

2013

# Exercise: The Plank



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## **EXERCISE: THE PLANK**

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## **1.0 Introduction**

The plank is a simple, effective abdominal strengthening exercise that an individual can do almost anywhere. Exercisers will encounter the plank in a wide range of workouts, including outdoor fitness, fitness boot camps, military fitness, mixed martial arts, yoga and Pilates. Proper form is essential to preventing injury and maximising the exercise's benefits.

You may think that the core muscles are only the ones in your stomach. In fact, the core is made up of all the muscles that connect the upper and lower body, including those of the stomach, lower back, hips and buttocks.

These muscles are essential for supporting the spine, aiding good posture, and almost every movement. By strengthening the core muscles you will not only be on a fast track to a flatter stomach but will also improve the effectiveness of, almost, any exercise you do.

The plank is one of the best exercises because it tightens the deepest core muscles. It is a static exercise where you use your arms to raise yourself off the floor and hold the whole body straight and rigid, just like a plank of wood.

You can do it anywhere, you do not need any equipment and it only takes a minute (literally). Further, it is more effective than sit-ups and crunches because these work only the superficial abdominal muscles.

This article will look at what the Plank is, the muscles behind the movement, why the Plank is a useful exercise and how to perform the exercise. The article will also provide some practical tips, ideas for variations and highlight some world records.

## **2.0 History**

No details available.

## **3.0 What is the Plank?**

The plank (also called a front hold, hover, or abdominal bridge) is an isometric core strength exercise that involves maintaining a difficult position for extended periods of time. The most common plank is the front plank which is held in a press-up position with the body's weight borne on the forearms, elbows, and toes.

## **4.0 The Muscles behind the Movement**

The plank strengthens the abdominals, back, and shoulders. Muscles involved in the front plank include:

- Primary muscles: erector spinae; rectus abdominis; and transverse abdominus.
- Secondary muscles (synergists/segmental stabilisers): rhomboids; rotator cuff; the anterior, medial, and posterior deltoid muscles; trapezius; pectorals; serratus anterior; gluteus maximus; quadriceps; and gastrocnemius.

Muscles involved in the side plank include:

- Primary: transverse abdominus; gluteus medius and gluteus minimus muscles (abductors); the adductor muscles of the hip; and the external and internal obliques.
- Secondary: gluteus maximus; quadriceps; and hamstrings.

### 5.0 Why the Plank?

The plank exercise is a great way to build endurance in the abdominals and back, as well as the stabiliser muscles.

This exercise is also great for building strength for press-ups, an exercise that requires quite a bit of core strength.

### 6.0 The Plank in the Military

The Plank is an integral part of military physical fitness and many military systems around the world train daily with this exercise.

### 7.0 Performing the Front Plank

1. Lie face down on a level surface, on a mat, resting on the forearms, palms flat on the floor (Figure 1).
2. Push off the floor, raising up onto toes and resting on the elbows.
3. Keep your back flat, in a straight line from head to heels.
4. Tilt your pelvis and contract your abdominals to prevent your rear end from sticking up in the air or sagging in the middle.
5. Hold for 20 to 60 seconds, lower and repeat for 3-5 repetitions.



**Figure 1:** The plank

### 8.0 Building-up to the Front Plank

If you do not have the core strength yet to do a 'classic' plank, you can build up to it by doing a modified, or bent-knee, plank (Figure 2).



**Figure 2:** Modified plank

## 9.0 Practical Tips

- Keep your elbows at your sides in the full or half plank and bend your arms 90 degrees for a variation called the staff plank.
- You can also try lifting your top leg in the full or half side plank.
- Keep your knees on the floor for the half plank. Keep your bottom knee on the floor for a half side plank.
- This stretch is good for getting a flat stomach, but do not overdo it. Do this every morning for 20 seconds and 3 reps.
- Lift 1 foot off the floor in the full, low or half plank for more core conditioning. Hold for 5 seconds then alternate to the other leg.
- Keep your forearms on the floor with your elbows beneath your shoulders for a low plank, also known as the dolphin plank.
- The longer you can hold a plank (to a point), the stronger your core will become and you will quickly see an improvement. You should seek professional advice before attempting the plank exercise if you have suffered any lower back problems.
- How to improve your time:
  - **Practice:** Perform planks several times each day, trying to hold the position a little longer each time.
  - **Use body-weight Exercises:** Press-ups and pull-ups will improve your core strength.
  - **Squat and Dead-lift:** individuals who are strong in these specific lifts find planks are no problem.

