

Obstetrics & Gynecology

Exercise Program for Pregnancy



MEDICINE *of* THE HIGHEST ORDER



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Department of Physical Medicine and Rehabilitation
Physical & Occupational Therapies

Program Overview

These exercise programs are designed for the birthing person with a high risk pregnancy requiring activity restrictions to control medical conditions or to prevent complications including fetal loss and extreme premature delivery.

Indications for beginning this exercise program include but are not limited to the following:

- Prevent deconditioning
- Prevent muscle atrophy
- Relieve joint stiffness
- Decrease risk of blood clots
- Decrease risk of orthostatic hypotension
- Increase respiratory capacity
- Relieve constipation
- Decrease risk of pressure sores

If you have any of the following, be sure to talk to your doctor or nurse before exercising or stop exercising if any of these develop within a session:

- New or increased vaginal bleeding or contractions
- Abdominal/pelvic pain, cramping, or discomfort
- Increased leaking of amniotic fluid
- New complaint of back pain
- Pregnancy <28 weeks gestation
- Dizziness as a result of hypotension

During all exercises it is very important to pay attention to your breathing.

When performing strengthening exercises (even gentle body weight strengthening), do not hold your breath. This is a compensation (cheat!) that puts extra pressure on your back, pelvic floor, or abs and overtime or with increased loads, can result in pain or injury. As a general rule of thumb, it is best to *breathe out during the work phase* of an exercise. The work phase is the harder part of the movement. For example: during a bicep curl, breathe out as you lift the weight up and breathe in as you lower the weight. During a squat, breathe in as you lower down and breathe out as you stand up.

Breathing Exercises

Did you know that you can use different breathing techniques to help your body relax, decrease stress/anxiety, engage your core better during exercise, relieve pressure on the pelvic floor and back, and help to manage pain during contractions in labor? Your breathing muscle is called your diaphragm and it is located in a cross-section underneath your rib cage and between your chest and abdominal cavities (image 1).

1. 360 Diaphragmatic Breath

- This exercise teaches you to breathe with your diaphragm and not the muscles in your chest, neck and shoulders!
- Lay on your left side in a comfortable position, feel free to use a pillow between your knees for comfort. Rest your right arm along the side of your body and allow your right hand to rest on your belly.
- Take a comfortable inhale - As you breathe in, try to draw the air downward and feel your belly relax. Your right ribcage will expand outward and rise toward the ceiling and your back will expand into the space behind you. Visualize expansion outward from the center of your waist in all directions (360-degree expansion) as you inhale.
- Allow everything to relax back toward the center as you breathe out (exhale). Let go of any tension you may feel in your body. Pause and repeat at a comfortable pace for 1-2 minutes, breathing in/out through your nose if able.

2. Destressor Breath

- This type of breath is great to use if you are feeling stressed or anxious. It can also be a way to manage pain during early and active labor contractions.
- This breath can be performed in a variety of positions - laying reclined on your back, on your side, on hands and knees, forward-leaning, sitting, or standing. It is going to be exactly the same as the 360 diaphragmatic breath except that you will focus your attention on long, slow exhales.
- You can actually use long exhales to trick your brain into thinking you're relaxed when you feel stressed. Longer exhales tell your nervous system to switch from "fight or flight" (i.e. anxiety mode) to "rest and digest" (i.e. relax mode).
- Perform the same 360 diaphragmatic breath but now count how many seconds it takes to take a comfortable breath in. Aim to try to double that number as you breathe out. For example, if it takes you 3 seconds to breathe in, try to breathe out for 6 seconds. Don't worry if you're not exactly double - as long as you slow down the exhales to make them take longer than the inhales it will still work! Perform continuously for 2-5 minutes.

