Physical examination of Upper Cervical Instability (UCI) in patients with symptomatic generalised hypermobility according to irritability grading

TABLE 7 Physical test and findings, safe for all patients.

	Contributing*	Common*	Diagnostic*
Observation based tests			
Posture, full body, sitting and/or standing, and segmental alignment	X	X	
Breathing pattern (chest vs. diaphragmatic, excessive accessory muscle use)	X	X	
Significant muscle guarding or reluctance to move neck		X	
Observe gait for ataxia, gross, and fine motor dyscoordination not due to other joint hypermobility			X
Observe for cranial nerve VII dysfunction: Lip drooping, unequal smile, eyelid twitching			X
Observe for dystonia, myoclonic jerking			X
Neurological tests			
Cranial nerve III, IV, VI tests: Oculomotor nerve/eye movement			X
Reflex tests not involving neck: e.g., Hoffmann, Babinski, clonus			X
Cranial nerve X, XII tests: Uvula, tongue (avoid gag)			X
Dysdiadochokinesia: e.g., rapidly alternating pronation/supination, fast finger or foot tapping			X
Testing of hand dexterity (need to distinguish from finger hypermobility). E.g., grip release test			X
Other tests			
Palpation for muscle spasm, especially suboccipitals, sternocleidomastoid, levator scapulae, upper trapezius		X	
Use of a rigid cervical brace for several weeks decreases signs and symptoms			X

TABLE 8 Physical tests and findings for moderate and low irritability patients only.

	Contributing*	Common*	Diagnostic*
Other motion and control			
Thoracic range of motion, range, and quality	X	X	
Scapular muscle strength and motor control	X	X	
Excessive use of temporomandibular muscles to provide cervical stabilization (secondary finding)		X	
Neck motion and control			
Cervical range of motion: Overall, looking for apprehension, range, and quality		X	X
Deep neck flexor recruitment efficiency	X	X	
Cervical stabilizer motor control inhibition and inefficient recruitment (e.g., craniocervical flexion test, suboccipital extensor test)	X	X	
Sensorimotor tests: Eye-head coordination, trunk-head coordination, smooth pursuit visual tracking	X	X	
Cervical proprioception: Joint position error	X	X	
Other tests			
Neurodynamic tests may be cautiously performed, eliminating or caution with neck motion	X	X	
Orthostatic intolerance: NASA lean test or stand test		X	X
Structural tests			
Cervical axial load in supine			X
Alignment of C1 (manual assessment)			X

TABLE 9 Physical tests and findings only for low irritability patients.

	Contributing*	Common*	Diagnostic*
Ligamentous testing			
Abnormal passive accessory intervertebral movements (PAIVMs) or passive physiological intervertebral movements (PPIVMs) at OA and AA (if trained)	X	X	
Alar ligament test			X
Modified sharp-purser cervical instability relocation test (NOT the provocation test)			X
Cervical distraction in supine		X	X
Mobility tests			
Isolated AA ROM		X	X
Neurodynamic tests with neck motion		X	X
Provocation tests			
Craniocervical flexion test provocation of UCI symptoms.		X	
Vertebrobasilar insufficiency positional test			X

*Contributing factors = not diagnostic but providing information about potential causes.
*Common = findings that are likely to be fairly common, but not necessarily diagnostic.
*Diagnostic = findings that are likely to be less common, but more diagnostic.

Russek LN, Block NP, Byrne E, Chalela S, Chan C, Comerford M, Frost N, Hennessey S, McCarthy A, Nicholson LL, Parry J**. Presentation and physical therapy management of upper cervical instability in patients with symptomatic generalized joint hypermobility: International expert consensus recommendations**. Frontiers in Medicine. 2023 Jan 18;9:4020.