**EXAMINATION**

<table>
<thead>
<tr>
<th>Grades of Recommendation</th>
<th>Must: benefits substantially outweigh harms; Should: benefits moderately outweigh harms; May: benefits minimally outweigh harms or benefit-harm ratio is value dependent; Should not: harms minimally or moderately outweigh benefits or evidence of no effect; Must not: harms largely outweigh benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (strong evidence)</td>
<td>Must: benefits substantially outweigh harms; Should: benefits moderately outweigh harms; May: benefits minimally outweigh harms or benefit-harm ratio is value dependent; Should not: harms minimally or moderately outweigh benefits or evidence of no effect; Must not: harms largely outweigh benefits</td>
</tr>
<tr>
<td>B (moderate evidence)</td>
<td>Should: benefits substantially outweigh harms; May: benefits moderately outweigh harms or benefit-harm ratio is value dependent; Should not: evidence that harms outweigh benefits or evidence of no effect</td>
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<tr>
<td>C (weak evidence)</td>
<td>Should: benefits substantially outweigh harms; May: benefits moderately or minimally outweigh harms or benefit-harm ratio is value dependent; Should not: harms minimally or moderately outweigh benefits</td>
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<tr>
<td>D (conflicting evidence)</td>
<td>May: conflicting evidence; the benefit-harm ratio is value dependent</td>
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<tr>
<td>E (Theoretical/Foundational)</td>
<td>May: in the absence of evidence from clinical studies, theoretical and/or foundational evidence supports benefit; Should not: in the absence of evidence from clinical studies, theoretical and/or foundational evidence suggests risk of harms</td>
</tr>
<tr>
<td>F (Expert Opinion)</td>
<td>Must: strongly supported by consensus-based best practice/standard of care; Should: moderately supported by best practice/standard of care; May: supported by expert opinion in the absence of consensus; Should not: best practice/standard of care indicates potential harms; Must not: potential harms are strongly supported by consensus-based best practice/standard of care</td>
</tr>
</tbody>
</table>

**SYSTEMS TO BE EXAMINED**

Physical therapists **must** determine and document a need for physical therapy to facilitate recovery from a concussive event, based on findings from a comprehensive multisystem physical therapy examination and evaluation.

- **Level of Evidence:** B
- **Patient presentation:** Identified as safe and appropriate for a comprehensive examination.

| SEQUENCING OF EXAMINATION BASED ON LEVELS OF IRRITABILITY – cont. |

Physical therapists **should proceed** with multisystem comprehensive examination of any untested domains of cerebral musculoskeletal function, vestibulo-oculomotor function, autonomic dysfunction/exertional tolerance, and motor function by sequencing tests and measures based on clinical judgement as indicated.

- **Level of Evidence:** F
- **Patient presentation:** Post triaging and screening for neck pain, dizziness, and headache

**IMPAIEMENTS: CERVICAL MUSCULOSKELETAL**

Physical therapists **should examine** the cervical and thoracic spines for potential sources of musculoskeletal dysfunction for patients who have experienced a concussive event.

- **Level of Evidence:** C
- **Patient presentation (reports any of the following symptoms):** neck pain, headache, dizziness, fatigue, balance problems, or difficulty with visually focusing on a target.

Physical Therapists **may examine** the cervical spine, thoracic spine, and temporomandibular joint for potential sources of musculoskeletal dysfunction.

- **Level of Evidence:** F
- **Patient presentation:** Do not report the symptoms listed to determine whether subtle impairments are present and may be contributing to symptoms.

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**Level of Evidence Legend**

- Green – circle
- Yellow – Diamond
- Orange - Triangle

ANPT Knowledge Translation Task Force: Bara Alsalaheen, PT, PhD and Naseem Chatiwala, PT, DPT, MS (Co-chairs) Annie Fangman, PT; Michelle Gutierrez, PT, DSc; John Heick, PT, DPT, PhD; Ethan Hood, PT, DPT, MBA; Victoria Kochick, PT, DPT; Lindsay Walston, PT, DPT
IMPAIRMENTS: VESTIBULO-OCULOMOTOR

Physical therapists should assess the patient using Dix-hallpike test or other appropriate positional test(s).

- Level of Evidence: A
- Patient presentation: BPPV is suspected.

Physical therapists should examine vestibular and oculomotor function.

- Level of Evidence: B
- Patient presentation (reports any of the following symptoms): headache, dizziness, vertigo, nausea, fatigue, balance problems, visual motion sensitivity, blurred vision, or difficulty with focusing on stable or moving targets.

Physical therapists may examine for vestibulo-oculomotor function to identify potential subtle impairments that may be contributing to symptoms.

△ Level of Evidence: F
△ Patient presentation: Experienced a concussive event and has not reported vestibulo-oculomotor symptoms.

IMPAIRMENTS: AUTONOMIC/EXERTIONAL TOLERANCE

Physical therapists should test for orthostatic hypotension and autonomic dysfunction (eg, resting and postural tachycardia or fast rise in heart rate with positional changes) by evaluating heart rate and blood pressure in supine, sitting, and standing positions.

- Level of Evidence: B
- Patient presentation: Experienced a concussive event.

Physical therapists should use a stationary bicycle for testing to reduce the risk of exacerbating impairments or compromising the validity of the test results.

◊ Level of Evidence: C
◊ Patient presentation: Vestibulo-oculomotor or cervical spine impairments or symptoms are present.

Physical Therapists should conduct a symptom guided, graded exertional tolerance test for patients who have experienced a concussive event.

- Level of Evidence: B
- Patient presentation (reports any of the following symptoms): exertional intolerance, dizziness, headache, and/or desire to return to high-level exertional activities (ie, sports, active military duty, jobs that entail manual labor)

Physical therapists may use assessments for orthostatic hypotension/autonomic dysfunction and symptom-guided, graded exertional tolerance tests to help determine the role autonomic dysfunction, deconditioning, or general fitness may play in symptoms.

◊ Level of Evidence: C
△ Patient presentation: Do not report exertional intolerance, but report symptoms (eg, headache, fatigue, fogginess)

Level of Evidence Legend
- Green – circle
- Yellow – Diamond
- Orange - Triangle

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