

Table S1: Search strategies for all databases

Medline (Ovid)	
1	((cerebral adj2 (pals* or paresis or pareses or paralys*)) or little* disease* or (spastic adj2 (diplegi* or hemiplegi* or hemipares* or quadripare* or tetrapares*)) or ((congenital* or perinatal* or peri natal* or prenatal* or pre natal* or postnatal* or post natal* or f?etal or infan* or neonat* or neo nat* or newborn* or new born* or utero or early) adj2 (brain or cerebral) adj2 (injur* or lesion* or trauma* or damag*)) or ((perinatal* or peri natal* or prenatal* or pre natal* or postnatal* or post natal* or f?etal or infan* or neonat* or neo nat* or newborn* or new born* or utero) adj stroke*)).ti,ab,kw.
2	Cerebral Palsy/
3	or/1-2
4	(somatosensory or sensory or sensorially or sensation* or sensibilit* or som?esthetic* or propriocept* or kin?esthe* or stereognos* or astereognos* or gnosi* or two point discrimination* or "2 point discrimination*" or (position adj2 sens*) or touch or tactile or haptic or tactual or vision* or visual* or spatial process* or body image or ((movement* or pattern* or space* or spatial or form* or colo?r*) adj3 (detect* or recogni* or percept* or discriminat* or sens*)) or (passive adj2 movement*)).ti,ab,kw.
5	((sense or senses or sensing or percept*) adj4 (disturb* or deficit* or problem* or trouble* or dysfunction* or disorder* or deficient* or defect* or disab* or handicap* or loss* or impair* or alterat* or abnormal* or function* or process* perform* or acuity or evaluat* or assess* or measur* or test* or task* or threshold* or stimulus or stimuli or feedback* or process* or respon* or discriminat* or input*)).ti,ab,kw.
6	Feedback, Sensory/ or Proprioception/ or Kinesthesia/ or Touch/ or Touch Perception/ or Stereognosis/ or Sensory Thresholds/ or Somatosensory Disorders/ or Evoked Potentials, Somatosensory/ or Sensation/ or Sensation Disorders/ or Perception/ or Perceptual Disorders/ or "Discrimination (Psychology)"/ or Signal Detection, Psychological/ or Differential Threshold/ or Vision/ or Visual Perception/ or Visual Fields/ or Visual Field Tests/ or Color Perception Tests/ or Color Perception/ or Evoked Potentials, Visual/ or Vision Tests/ or Pattern Recognition, Visual/ or Pattern Recognition, Physiological/ or Spatial Processing/ or Space perception/ or Form perception/ or Body Image/
7	or/4-6
8	(((bimanual or bi manual or bilateral or bi lateral or unilateral or uni lateral or unimanual or uni manual or upper limb* or upper extremi* or hand or hands or arm or arms or finger* or motor or psychomotor or sensorimotor) adj4 (perform* or skill* or abilit* or capacit* or function* or movement* or process* or control* or evaluat* or assess* or measur* or test* or task* or disturb* or deficit* or problem* or

trouble* or dysfunction* or disorder* or deficient* or defect* or disab* or handicap* or loss* or impair* or alterat* or abnormal* or outcome* or coordinat* or integrat*) or (task* adj2 (performance or analysis)) or dissymmet* or asymmet* or reach* or grasp* or dexterity or fine motor or gross motor).ti,ab,kw.

- 9 Upper Extremity/ or Arm/ or Hand/ or Fingers/ or exp Psychomotor Performance/ or Motor Skills Disorders/ or Motor skills/
 10 or/8-9
 11 3 and 7 and 10

Embase (Ovid)

- 1 ((cerebral adj2 (pals* or paresis or pareses or paralys*)) or little* disease* or (spastic adj2 (diplegi* or hemiplegi* or hemipares* or quadripare* or tetrapares*)) or ((congenital* or perinatal* or peri natal* or prenatal* or pre natal* or postnatal* or post natal* or f?etal or infan* or neonat* or neo nat* or newborn* or new born* or utero or early) adj2 (brain or cerebral) adj2 (injur* or lesion* or trauma* or damag*)) or ((perinatal* or peri natal* or prenatal* or pre natal* or postnatal* or post natal* or f?etal or infan* or neonat* or neo nat* or newborn* or new born* or utero) adj stroke)).ti,ab,kw.
- 2 Cerebral palsy/
 3 or/1-2
- 4 (somatosensory or sensory or sensorially or sensation* or sensibilit* or som?esthetic* or propriocept* or kin?esthe* or stereognos* or astereognos* or gnosi* or two point discrimination* or "2 point discrimination*" or (position adj2 sens*) or touch or tactile or haptic or tactual or vision* or visual* or spatial process* or body image or ((movement* or pattern* or space* or spatial or form* or colo?r*) adj3 (detect* or recogni* or percept* or discriminat* or sens*)) or (passive adj2 movement*)).ti,ab,kw.
- 5 ((sense or senses or sensing or percept*) adj4 (disturb* or deficit* or problem* or trouble* or dysfunction* or disorder* or deficient* or defect* or disab* or handicap* or loss* or impair* or alterat* or abnormal* or function* or process* or perform* or acuity or evaluat* or assess* or measur* or test* or task* or threshold* or stimulus or stimuli or feedback* or process* or respon* or discriminat* or input*)).ti,ab,kw.
- 6 somatosensory system/ or sensory system/ or sensory evaluation/ or sensory feedback/ or proprioception/ or proprioceptive feedback/ or tactile feedback/ or visual feedback/ or kinesthesia/ or touch/ or tactile discrimination/ or perceptive threshold/ or visual threshold/ or abnormal sensation/ or somatosensory evoked potential/ or sensory evoked potential/ or visual evoked potential/ or sensory dysfunction/ or somatosensory disorder/ or movement perception/ or perceptive discrimination/ or color discrimination/ or spatial discrimination/ or visual discrimination/ or differential threshold/ or sensory system examination/ or perception test/ or sensory perception test/ or visual perception test/ or two-point discrimination test/ or vision/ or color vision defect/ or visual system examination/ or vision test/ or color vision test/ or visual field defect/ or visual field/ or visual impairment/ or body image/ or pattern recognition/ or perception/ or sensation/
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7	or/4-6 (((bimanual or bi manual or bilateral or bi lateral or unilateral or uni lateral or unimanual or uni manual or upper limb* or upper extremit* or hand or hands or arm or arms or finger* or motor or psychomotor or sensorimotor) adj4 (perform* or skill* or abilit* or capacit* or function* or movement* or process* or control* or evaluat* or assess* or measur* or test* or task* or disturb* or deficit* or problem* or trouble* or dysfunction* or disorder* or deficien* or defect* or disab* or handicap* or loss* or impair* or alterat* or abnormal* or outcome* or coordinat* or integrat*)) or (task* adj2 (performance or analysis)) or dissymmet* or asymmet* or reach* or grasp* or dexterity or fine motor or gross motor).ti,ab,kw.
8	upper limb/ or arm/ or hand/ or finger/ or motor control/ or motor coordination/ or motor performance/ or motor dysfunction/ or task performance/ or psychomotor disorder/ or exp psychomotor performance/ or motor function test/ or dexterity test/ or sensorimotor function/ or sensorimotor integration/ or visuomotor coordination/ or eye hand coordination/ or motor dysfunction assessment/
9	
10	Or/8-9
11	3 and 7 and 10

