

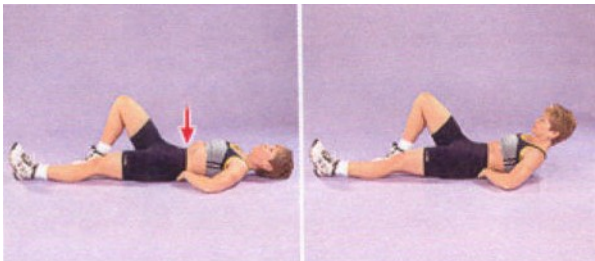
Creating an abdominal brace

- Stand with your lower back flexed forward slightly while feeling the muscles of your lower back.
- Slowly extend your back, bringing it to a more upright position until the muscles of the lower back relax. **This is your neutral back position.**
- Now flex your stomach muscles; **not** by “sucking in”, but by simultaneously contracting all of your lower abdominal muscles, creating the feeling of a brace around your stomach and lower back. You will feel pressure taken off your lower spine when this is done properly.

The next step is to maintain this position through a series of motions. You may find that you can apply this abdominal brace while running or walking right away with little difficulty. For the rest of us we can develop to this point through a series of steps to develop proper muscle firing and strength. The following exercises will help to address core weakness and develop endurance so that a solid core can be maintained through a variety of distances:

Note: Rest indicates time in between sets.

Abdominal Crunches (Neutral Back)



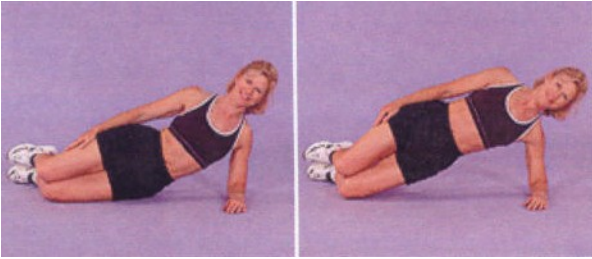
Sets:	1 /side
Reps:	10-20
Hold:	2 sec
Rest:	30 sec
3 x / week	

Starting position: Lay on your back with your hand placed directly under the low back and one leg straight while the other is bent.

Form an abdominal brace, maintaining the spine in it’s neutral position (not touching floor or overly curled). Focus rotation in the middle spine (thoracic) with no flexion in the upper spine and neck region. The head and neck should remain “locked” to the rib cage area with no chin poking or chin tucking allowed. Leave the elbows on the floor while elevating the head and shoulders a short distance off the floor. Contraction should be felt in the stomach region with no pressure felt in the lower back.

Side Bridges

Beginner



Sets:	2 /side
Reps:	1
Hold:	30 sec
Rest:	30 sec
3 x / week	

Starting position: Lying on one side with the knees bent keeping knees, hip and shoulder in line. Support the upper body on the elbow, placing elbow directly under the shoulder.

Form an abdominal brace, maintaining the back in it's neutral position (not allowing it to curl back or to flex forward). Maintain the abdominal brace throughout the exercise. Raise the hip up off the floor while avoiding rotating forward or backward.

Intermediate

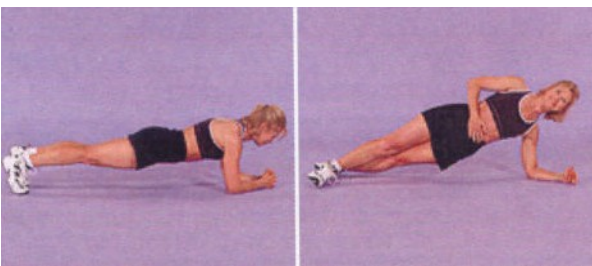


Sets:	2 /side
Reps:	1
Hold:	30 sec
Rest:	30 sec
3 x / week	

Starting position: Lying on one side with the legs out straight (feet staggered) keeping the hip and shoulder in line. Support upper body on forearm, placing elbow directly under shoulder.

Form an abdominal brace, maintaining the back in it's neutral position (not allowing it to curl back or to flex forward). Maintain the abdominal brace throughout the exercise. Raise the hip up off floor and hold. Avoid rotating forward or backward.

Advanced



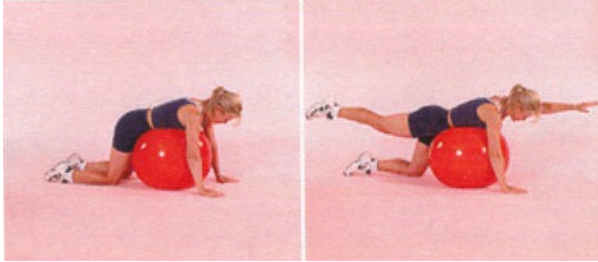
Sets:	2 /side
Reps:	1
Hold:	30 sec
Rest:	30 sec
3 x / week	

Starting position: Support body in a plank position on forearms with feet shoulder width apart. Keep a straight line through the knee, hip and shoulder.

