



CU SPORTS MEDICINE

## Exercises to Correct Movement Impairment Syndromes

The purposes of the following exercises are:

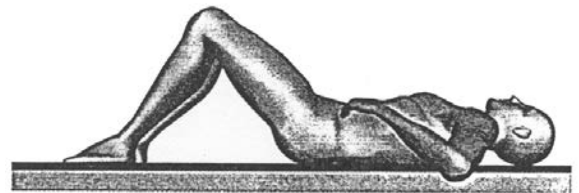
- To improve the performance of the abdominal muscles.
- To move the lower limb without moving the pelvis or spine.

*Starting position:* Bend your hips and knees with your feet on the floor. Place your fingers on your abdominal muscles (outside of your abdomen between the pelvis and ribs).

Remember to breathe and not hold your breath while doing these exercises.

### Exercise 1

- Contract your abdominal muscles by “pulling your navel toward your spine”.
- Lift one knee toward your chest.
- Hold your knee toward your chest with your hand.
- If able to hold your knee with one hand, place your other hand on your abdominal muscle.
- Be sure your abdominal muscles are contracted.
- Lift your other foot off the floor.
- Lower your foot to the floor while being sure to contract your abdominal muscles.
- Do \_\_\_\_\_ repetitions.
- Repeat this movement with the other leg.



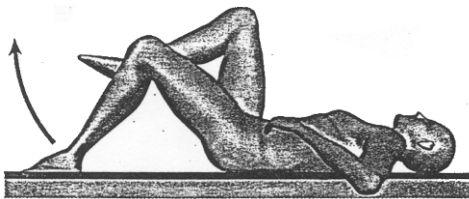
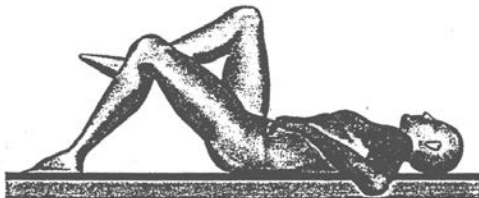
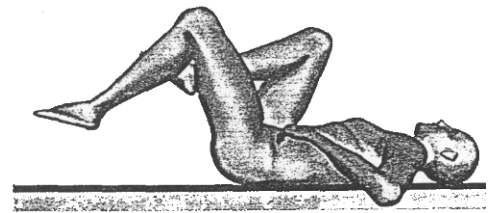
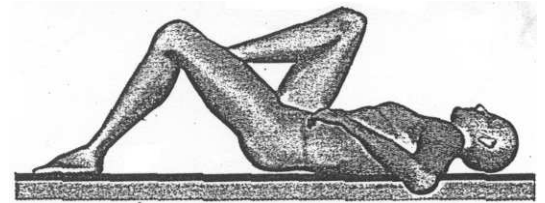
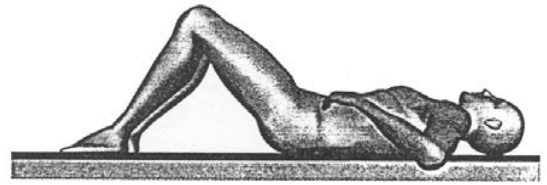
### Exercise 1B

If checked, perform these variations of exercise 1:

- Start when no pain is experienced when performing the above exercise 10 times.
- Do not hold your knee toward your chest as tightly while lifting your leg off the floor.
- Let your knee move away from your chest and hold it lightly with your hand while lifting your leg off the floor.
- Do \_\_\_\_\_ repetitions

**Exercise 2 (Level 1A)**

- Contract your abdominal muscles by “pulling your navel toward your spine”.
- Lift one foot off the floor. Bring that knee toward your chest to more than 90 degrees.
- If necessary, contract your abdominal muscles again.
- Lift the other foot off the floor.
- Do not let your back move.
- Lower your last leg lifted. Be sure to maintain your abdominal contraction.
- Lower your other leg back to the starting position.
- Repeat the exercise starting with the other leg.
- Do \_\_\_\_\_ repetitions.



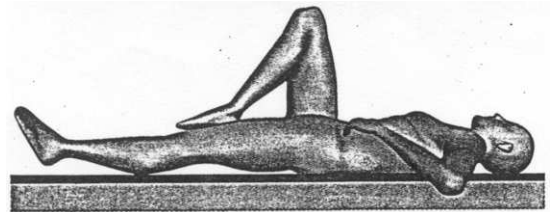
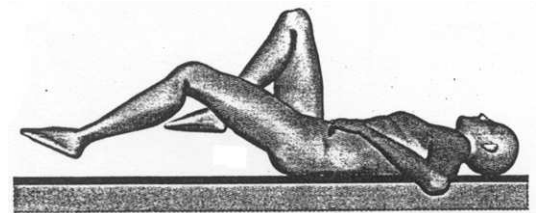
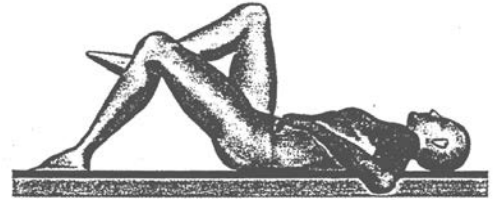
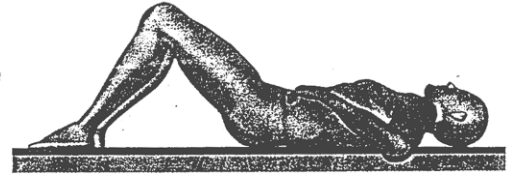
**Exercise 3 (Level 1B)**

- Contract your abdominal muscles by “pulling your navel toward your spine”.
- Lift one foot off the floor and stop when your hip is bent to 90 degrees and your thigh is pointing toward the ceiling.
- If necessary, contract your abdominal muscles again.
- Lift the other foot off the floor.
- Do not let your back move.
- Lower your last leg lifted. Be sure to maintain your abdominal contraction.
- Lower your other leg back to the starting position.
- Repeat the exercise starting with the other leg.
- Do \_\_\_\_\_ repetitions.

