

## Vestibulo-Ocular Exercises

### BALANCE EXERCISES

Start with 3 sets of 15-30 sec daily, and gradually increase duration. *All exercises should be performed within symptom tolerance.*

1. **Stance:** Balancing on 2-1 foot, firm to soft surface, level ground to incline or uneven.
2. **Core stability exercises:** Plank, side plank, wall sit, lunges, quad rocks with rotation and airplanes
3. **Gait exercises:** Tandem walk, toe and heel walk, walk with finger to nose.

### VISUAL EXERCISES

Start with 3 sets of 15 reps of each exercise daily, and gradually increase duration, number of repetitions.

1. **Side to side (Saccades):** Eyes will jump back and forth between two targets (choose small targets like a cup) without moving the head. Gradually progress speed or location of targets.
2. **Near/Far (Accommodation):** Hold onto a paper with a photo/word and have a second page on a wall in the distance. Using only their eyes, patient will look down at the image until it is in focus, then look up until image on wall is in focus.
3. **Pencil Push-ups (NPC):** Patient holds pencil in front of their nose at a distance where they see only a single pencil. Patient slowly brings the pencil closer to their nose until the pencil appears double. Hold for a few seconds and slowly move away from their nose.
4. **Dolls eye (hVOR):** With eyes fixed on a pencil rotate head as close to 90 degrees as possible while maintaining focus on the fixed pencil.

### **Visual/Vestibular Integration**

Combine visual exercises with balance exercises above (ie; Near/Far exercise with one foot stance, or pencil push ups during lunges)

### **References:**

Fowler Kennedy-stay active rehab  
St Joseph Health Care Rehab

McCrorry P, Meeuwisse W, Johnston K, Dvorak J, Aubry M, Molloy M, Cantu R. Consensus Statement on Concussion in Sport: The 3rd International Conference on Concussion in Sport Held in Zurich, November 2008. Journal of Athletic Training. 2009; 44(4): 434-448