

Spondylolysis & Aesthetic Athletes

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MCE Handout

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April 2015

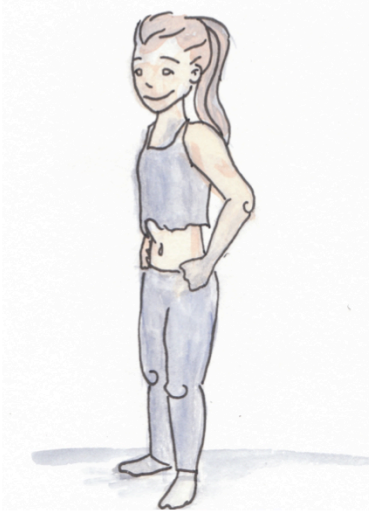
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This is intended to complement and not replace any advice or information from a health professional.

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Exercise regimen illustrated and adapted from: Rabin, A., Shashua, A., Pizem, K., Dickstein, R., & Dar, G. (2014, January). A clinical prediction rule to identify patients with low back pain who are likely to experience short-term success following lumbar stabilization exercises: A randomized controlled validation study. *Journal of Orthopaedic & Sports Physical Therapy*, 44(1), 6-18, B1-B13.

Standing ADIM



30x

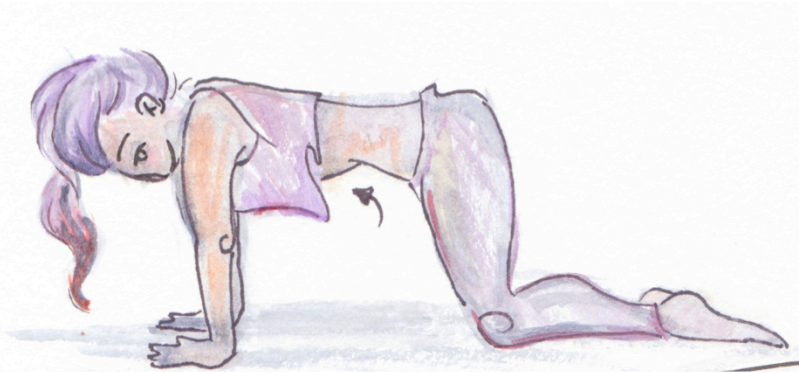
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First, you must learn to perform the basic **abdominal drawing-in maneuver (ADIM)** in **quadruped, standing, and supine** positions.

Following exhalation, tighten your abdominal muscle and draw the belly button up towards the spine or rib cage, without flexing or extending your spine (maintain a neutral lumbar spine).

Practice holding the contraction for **8 seconds** in each position, **30 repetitions** each.

Quadruped ADIM



30x

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Supine ADIM



30x

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1. **Supine ADIM + Heel Slide**



20x Each Leg

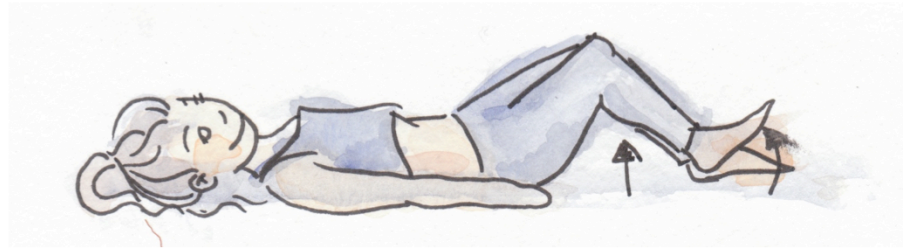
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Starting in a hook-lying position, feet flat on the supporting surface, perform the supine ADIM and slide 1 heel on the supporting surface until the knee is straight.

HOLD this for 4 seconds, then return to start.

Alternate legs and repeat.

2. **Supine ADIM + LEG LIFT**



20x Each Leg

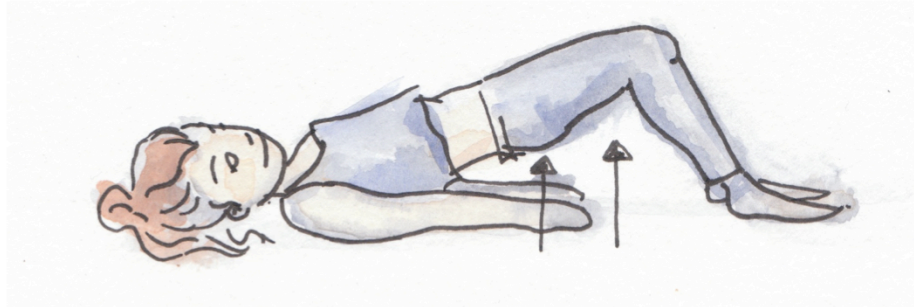
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Perform a supine ADIM and raise one foot 10 cm above the ground.