**Exercise 4** (Level 2)

If checked, perform the variations below.

- Contract your abdominal muscles by “pulling your navel toward your spine”.
- Lift one foot off the floor and stop when your hip is bent to 90 degrees and your thigh is pointing toward the ceiling.
- If necessary, contract your abdominal muscles again.
- Do not let your abdomen distend.
- Do not push your head back into the supporting surface.
- Breathe.
- Lift your other foot off the floor.
- Slide your foot down the floor, *while lightly touching the floor*.
- Straighten your leg completely.
- Relax.
- Reinforce your abdominal contraction.
- Slide your foot back to the starting position.
- Repeat with the same leg.
- Lower your non-moving leg to the floor, so that both feet are on the floor.
- Repeat starting with your opposite leg.
- Do \_\_\_\_\_ repetitions.

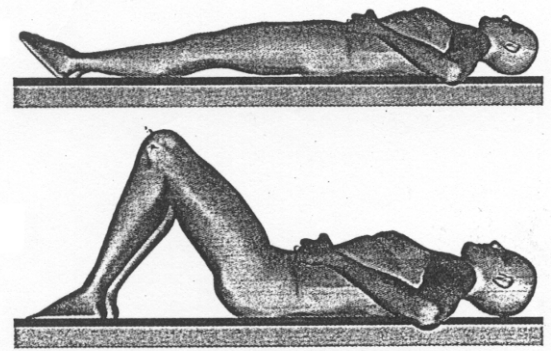
 **Exercise 5** (Level 3)

Perform the same movements as outlined above for Exercise 3, except do the following:

- Hold your foot off the floor while straightening your leg out.
- Set your leg down on the floor.
- Bring your leg back to the starting positions by while holding your foot off the floor.
- Be sure to contract your abdominal muscles.
- Do not let your back move.
- Repeat with the opposite leg.
- Do \_\_\_\_\_ repetitions.

**Exercise 6** (Level 4)

- Contract your abdominal muscles by “pulling your navel toward your spine”.
- Bend your hips and knees and slide your heels along the floor.
- Lift both feet off of the floor when your hips are bent to 90 degrees.
- Reverse the movement to return to your starting position.
- Do \_\_\_\_\_ repetitions.



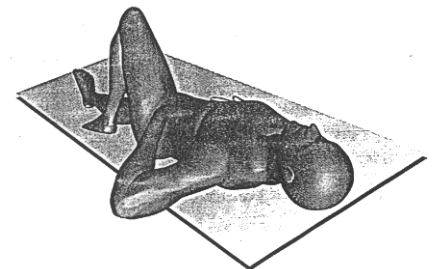
**Exercise 7** (Level 5)

- Contract your abdominal muscles by “pulling your navel toward your spine”.
- Bend your hips and knees by lifting both your feet off of the floor and bringing your knees to your chest.
- Hold your hips at 90 degrees and straighten your knees.
- Lower your legs to the floor, returning to your starting position.
- Do \_\_\_\_\_ repetitions.

The purposes of the following exercise are:

- To improve the isometric performance of the abdominal muscles in preventing pelvic rotation.
- To move the leg without moving the pelvis.
- To stretch the hip adductor muscles (the inner thigh muscles).

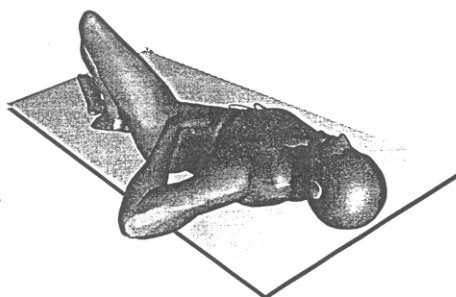
*Starting position:* Place your hands on your pelvis. Bend one knee with your foot on the floor. Straighten the other leg. Place a pillow along side the leg that is bent.



**Exercise**

If checked, perform the variations (listed on the next page) of this exercise:

- Contract your abdominal muscles by “pulling your navel toward your spine”.
- Let your knee move toward the outside and away from your body.



- Keep your pelvis still
  - Bring your knee back to the starting position.
- (Exercise instructions continued on the next page.)

- Return to the starting position.
- Do \_\_\_\_\_ repetitions.
- Perform the other exercise with your other leg.
- Bring your knee toward the inside of your body toward your opposite leg.
- Place a pillow under the knee of the leg that is straight.
- Place a pillow along the side of the leg that is bent at the level of the knee.



The purposes of the following exercise are:

- To improve the isometric performance of the gluteus maximus and hamstring muscles.
- To stretch the hip flexor muscles.
- To improve the performance of the back extensor muscles.
- To improve the performance of the abdominal muscles.

*Starting position:* Lying face down with your legs straight and fairly close together.

**Exercise**

If checked, perform the variations of this exercise.

- Contract your abdominal muscles by “pulling your navel toward your spine”.
- Lift your entire leg off the supporting surface. To do this, think about turning your leg slightly outward as you contract your buttock (gluteal) muscle.
- Do not let your pelvis move.
- Do not lift your leg high (only 10 degrees of hip motion in this direction).
- Hold your position for a count of 3 to 10 seconds.
- Place a pillow under your abdomen.
- Place your fingers on the bones of the front of the pelvis to monitor pelvic motion.
- Perform the other exercise with your other leg.
- Do \_\_\_\_\_ repetitions.