3. Connection Breath

- This type of breath will help turn on your deepest core muscles for good support when you are exercising.
- This breath can be performed in any position as well but it is easiest to get the hang of it first in a reclined position with knees bent, laying on your side, or on hands and knees.
- For the connection breath, perform your 360-degree inhale allowing ribs to move out to the sides and belly, back, and pelvic floor to relax.
- On your exhale, allow your lower ribs to move together toward each other/your center. This will help turn on your upper abdominal muscles. On the exhale you will also draw your belly button toward your back creating tension or a trampoline-like feeling in your lower abs. Try not to “suck in” but rather “flatten” and create some slight tightening.
- Repeat, relaxing on inhales and turning on the core on the exhales for 1-2 minutes as a warm up before other core or strengthening exercises.

Appendix:

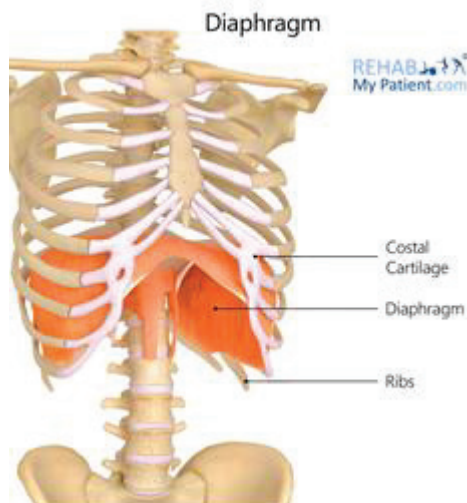


Image 1: <https://www.rehabmypatient.com/ribs/diaphragm>

Thank you Julie Berube, PT, DPT, OCS from LiveWell CNY Physical Therapy for providing this information on the importance of breathing and breathing exercises.

Posture During Pregnancy

Good posture (the position in which you hold your body while standing, sitting, or lying down) during pregnancy involves training your body to stand, walk, sit, and lie in positions where the least amount of strain is placed on your back.



What Is the Correct Way to Stand During Pregnancy?

- Hold your head up straight with your chin in. Do not tilt your head forward, backward, down or sideways.
- Make sure your ear lobes are in line with the middle of your shoulders.
- Keep your **shoulder** blades back and your chest forward.
- Keep your **knees** straight, but not locked.
- Stretch the top of your head toward the ceiling.
- Pull your **stomach** in and up (as much as possible!). Do not tilt your pelvis forward or backward. Keep your buttocks tucked in.
- Point your feet in the same direction, with your weight balanced evenly on both feet. The arches of your feet should be supported with low-heeled (but not flat) shoes to prevent stress on your back.
- Avoid standing in the same position for a long time.
- If you need to stand for long periods, adjust the height of the work table to a comfortable level if possible. Try to elevate one foot by resting it on a stool or box. After several minutes, switch your foot position.

What Is the Correct Way to Sit During Pregnancy?

- Sit up with your back straight and your shoulders back. Your buttocks should touch the back of your chair.
- Sit with back support (such as a small, rolled-up towel or a lumbar roll) at the curve of your back. **Sitting position when you're not using a back support or lumbar roll:**
 - Sit at the end of your chair and slouch completely.
 - Draw yourself up and accentuate the curve of your back as far as possible. Hold for a few seconds.

- Release the position slightly (about 10 degrees). This is a good sitting posture.
- Distribute your body weight evenly on both hips.
- Keep your hips and **knees** at a right angle (use a foot rest or stool if necessary). Your legs should not be crossed and your feet should be flat on the floor.
- Try to avoid sitting in the same position for more than 30 minutes.
- When standing up from the sitting position, move to the front of the seat of your chair. Stand up by straightening your legs. Avoid bending forward at your waist.

It is OK to assume other sitting positions for short periods of time, but most of your sitting time should be spent as described above so there is minimal stress on your back. **If you have back pain, sit as little as possible**, and only for short periods of time (10 to 15 minutes).



What Is the Best Position for Sleeping and Lying Down During Pregnancy?

