

**Treatment Session Number: 1 (exercise group) and 3 (manipulation + exercise group)
 Hand to treating therapist to provide to patient. Discard for patients in the
 manipulation + exercise group for Session Number 1 and discard for patients in the
 exercise group for Session Number 3.**

Physical Therapy and Home Exercise Program for Patients in the Exercise Group (Treatment Sessions 1-8) and the Manipulation + Exercise Group (Treatment Sessions 3-8)

This exercise handout contains descriptions and pictures of each exercise that you are doing during physical therapy and at home. You should pay particular attention to using proper technique and avoid any exercise your physical therapist has indicated you should not perform. **You do not have to discontinue all other forms of exercise during your participation in this study (i.e. jogging program, walking program, etc.).**

However, do not begin any new forms of exercise during your participation in this study, and do not add any exercises to this program. Ensure you continue to breathe normally during the exercises and do not hold your breath. Counting aloud will help you to avoid holding your breath. You should not experience any significant increase in your pain while performing these exercises. Discontinue any exercise that causes you increased pain, and notify your physical therapist. **You should perform these exercises everyday at home except for the days you perform these exercises while you are at physical therapy.** Please record your home exercise sessions in the exercise log that is provided below (See codes below). Thank you for your participation in this research study, and please let your physical therapist know if you have any questions.

<i>D: Date</i>	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Week 1	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>
Week 2	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>
Week 3	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>
Week 4	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>
Week 5	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>	D: <input type="checkbox"/>

Comments:

Please use the following codes to record your exercise sessions:

T: Mark if you attended Physical Therapy on this day

Y: If you completed your exercise program

N: If you did not complete your exercise program

P: If you only completed some of the exercises (Please comment in the Notes section as to the reason why.)

Treatment Session Number: 1 (exercise group) and 3 (manipulation + exercise group)
Hand to treating therapist to provide to patient. Discard for patients in the manipulation + exercise group for Session Number 1 and discard for patients in the exercise group for Session Number 3.

1.) Hand-Heel Rocks

Performance:

Starting Position

Get on all fours on the floor. Rest some of the weight on your hands and arms; move your hands to just slightly higher than your shoulders.

Forward Rock

Transfer the weight more to your hands, not allowing your arms to bend. Allow your abdomen to sag towards the surface while your head tends to look up. Pause momentarily toward the end of your range and then start back towards neutral.

Backward Rock

Rock backwards as though you were attempting to sit on your heels. Allow your back to round out and do not be concerned if you have to drag your hands along the surface in order to get back to the fully backward position.

Goals:

Perform 10 repetitions as a warm-up exercise.



2a.) Abdominal bracing

Performance:

Lie on your back and bend your hips and knees so that your feet are flat on the surface. Attempt to “draw in” your stomach without holding your breath or pressing your back flat to the floor.

Goals:

Perform 10 contractions, holding each contraction for 20 seconds. When able to accomplish this, add the next two exercises below (2b. - abdominal bracing in standing and 2c. - abdominal bracing with bridging)



Treatment Session Number: 1 (exercise group) and 3 (manipulation + exercise group)
Hand to treating therapist to provide to patient. Discard for patients in the manipulation + exercise group for Session Number 1 and discard for patients in the exercise group for Session Number 3.

2b.) Abdominal bracing in standing

Performance:

Stand with your back against the wall and attempt to “draw in” your stomach without changing the curve in your lower back. While holding that position, then perform a wall slide, bending your hips and knees approximately 45° while maintaining bracing.

Goals:

Perform 20 wall slides.



2c.) Abdominal bracing with bridging

Performance:

Lie on your back and bend your hips and knees so that your feet are flat on the surface. Attempt to “draw in” your stomach without holding your breath. While holding this position, slowly lift your pelvis off the floor, being careful to keep the normal curve in your back (i.e. do not arch your back). After holding this position for 10 seconds, gently bring your buttocks down to the surface.

Goals:

Perform 10 repetitions, holding the position for approximately 10 seconds.



Treatment Session Number: 1 (exercise group) and 3 (manipulation + exercise group)
Hand to treating therapist to provide to patient. Discard for patients in the manipulation + exercise group for Session Number 1 and discard for patients in the exercise group for Session Number 3.