HOLD this for 4 seconds, then return to start.

Alternate legs and repeat.

3. **Supine ADIM + 2-Leg Bridge**

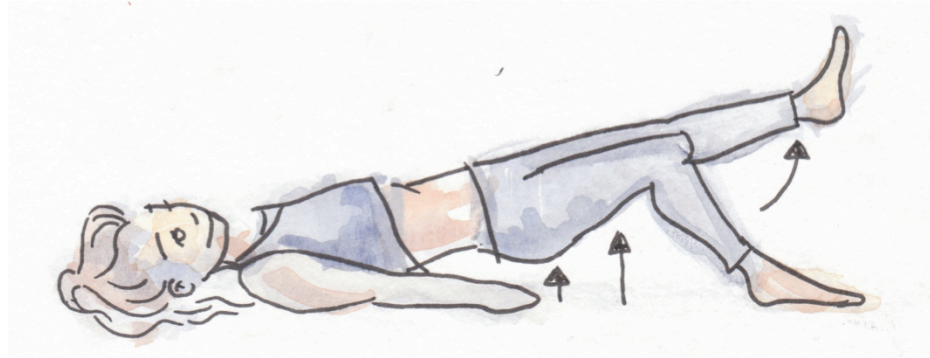


30x

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Perform a supine ADIM and raise butt above ground.
HOLD this for 8 seconds, then return to start.
Repeat.

4. **Supine ADIM + 1-Leg Bridge**

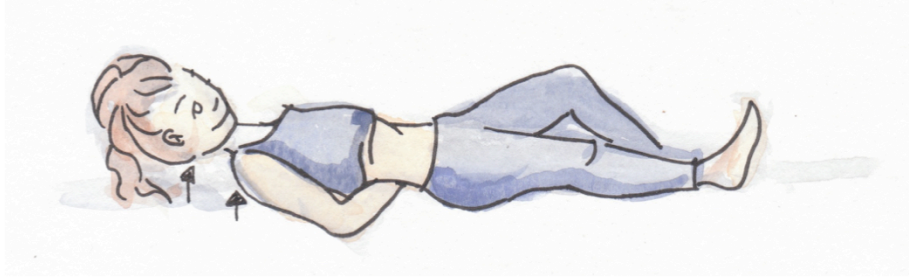


30x Each Leg

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Starting in a hook-lying position, feet flat on the support surface, perform the supine ADIM, straighten 1 knee, and raise the butt above ground. HOLD this for 8 seconds, then lower butt to ground, and return to start. Alternate legs and repeat.

5. **Supine ADIM + Curl-up + Elbows Down**



30x

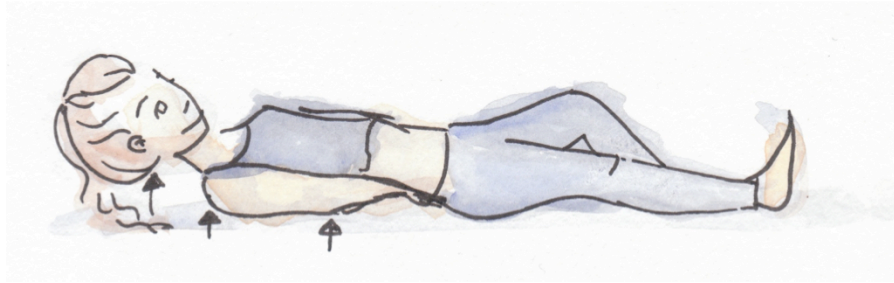
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Starting in a supine position with one leg straight, one leg bent, and elbows resting on surface; place both hands under the lumbar spine in a neutral pelvic and lumbar position. Perform a supine ADIM and raise head and shoulders off the table.

HOLD this for 8 seconds, then return to start.

Repeat.

6. **Supine ADIM + Curl-up + Elbows Up**



30x

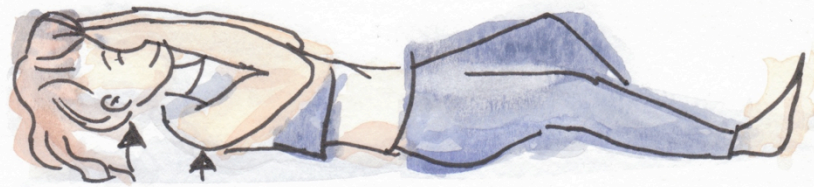
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Starting in a supine position with one leg straight, one leg bent, and elbows above surface; place both hands under the lumbar spine in a neutral pelvic and lumbar position. Perform a supine ADIM and raise head and shoulders off the table.