Try not to lie flat on your back or directly on your stomach. Lying on your back, especially in the **third trimester**, causes more work and stress on your **heart**.

Try to sleep in a position that helps you maintain the curve in your back (such as on your side with your knees slightly bent and with a pillow between your knees).

When standing up from the lying position, turn on to your side, draw up both knees and swing your legs to the bed's side. Sit up by pushing yourself up with your hands. Avoid bending forward at your waist.



References:

- Cleveland Clinic. 2018. *Pregnancy: Correct Posture & Body Mechanics*. (<https://my.clevelandclinic.org/health/articles/6913-pregnancy-correct-posture--body-mechanics>). Accessed 6/3/2022.

Bed Level Exercises During Pregnancy

UPPER BODY

Shoulder circles forward backward

- Starting position: Lay comfortably on your back with the head of the bed slightly elevated.
- Movement: Complete a circle with your shoulders up, backward, down and forward then reverse to complete the circle in the other direction.



Rows

- Starting position: Lay comfortably on your back with the head of the bed slightly elevated.
- Movement: With arms straight out in front of you, pull your elbows backwards and squeeze your shoulder blades together.



Neck stretches

- Starting position: Lay comfortably on your back with the head of the bed slightly elevated.
- Movement: Tilt your head bringing your left ear down towards your left shoulder. Use your left hand on the right side of your head to gently pull your head down further to increase the stretch. Hold for 5-10 seconds then repeat on the other side.



Shoulder flexion

- Starting position: Lay comfortably on your back with the head of the bed slightly elevated.
- Movement: Keep your elbow straight and raise your arm straight forward and above your head then lower back down slowly.



Bicep curls

- Starting position: Lay comfortably on your back with the head of the bed slightly elevated.
- Movement: Slowly bend your elbows then straighten to the starting position.



Triceps extension

- Starting position: Lay comfortably on your back with the head of the bed slightly elevated.
- Movement: Raise your arm over your head then bend your elbow while dropping your hand behind your head. Slowly straighten your elbow back to the starting position.



LOWER BODY

Ankle pumps / circles

- Starting position: Lay comfortably on your back with the head of the bed slightly elevated.
- Movement: Point and flex your foot and also rotate your foot in a circle in both directions.



Heel slides

- Starting position: Lay comfortably on your back with the head of the bed slightly elevated.
- Movement: Start with both legs straight and bend one knee to slide your heel along the bed up towards your butt. Press your leg back to the starting position.



Knee extension

- Starting position: Lay comfortably on your back with the head of the bed slightly elevated. Place rolled pillow under one knee.
- Movement: Lift your foot off the bed while straightening your knee. Repeat with pillow on the other side.



