Postural Deficiency Syndrome / Proprioception Dysfunction Syndrome (PDS): Summary of Diagnostic Protocol and Active Prisms Protocol

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Diagnostic Protocol	**PDS type: Pure right or Pure left**	**PDS type: Mixed right or Mixed left**	**PDS type: Mixed Pure right or Mixed Pure left**
1.Directional Scotometry: peripheral pseudoscotomas* observed in Dextroversion (Dextro, D); and in Levoversion (Levo, L)	**To diagnose and to confirm diagnostic**		**To confirm diagnostic**
	Difference in angles in Dextro (D) and in Levo (L) always > 10° Standard: 40°D & 20°L or 20°D & 40°L	Difference in angles in Dextro (D) and in Levo (L) always = 10° Standard: 30°D & 20°L or 20°D & 30°L	Same angles in Dextro (D) and in Levo (L) Standard: 20° D & L or 30° D & L
2. Asymmetry of upwards head tilt/rotation ⮥😐⮭ Shorter side (upwards head tilt) ⮨😐➥Harder side (head rotation)	Non-concordant: shorter & harder, **opposite** sides ⮥😐 & 😐➥ or 😐⮭ & ⮨😐		Concordant: shorter & harder, **same** side ⮥😐 & ⮨😐 or 😐⮭& 😐➥
3. Supporting foot (SF) & heel support (secondary diagnostic tool **)	SF points forwards, with strong support on heel; Non-SF in external rotation	Both feet in external rotation, rotation more pronounced in SF; difference in heel support is less pronounced	Both feet in similar external rotation, and similar heel support which alternates between right and left
Active Prisms Protocol	**PDS type: Pure right or Pure left**	**PDS type: Mixed right or Mixed left**	**PDS type: Mixed Pure right or Mixed Pure left**
Target Extra Ocular Muscles/ Prism	External recti / Temporal	Inferior oblique / Upper temporal (125°RE and 55°LE)	
Prismatic power/side	1Δ - 4Δ / Unilateral (right eye or left eye)		1Δ - 4Δ / Bilateral (both eyes)
Power difference right-left / left-right	Any		Standard: 1Δ; Occasionally: 0.5Δ or 2Δ
Standard prescriptions	3Δ 0Δ or 0Δ 3Δ	2Δ 0Δ or 0Δ 2Δ	3Δ 2Δ or 2Δ 3Δ
Other prescriptions ***	2Δ 0Δ or 0Δ 2Δ Less usual: 4Δ 0Δ or 0Δ 4Δ Very rarely: 1Δ 0Δ or 0Δ 1Δ	3Δ 0Δ or 0Δ 3Δ; 3,5Δ 0Δ or 0Δ 3,5Δ 2,5Δ 0Δ or 0Δ 2,5Δ; 1,5Δ 0Δ or 0Δ 1,5Δ Very rarely: 4Δ 0Δ or 0Δ 4Δ	2,5Δ 2Δ or 2Δ 2,5Δ Less usual: 4Δ 2Δ or 2Δ 4Δ Never: 4Δ 3Δ or 3Δ 4Δ
Clinical incidence	< 10%		> 90%

* Directional Scotometry, first developed by Orlando Alves da Silva in 1977, is a modified protocol using the Clement Clarke synoptophore with slides G3/G4 (larger lion and cage). Patients with SDP display an incorrect perception of the precise orientation of their eyes in lateral gaze in relation to the target image. Typically, the patients describe a complete image when the synoptophore oculars are in primary position, but when asked to describe what they see when the oculars are in dextroversion and/or levoversion, patients describe the images as being incomplete in the periphery. The image is perceived as being incomplete in the periphery because there is an error in the patients' perception of spatial localisation, and the patients' eyes overshoot. The part of the image that is not seen is referred to as a pseudoscotoma. Such peripheral pseudoscotomas are evidenced using Directional Scotometry. Please note: peripheral pseudoscotomas are not to be confused with scotomas which have no bearing on the SDP diagnosis, but that can also be present in SDP. Such scotomas are detected and confirmed by computerised visual field studies. Typically, when being tested with Directional Scotometry, patients will refer to central and/or paracentral intermittent faded areas (e.g. the belly of the lion disappears and may reappear) both in primary position and lateral positions of the gaze.

** If the angle at which the pseudoscotoma appears is lower in dextroversion than in levoversion, this indicates that the dominant limb support is the left. If the angle at which the pseudoscotoma appears is lower in levoversion than in dextroversion, this indicates that the dominant limb support is the right. There is a correspondence between the range of angles at which peripheral pseudoscotomas are observed in dextroversion and levoversion, and the dominant supporting limb; a peripheral pseudoscotoma at a lower angle in dextroversion than in levoversion corresponds to a left-hand side supporting foot; a peripheral pseudoscotoma at a lower angle in levoversion than in dextroversion corresponds to a right-hand side supporting foot.

*** When the effect of a prism is insufficient to trigger the expected response, the power is increased, **but never above 4Δ**. If the effect of a prism is too strong, the patient may experience diplopia, and the prismatic power needs to be reduced.