HOLD this for 8 seconds, then return to start.

Repeat.

**7. Supine ADIM + Curl-up +
Elbows Up + Hands on
Forehead**



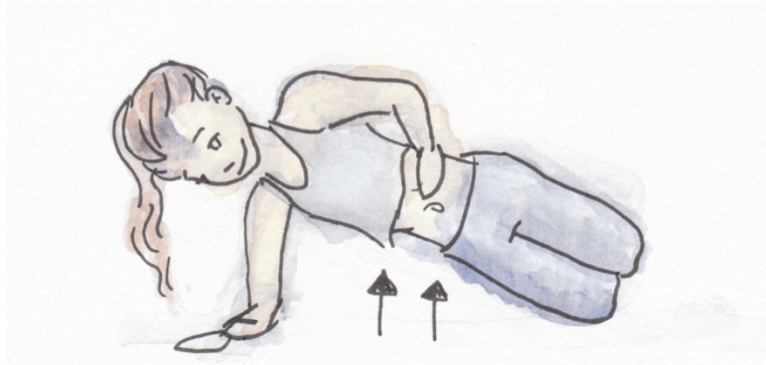
30x

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Starting in a supine position with one leg straight and one leg bent, place both hands on your forehead. Perform a supine ADIM and raise head and shoulders off the table.

HOLD this for 8 seconds, then return to start.
Repeat.

8. Horizontal Side Support + Knees Bent



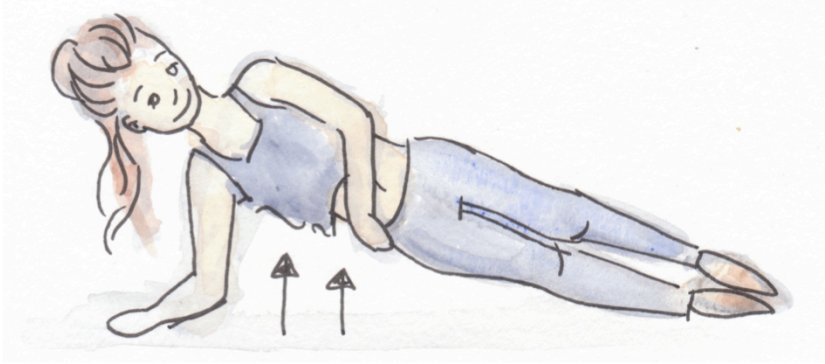
30x each side

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Starting on side (one forearm extended flat on surface, knees together and bent, resting knee on surface), perform an ADIM and raise your hips and trunk off the surface.

HOLD this for 8 seconds, then return to start.
Repeat.

9. Horizontal Side Support + Knees Straight



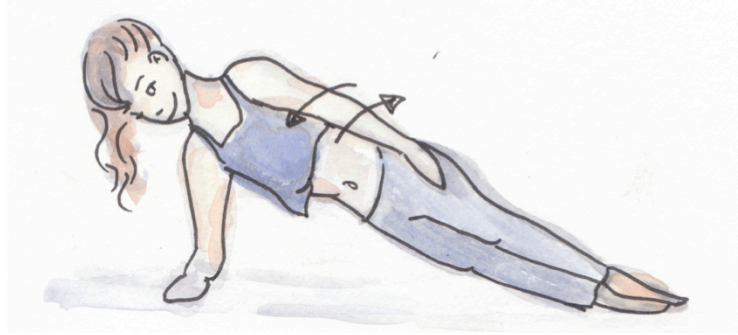
30x each side

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Starting on side (one forearm extended flat on surface, knees together and straight, resting calf on surface), perform an ADIM and raise your hips and trunk off the surface.

HOLD this for 8 seconds, then return to start.
Repeat.

10. Horizontal Side Support
+ Knees Straight
+ Trunk Rotation



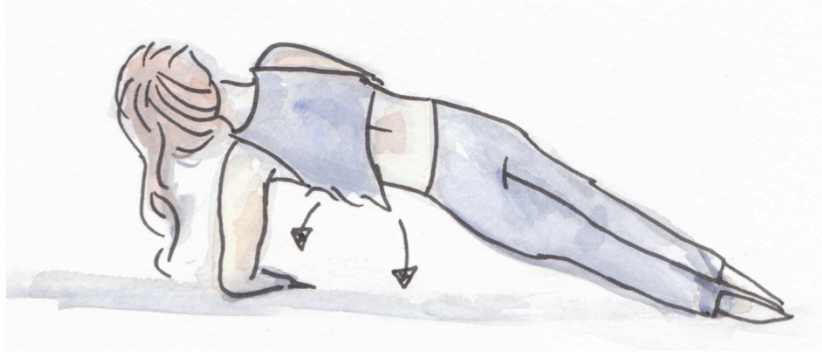
30x each side

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Starting on side (one forearm extended flat on surface, knees together and straight, resting calf on surface), perform an ADIM and raise your hips and trunk off the surface.