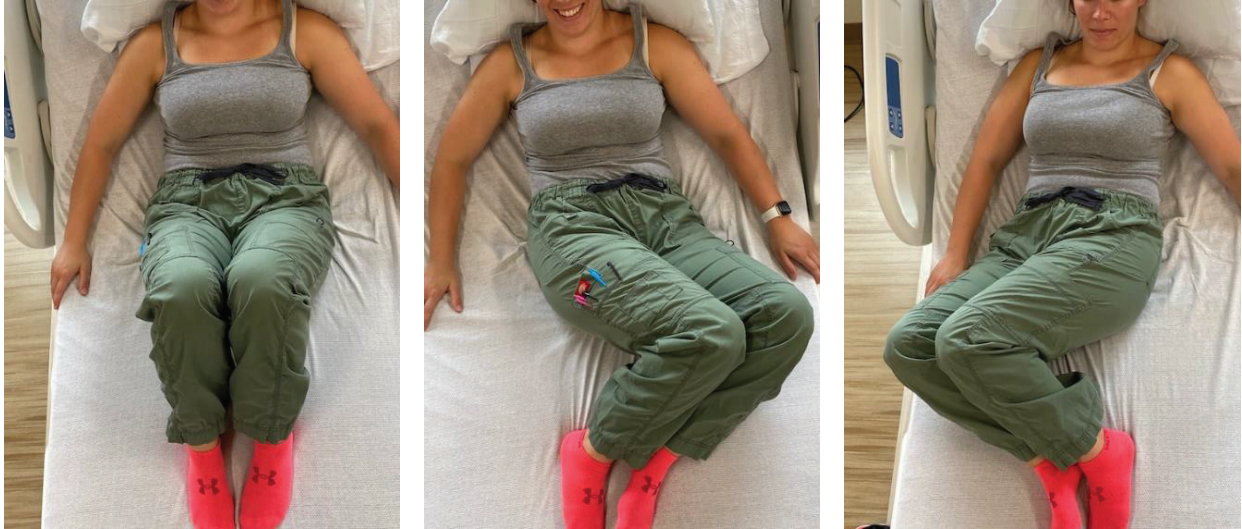
Single knee to chest

- Starting position: Lay comfortably on your back with the head of the bed slightly elevated and your knees bent with feet flat on the bed.
- Movement: Place both hands behind one knee and gently pull your knee towards your chest. If needed, place towel or sheet behind knee and use that to pull.



Hook-lying rotations

- Starting position: Lay comfortably on your back with the head of the bed slightly elevated and your knees bent with feet flat on the bed.
- Movement: Slowly drop both knees down to one side then bring them back to the middle and drop them down to the other side.



Clamshells

- Starting position: Lay on your side with your hips and knees bent.
- Movement: Lift your top knee towards the ceiling while keeping your feet together. Avoid rolling your hips backwards.



Open book stretch

- Starting position: Lay on your side with your hips and knees bent with a pillow between your knees for comfort.
- Movement: Lift your top arm to open your chest and reach back while turning your head and eyes to look behind you.



General Exercises During Pregnancy

Equipment: Wing span length of resistance band (~ 4 feet)

WARM UP

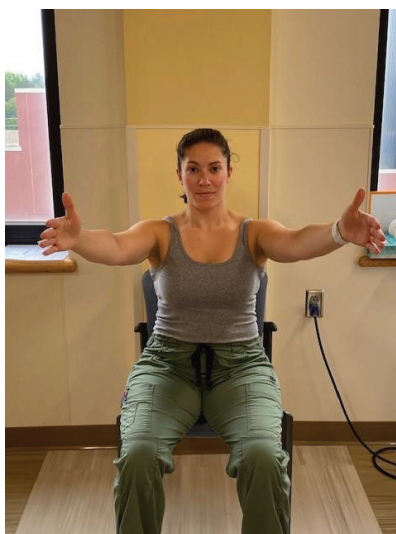
Neck stretches

- Starting position: Sit comfortably in a stable chair or at the edge of the bed with feet flat on the floor.
- Movement: Tilt your head bringing your left ear down towards your left shoulder. Use your left hand on the right side of your head to gently pull your head down further to increase the stretch. Hold for 5-10 seconds then repeat on the other side.



Shoulder circles

- Starting position: Sit comfortably in a stable chair or at the edge of the bed with feet flat on the floor.
- Movement: Complete a circle with your shoulders up, backward, down and forward then reverse to complete the circle in the other direction.



Seated trunk rotation

- Starting position: Sit comfortably in a stable chair or at the edge of the bed with feet flat on the floor.
- Movement: Reach across your body with your left arm and rotate your head, shoulders, and trunk towards the right. Hold for one full breath in that position then repeat on the other side.



Chest opener

- Starting position: Sit comfortably in a stable chair or at the edge of the bed with feet flat on the floor.
- Movement: Move your arms into a field goal position then squeeze your shoulder blades back and down to feel a stretch across your chest.



UPPER BODY

Bicep curls

- Starting position: Sit comfortably in a stable chair or at the edge of the bed with feet flat on the floor. Place resistance band under your feet.
- Movement: Bend one elbow against resistance and lower down slowly. Repeat on the other side.



