



Core

In addition to developing the strength of large muscle groups using traditional exercises such as the bench press or squat, it is important to develop the strength and endurance of core muscles in the abdominal and spinal regions. This will improve overall body balance and alignment, improve stability, and reduce injury. Sit-ups and push-ups, which should be performed regularly in preparation for the PST, are important core exercises. Additional core exercises include the bridge, plank, and bird dog. See Table 3 (below) for specific training recommendations. Work up to being able to complete the sets and reps listed in each time period. You don't have to make each jump all at once.

One more note about core strength: effective training is as much about learning to activate the lesser-used muscles as it is about increasing their strength. An important core muscle that should be activated during each session is the *transverse abdominis*. You can feel this muscle activated when you cough, and one technique to make sure it is active during core exercises is to cough before performing a core exercise and to make sure you feel this muscle contracting during the exercise.

Table 3: Core Exercise Progressions					
Exercise	Week 1-6	Week 7-11	Week 12-16	Week 17-21	Week 22-26
Bridge	2 x 20 reps (alternating)	2 x 25 reps (alternating)	3 x 20 reps (alternating)	3 x 25 reps (alternating)	3 x 30 reps (alternating)
Plank	2 x 30 sec	2 x 45 sec	3 x 40 sec	3 x 50 sec	3 x 60 sec
Side Plank (each side)	2 x 30 sec	2 x 40 sec	2 x 45 sec	2 x 50 sec	2 x 60 sec
Bird Dog	2 x 20 reps (alternating)	2 x 25 reps (alternating)	3 x 20 reps (alternating)	3 x 25 reps (alternating)	3 x 30 reps (alternating)
Superman	2 x 10 reps	3 x 8 reps	2 x 12 reps	3 x 10 reps	3 x 12 reps
Wipers	2 x 20 reps	2 x 25 reps	3 x 20 reps	3 x 25 reps	3 x 30 reps



Bridge

Description

- Lie on back with knees bent and feet about ten inches from buttocks.
- Keep arms at sides or folded across the chest and keep the pelvis neutral.



- Raise the hips off the floor, creating a straight line between the knees, hips and shoulders.



- Lift the right foot off the floor and extend the leg until it is straight and creates a line from the shoulder through the hip, knee and foot.





- Meanwhile, support the body's weight by statically contracting the glutes and hamstring of the left leg. Make sure to keep the pelvis neutral and horizontal; don't let it dip toward the unsupported side.
- Hold the contraction for 3-4 seconds before lowering the pelvis to the floor with both feet near the buttocks in the original starting position. Lift the left foot off the floor and extend the leg while supporting the body's weight with the right leg in the same manner for 3-4 seconds.



- Continue to alternate between legs.



Plank

Description

- Lie face down on floor with legs straight and feet together, place forearms on floor with elbows directly below shoulders, then raise body off the floor so weight is supported by toes and forearms.



- Hold body in this position by statically contracting the core muscles, maintaining a straight line from heels to shoulders.

Variations

- Lift each arm and leg off the floor one at a time in turn, holding each position for several seconds before moving to the next position. Make sure the torso remains stable.



- Hold one arm and the opposite leg off the floor simultaneously.



Side Plank

Description

- Lie on one side supporting body weight on one forearm with elbow below shoulder and resting the other arm along the side of the body.



- Don't let the hips sag towards the floor. Hold the spine and legs in a straight line by statically contracting the core muscles.
- Hold for desired length of time and switch to the other side.





Variations

- Maintain core contraction while lifting the top leg off the floor by abducting the hip.
- Raise the body higher off the floor by extending the support arm completely straight and supporting the weight with one hand, meanwhile extending the opposite arm straight above the body.





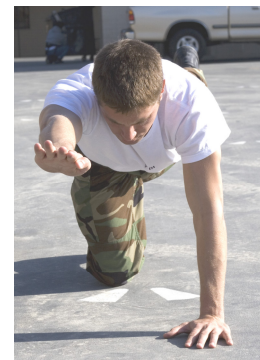
Bird Dog

Description

- Begin on hands and knees, with hands directly below shoulders and head & neck aligned with back.



- Raise the right arm until it is fully extended and parallel to the floor. Simultaneously raise the left leg until it is fully extended. The arm, leg and back should all be in the same horizontal plane.



- Keep the torso stable; do not let the hip drop on the unsupported side.



- Hold for 3-4 seconds, then lower the upraised arm and leg to the starting position, and raise the opposite arm and leg to the same extended positions.





Superman

Description

- Lie face down on floor with legs straight, feet together and arms straight and extended overhead.



- Keeping arms and legs straight, lift both hands and both feet several inches off the floor and hold for 3-4 seconds.



- Relax for 1-2 seconds and repeat.



Variation

- Keeping arms and legs straight, lift one hand and the opposite foot several inches off the floor and hold for 3-4 seconds. Return to starting position and simultaneously lift the other hand and foot. Continue to alternate lifting opposite hands and feet.





Wipers

Description

- Lie on your back with legs extended straight and together, and arms outstretched away from the body.



- Lift the legs together till they are perpendicular to the ground (hips flexed to 90 degrees). Keeping the hips flexed to 90 degrees, rotate the lower torso and pelvis to one side so the legs contact the ground.





- Rotate the lower torso and pelvis through a 180 degree arc till the legs contact the ground on the other side. Swing the legs back and forth through a 180 degree arc (like a windshield wiper). Each arc counts as one rep.



- Keep the upper back, both arms and shoulder blades in contact with the ground at all times.