PsychInfo (Ovid)

1	((cerebral adj2 (pals* or paresis or pareses or paralys*)) or little* disease* or (spastic adj2 (diplegi* or hemiplegi* or hemipares* or quadripares* or tetrapares*)) or ((congenital* or perinatal* or peri natal* or prenatal* or pre natal* or postnatal* or post natal* or f?etal or infan* or neonat* or neo nat* or newborn* or new born* or utero or early) adj2 (brain or cerebral) adj2 (injur* or lesion* or trauma* or damag*)) or ((perinatal* or peri natal* or prenatal* or pre natal* or postnatal* or post natal* or f?etal or infan* or neonat* or neo nat* or newborn* or new born* or utero) adj stroke*)).ti,ab,id.
2	Cerebral palsy/
3	or/1-2 (somatosensory or sensory or sensorially or sensation* or sensibilit* or som?esthetic* or propriocept* or kin?esthe* or stereognos* or astereognos* or gnosi* or two point discrimination* or "2 point discrimination*" or (position adj2 sens*) or touch or tactile or haptic or tactual or vision* or visual* or spatial process* or body image or ((movement* or pattern* or space* or spatial or form* or colo?r*) adj3 (detect* or recogni* or percept* or discriminat* or sens*)) or (passive adj2 movement*)).ti,ab,id.
4	
5	((sense or senses or sensing or percept*) adj4 (disturb* or deficit* or problem* or trouble* or dysfunction* or disorder* or deficien* or defect* or disab* or handicap* or loss* or impair* or alterat* or abnormal* or function* or process* or perform* or acuity or evaluat*

or assess* or measur* or test* or task* or threshold* or stimulus or stimuli or feedback* or process* or respon* or discriminat* or input*)).ti,ab,id.

6 Sensory Feedback/ or Sensory Integration/ or Sensory Integration Dysfunction/ or Proprioception/ or Somatosensory Disorders/ or Sensory System Disorders/ or Perceptual Disturbances/ or Somatosensory Evoked Potentials/ or Somesthetic Perception/ or Kinesthetic perception/ or Tactual Perception/ or "Signal Detection (Perception)"/ or Visual perception/ or Vision/ or Color perception/ or Spatial Perception/ or Visual Feedback/ or Visual Field/ or Form and Shape Perception/ or Body image/ or Body Awareness/ or Perception/ or Pattern Discrimination/ or Perceptual Discrimination/ or Visual Discrimination/ or Visual Thresholds/ or Visuospatial Ability/ or Visual Evoked Potentials/

7 or/4-6

8 (((bimanual or bi manual or bilateral or bi lateral or unilateral or uni lateral or unimanual or uni manual or upper limb* or upper extremity* or hand or hands or arm or arms or finger* or motor or psychomotor or sensorimotor) adj4 (perform* or skill* or ability* or capacity* or function* or movement* or process* or control* or evaluate* or assess* or measur* or test* or task* or disturb* or deficit* or problem* or trouble* or dysfunction* or disorder* or deficient* or defect* or disab* or handicap* or loss* or impair* or alterat* or abnormal* or outcome* or coordinat* or integrat*)) or (task* adj2 (performance or analysis)) or dissymmet* or asymmet* or reach* or grasp* or dexterity or fine motor or gross motor).ti,ab,id.

9 "Arm (Anatomy)"/ or "Hand (Anatomy)"/ or "Fingers (Anatomy)"/ or Motor Coordination/ or Motor Skills/ or Task analysis/ or Motor Performance/ or Motor Control/ or Perceptual Motor Processes/ or Perceptual Motor Coordination/ or Visual Motor Integration/ or Physical dexterity/ or Sensorimotor Measures/ or Motor Processes/ or Grasping/

10 Or/8-9

11 3 and 7 and 10

Cinahl (EBSCO)

1 TI (((cerebral N1 (pals* or paresis or pareses or paralys*)) or "little* disease*" or (spastic N1 (diplegi* or hemiplegi* or hemipares* or quadripare* or tetrapares*)) or ((congenital* or perinatal* or "peri natal*" or prenatal* or "pre natal*" or postnatal* or "post natal*" or f#etal or infan* or neonat* or "neo nat*" or newborn* or "new born*" or utero or early) N1 (brain or cerebral) N1 (injur* or lesion* or trauma* or damag*)) or ((perinatal* or "peri natal*" or prenatal* or "pre natal*" or postnatal* or "post natal*" or f#etal or infan* or neonat* or "neo nat*" or newborn* or "new born*" or utero) W0 stroke*)) OR

AB (((cerebral N1 (pals* or paresis or pareses or paralys*)) or "little* disease*" or (spastic N1 (diplegi* or hemiplegi* or hemipares* or quadripare* or tetrapares*)) or ((congenital* or perinatal* or "peri natal*" or prenatal* or "pre natal*" or postnatal* or "post natal*" or