Tricep extensions

- Starting position: Sit comfortably in a stable chair or at the edge of the bed with feet flat on the floor. Hold resistance band in both hands with elbows bent.
- Movement: Keep one arm stable in front of the body and with the other arm, straighten it down and back in a diagonal motion. Return to starting position. Repeat with your other arm.



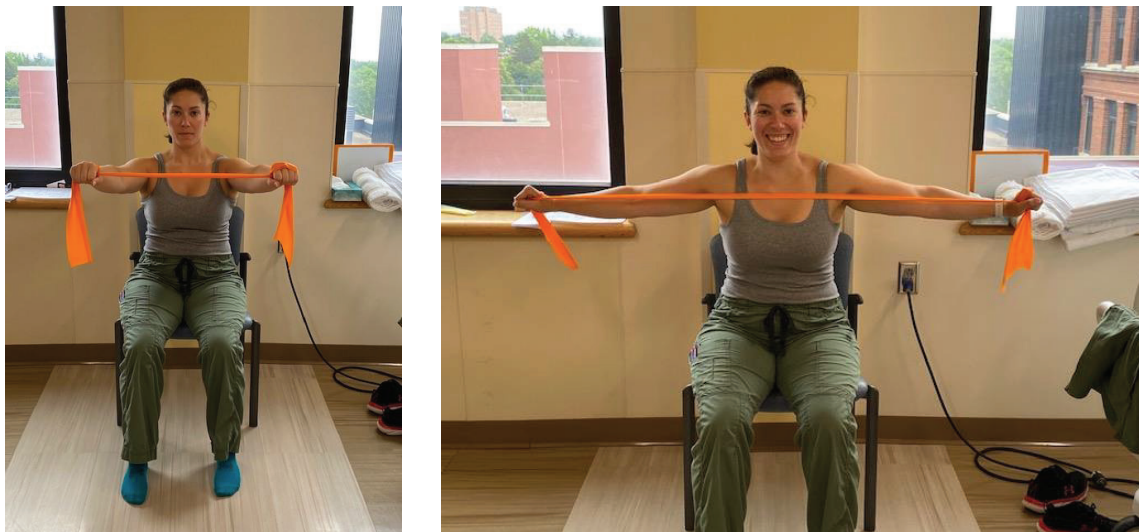
Shoulder flexion

- Starting position: Sit comfortably in a stable chair or at the edge of the bed with feet flat on the floor. Place resistance band under feet or thighs depending on the resistance you want.
- Movement: Raise one arm overhead while keeping your elbow straight then lower down slowly. Repeat with the other side. You may do both arms at the same time if you are comfortable. If you feel that your back is arching then only raise your arms to shoulder level.



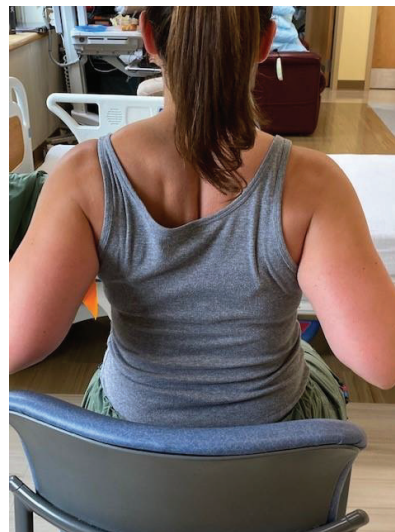
Horizontal abduction

- Starting position: Sit comfortably in a stable chair or at the edge of the bed with feet flat on the floor. Hold the resistance band in both hands out in front of you with arms straight.
- Movement: Move arms away from each other while keeping elbows straight and squeezing shoulder blades.