## 10.0 Variations of the Plank

Many variations exist such as the side plank and the reverse plank. The plank is commonly practiced in Pilates and yoga, and by those training for boxing and other sports.



**Figure 3: Side plank:** Lie on your right side, propped up on your elbow. Let your left foot rest on top of your right, and then push up so that your body forms a perfect triangle with the floor. Don't let your left shoulder roll forward or back. Hold the position for as long as you can, then repeat on the other side.



**Figure 4: Prone sky-dive (also known as prone cobra):** Always follow a basic or side plank with this move. Lie flat on the floor, face down, with your arms by your sides. Gently raise your chest off the floor until you can feel your lower back muscles start to work, simultaneously raising your arms up, palms facing upwards and with your thumbs furthest away from your body, pointing to the ceiling. Be careful not to clench your buttocks. Hold for 30 seconds.



**Figure 5:** Modified side plank

If you can hold a plank for more than two minutes with ease, you can probably move on to these tougher variations.

- **Leg Lift Plank:** Lift one leg up. By simply raising one leg in the air, you dramatically increase the demand on your core to fight your body's natural urge to rotate.
- **Arm Lift Plank:** Lift one arm up. Again, your body will want to fall to one side. Do not let it!
- **Swiss Ball Plank:** Using a Swiss ball, rest your forearms on the ball and you will have to stabilise your body and stop the ball from rolling out from under you.
- **Reverse Plank:** opposite of the 'classic' plank position. On your elbows and heels facing up to the sky.
- **Medicine Ball Plank:** place the hands and/or feet on a medicine ball (an advanced exercise).
- **Incline Plank:** the elbows are slightly raised on above the level of the feet.
- **Decline Plank:** the feet are slightly raised above the level of the elbows.
- **The Walking Plank:** to make this exercise more difficult, perform the walking plank. In the plank position crawl out to a point about 2 metres in front of you and then crawl back to your starting point. It is essential that a good plank position is kept at all times.

### 11.0 Population Averages

No details available.

### 12.0 Record Breakers

There are a number of plank exercise world records documented by the Guinness World Records (GWR), as highlighted below:

- The current world record for the plank position is 3 hours 7 minutes and 15 seconds, set in Newport, Kentucky on 20 April 2013 by George Hood (GWR, 2013a).

- The longest time in an abdominal plank position carrying a 60-lb pack is 17 min and 26 sec and was achieved by Eva Bulzomi (USA) at Axiom Fitness in Boise, Idaho, USA, on 6 July 2013 (GWR, 2013b).
- The most people planking simultaneously is 1,549 and was achieved by King George V School (UK) in Hong Kong, on 16 December 2011. Anoushka Weiley (13 years old), a student of the school, suggested the planking record in celebration of the school's new chairs and as a fitting farewell to the old chairs that had been in use for 40 years (GWR, 2011).
- Sara Jokinen (Finland) travelled in a bridge position a distance of 20 metres (65 ft 7.2 in) in a time of 14.11 seconds at the YMCA in Indiana, Pennsylvania, USA, on 29 December 2006. A human bridge consists of only the participant's hands and feet on the floor, with the arms extended above the shoulders and head, with the back completely arched (GWR, 2006).

### 13.0 References

GWR (Guinness World Records) (2013a) *Longest Time in An Abdominal Plank Position*. Available from World Wide Web: <<http://www.guinnessworldrecords.com/records-8000/longest-time-in-an-abdominal-plank-position/>> [Accessed: 02 December, 2013].

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GWR (Guinness World Records) (2011) *Most People Planking Simultaneously*. Available from World Wide Web: <<http://www.guinnessworldrecords.com/world-records/1000/most-people-planking-simultaneously>> [Accessed: 12 December, 2013].

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