	f#etal or infan* or neonat* or "neo nat*" or newborn* or "new born*" or utero or early) N1 (brain or cerebral) N1 (injur* or lesion* or trauma* or damag*) or ((perinatal* or "peri natal*" or prenatal* or "pre natal*" or postnatal* or "post natal*" or f#etal or infan* or neonat* or "neo nat*" or newborn* or "new born*" or utero) W0 stroke*))
2	MH (Cerebral palsy)
3	S1 OR S2
4	<p>TI (somatosensory or sensory or sensorially or sensation* or sensibilit* or som#esthetic* or propriocept* or kin#esthe* or stereognos* or astereognos* or gnosi* or "two point discrimination*" or "2 point discrimination*" or (position N1 sens*) or touch or tactile or haptic or tactual or vision* or visual* or "spatial process*" or "body image" or ((movement* or pattern* or space* or spatial or form* or colo#r*) N2 (detect* or recogni* or percept* or discriminat* or sens*)) or (passive N1 movement*)) OR</p> <p>AB (somatosensory or sensory or sensorially or sensation* or sensibilit* or som#esthetic* or propriocept* or kin#esthe* or stereognos* or astereognos* or gnosi* or "two point discrimination*" or "2 point discrimination*" or (position N1 sens*) or touch or tactile or haptic or tactual or vision* or visual* or "spatial process*" or "body image" or ((movement* or pattern* or space* or spatial or form* or colo#r*) N2 (detect* or recogni* or percept* or discriminat* or sens*)) or (passive N1 movement*))</p> <p>TI ((sense or senses or sensing or percept*) N3 (disturb* or deficit* or problem* or trouble* or dysfunction* or disorder* or deficient* or defect* or disab* or handicap* or loss* or impair* or alterat* or abnormal* or function* or process* or perform* or acuity or evaluat* or assess* or measur* or test* or task* or threshold* or stimulus or stimuli or feedback* or process* or respon* or discriminat* or input*)) OR</p>
5	<p>AB ((sense or senses or sensing or percept*) N3 (disturb* or deficit* or problem* or trouble* or dysfunction* or disorder* or deficient* or defect* or disab* or handicap* or loss* or impair* or alterat* or abnormal* or function* or process* or perform* or acuity or evaluat* or assess* or measur* or test* or task* or threshold* or stimulus or stimuli or feedback* or process* or respon* or discriminat* or input*))</p> <p>MH (Proprioception or Kinesthesia or Touch or Sensation or Sensation Disorders or Somatosensory Disorders or Perceptual</p>
6	Distortion or Perception or Perceptual Disorders or Evoked Potentials, Somatosensory or Visual Perception or Vision or Vision tests or Evoked Potentials, Visual or Visual Fields or Color Perception or Color Perception Tests or Body Image or Spatial Perception)
7	S4 OR S5 OR S6
8	<p>TI (((bimanual or "bi manual" or bilateral or "bi lateral" or unilateral or "uni lateral" or unimanual or "uni manual" or "upper limb*" or "upper extremi*" or hand or hands or arm or arms or finger* or motor or psychomotor or sensorimotor) N3 (perform* or skill* or abilit* or capacit* or function* or movement* or process* or control* or evaluat* or assess* or measur* or test* or task* or disturb* or deficit* or problem* or trouble* or dysfunction* or disorder* or deficient* or defect* or disab* or handicap* or loss* or impair* or</p>

	alterat* or abnormal* or outcome* or coordinat* or integrat*)) or (task* N1 (performance or analysis)) or dissymmet* or asymmet* or reach* or grasp* or dexterity or fine motor or gross motor) OR
	AB (((bimanual or "bi manual" or bilateral or "bi lateral" or unilateral or "uni lateral" or unimanual or "uni manual" or "upper limb*" or "upper extremit*" or hand or hands or arm or arms or finger* or motor or psychomotor or sensorimotor) N3 (perform* or skill* or abilit* or capacit* or function* or movement* or process* or control* or evaluat* or assess* or measur* or test* or task* or disturb* or deficit* or problem* or trouble* or dysfunction* or disorder* or deficien* or defect* or disab* or handicap* or loss* or impair* or alterat* or abnormal* or outcome* or coordinat* or integrat*)) or (task* N1 (performance or analysis)) or dissymmet* or asymmet* or reach* or grasp* or dexterity or fine motor or gross motor)
9	MH (Upper Extremity or Arm or Hand or Fingers or Psychomotor Performance or Motor Skills Disorders or Motor Skills or Object Manipulation or "Task Performance and analysis" or Sensory Motor Integration or Reaching)
10	S8 OR S9
11	S3 AND S7 AND S10

Web of Science

1	TS=((cerebral NEAR/1 (pals* or paresis or pareses or paralys*)) or "little* disease*" or (spastic NEAR/1 (diplegi* or hemiplegi* or hemipares* or quadripare* or tetrapares*)) or ((congenital* or perinatal* or "peri natal*" or prenatal* or "pre natal*" or postnatal* or "post natal*" or f\$etal or infan* or neonat* or "neo nat*" or newborn* or "new born*" or utero or early) NEAR/1 (brain or cerebral) NEAR/1 (injur* or lesion* or trauma* or damag*)) or ((perinatal* or "peri natal*" or prenatal* or "pre natal*" or postnatal* or "post natal*" or f\$etal or infan* or neonat* or "neo nat*" or newborn* or "new born*" or utero) NEAR/0 stroke*))
2	TS=(somatosensory or sensory or sensorially or sensation* or sensibilit* or som\$esthetic* or propriocept* or kin\$esthe* or stereognos* or astereognos* or gnosi* or "two point discrimination*" or "2 point discrimination*" or (position NEAR/1 sens*) or touch or tactile or haptic or tactual or vision* or visual* or "spatial process*" or "body image" or ((movement* or pattern* or space* or spatial or form* or colo\$r*) NEAR/2 (detect* or recogni* or percept* or discriminat* or sens*)) or (passive NEAR/1 movement*))
3	TS=((sense or senses or sensing or percept*) NEAR/3 (disturb* or deficit* or problem* or trouble* or dysfunction* or disorder* or deficien* or defect* or disab* or handicap* or loss* or impair* or alterat* or abnormal* or function* or process* or perform* or acuity or evaluat* or assess* or measur* or test* or task* or threshold* or stimulus or stimuli or feedback* or process* or respon* or discriminat* or input*))
4	#2 OR #3
5	TS((((bimanual or "bi manual" or bilateral or "bi lateral" or unilateral or "uni lateral" or unimanual or "uni manual" or "upper limb*" or "upper extremit*" or hand or hands or arm or arms or finger* or motor or psychomotor or sensorimotor) NEAR/3 (perform* or

skill* or abilit* or capacit* or function* or movement* or process* or control* or evaluat* or assess* or measur* or test* or task* or disturb* or deficit* or problem* or trouble* or dysfunction* or disorder* or deficien* or defect* or disab* or handicap* or loss* or impair* or alterat* or abnormal* or outcome* or coordinat* or integrat*) or (task* NEAR/1 (performance or analysis)) or dissymmet* or asymmet* or reach* or grasp* or dexterity or fine motor or gross motor)

6

#1 AND #4 AND #5

Table S2: Extracted data for each study.

