back pain can alter the maps related to spinal muscles as well as areas related to the perception of pain.

The good news is that due to neuroplasticity movement and exercise can improve the areas of your brain related to pain.

## SWISS BALL SMALL ROLL-OUT

### Step 1

Kneeling in front of a Swiss ball place your hands flat on the ball. They should be in line with your hips. Ensure you have an upright posture.



### Step 3

Slowly roll the ball forward while keeping your body straight. You should maintain a natural curve in your lower back. Hold this position for 5 seconds.



### Step 2

Draw your shoulder blades down your back.

### Step 4

Slowly return to the step 1 position.

Repeat steps 2 to 4 five times.

When you learn new ways of moving you're not just changing your body – you're also changing your brain!

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