Form an abdominal brace, maintaining the back in its neutral position (not allowing it to curl back or to flex forward). Maintain the abdominal brace throughout the exercise. Turn the body as a unit into a side bridge position by pivoting on the feet and shifting weight over one shoulder. Hold, return to plank and alternate sides.

Quadruped Exercises

Beginner

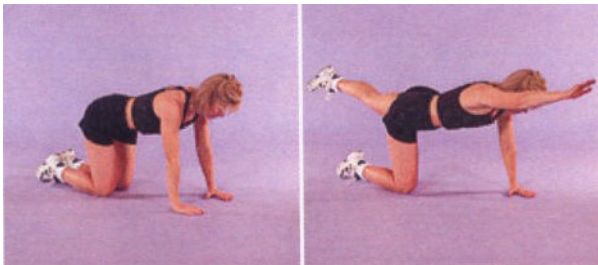


Sets:	2
Reps:	15-20
Hold:	2 sec
Rest:	30 sec
3 x / week	

Starting position: Lying on stomach over ball with hands and feet on the floor. **Note:** Select a ball size that will allow this position.

Form an abdominal brace, maintaining the back in its neutral position (not allowing it to curl back or flex forward). Maintain this abdominal brace throughout the exercise. Slowly extend one leg out behind while at the same time raising opposite arm up in front until parallel with floor. Avoid raising either the arm or the leg past the horizontal. Return arm and leg to floor and alternate. Keep trunk square and stable and maintain abdominal brace without allowing the lower back to curl.

Intermediate



Sets:	2
Reps:	15-20
Hold:	2 sec
Rest:	30 sec
3 x / week	

Starting position: On hands and knees with a straight back.

Form an abdominal brace, maintaining the back in its neutral position (not allowing it to curl back or flex forward). Maintain this abdominal brace throughout the exercise. Slowly extend one leg behind while at the same time extending opposite arm out in front until parallel with floor.

Keep trunk square and stable. Return arm and leg to floor and alternate.

Advanced



Sets:	2
Reps:	15-20
Hold:	2 sec
Rest:	30 sec
3 x / week	

Starting Position:

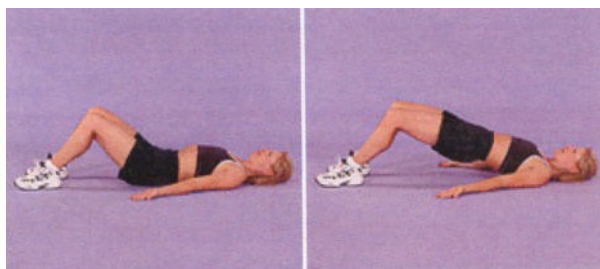
- Position the brace of the machine so that the top of the pelvis will move freely over the pad. Then stand with the hips and feet straight and slightly rotated outward (about 30 degrees)
- Squeeze the shoulder blades together and pull the arms slightly behind the torso. The arms may also be placed across the chest, behind the head, or overhead to further increase the load.
- Create an abdominal brace to maintain a neutral spine throughout the exercise (at no point should the spine flex forward).
- Activate the core and abdominal muscles, and contract the glutes and hamstrings to stabilize the starting position.

Motion:

- Lower the trunk as far as the hamstrings will allow while maintaining proper posture and head position.
- Hold, activate the core, and pull the torso back up to the starting position by contracting the glutes and hamstrings. Continue to maintain head and spinal position.

Bridge

Beginner

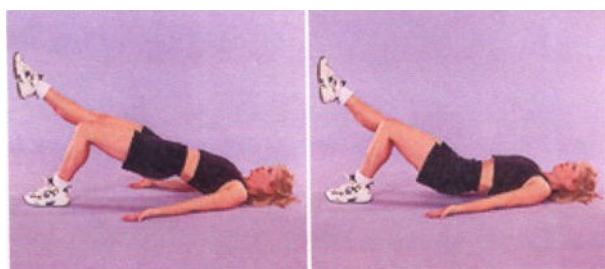


Sets:	2
Reps:	10
Hold:	2 sec
Rest:	30 sec
3 x / week	

Starting position: Lie on back with the knees bent and feet flat on the floor. Place arms 45 degrees at sides with *palms up*.

Form an abdominal brace, maintaining the back in it's neutral position (not allowing it to curl back or flex forward). Maintain this abdominal brace throughout the exercise. Squeeze buttocks and slowly raise pelvis up off the floor into a bridge position. Maintain relaxed hamstrings (back of thigh). Shoulder blades should remain on floor. Hold at end position, then lower and repeat.