Authors (years)	Participant characteristics: Age/Sex Lesion type and/or timing of lesion	MACS/GMFCS level CP type	Motor assessments / outcomes (name of assessment used)	Motor function (UMF or BMF)	Sensory assessments / outcomes (name of the assessment used)	Sensory modality	Results
Alves-Pinto & al. (2017)	<u>CP subjects :</u>	CPY: MACS:					
	Adolescents (n=9) (CPY):	Level I = 2					
	Age: Mean=15y; Range= 11-17y	Level II=3					
	Sex:	Level III=4					
	4M; 5W	CPA: MACS Level II=4 Level III=1					
	Adults (n=7) (CPA)	Level IV=1					
	Age	Level V=1					
	Mean=44 y, Range= 34-52 y	CPY: Bilateral spastic= 3; Right spastic	Repetitive keystrokes / Regularity of keystroke	UMF	Perception of vibration on fingers / Proportion of correct responses for each hand	Tactile	Best hand: r = -0.6, p= 0.01 Other hand: r= -0.6, p=0.006
	Sex: 3M; 4W	hemiplegia=2, Dyskinetic=1, Ataxic=2					
	Lesion type and/or timing: N/R						
	<u>Control subjects:</u>	CPA: Bilateral spastic=5, Left spastic					
	Typically developing adolescents (n=6):	hemiplegia=1, Ataxic=1					
	Age: Mean= 12y, Range= 7-17y						
	Sex: 3M; 3W						

					of the Semmes–Weinstein)			with MUUL, JTTHF and AHA (static: $R^2=0.21-0.26$, $p < 0.005$, moving: $R^2=0.23-0.29$, $p < 0.005$)
					c. Spatial tactile perception: two- point discrimination / Smallest distance in mm between two pressure points detected (DiskCriminator)			d. Double simultaneous perception was significantly associated with MUUL, JTTHF and AHA ($R^2=0.18-0.35$, $p < 0.005$)
					d. Spatial tactile perception: Double simultaneous / number of monofilament contacts detected on fingers within 24 trials (monofilaments- bristles)			e. Stereognosis was significantly associated with MUUL, JTTHF and AHA ($R^2=0.25-0.36$, $p < 0.005$)
					e. Stereognosis / Number of objects identified on 9			f. Texture was significantly associated with MUUL, JTTHF and AHA ($R^2=0.24-0.2$, $p > 0.005$)
					f. Texture tactile perception / Converted score on the tactile discrimination index representing the moment where the child discriminate smoothness from rudeness on a board (Perspex board)			All significant except for texture 1- Whole sample: no association found for the NDH and DH ($r = 0.128$, $p=0.691$ and $r = 0.322$, $p=0.307$).
								2- Right lesion group: no association found for both hands (NDH: $r=-0.164$, $p=0.699$; DH: $r=0.659$, $p=0.076$).
								3- For the left lesion group, no significant association was found for the NDH ($r=0.8$, $p= 0.2$), but there was a significant
	Children (n=12)							
	Age:	GMFCS:						
	Mean=12.5 +/- 2.1y; range	Level I= 8	Fine motor function / Mean					
Bleyenheuft	10-16y	Level II= 4	number of pegs placed within	UMF	Tactile spatial resolution			
& al. (2011)	Sex: 10M; 2W		30 seconds across 3 trials		threshold / Detecting orientation	Tactile		
		Hemiplegia: 12	(Purdue Pegboard test)		of the tactile stimulus for 10 trials			
	Lesion type and/or	(Left = 8; Right = 4)			(Grating Orientation Task)			
	timing: Varied							

					Control subjects:			
					Typically developing children (n=37)			
					Age: Mean 90.6 +/- 24.8 months			
							b. Motor-Free Visual Perceptual Test Revised / 40 items measuring visual processing without motor involvement (MVPT-R)	
							materials and written work sections (regression coefficient= 0.57-0.3-0.41, p > 0.01)	
							c. Visual motor integration was associated with using materials (regression coefficient = 0.68, p < 0.001) but not with written work section (regression coefficient = 0.53, p > 0.001)	
							d. Motor-Free Visual Perceptual Test Revised was not associated with using materials and written work sections (regression coefficient=0.34-0.35, p > 0.001)	
							Sum of all deficits on 5 where abnormality at one test =1 =	
							- Grating acuity / Threshold of acuity of the finest strips width which the subject consistently responds correctly (Teller acuity card)	
							- Visual field / Eye and head movements (kinetic perimeter)	
							- Horizontal optokinetic nystagmus / Number of saccades elicited	
							- Oculomotor behaviour / Abnormality of eyes contact, nystagmus, fixation and	
							Visual	
							Kendall coefficient: global-DQ-visual score= -0.659, p<0.01; Hand-DQ-visual score= -0.597, p<0.01; Performance-DQ-visual score= -0.648, p<0.01	
Cioni & al. (2000)	Children (n=22) Age: Mean: 13 +/- 2.1; range 8-16 months		MACS/GMFCS: N/R		Developmental assessment / Developmental quotient (DQ)			
	Lesion type and/or timing: 9 infants had grade 1 PVL, 6 had grade 2, and seven grade 3		Hemiplegia:2; Diplegia: 15; Tetraplegia: 5		1. Global; 2. Hand-eye coordination; 3. Performance (Griffith developmental scales)		UMF and BMF	

					convergence movement (following and fixation) - Strabismus / Eyes alignment		
Cooper & al. (1995)	<u>CP subjects:</u>				a. Tactile pressure detection / Normal pressure detection set at 2.83, if higher categorize as abnormal (filaments of the Semmes-Weinstein),		
	Children (n=9) Age: Mean= 11.25 +/- 5.36y; range 4.33-18.08y Sex: 7M;2W		1-Range of motion / Complete passive range of motion of the elbow, forearm, wrist, thumb, index and little finger		b. Two-point discrimination / Smallest distance in mm between two pressure points detected (DiskCriminator))		
	Lesion type and/or timing: N/R	MACS/GMFCs: N/R	2- Muscle tone / Einstein Neonatal Neurobehavioral Assessment Scale	UMF	c. Stereognosis / Number of shapes identified on 10	Tactile and Proprioception	Sensory function correlates with motor function in 6 of 9 CP children while the 3 other subjects show no correlation.
	<u>Control subjects:</u> Typically developing children (n=41) Age: Mean: 9.88 +/- 3.02y; range 4.42-16y Sex: 20M;21W	Hemiplegia: 9	3-Grasp pattern / The Functional Evaluation of the Congenitally Anomalous Hand 4- Grip and pinch strength / Jamar dynamometer		d. Passive proprioception / Detection of the direction of movements at MCP level (thumb, index and little finger) e. Directionality / Identification of the direction of the filament movements along the finger (filaments of the Semmes-Weinstein)		
De Campos & al. (2014)	<u>CP subjects:</u>				a. Tactile spatial discrimination / Identify the orientation of domes placed on the hand (Johnson, Van Boven, Phillips (JVP) domes)	Tactile	No significant association was found between any of the motor and sensory outcomes assessed.
	Adolescents (n=11) Age: Mean=15 +/- 4 years	MACS: Level I=2 Level II=4 Level III= 1	Reach to lift task one hand at the time / Reach time, hold time, hand orientation error, intra limb coordination	UMF			

