

Laura S. 36 years old

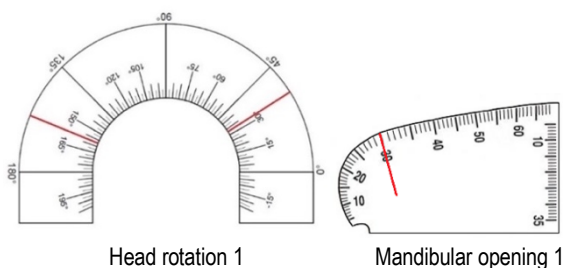
Body instability and imbalance with insecure movement

Initial symptoms: The subject suffered a head injury at the age of 16. He reports that every time he has to look at an object of interest he has to concentrate and make an effort to "push" the two eyes to work together. This is why he has never liked to read and often has episodes of diplopia. The left eye tends to deviate outward and its gait is particularly unstable. Standing in a static position, it has such precarious stability that it feels like a "rough sea". He reports lower back pain.

Questionnaire	Initial evaluation		
	Never	Sometimes	Often
Fatigue during reading			
Visual quality			
Binocular coordination			
Visual attention			
Spatial relation			
Uncertain walking			
Connection of peripheral information			
Dynamic visual stimuli			
Headache			
Tension phenomena			
TMJ response			

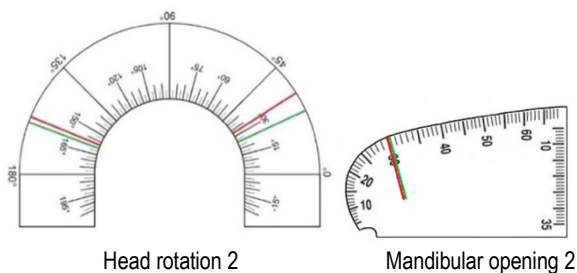
The results obtained in the visual tests are:

- Integration Capacity = full integration
- Coordination Capacity = no integration
- Selection Capacity = tension eyes and neck, deviation left eye
- Attention and Recognition = no integration, disequilibrium, diplopia
- Sagittal perception = Coherent
- Retinoscopy Reflex = no integration with astigmatism on LE
VA (Visual Acuity) = RE 10/10, LE 10/10, OU 10/10.
Refraction: RE sf. 0,00 cyl. -0,50 ax. 180. LE sf. 0,00 cyl. -0,50 ax. 180°
- Slight pain while she is walking, her right foot is in supination.
- The mandibular joint is contracted on the left side with right lateral deviation.



Immediate response of the system with SIXDEVICE: Immediate system response with SIXDEVICE:

The walk is more stable. The ability to test integration and visual coordination and visual acuity has improved. The ROM (head rotation) is wider, less lumbar pain and less lateral deviation of the jaw.



1st check	
Head rotation	$(157,5^\circ \pm 2,5^\circ) - (32,5^\circ \pm 2,5^\circ) = 125,0^\circ \pm 5,0^\circ$
Mandibular opening	30 mm \pm 1mm
2nd check	
Head rotation	$(160,0^\circ \pm 2,5^\circ) - (25,0^\circ \pm 2,5^\circ) = 135,0^\circ \pm 5,0^\circ$
Mandibular opening	30 mm \pm 1mm

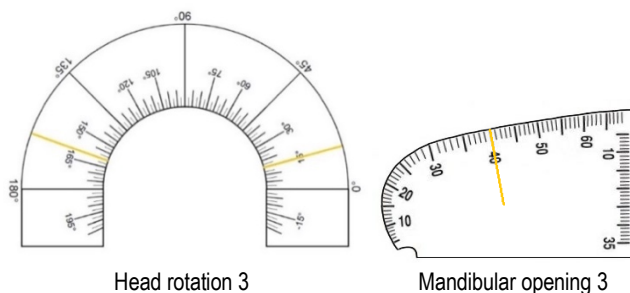
1st MONTH

The changes occurred after one month of using SIXDEVICE: greater motor coordination and general balance. Binocular coordination improved and diplopia phenomena reduced. He no longer has a tendency to rub his eyes.

Repeating the tests of the initial evaluation, the following improvements were found:

- Integration Capacity = full integration
- Coordination Capacity = full integration
- Selection Capacity = full integration, slight tension at the base of the neck that disappears using the device
- Attention and Recognition = fatigue to integration, no disequilibrium and diplopia

Questionnaire	Initial evaluation			1 ^o check		
	N	S	O	N	S	O
Fatigue during reading						
Visual quality						
Binocular coordination						
Visual attention						
Spatial relation						
Uncertain walking						
Connection of peripheral information						
Dynamic visual stimuli						
Headache						
Tension phenomena						
TMJ response						



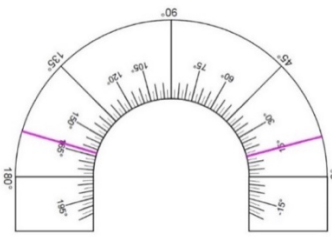
3rd check	
Head rotation	$(160,0^\circ \pm 2,5^\circ) - (15,0^\circ \pm 2,5^\circ) = 145,0^\circ \pm 5,0^\circ$
Mandibular opening	40 mm \pm 1mm

3rd MONTH

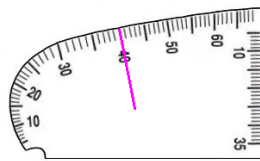
The changes obtained after three months of using SiXDEVICE: The improvements obtained the previous time are reconfirmed.

