Supplement 2

Core stability exercise

1. Abdominal bracing exercises



Lie on your back with your knees bent. Tighten your abdominal muscles and avoid completely flattening your back against the floor. Hold for 8 seconds, and remember to breathe normally. Relax and repeat.

Criterion for progression: able to complete 30 reps \times 8 s hold.

a) Abdominal bracing (supine)



Start with position a. While tightening your abdominal muscles, slide one foot forward with the heel until the knee is straightened (3 s count), then slide the heel back to the original position (3 s count). Relax and repeat with the other leg.

Criterion for progression: able to complete 20 reps per leg.

b) Abdominal bracing with heel slide



Start with position a. While tightening the abdominal muscles, lift one foot off the ground by approximately 15cm (3 s count). Then place it back on the ground (3 s count). Relax and repeat with the other leg.

Criterion for progression: able to complete 20 reps per leg.

c) Abdominal bracing with leg lifts



Start with position a. While tightening the abdominal muscles, tighten the buttocks and lift them off the ground. Keep the back straight and hold for 8 seconds. Relax and repeat.

Criterion for progression: able to complete 30 or more Reps until you can perform a single leg bridging.

d) Abdominal bracing with bridging



e) Abdominal bracing with single leg bridging

Start with position a. While tightening the abdominal and gluteal muscles, extend one knee to place one foot on the floor. Then slowly lift your hips off the ground, holding for 8 seconds. Relax and repeat.

Goal is 30 reps per leg.

2. Side support exercises



Lie on your side with your knees bent, supporting your body weight on your elbow and knee. Slowly lift your body off the ground, holding for 8 seconds. Relax and repeat. Criterion for progression: able to complete 30 reps \times 8 s hold on each side.

a) Side support with knees flexed

b) Side support with knees flexed and bracing

Perform the abdominal brace (tighten your abdominal muscles), then complete the movement a. Hold for 8 s. Relax and repeat. Criterion for progression: able to complete 30 reps \times 8 s hold on each side.



Lie on your side with your legs straight, supporting your body weight on your elbow and feet. Slowly lift your body off the ground, holding for 8 seconds. Relax and repeat. Criterion for progression: able to complete 30 reps \times 8 s hold on each side.

c) Side support with knees extended

d) Side support with knees extended and bracing

Perform the abdominal brace (tighten your abdominal muscles), then complete the movement c. Hold for 8 s. Relax and repeat. Criterion for progression: able to complete 30 reps \times 8 s hold on each side.

e) Advanced side support

Perform the right side support as movement d. Tighten your abdominal muscles and roll your body forward, placing your opposite elbow on

the ground to complete a left side support. Hold for another 8 s. Relax and repeat. Goal is 30 or more reps.

3. Quadruped exercises



a) Quadruped arm lifts with bracing

Begin on all fours with both hands and knees on the ground. Tighten your abdominal muscles and slowly lift your right arm off the ground, holding for 8 seconds. Return to the starting position and repeat with the left arm. Criterion for progression: able to complete 30 reps \times 8 s hold on each side.



b) Quadruped leg lifts with bracing

Begin on all fours with both hands and knees on the ground. Tighten your abdominal muscles and slowly extend your right leg, lifting the knee off the ground and keeping your hip and lower limb parallel to the ground, holding for 8 seconds. Return to the starting position and repeat with the left leg.

Criterion for progression: able to complete 30 reps \times 8 s hold on each side.



 Quadruped opposite arm and leg lift with bracing Begin on all fours with both hands and knees on the ground. Tighten your abdominal muscles and slowly extend and lift your right leg and left arm, bringing them parallel to the ground. Hold for 8 seconds. Return to the starting position and repeat with your left leg and right arm.

Goal is 40 or more reps.