	Sex: 5M;2W (not all data reported)	(not all data reported)						b. Temporal discrimination / Threshold of electrical stimulation detection
	7 left middle cerebral artery strokes	Hemiplegia with dystonia: 11 (Left=11)						c. Stereognosis / Number of objects identified on 8
	<u>Control subjects:</u>							
	Typically developing adolescents and young adults (n=9) Age: Mean= 17 +/- 5y							
	Sex: 1M; 8W							
	<u>CP subjects:</u>							
	Children and adolescents (n=16) Age: Mean= 12.6 +/- 3.4y							
	Sex: 8M;8W							
	Lesion type and/or timing: Six patients	MACS/GMFCs: N/R						
Duque & al. (2003)	had extensive hemispheric lesions (group 1), three patients had focal cortical lesions (group 2) and five had subcortical lesions (group 3). One patient had a focal internal capsule lesion (group 4).	Hemiplegia: 16 (Left=5; Right=11)	Quality of movements / Melbourne assessment of unilateral upper limb [MUUL]	UMF				
								a. Tactile pressure detection / Force required to bend the thinnest monofilament detected by child (monofilaments of the Semmes-Weinstein)
						Tactile and Proprioception		MUUL was associated with the proprio-thumb (r= 0.59, p=0.025) but not with the tactile pressure detection (r= -0.11, p=0.721), the stereognosis (r= 0.43, p=0.121) and the proprioception index (r= 0.21, p= 0.463)
								b. Stereognosis / Total of objects identified on 10
								c. Proprioception / Movement detection of thumb and index MCP

JTTHF was not associated with Two-point discrimination for both group (ChildrenCP: $r=0.341$, $p=0.369$; AdolescentsCP: $r=0.542$, $p=0.165$)

Gordon & al. (1999)	Children and adolescents (n=15) Age: range 8-14y	MACS/GMFCS: N/R	1- Pinch strength //Jamar hydraulic hand dynamometer	UMF	a. Two-point discrimination / Smallest distance in mm between two pressure points detected (DiskCriminator)	Tactile	a. Two-point discrimination was associated with pinch (r= - 0.61) et JTTHF (r=0.31)
	Lesion type and/or timing: N/R	Hemiplegia: 15	2- Time taken to perform 6 ADL tasks / Jebsen-Taylor Test of Hand Function [JTTHF]		b. Tactile pressure detection / Force required to bend the thinnest monofilament detected by child (Semmes-Weinstein monofilaments)		b. Tactile pressure detection was associated with pinch (r=- 0.19) and JTTHF (r=0.47)
					c. Stereognosis / Number of objects identified on 8		c. Stereognosis was associated with pinch (r=0.59) and JTTHF (r= -0.42)
<u>CP subjects:</u>							
Guedin & al. (2018)	Children and adolescents (n=11)			UMF	Finger sense / Number of fingers correctly identified when touch bye the evaluator (gnosia)	Tactile	HCP have sensory deficits in their paretic hands and DCP in their both hands. Otherwise, HCP have motor deficits in their both hands as DCP have impairments in their dominant hand compare to CTRL.
	Hemiplegia: Age: Mean: 11.2 +/- 2.3y; Diplegia: 11.1 +/- 2.5y						
	Sex: Hemiplegia: 5M;6W Diplegia: 6M;5W	MACS/GMFCS: N/R	Hemiplegia (HCP): 11 (Left=6, Right= 5) Diplegia (DCP): 11				
<u>Control subjects:</u>							
	Typically developing children and adolescents:						
	Age: Mean= 11.2 +/- 2.3y						
	Sex: 9M;13W						

Gupta & al. (2017)	Children and adolescents (n=24): Age: Mean: 10.5 +/- 3.3 y Sex: 13M; 11W	MACS/GMFCs: N/R	1- Time taken to perform 6 ADL tasks / Jebsen-Taylor Test of Hand Function [JTTHF]	UMF and BMF	a. Stereognosis / Number of objects identified on 10 b. Two-point discrimination / Smallest distance in mm between two pressure points detected	Tactile	a. Stereognosis was associated with JTTHF (r= 0.7), Box and block (r= 0.69) and AHA (r= 0.74) b. Two-point discrimination was associated with JTTHF (r=0.74), Box and block (0.76) and AHA (r= 0.76) All significant
	Lesion type and/or timing: 12 periventricular; 7 middle cerebral arteries; 5 not reported or other Adolescents and young adults (n=12) Age: Mean= 16.8; range 10-28y Sex: 8M; 4W	Hemiplegia: 24 (Left= 7, Right= 17)	2- Gross manual function / Box and blocks test 3- Bimanual used during play and ADL / Assisting Hand Assessment [AHA]		All on a scale from 0 to 2		
Guzzetta & al. (2007)	Lesion type and/or timing: - Malformation of cortical development= 6 - Stroke= 3 - Periventricular leukomalacia = 3	MACS/GMFCs: N/R Hemiplegia: 12 (Left=3, Right=9)	Quality of movements / Melbourne assessment of unilateral upper limb [MUUL]	UMF	a. Tactile sense / Number of stimulations identified on different parts of the limbs with cotton b. Proprioception / Recognition of slow displacement of finger c. Graphaesthesia / Objects recognized on 5 d. Two-point discrimination / Number of numbers identified drawn on the palm of their hand e. Double stimulation (DS) / Smallest distance in mm between two pressure points detected	Tactile and proprioception	No correlation identified between sensory and motor function at the whole group level. A significant correlation between motor and sensory function is present in the ipsilesional CST group (p < 0.02)
	- 6 before 24 weeks of gestation - 3 between 24 and 36 weeks of gestation - 2 term age - 1 2 years old						
James & al. (2017)	Children and adolescents (n=37) Age: range: 4-15 years	Gross Motor Function Classification	1- Passive and active range of motion at elbow, forearm,	UMF and BMF	Stereognosis / Number of objects recognized on 12	Tactile	Positive significant correlation between stereognosis and AHA (r=0.54), but not with other

