The Reliability of 10 tests Used to Diagnose Asymmetric Mobility of the Spine.

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BACKGROUND: During the last few decades, asymmetric anatomy, asymmetric mobility and lateralization have been subject to discussion, although it is widely accepted that there are no tools for standardization in order to incorporate these into diagnostic procedures of the physical examination of the apparatus loco motor in modern manual medicine. Using fundamental laws of heterogeneous elastic material (introducing the terminology of mass-mechanics versus biomechanics), normal asymmetry can be explained as body deformation. In the last 20 years we have developed – in our laboratory – a standard (based on several scientific reflections of asymmetric behavior in man) to evaluate the asymmetric normal mobility of the trunk and its extremities. As part of a Master of Science thesis and also a scientific follow-up study on the diagnostic standardization of preferential mobility/deformity in men, students were examined through 10 tests by two researchers, relating their reliability with the test-retest method.

METHODS: After signing an informed consent 52 healthy persons (median m/f) without complaints of their spine, mostly, first year students of a school of manual therapy, were asked to execute ten non- related lateralization tests by two researchers, blinded for each other's results. Two controllers observed the results. The researchers trained in one single day, checking their level of overall agreement, were inexperienced and not familiar with these tests before. The ten tests were standardized.

RESULT: Kappa analyses revealed that the results were sufficiently reliable for all tests (table 1)

CONCLUSION: On the level of reliability of lateralization test this kappa study is highly acceptable. It still misses a link to validate it with tests of asymmetric mobility.

Further study to validate these tests in relation to mobility is needed. Screening the habitual individual asymmetric mobility through 8 tests (3-minute test battery) seen as a way of preferential mobility, the researcher gets access to what the normal or expected mobility for individuals is.

Table 1

	A (L/L)	B L/R	C R/L	D R/R	N	Prev.	Po	Pc	kappa
Dominant eye	37	1	2	9	49	0,786	0,939	0,028	0,937
Phoria of eyes	25	0	3	16	44	0,602	0,932	0,057	0,928
Scooping	9	0	0	43	52	0,173	1,000	0,020	1,000
Step Forward	44	2	1	5	52	0,875	0,942	0,012	0,942
Finger crossing	25	0	0	27	52	0,481	1,000	0,062	1,000
Step on platform.	38	0	2	12	52	0,750	0,962	0,035	0,960
Axis rotation	15	1	2	34	52	0,317	0,942	0,047	0,939
Tailors' Position.	32	2	2	15	51	0,667	0,922	0,049	0,917
Step Backward	35	2	4	11	52	0,731	0,885	0,038	0,880
Arm crossing	20	0	0	32	52	0,385	1,000	0,056	1,000