HOLD this, then ROTATE the trunk backward and forward 4 times in each direction, then return to start.
Repeat.

10. Horizontal Side Support
+ Knees Straight
+ Rotate Sides



30x

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Starting on side (one forearm extended flat on surface, knees together and straight, resting calf on surface), perform an ADIM and raise your hips and trunk off the surface.

HOLD this, then SWITCH SIDES by rolling over onto the opposite elbow while maintaining a neutral spine.

Roll back to start. Repeat.

12. **Quadruped ADIM + Leg Raise**



30x each leg

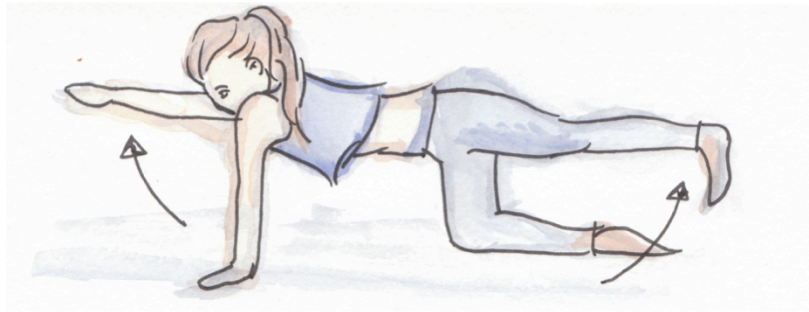
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Perform a quadruped ADIM, and straighten 1 leg backward while maintaining a neutral lumbar spine position.

HOLD this for 8 seconds, then return to start.

Alternate legs and repeat.

13. **Quadruped ADIM + Leg Raise** **AND Opposite-Arm Raise**



30x each leg/arm pair

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Perform a quadruped ADIM, then straighten 1 leg backward AND raise the opposite arm forward while maintaining a neutral lumbar spine position. HOLD this for 8 seconds, then return to start. Alternate legs/arms and repeat.

**14. Quadruped ADIM + Leg Raise
AND Opposite-Arm Raise,
No Rest**

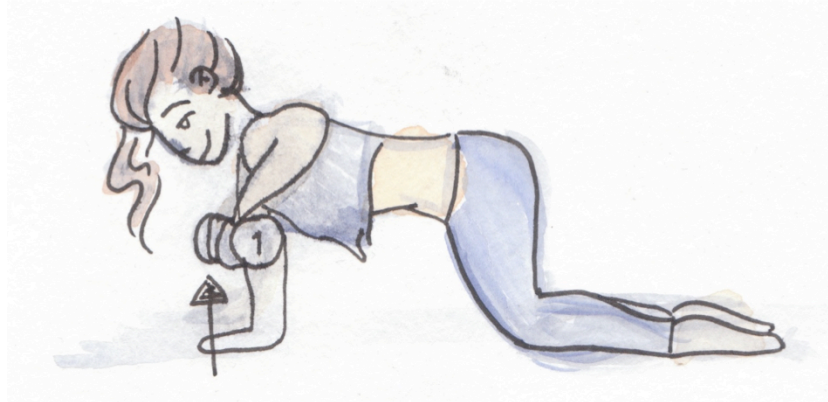


30x each leg/arm pair

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Perform a quadruped ADIM, then straighten 1 leg backward AND raise the opposite arm forward while maintaining a neutral lumbar spine position. HOLD this for 8 seconds, then lower WITHOUT returning to start (placing on supporting surface). Repeat. Alternate legs/arms and repeat.

15. **Quadruped ADIM + Rowing**



30x each arm

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Perform a **standing ADIM**, then pull a 1 to 1.5 kg weight in a rowing motion until the weight is at chest level. HOLD for 6 seconds, return weight to starting position.

Repeat.

Then, repeat while performing a **quadruped ADIM** (shown above).

How are you doing?

Ask yourself...

- Is my spine always in neutral position?
- Am I aware of my body in space?
- How is my body feeling?
- Am I fully completing every repetition and hold?
- Can I increase the intensity of what I am doing?
- Am I applying the ADIM to my sport? For example, do I keep my spine protected in ADIM during flips and landings?

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