	Sex: 26M; 11W	System levels 1 or 2	wrist, fingers and thumb levels				upper limb function measurements.
	Lesion type and/or timing: N/R	Hemiplegia: 37 (Left= 19; Right=18)	2- Bimanual used during play and ADL / Assisting Hand Assessment [AHA] 3- Gross manual / Box and blocks test 4- Shriners Hospitals Upper Extremity Evaluation / [SHUEE]				
		MACS (%)	1- Performance in functional tasks / Assessment of Motor and Process Skills [AMPS]				
	Children and adolescents (n=101) Age: Mean= 11 y and 8 months +/- 2y and 4 months	Level I= 24 Level II= 75 Level III= 1	2- Time taken to perform 6 ADL tasks / Jebsen-Taylor Test of Hand Function [JTTHF]				
James & al. (2015)	Sex: 51M; 50W	GMFCS (%) Level I= 45 Level II= 56	3- Bimanual used during play and ADL / Assisting Hand Assessment [AHA]	UMF and BMF	Test of Visual Perceptual Skills, 3rd edition / a. Visual Discrimination; b. Visual Memory; c. Visual Spatial Relationships; d. Form Constancy; e. Visual Sequential Memory; f. Figure-Ground; g. Visual Closure. (TVPS-3)	Visual	AMPS motor sub form was associated with TVPS-3 (r=0.408; p<0.001), more specifically for Visual memory (r= 0.38, p < 0.001) and Visual Sequential memory (r= 0.39, p<0.001).
	Lesion type and/or timing: N/R	Hemiplegia: 101 (Left=48; Right=53)					
	Children and adolescents (n=41) Age: Mean=8.7y; range 6-16y	MACS/GMFCS: N/R	Time taken to perform 6 ADL tasks / Jebsen-Taylor Test of Hand Function [JTTHF]				
Kinnucan & al. (2010)	Sex: 19M; 22W	Hemiplegia: 34 (Left=18; right=23)		UMF	Stereognosis / Number of objects recognized on 12	Tactile	Stereognosis was associated with JTTHF (all p <0.04): Total score: -0.54; Cards: -0.39; Small objects: -0.52; Checkers: -0.60; Light objects: -0.33; Heavy objects: -0.48
	Lesion type and/or timing: N/R	Triplegia: 7					
	Children and adolescents (n=81) Age: Mean= 9y 11 months +/- 3y 3 months; range 6-15y	MACS Level I= 29 Level II= 36 Level III= 16	1- Passive range of motion of shoulder, elbow and wrist 2-Muscle tone of shoulder, elbow and wrist / Modified Ashworth Scale	UMF and BMF	a. Two-point discrimination / Smallest distance in mm between two pressure points detected b. Stereognosis / Number of objects recognized on 12	Tactile and Proprioception	a. Two-point discrimination was associated with MUUL (r= 0.66, p<0.0001), AHA (r=0.65, p<0.0001) and ABILHAND (r= 0.58, p<0.0001)
	Sex: 43M;38W						

Congenital = 69; acquired = 12		Hemiplegia: (Left=36, Right=45)	81 36, 4- Dynamometer 5- unilateral upper limb [MUUL] 6- Assessment [AHA] 7- Kids questionnaire	3- Muscle testing of shoulder, elbow and wrist 4-Grip strength / Jamar hydraulic hand 5- Quality of movements / Melbourne assessment of unilateral upper limb [MUUL] 6- Bimanual used during play and ADL / Assisting Hand Assessment [AHA] 7- Subjective manual performance / ABILHAND-Kids questionnaire	c. Tactile sense / Touch on the thumb, index and hand palm d. Proprioception / Recognition of slow displacement of index (passive movement)	b. Stereognosis was associated with MUUL ($r=0.72$, $p<0.0001$), AHA ($r= 0.63$, $p<0.001$) and ABILHAND ($r= 0.70$; $p<0.0001$) c. Tactile sense was associated with MUUL ($r=0.39$, $p<0.01$), and ABILHAND ($r= 0.40$, $p<0.01$) but not with AHA ($r=0.38$, $p<0.01$) d. Proprioception was associated with MUUL ($r=0.49$, $p<0.0001$), AHA ($r=0.4$; $p<0.0001$) and ABILHAND ($r= 0.38$, $p<0.01$). Wrist strength, stereognosis and proprioception predict MUUL score (respectively adding 68. 6 and 2% of variance); Wrist strength and grip strength predict AHA score (respectively adding 70 and 6% of variance); Wrist strength and stereognosis predict ABILHAND-Kids questionnaire (respectively adding 39 and 7% of variance).
Krumlinde-Sundholm & al. (2002)	<u>CP subjects:</u> Children and adolescents (n=25) Age: range 8-15y	MACS/GMFCS: N/R Hemiplegia: (Left=11, Right=14)	25 14)	1- Pick-up test n / Time in seconds to pick out 10 wooden cubes from a box (Dexterity) 2- Bimanual tasks / Performance in eight everyday tasks	UMF and BMF a. Tactile pressure detection / Force required to bend the thinnest monofilament detected by child (Semmes-Weinstein monofilaments)	Tactile and Visual a. Tactile pressure detection was associated with pick-up test ($r=-0.4$) but not bimanual tasks ($r=-0.13$) b. Two-point discrimination-3mm was associated with pick-