Rows

- **Starting position:** Sit comfortably in a stable chair placed in front of the bedrail, or standing in front of the bedrail. Have resistance band looped through the bedrail and hold in both hands.
- **Movement:** Start with your elbows bent at your side. Pull your elbows straight back (not up) while squeezing your shoulder blades together. Return to starting position.



LOWER BODY

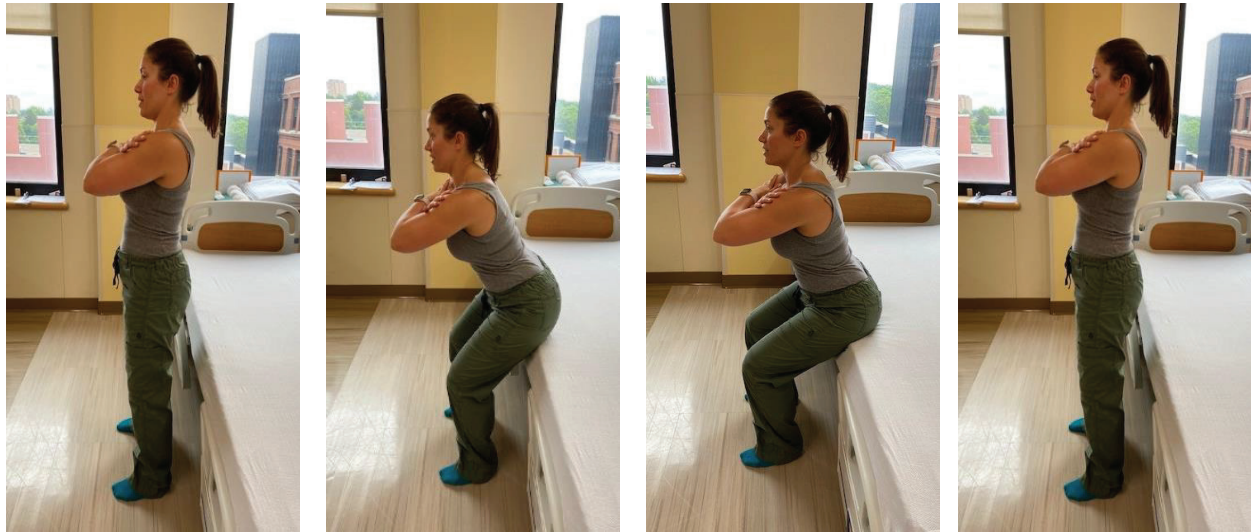
Standing Heel Raises

- **Starting position:** Stand facing the bed rail with feet together and hands lightly touching rail for support. You can also do this standing facing a wall with hands lightly on the wall for support.
- **Movement:** Raise up on your toes. Pause at the top then lower slowly. Keep your feet/ankles straight and avoid rolling ankles outward.



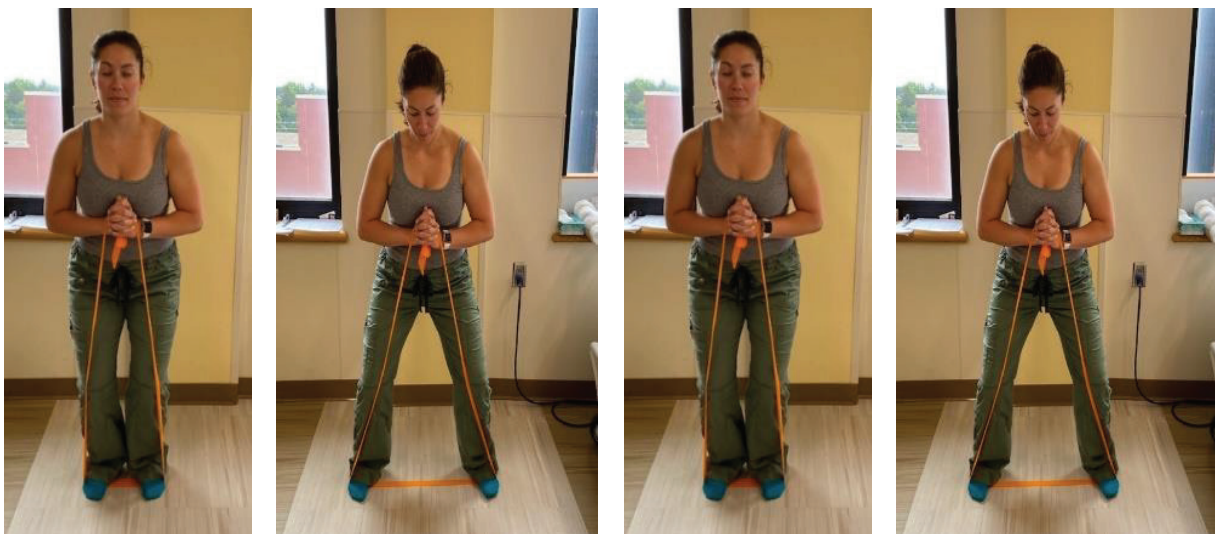
Squats (modification: sit to stand)

