

# Spinal Conditioning – Home Exercise Program

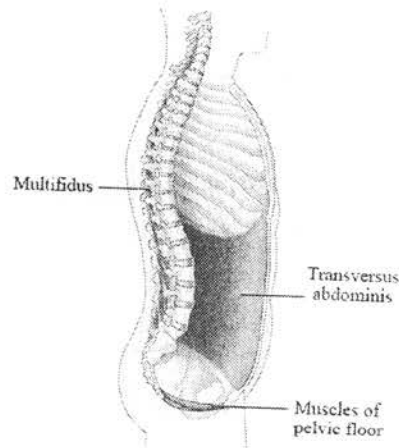
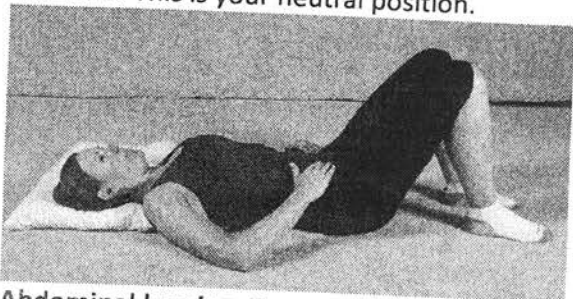
The following exercises will help strengthen your back and core muscles. By improving your strength and flexibility, you will be able to maintain a more healthy "Neutral" position of your back.

**Caution:** Be sure not to move into pain while doing these exercises. Do the exercises you can perform with good control and without increasing your symptoms. Add in other exercises as you are able.

**Frequency:** Perform these exercises daily. Choose 1-2 exercises from each category and work up to doing each exercise for about a minute.

## Pelvic neutral

Lie on your back with your knees bent. Find your *neutral position*. Place your hands on your pelvic bones and move your pelvis back and forth to round and arch your lower back. Find the position that is the most comfortable for your low back. This is your neutral position.



## Abdominal bracing: Transverse abdominis activation:

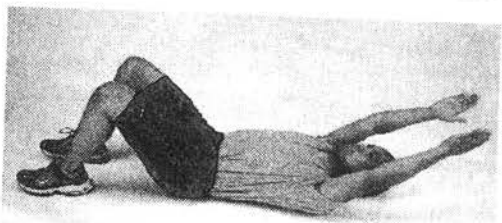
Gently contract your lower abdominal muscles without moving your back out of *neutral position*. Do this by breathing in and out, and then draw your belly button inward and upward.

## Pelvic Floor muscle activation

- Your pelvic floor muscles are at the bottom of your trunk and form a sling that attaches from the front of your pelvis to your tailbone making up part of your deep "core" muscles. To strengthen these muscles, pull your pelvic floor muscles upward into your body as if you are trying to stop the flow of urine.
- Hold each of the above contractions for 5 seconds. Work up to holding the contraction for 15 seconds while continuing to breathe naturally.

As you are better able to control both muscle groups you can try to perform the **abdominal bracing and pelvic floor contractions together**.

**Abdominal Exercise Progression:** For each of the following exercises, find and hold your neutral position, then do the abdominal bracing and pelvic floor activation throughout the exercise.



## Hook-lying with arm lift

Lie on your back with your knees bent and arms by your sides.

**Arm Lift:** Lift both arms overhead slowly. Return them to the start position.

2 x 10 - 15 reps

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### Hook-lying leg lift

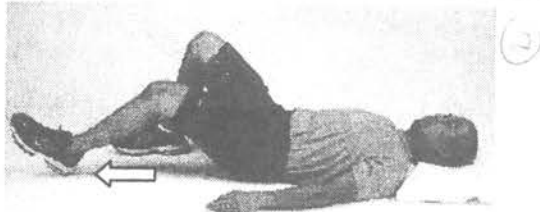
**One Leg:** Slowly lift one foot about 1-2 inches from the floor. Lower slowly. Repeat with the other foot and continue alternating legs as if taking small steps. *2-3 x 10 reps*

**Two legs:** Slowly lift one foot from the floor until your hip is bent to 90 degrees. Hold that position as you bring your other foot up. Slowly lower one leg, then the other. Continue this pattern: lift, lift, lower, lower, alternately tapping each toe.



### Hook-lying heel slide

Keep your heel on the ground and slowly slide your foot forward until your leg is almost straight. Return to the start position by sliding your heel back. Repeat the movement with your other leg.



### Dead Bug

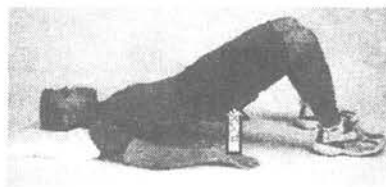
Starting position: both hips and knees bent, both arms raised toward the ceiling. Alternate raising one arm overhead while lifting the opposite foot.



