Measuring Core Body Stability

**Definition of Core Body** -
The body’s core is the area around the trunk and pelvis — is where your center of gravity is located.

A strong core provides:
- Increased back protection and “bracing” Controlled movement
- A more stable center of gravity
- A more stable platform for sports movements

When you have good core stability, the muscles in your pelvis, lower back, hips and abdomen work in harmony. They provide support to your spine for just about any activity.

A weak core can make you susceptible to poor posture, lower back pain and muscle injuries. Strong core muscles provide the brace of support needed to help prevent such pain and injury.

**The lunge as a ‘functional’ strength test:**
“In the training repertoire, the lunge is a strength exercise for the quadriceps and gluteals; however, it also serves as a ‘functional’ test of movement quality and postural control.

The lunge position is a basic movement pattern that is commonly executed in a range of everyday activities and has very broad applicability. Broken down, the exercise is complex and hard to perform perfectly, which makes it a good test and analytical tool.”

**How do you measure your core body stability?**
Conditioning coach Raphael Brandon uses a simple functional test — the lunge — as a reliable guide to the key components of core stability.

Following the “functional movement screen” work of US orthopedic physician Gray Cook, Raphael Brandon has devised a full set of criteria against which you can judge your ability to do the lunge.

For more advice on how to interpret the results, read Raphael Brandon’s article in publication *Sports Injury Bulletin 46*.

This important article also raises the debate about isolated muscle recruitment work vs functional stability work in order to achieve perfect movement patterns. Read the full discussion at [http://www.sportsinjurybulletin.com](http://www.sportsinjurybulletin.com)
**Lunge (exercise)**


From Wikipedia, the free encyclopedia

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**Revolved lunge position**

The lunge is a weight training exercise that is used to strengthen the quadriceps muscles, gluteal muscles and the muscles comprising the "hamstrings", the semitendinosus, the semimembranosus, and the biceps femoris.

A long lunge emphasizes the glutes whereas a short lunge emphasizes the quadriceps.

To perform the lunge, the individual stands with their feet shoulder-width apart, and then steps forward, landing with the heel first. The knee should be at 90 degrees and directly above the toes, not further (taking a shorter step can put added pressure on the knee).

The motion is continued until the back knee is nearly touching the ground. The individual then returns to his or her starting position by driving upward with the front leg.

There are variations on the basic structure lunge, with regard to both form and resistance in addition to varying the step length as mentioned above. The exercise is sometimes performed on an incline or on a bench to increase the difficulty.

The walking lunge is performed by walking with lunging steps as described above. The stationary lunge can be performed either by alternating legs or by focusing on a particular leg.

Many other variations of the lunge exist.

- Adobe Flash must be installed to view -

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**Dumbbell Lunge**

[http://www.exrx.net/WeightExercises/Quadriceps/DBLunge.html](http://www.exrx.net/WeightExercises/Quadriceps/DBLunge.html)

**Dumbbell Lunge**

This drop-knee version is the most basic lunge and, surprisingly, one of the harder versions.

The lunge can be performed without weights (i.e., bodyweight). However, weight trainers usually seek to increase the difficulty using either dumbbells (held in each hand) or a barbell with weights on it (held atop the neck and shoulders).

Advanced trainers may find that grip strength is an issue with the dumbbell lunge, and therefore prefer the barbell lunge.

**Preparation**

Stand with dumbbells grasped to sides.

**Execution**

Lunge forward with first leg. Land on heel then forefoot. Lower body by flexing knee and hip of front leg until knee of rear leg is almost in contact with floor. Return to original standing position by forcibly extending hip and knee of forward leg. Repeat by alternating lunge with opposite leg.

**Comments**

Keep torso upright during lunge; flexible hip flexors are important. Lead knee should point same direction as foot throughout lunge. A long lunge emphasizes Gluteus Maximus; short lunge emphasizes Quadriceps.

[http://exercise.about.com/od/exerciseworkouts/ss/bestbuttexercise_3.htm](http://exercise.about.com/od/exerciseworkouts/ss/bestbuttexercise_3.htm)

Here's how to do it the drop-knee version of the most basic lunge:
1. Stand in a split stance, with feet about 3 feet apart. You want both knees to be at about 90-degree angles at the bottom of the movement, so adjust accordingly.
2. Hold weights in each hand (or place a barbell behind the neck) for added intensity.
3. Bend the knees and lower the back knee toward the floor, keeping the front heel down and the knee directly over the center of the foot.
4. Keep the torso straight and abs in as you push through the front heel and back to starting position.
5. Don’t lock the knees at the top of the movement.
6. Perform 1 to 3 sets of 10 to 16 reps according to your fitness level and goals.

**Youtube demonstration of lunge**
http://www.youtube.com/watch?v=dJ95qwNaD78