Advanced



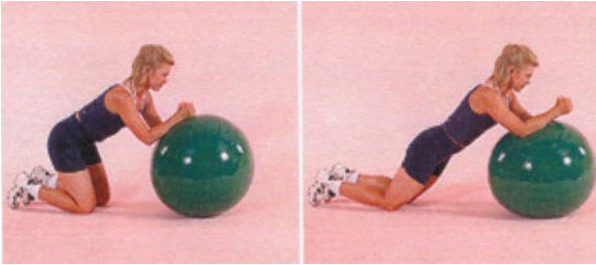
Sets:	2 / side
Reps:	10-15
Hold:	2 sec
Rest:	30 sec
3 x / week	

Starting position: From the bridge position, maintain a slight pelvic tilt.

Form an abdominal brace, maintaining the back in it's neutral position (not allowing it to curl back or flex forward). Maintain this abdominal brace throughout the exercise. Raise and extend one leg out until it is straight. With control, slowly lower pelvis down to floor and raise back up to the starting position.

Plank

Beginner



Sets:	2
Reps:	10
Hold:	5 sec
Rest:	30 sec
3 x / week	

Starting position: In a kneeling 'prayer' position with forearms on ball.

Form an abdominal brace, maintaining the back in it's neutral position (not allowing it to curl back or flex forward). Maintain this abdominal brace throughout the exercise. Lean the upper body to a 45-degree angle while maintaining postural alignment. Hold.

Intermediate



Sets:	2
Reps:	1
Hold:	30 sec
Rest:	30 sec
3 x / week	

Starting position: Support body in a half plank position with forearms shoulder width apart and knees together. Keep a straight line through the knee, hip and shoulder.

Form an abdominal brace, maintaining the back in it's neutral position (not allowing it to curl back or flex forward). Maintain this abdominal brace throughout the exercise. Hold.

Intermediate

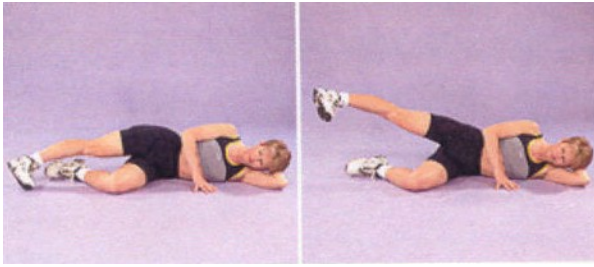


Sets:	2
Reps:	1
Hold:	30 sec
Rest:	30 sec
3 x / week	

Starting position: Support body in a plank position on forearms with feet shoulder width apart. Keep a straight line through the knee, hip, and shoulder.

Form an abdominal brace, maintaining the back in it's neutral position (not allowing it to curl back or flex forward). Maintain this abdominal brace throughout the exercise. Hold.

Side Lying Hip Abduction



Sets:	2 / side
Reps:	15-20
Hold:	2 sec
Rest:	30 sec
3 x / week	

Starting position: Lying on one side, bend bottom knee up and keep top leg straight.

Form an abdominal brace, maintaining the back in it's neutral position (not allowing it to curl back or flex forward). Maintain this abdominal brace throughout the exercise. Slowly raise top leg up sideways (to 30-40 degrees). Keeping knee straight and toes pointing slightly downward.

Keep body and leg aligned and avoid hiking the hip.

One Leg Squat



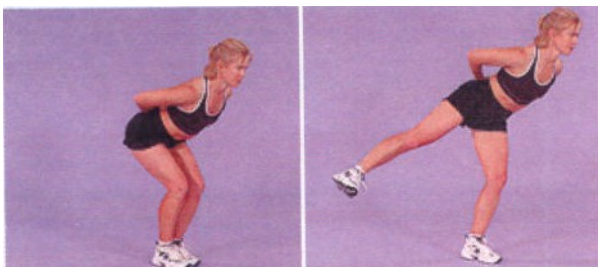
Sets:	2 / side
Reps:	5-10 / leg position
Hold:	1-2 sec
Rest:	30 sec
3 x / week	

Starting Position: Standing in readiness position, close to a wall or within a doorway.

Form an abdominal brace, maintaining the back in it's neutral position (not allowing it to curl back or flex forward). Maintain this abdominal brace throughout the exercise. Raise one leg up in front. Perform half squats maintaining good postural balance. **Repeat with lifted leg to the side then to the back.**

Speed Skater Hip Abduction Squat

Advanced



Sets:	2
Reps:	10 / side
Hold:	2 sec
Rest:	30 sec
3 x / week	

Starting position: Standing with hands behind back, bend forward at the hips until back is parallel with the floor.

Form an abdominal brace, maintaining the back in it's neutral position (not allowing it to curl back or flex forward). Maintain this abdominal brace throughout the exercise. Standing with hands behind back, bend forward at the hips until back is parallel with the floor. Lift one leg up off floor, as if skating, and hold, lower and repeat.