3a.) Quadruped single leg lifts

Performance

Get on all fours on the floor. Rest some of the weight on your hands and arms; move your hands to just slightly higher than your shoulders. Then attempt to “draw in” your stomach without holding your breath. While holding this position, extend one leg behind you, being careful to maintain your trunk in a static position and not allow it to twist or bend. Keep your hands in the same position throughout the exercise. Hold this position momentarily and then return to the starting position. Then repeat the exercise with the opposite leg.

Goals

Perform 20 lifts with each leg (for a total of 40 lifts) without pain. When able to accomplish this, then add the quadruped opposite arm and leg lifts



3b.) Quadruped opposite arm and leg lifts

Performance:

Get on all fours on the floor. Rest some of the weight on your hands and arms; move your hands to just slightly higher than your shoulders. Then attempt to “draw in” your stomach without holding your breath. While holding this position, slowly bring the arm up towards the ear as you extend the opposite leg (as was done in the previous exercise). It is important to stay in control here. You may not be able to bring the leg all the way back as depicted in the picture. The important thing is to maintain a stable trunk while being able to move both the arm and opposite leg. After momentarily holding this position, repeat this exercise with the opposite arm and leg.

Goals:

Perform 20 lifts with each arm and leg (for a total of 40 lifts) without pain.



Treatment Session Number: 1 (exercise group) and 3 (manipulation + exercise group)
Hand to treating therapist to provide to patient. Discard for patients in the manipulation + exercise group for Session Number 1 and discard for patients in the exercise group for Session Number 3.

4a.) Horizontal side-support

Performance:

Lie on either side, allowing your hips and knees to be comfortably bent and prop yourself up on your elbow by lying on your forearm. Lift your pelvis up from the surface so that the only contact remaining on the surface is your forearm and your knee. Do not go beyond the neutral position. After momentarily holding this position, gently relax down to the starting position.

Goals:

Perform 10 lifts on each side, holding each repetition for approximately 10 seconds without pain. When able to accomplish this, then progress to advanced horizontal side support.



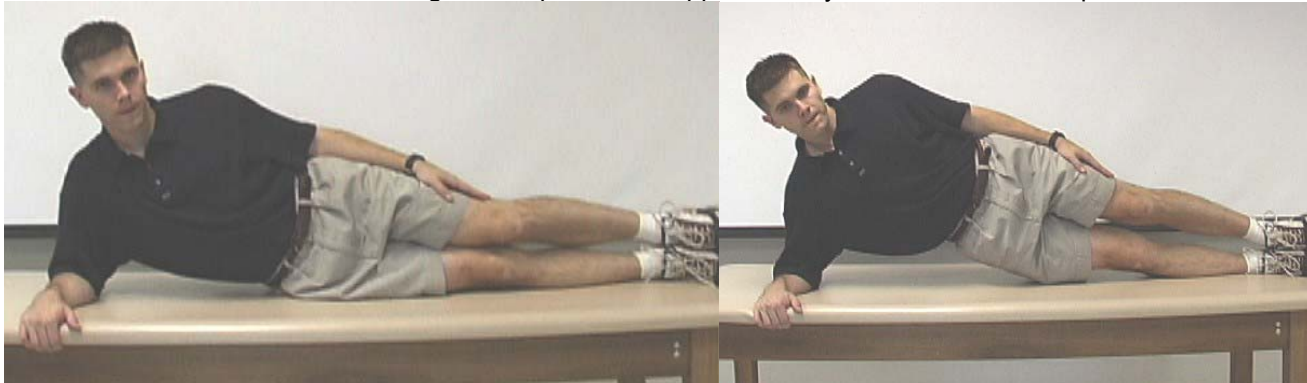
4b.) Advanced horizontal side-support

Performance:

This exercise is identical to the one above (lying on your side, propping yourself up on your elbows), except that you start with both of your legs straight instead of being bent, so that there is no contact with the knee. Rather your body will form a bow between your elbow at one end and the feet at the other.

Goals:

Perform 10 lifts on each side, holding each repetition for approximately 10 seconds without pain.



* The description for some of the exercises included in this manual was edited from the descriptions included in Dr. Richard E. Erhard's *The Spinal Exercise Handbook: A Home Exercise Manual for a Managed Care Environment*¹

1. Erhard RE. *The Spinal Exercise Handbook: A Home Exercise Manual for a Managed Care Environment*. Pittsburgh, PA: Laurel Concepts, 1998.