Lesion type and/or timing: N/R			
<u>Control subjects:</u>			
Typically developing adolescents and children (n=19) Age: Range 5-18y		b. Two-point discrimination / Smallest distance in mm between two pressure points detected (3mm and 7 mm tested) c. Stereognosis / Number of objects recognized on 6 familiar objects and 10 forms (familiar object and abstract forms)	up test (r=-0.6) but not with bimanual tasks (r=0.25). Two-point discrimination-7mm was associated with pick-up test (r=-0.71) and bimanual tasks (r=0.41) c. Stereognosis of familiar object was associated with pick-up test (r= -0.65) but not with bimanual tasks (r=0.36). Stereognosis of forms was associated with pick-up test (r=-0.60) but not with bimanual tasks (r=0.35)
<u>CP subjects:</u>			
Adolescents (n=40) Age: AIS: Mean= 13.0 +/- 3.6y; PVI : Mean= 12.1 +/- 3.5y Sex : AIS : 12M; 10W PVI : 11M; 7W Kuczynski & al. (2016)	MACS AIS Level I : 6 Level II : 12 PVI Level I : 8 Level II :5 Hemiplegia: 40 AIS: Left= 8, Right=14 PVI: Left=9; Right=9	1- Bimanual used during play and ADL / Assisting Hand Assessment [AHA] 2- Upper limb motor recovery on a scale of 1 to 7 / Chedoke McMaster Stroke Assessment [CMSA] 3- Fine motor function / Purdue Pegboard test UMF and BMF	
22 Arterial ischemic stroke (AIS) and 18 periventricular venous infarctions (PVI)		a. Arm position matching test / 1. Variability, contraction/expansion; 2. Systematic shift with and without vision (Variability, shiftxy) (KINARM)	Proprioception AHA scores were negatively correlated with Variability (no vision) in AIS (q = -0.64, P < 0.01) but not PVI (q= 0.12, P = 0.7). AHA scores correlated with Shiftxy(vision) in AIS (q = -0.49, P < 0.05) but not PVI (q = 0.20, P =0.5). Fine motor function as determined by the PPB was inversely correlated with both Varxy (q = -0.51, P < 0.01) and Shiftxy (q = -0.52, P < 0.01) in AIS but not PVI or controls.
<u>Control subjects:</u>			

Kurtaran & al. (2015)	Adolescents (n=60) Age: Mean = 12.3 +/- 3.6y Sex: 38M;22W <u>CP subjects:</u>							
	Children (n=36) Age: Mean= 6.28 +/- 1.95y Sex: 66%M; 24%W		MACS/GMFCS: N/R	Functional status / On a scale from 1 (no limitation) to 4 (impossible to perform the task)	BMF (subjective)	Stereognosis / Number of objects recognized on 10	Tactile	Significant correlation (p<0.05) between functional level and stereognosis.
	Lesion type and/or timing: N/R	Hemiplegia: 6; Diplegia: 13; Quadriplegia: 17						
	<u>Control subjects:</u> Children (n=18) Age: Mean= 6.61 +/- 1.61y							
Law & al. (2008)	Children, adolescents and adults (n=30) Age: Mean= 12.48y; range 6-33y		MACS/GMFCS: N/R	1- Quality of movements based / Melbourne assessment of unilateral upper limb [MUUL]		a. Stereognosis / Number of objects recognized on 13		Sensory deficits showed a statistically significant correlation with the MUUL, but not with the FHGT.
	Lesion type and/or timing: N/R	Hemiplegia: 9; Diplegia: 8; Triplegia: 3; Quadriplegia: 10		2- Grasping / Functional Hand Grip Test [FHGT] 3- Function / Functional Independence Measure for Children [WeeFIM]	UMF	b. Two-point discrimination two points discrimination / Smallest distance in mm between two pressure points detected	Tactile	1- MUUL- two-point discrimination: r=0.422 (p = 0.002) 2- MUUL-stereognosis: r= 0.440 (p = 0.036).
O'Malley & al. (1977)	Children and adolescents (n=18) Age: Mean= 9y 5		MACS/GMFCS: N/R	Fine motor skills and Bilateral integration /The Beery Developmental Test	UMF and BMF	a. Stereognosis b. Graphesthesia c. Tactile localization	Visual, Tactile	3- WeeFIM- two-point discrimination: r= -0.519, p=0.011 Bilateral integration was not associated to any of the sensory function and:

	months; range 5y 8months- 15y 3 months	Hemiplegia: 18 (Left= 9; Right=9)			d. Double simultaneous stimulation e. Touch f. Visuo-spatial perceptual skills g. Visuo-spatial constructive skills		a. r= 0.1, p= 0.693 b. r= 0.055, p= 0.827 c. r= 0.025, p= 0.925 d. r= 0.06, p= 0.814 e. r= 0.395, p= 0.104 f. r= 0.204, p= 0.417 g. r= 0.204, p= 0.417
	15 perinatal injury and 3 acquired, post natal injury				Not detailed (The Beery Developmental Test of Visual Motor Integration and the Ayres battery or Southern California Sensory)		
							a. Stereognosis was association with MUUL (r= 0.705, p= 0.015) but not with ROM (r= 0.451, p= 0.08)
Robert & al. (2013)	Children (n=16) Age: Mean= 8.6y; range 6-11y Sex: 7M; 9W	MACS Level II: 7 Level III: 5 Level IV: 4	1- Upper limb passive range of motion (ROM) 2- Quality of movements based / Melbourne assessment of unilateral upper limb [MUUL]	UMF	a. Stereognosis / number of objects recognized in % b. Touch / Light touch-measure on a total of 20 c. Proprioception/ Level of impairment on a scale of 8	Tactile and proprioception	b. Light touch was not associated with ROM (r= 0.004, p= 0.988) and MUUL (r= -0.598, p= 0.52) c. Proprioception was associated with ROM (r= 0.529; p= 0.035) and MUUL (r= 0.656, p= 0.028)
	Lesion type and/or timing: N/R	Hemiplegia: 16 (Left= 9; Right= 7)					Sensation had a significant positive direct effect on manual ability (b= 0.52) and a positive indirect effect for sensory function (b= 0.24) on independence self- care.
Russo & al (2019)	Children and adolescents (n=108) Age: Mean= 8y 7 months +/- 3y 9 months; range 3-16y Sex: 62M; 46W	GMFCS Level I=86 Level II=15 Levels III- V=7	1- Performance in functional tasks / Assessment of Motor and Process Skills [AMPS] 2- Functional capacity / Pediatric Evaluation of Disability Inventory [PEDI]	UMF and BMF	a. Stereognosis / Number of objects recognized on 10 b. Tactile sense / Number of fingers identified when touch c. Two-point discrimination / Yes/no identification of 8 mm distance	Tactile	
	Lesion type and/or timing: N/R	Hemiplegia: 108 (Left= 49; Right= 59)	3- Subjective bimanual function (CP Register Assessment of				