**Bridge Progression:** For each of the following exercises, find and hold your neutral position. Do the abdominal bracing and pelvic floor activation as instructed on page 1. Gently hold the contraction throughout the exercise.

### Bridge

Lie on your back with your knees bent and feet flat on the floor, hands by your sides. Gently brace your abdominal muscles. Lift your hips 3-5 inches from the floor without arching your back. Hold bridge for 5 seconds and then slowly lower your hips to the floor.



### Bridge with heel lift (A):

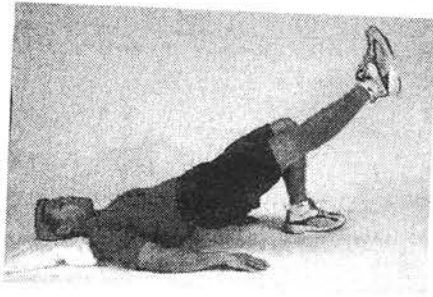
Lift one heel up keeping your toes on the floor. Slowly lower your heel to the floor. Repeat on the other side. Continue alternating while holding the bridge.

### Progression: Bridge with march (B):

Lift one foot 3-5 inches, keeping your knee bent. Slowly lower your foot to the floor and repeat with the other side. Continue alternating as if marching in place.



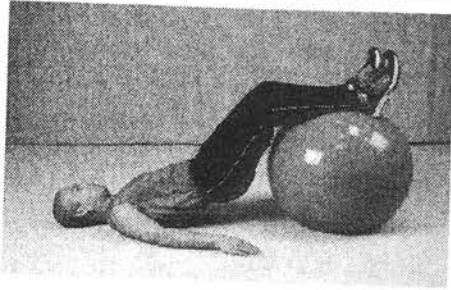
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## Bridge with leg lift:

Lift one leg with your knee bent, and then straighten your knee. Hold 3 seconds. Slowly bend your knee and lower your leg, returning to the *Basic Bridge* position. Repeat the movement with the other leg. Continue alternating sides while holding the bridge.

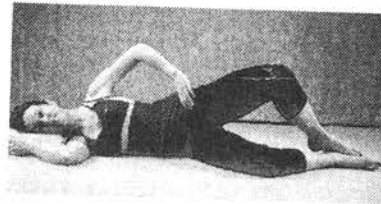
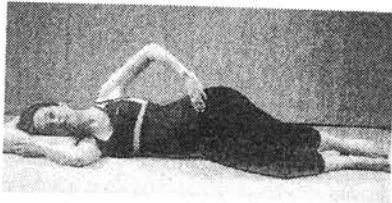
**Progression: One leg bridge:** Hold the position above while raising and lowering your hips.



## Bridge on the ball:

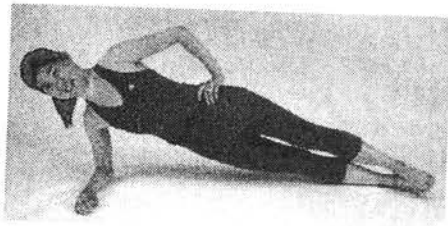
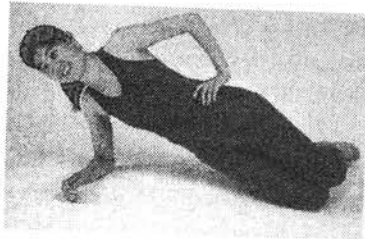
Lie with your lower legs on the ball. Press your legs into the ball and lift buttocks up. Lift only as far as you can go comfortably and keep your neutral spine position. Hold for 3 seconds and lower slowly.

**Side progression** For each of the following exercises, do the abdominal bracing and pelvic floor activation as instructed above and gently hold the contraction throughout the exercise.



## Clam

Lie on your side. Place your hand on your pelvis to monitor the movement. Gently brace your abdominal muscles and lift your knee toward the ceiling. Hold for 2 seconds, lower slowly. As you do this exercise, your pelvis should stay still while your hip and knee moves.



## Side support

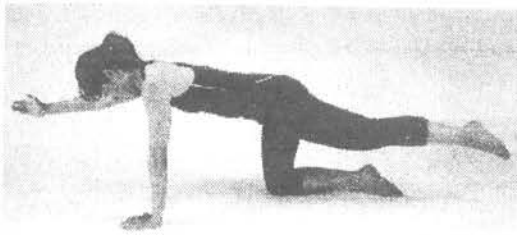
**On knees:** Lie on one side with both of your knees bent and your hips in line with your shoulders. Support your weight on your forearm. Lift your hips from the floor to the point your body is straight. Work up to holding for 60 seconds. Slowly lower to the start position.

**Side support on feet:** Do the same exercise as noted above. Your starting position will be with your knees straight, supporting yourself on your ankles/feet.