Further improvements to visual tests compared to the last evaluation:

- Coordination Capacity = full integration
- Selection Capacity = full integration, slight tension at the base of the neck that disappears using the device
- Attention and Recognition = full integration of information and body, no deviation left eye
- Sagittal perception = Coherent
- Retinoscopy Reflex = no integration with astigmatism on LE
- VA (Visual Acuity) = OU 13/10
- New refraction: RE sf. 0,00 **cyl. -0.25** ax. 180; LE sf. 0,00 **cyl. -0.25** ax. 180°



Head rotation 4



Mandibular opening 4

4 th check	
Head rotation	$(162,5^\circ \pm 2,5^\circ) - (15,0^\circ \pm 2,5^\circ) = 147,5^\circ \pm 5,0^\circ$
Mandibular opening	40mm \pm 1mm

6th MONTH

Stability obtained after six months of using SiXDEVICE: The improvements obtained the previous time are reconfirmed, the visual acuity and the symptomatic picture have improved. He feels less need to use his glasses.

Questionnaire	Initial evaluation			1° check			3° check		
	N	S	O	N	S	O	N	S	O
Fatigue during reading									
Visual quality									
Binocular coordination									
Visual attention									
Spatial relation									
Uncertain walking									
Connection of peripheral information									
Dynamic visual stimuli									
Headache									
Tension phenomena									
TMJ response									



Head rotation 5

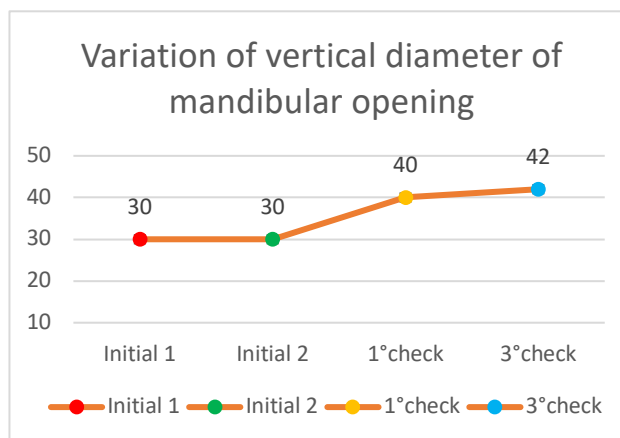
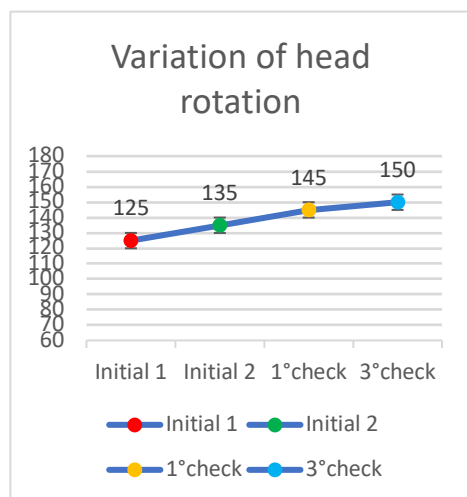
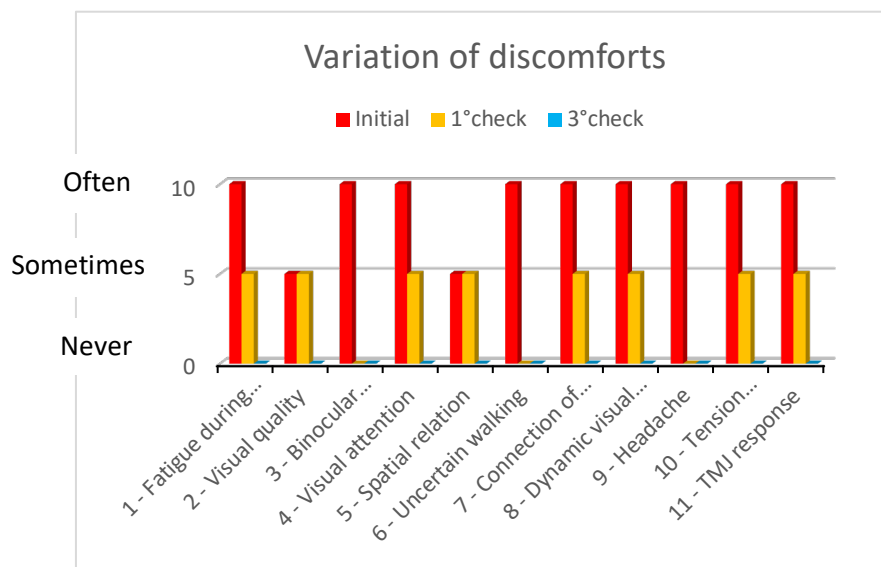


Mandibular opening 5

5th check	
Head rotation	$(165,0^\circ \pm 2,5^\circ) - (15,0^\circ \pm 2,5^\circ) = 150,0^\circ \pm 5,0^\circ$
Mandibular opening	42 mm \pm 1mm

Summary of case: It is interesting to note the general improvement: reduction of astigmatism by 0.25 D for both eyes; recovery of the ability to control the two eyes with disappearance of the diplopia and consequent ease in reading and attentional processes; absence of back tension, greater perceptual stability without weight imbalance, no sensation of "movement under the feet" safety in walking.

Graphs show the variation of discomforts, the variation of the total head rotation and the variation of the mandibular opening.



The below tables show the head rotation and vertical diameter obtained with respect to the initial evaluation.

	Initial 1	Initial 2	1°check	3° check	Final Variation
Rotation (°)	125,0 \pm 5,0	135,0 \pm 5,0	145,0 \pm 5,0	150,0 \pm 5,0	+25 \pm 10,0
Vertical diameter of mandibular opening (mm)	30 \pm 1	30 \pm 1	40 \pm 1	42 \pm 1	12 \pm 2

	Initial 2	1°check	3°check
Rotation (°)	+10	+20	+25
Vertical diameter (mm)	0	+10	+12