1) Vestibular Ocular Reflex (VOR) Exercises

Perform the exercise for 30 seconds, then rest for 30 seconds
Repeat 4 times
Do this exercise 3 times a day

There are two variations of the exercise:

**VORx1** – Hold a pen in front of you, or use an index card with a letter written on it, or even a small object on the wall in front of you.
Move your head from side to side while keeping your eyes fixed on the stationary object directly in front of you.
Start with slow head movements, and gradually work to faster head speeds as you progress. Do not move so fast that it causes neck strain. When this exercise becomes easy and is no longer producing symptoms, move on to **VORx2**.

![Diagram of VORx1](image1)

**VORx2** – Hold a pen directly in front of you. As you move your head from side to side, move the hand holding the pen in the opposite direction of the head motion. For example, if you move your head to the right, the hand holding the pen will move to the left. Keep your eyes on the pen at all times. Start with slow head movements and gradually increase the speed of the motion.

![Diagram of VORx2](image2)
2) Cawthorne-Cooksey Exercises

Make sure that you are in a safe environment before you start any of these exercises. *You may require the assistance of another individual when performing any of the standing or walking exercises. Please use caution if you have any neck or back injuries, do not strain your neck. It may take 4 weeks or more before you can complete all exercises without experiencing symptoms.

Perform each exercise for approximately 1 minute, 3 times a day. Work on one level each week before moving to the next progression.

Level 1 – In bed or sitting
   A. Eye Movements (move eyes slowly at first, then gradually increase speed)
      a. Up and down
      b. Side to side
      c. Focusing your eyes on your index finger when your arm is stretched out in front of you. Then try to maintain focus on your finger while you bring it towards your nose. Repeat.
   B. Head Movements (move head slowly at first, then gradually increase speed.
      a. Bending head forwards and backward.
      b. Turning from side to side.
      c. Tilt your head from one shoulder to the other, trying to touch your ear to your shoulder.

Level 2 – Sitting
   A. Eye and head movements, as in Level 1
   B. Shrug shoulders up, then relax.
   C. Bend over and try to touch the ground, then sit back up.
   D. Toss a small ball (tennis ball) from one hand to the other. Make sure the ball goes higher than your eyes so that you have to look up each time you toss the ball.

Level 3 – Standing
   A. Eye, head, and shoulder movements, as in Level 1 & 2
   B. Throw a ball from hand to hand as in Level 2.
   C. Pass a ball from one hand to the other under one of your knees.*
   D. Change from a sitting to a standing position with eyes open, then closed.*
   E. Change from a sitting to standing position, turning around in between.

Level 4 – Moving About
   A. Walk across the room performing eye and head movements, as in Level 1.
   B. Walk across the room, turn right and return to where you started. Then repeat with a turn to the left.
   C. Walk in more challenging environment and on varied surfaces (Shopping mall or grocery store, gravel or grass, sloped surfaces, steps, etc.).
   D. Throw and catch a ball.
3) **Substitution Exercises**

Perform these exercises for 30 seconds at a time, building up to 1 minute. Repeat twice, 3 times a day.

*You may require the assistance of another individual when performing any of the standing or walking exercises.

A. Start by standing stationary on a foam cushion or firm pillow. Progress to stepping on and off the pillow. The goal is to move from a solid to soft surface.

B. Purchase a ball (medium sized such as a soccer ball). While sitting on a chair, place the ball beneath your feed and roll ball around with eyes closed. Try doing this with both feet together, then each foot individually. When you feel confident, try this exercise while standing* with eyes opened. With progress, try standing with eyes closed.

C. Sit on a chair and rock your feet from heel to toe, making sure to concentrate on how the floor feels underneath each part of your foot. When you feel confident, try this exercise while standing* and rocking your feet back and forth.

D. Begin a daily walking program.

4) **Habituation Exercises**

Perform the designated position or movements twice, 3 times a day. These exercises may elicit mild to moderate symptoms. As you perform the exercises over time, the symptoms will become more manageable. Rest between movements for symptoms to subside before repeating.

<table>
<thead>
<tr>
<th>Position or Movement</th>
<th>Description</th>
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<tbody>
<tr>
<td>Sitting to Supine</td>
<td></td>
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<tr>
<td>Supine to Left Side</td>
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<tr>
<td>Supine to Right Side</td>
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<tr>
<td>Supine to Sitting</td>
<td></td>
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<tr>
<td>Left Dix-Hallpike</td>
<td></td>
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<tr>
<td>Right Dix-Hallpike</td>
<td></td>
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<tr>
<td>Sitting, head tipped to Left knee</td>
<td></td>
</tr>
<tr>
<td>Sitting, head tipped to Right knee</td>
<td></td>
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<tr>
<td>180° turn to Left</td>
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<tr>
<td>180° turn to Right</td>
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Follow Up Instructions

Vestibular compensation is a process that allows the brain to regain balance control and minimize dizziness when there is an impairment to the vestibular system. The brain copes with the disorienting signals from the inner ears by learning to rely more on alternative signals coming from the eyes, neck, legs and ankles to maintain balance. Please make sure that you are in a safe environment and that you have assistance when performing any of these exercises that require standing, walking, or balancing. Please use caution if you have neck or back injuries.

You may experience symptoms that are slightly worse for the first few days of this program. Continue the program, but proceed slowly or shorten the duration if you experience worsening symptoms.

If you are having significant problems, or if you need clarification on any of the exercises, please all and speak with the audiologist.

Unless otherwise directed, you should return in 2-3 weeks for a follow-up with Amanda Kester, Au.D./Elizabeth Benites, Au.D., and __________________________.