**Effectiveness of Vestibular Rehabilitation**

- **Strong recommendation** (Level I*) that vestibular rehabilitation should be offered to patients with symptoms due to:
  - Acute, Subacute, & Chronic Unilateral Hypofunction
  - Bilateral Hypofunction, including Pediatrics
- **Benefits:**
  - Reduces dizziness/vertigo, improves gaze stability and reduces imbalance and falls
  - Improves activities of daily living and quality of life
- **Risks:**
  - Potential increase in cost & time for patient to travel
  - May increase symptom intensity at treatment onset
- **Studies show there is a preponderance of benefit compared to harm**
- **Exclusions:**
  - Compensated vestibular loss; cognitive or mobility deficit that impedes effective application; or active Meniere’s disease

**Factors that Modify Vestibular Rehabilitation Outcomes**

- **Weak to strong recommendation** (Level I-III*):
  - Age, gender, and symptom onset time does not affect outcomes
  - Potential harm if rehabilitation delayed
  - May have negative impact on recovery
    - Co-morbidities (anxiety, migraine, & peripheral neuropathy)
    - Vestibular suppressants

**Supervised Vestibular Rehabilitation Effectiveness**

- **Moderate recommendation** (Level I-III*) that patients with peripheral vestibular hypofunction use customized, supervised exercises
- **Benefits:**
  - Promotes adherence with rehabilitation
  - Better outcomes compared to generic or solely-home programs
  - May be preferred for patients who are fearful of falling or have cognitive or mobility dysfunction
- **Risk:**
  - Potential increase in cost & time for patient to travel
- **Exclusions:**
  - Patients living long distances from therapy may not be able to participate in supervised setting

**Optimal Exercise Dose**

- **Expert opinion recommendation** (Level V*) for gaze stabilization exercise for unilateral & bilateral hypofunction consists of:
  - Acute/Subacute - Three times/day minimum (At least 12 minutes/day)
  - Chronic - Three times/day minimum (At least 20 minutes/day)
- **Exclusions:** Risk of bleeding or cerebrospinal fluid leak

**Saccadic or Smooth Pursuit Exercises Effectiveness**

- **Strong recommendation** (Level I*) that voluntary saccadic or smooth pursuit eye exercises should not be offered in isolation as gaze stabilization exercises
- **Benefits:**
  - Gaze stabilization exercises, using adaptation & substitution, are more effective
- **Risk:**
  - Causes delay in receiving an effective exercise program
  - Increases cost & time for patient to travel

**Effectiveness of Different Exercise Types for Unilateral Peripheral Vestibular Hypofunction**

- **Moderate recommendation** (Level II*) for use of targeted exercise techniques for acute and chronic hypofunction
- **Benefit-harm assessment:**
  - Unknown consequences when patients perform an exercise that does not address their primary problem
  - Important to use the most appropriate exercise approach for identified impairments and activity limitations
- **Exclusions:**
  - Cognitive or mobility deficit than impedes effective application or active Meniere’s disease

**Vestibular Rehabilitation Harm/Benefit Ratio**

- **Strong recommendation** (Level I-III*) that quality of life improves and psychological distress reduces with rehabilitation
- **Benefits:**
  - Improvements in perceived disability and anxiety scores
- **Potential negative impact on quality of life**
  - Side effect of neck pain, motion sickness, or nausea
  - No resolution of symptoms

**Stopping Vestibular Rehabilitation**

- **Expert opinion recommendation** (Level V*) for the decision to stop rehabilitation based on:
  - Goals met; symptoms resolve; reach plateau; patient choice; non-adherence; status deteriorates; prolonged symptom increase; and/or if co-morbidities affect ability to participate
- **General recommendation for overall number of treatment sessions:**
  - Acute/Subacute Unilateral – once per week for 2-3 sessions
  - Chronic Unilateral – once per week for 4-6 weeks
  - Bilateral – once per week for 8-12 weeks
- **Patient populations that may require additional sessions:**
  - Cognitive or mobility deficit
  - Moderate-severe symptoms sensitivity
  - Taking vestibular suppressants
- **Risk:**
  - Prematurely stopping before reach maximum gains
  - Protracted treatment costly

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**For more detailed information, please refer to the original document:**

http://journals.lww.com/jnpt/Fulltext/2016/04000/Vestibular_Rehabilitation_for_Peripheral.8.asp

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**Level of Evidence**

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<thead>
<tr>
<th>Level</th>
<th>Description</th>
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<tr>
<td>I</td>
<td>High quality (&gt;50% critical appraisal score) diagnostic studies, prospective, or randomized controlled trials</td>
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<tr>
<td>II</td>
<td>Lesser quality (&lt;50% critical appraisal score) diagnostic studies, prospective, or randomized controlled trials</td>
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<td>III</td>
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<td>V</td>
<td>Expert opinion</td>
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Based on Centre for Evidence Based Medicine website (http://www.cebm.net/oxford-centre-evidence-based-medicine-levels-evidence-march-2009/)

**Hall CD, et al. Vestibular Rehabilitation for Peripheral Vestibular Hypofunction: An Evidence-Based Clinical Practice Guidelines. JNPT. 2016; 40:04-156.**