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### Hands and knees Progression:

For each of the following exercises, find and hold your neutral position. Do the abdominal bracing and pelvic floor activation and gently hold the contraction throughout the exercise.



#### Hands and knees - arm reach:

Lift one arm and reach forward. Slowly lower your arm. Repeat with the other arm, alternating sides.

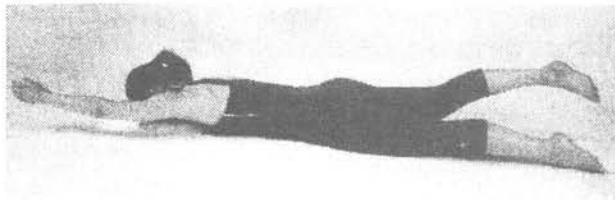
#### Hands and knees leg reach:

Slide one leg backwards until the knee is straight. Lift your straight leg 3-5 inches from the floor. Slowly lower. Repeat with the other leg. Continue alternating sides.

#### Hands and knees - arm and leg reach:

Slowly slide one leg backward keeping your toes on the floor. At the same time, slide your opposite arm forward, then lift arm and leg 3-5 inches from the floor. Repeat with the other leg and arm.

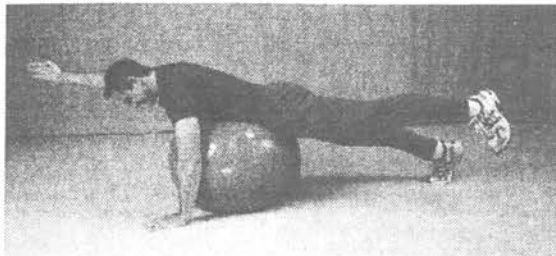
2 x 10 = 20



#### Alternate position

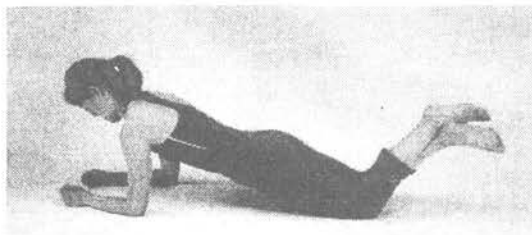
##### Face down - Arm and leg lift:

Place a pillow under your hips as needed to maintain your neutral spine position. Tighten your buttocks muscles. Lift one arm and your opposite leg 1-2 inches off the floor. Do not allow your back to twist or arch. Hold for 5 seconds, and then lower your arm and leg to the start position. Repeat exercise with your other arm and leg.



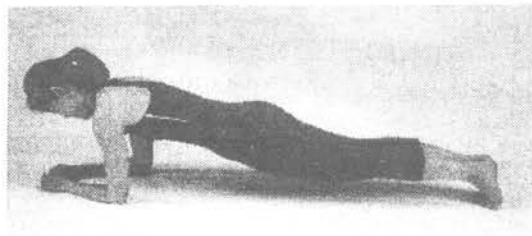
#### Alternate position:

Lying over an exercise ball



#### Plank on knees

Lie face down with your weight supported on your forearms and knees. Make sure your elbows are directly under your shoulders. You may cross your ankles. Tighten your stomach and buttock muscles and keep them tight throughout the exercise. This will hold your body in neutral. Hold up to 60 seconds as able.



#### Plank on toes

Do the same exercise as noted above. Your starting position will be with your knees straight, supporting yourself on your toes.



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## Functional Exercise Progression



### Mini squat

Gently hold onto the back of the chair or counter with your feet shoulder width apart. Slowly bend your knees and squat down just a few inches. Keep your knees over your feet and keep your back in the neutral spine position. Hold for 5 seconds then return to the starting position.



A



B

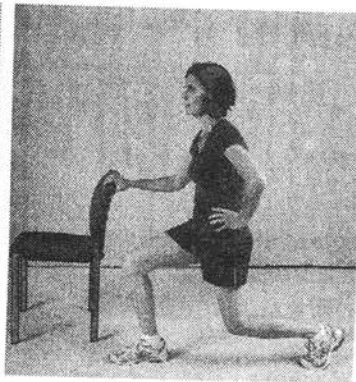
### Tandem standing for balance:

A) Easier: Stand on a firm surface backed into a corner of a room or stand holding onto the back of a chair or counter top. Stand with the heel of one foot against the toe of your other foot. Touch the walls or counter only to regain your balance and to prevent a fall. Try to hold this position for 30 seconds. Work up to 2 minutes.

B) Harder: Progress to standing on one leg. Work up to holding this position for 30 seconds.

C) Progress by:

- standing on a pillow
- closing your eyes
- turning your head from side to side



### Lunge

Stand to the side of a chair, and hold onto the back of it with one hand. Stand with one foot forward and the other one back (toes pointing forward). Lower your back knee towards the floor, keeping your front knee over your ankle. Return to the starting position.

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