- Starting position: Stand in front of the bed with feet hip distance apart. Arms crossed or by your side. Height of bed can be raised or lowered for comfort.
- Movement: Slowly lower yourself while pushing your hips backwards and then stand back up.
- Modification: Stand up from a seated position and use your arms to stand back up as needed. Return to seated position.



Monster walk (modification: no resistance or seated abduction)

- Starting position: Stand with resistance band under feet close together and hold resistance band in both hands, allow slight bend in knees.
- Movement: Take full step to the right with each foot, keeping feet flat on band and floor then repeat to the left.



Standing hamstring curl

- **Starting position:** Stand facing the bed rail with feet together and hands lightly touching rail for support. You can also do this standing facing a wall with hands lightly on the wall for support.
- **Movement:** Bend one knee to bring your foot up behind you. Keep your back straight. Repeat on the other side.



Single leg balance

- **Starting position:** Stand sideways next to the bed rail with feet together and hand lightly touching rail for support. You can also do this standing next to a wall with hand lightly on the wall for support.
- **Movement:** Shift weight onto your right leg, lift left foot off the ground for a count of 10. Place foot back on ground and repeat on other side.
- **Modification:** Shift weight onto your right leg, keep left toes on the ground while bringing your left heel to your right ankle for a count of 10. Place foot back on ground and repeat on other side.



COOL DOWN

Hip flexor stretch with overhead reach

- Starting Position: Start standing next to bed, with left hand holding bed rail, take a step forward left foot, and keep right heel planted on floor.
- Movement: Lift right arm overhead. For extra stretch lean trunk to the left.



Hamstring stretch

- Starting Position: Stand facing the side of the bed, feet hip width apart with slight bend in knee.
- Movement: Lean forward at hips attempting to place forearms on bed for support, keep back as flat as possible. To deepen stretch, straighten knees. Hold position for 5 slow deep breaths. Use arms to push trunk back into standing position.



Quadruped rocking

- Starting Position: Hands and knees on the bed with hands and feet shoulder width apart with knees spread wider for comfort (may need to be wider as your belly grows larger).
- Movement: Slowly shift your weight slightly forward on to your hands then shift your weight backwards so your buttocks approach your heels.



Open book stretch

- Starting position: Lay on your side with your hips and knees bent with a pillow between your knees for comfort.
- Movement: Lift your top arm to open your chest and reach back while turning your head and eyes to look behind you.



Exercise Program – Weekly Tracker

Exercise Program: Bed Level General

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

Walking Program: Yes No Distance: _____

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday



Notes

Notes

Department of Physical Medicine and Rehabilitation

If you have any questions or concerns, please reach out to your nurse or doctor who can assist with getting you in touch with the therapy team.

**URMC Pelvic Floor
Physical Therapy Information:**



**Department of OB/GYN
Additional Patient Resources:**