Simon-Martinez & al. (2018)	Children and adolescents (n=75) Age: Mean= 11y 1month +/- 3y 6 months Sex: 42M; 33W	MACS Level I=25 Level II= 25 Level III= 25	1- Time taken to perform 6 ADL tasks / Jebsen-Taylor Test of Hand Function [JTTHF] 2- Bimanual used during play and ADL / Assisting Hand Assessment [AHA] 3- Grip strength / Jamar hydraulic hand dynamometer	UMF and BMF	a. Two-point discrimination / Smallest distance in mm between two pressure points detected b. Stereognosis / Number of objects recognized on 6 c. Tactile pressure detection / Force required to bend the thinnest monofilament detected by child (Semmes-Weinstein monofilaments)	Tactile	a. Two-point discrimination was not associated with any of motor tasks. b. Stereognosis was associated with grip strength ratio ($r = -0.60, p < 0.001$), JTHFT ratio ($r = -0.60, p < 0.001$) and AHA ($r = 0.61, p < 0.001$) c. Tactile pressure detection was not associated with any of motor tasks.
	PV: Periventricular=34; CSC: Corticosubcortical=18	Hemiplegia: 75 (Left=39; Right=36)	Reach and grasp 1- Eye-hand coordination / a. Movement Onset Asynchrony: Time lag between the first gaze to the starting stimulus and hand initiation. b. Movement Termination Asynchrony: Time lag between the object placement and gaze at the target. c. Frequency of gaze shift: Number of times the gaze moved in each sequence of movement.				- CTRL (341.12 + 82.18 ms) = faster anticipatory gaze time than HCP (878.44 + 76.58 ms) - CTRL (250.17 + 115.90 ms) = shorter latency between gaze timing and hand initiation than HCP (764.81 + 107.99 ms) -CTRL (121.03 + 51.11 ms)= shorter latency between the gaze leaving the fixation target and starting to move toward the final target than HCP (-220.19 + 56.60 ms) - CTRL (189.03 + 45.66 ms)= quicker and shorter anticipatory gaze time than HCP (356.10 + 51.1 ms). - CTRL (591.66 + 606.79 ms)= shorter reaction time than HCP (2579.87 + 565.35 ms).
Surkar & al. (2018)	<u>CP subjects:</u> Children (n=13) Age: Mean = 6.8y +/- 2.9y Sex: 7M;6W			UMF	Visual anticipatory pattern / Time lag between appearance of a starting stimulus and first gaze at the stimulus	Visual	
	Periventricular leukomalacia= 2, Perinatal stroke= 9; Neonatal stroke= 1; Schizencephaly =1	MACS Level II: 2 Level III: 9 Level IV:2 Hemiplegia: 13 (Left= 8; Right= 5)					
	<u>Control subjects:</u> Typically developing children (n=15) Age: Mean= 5.8y +/- 1.1y Sex: 8M;7W		2- Action planning / a. Reaction Time: Time lag between the first gaze to the starting stimulus and hand initiation. 3- Action execution / a. Movement time: Time to				

11.3y; interquartile range
9.1-14.5y
Sex: 64.7%M; 35.3%W

2- Bimanual used during play
and ADL / Assisting Hand
Assessment [AHA]

Periventricular venous
infarction (PVI)

Control subjects:

Children and adolescents
(n=21) Age: Median=
12.6y; interquartile range
9.5-15.5y

Legend :

MACS : Manual Ability Classification System; Gross Motor Function Classification System; UMF: Unilateral motor function; BMF: Bilateral motor function; r: correlation coefficient; CP: cerebral palsy (Y: young; A: adult); y: years; M: man; W: woman; N/R: not reported; N/A: not applicable; ADL: activity of daily living; MCP: metacarpophalangeal; DH: dominant hand; NDH: non dominant hand; MA: manual ability; MP: subjective manual performance; MUUL: Melbourne Unilateral Upper Limb Assessment; JTTHF: Jebsen-Taylor Test of Hand Function; AHA: Assisting hand assessment; DVPT-2: Developmental Test of Visual Perception 2nd ed; MVPT-R: Motor-Free Visual Perceptual Test Revised ; PQ: Perceptual quotient; GVPQ: General visual perception quotient; MRPQ: motor reduced perception quotient; VMI: Visual motor integration; PVL: periventricular leukomalacia; DQ: developmental quotient; HCP: Hemiplegia cerebral palsy type; DCP: Diplegia cerebral palsy type; CST: corticospinal tract; SP: spastic; ATH: athetoid; SHUEE: Shriners Hospitals Upper Extremity Evaluation; TVPS-3: Test of Visual Perceptual Skills, 3rd edition; AMPS: Assessment of Motor and Process Skills; mm: millimeters; AIS: Arterial ischemic stroke; PVI: periventricular venous infarction; RL: Response latency; IDE: Initial direction error; PSR: Peak speed ratio; CTRL: control; FGHT: Functional Hand GripTest; WeeFIM: Functional Independence Measure for Children; ROM: range of motion; CSC: Corticosubcortical; ms : milliseconds; MT: movement time; AF: axial force; D: dysfluency; cm: centimeter; LD: lateral deviation

Table S3: Assessment of study quality by an appraisal quality tool (Kmet d & al., 2004)

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Study	Q1	Q2	Q3	Q4	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Total	%	Quality
Alves-Pinto & al. (2017)	2	2	1	2	2	1	2	2	1	2	2	19	86	High
Arnould & al. (2007)	2	2	1	2	2	2	2	2	2	2	2	21	95	Very high
Arnould & al. (2014)	2	1	1	2	1	2	1	1	2	2	2	17	77	Moderate
Auld & al. (2012)	2	2	2	1	2	2	2	1	1	2	2	19	86	High
Bleyenfeult & al. (2011)	2	1	1	2	1	1	2	0	0	2	2	14	63	Low
Bumin & al. (2010)	2	1	2	1	2	2	1	2	1	2	2	18	81	High
Burner & al. (2006)	2	2	1	2	2	2	2	2	1	2	2	20	90	Very high
Cioni & al. (2000)	2	2	2	1	1	2	2	0	1	2	2	17	77	Moderate
Cooper & al. (1995)	2	2	1	1	1	1	1	2	1	2	2	16	72	Moderate
De Campos & al. (2014)	2	1	1	2	2	1	2	1	2	2	2	18	81	High
Duque & al. (2003)	2	1	1	2	2	2	2	0	2	2	2	18	81	High
Eliasson & al. (1995)	2	1	1	0	1	1	2	1	2	2	2	15	68	Low
Gordon & al. (2006)	2	1	1	2	1	2	2	1	2	2	2	18	81	High
Gordon & al. (1999)	2	1	2	0	1	2	2	0	2	2	2	15	68	Moderate
Guedin & al (2018)	2	1	2	2	1	2	0	2	2	2	2	18	81	High
Gupta & al. (2017)	2	1	1	2	1	2	2	1	1	2	2	17	77	Moderate
Guzzetta & al. (2007)	2	1	1	2	1	1	1	0	2	2	2	15	68	Low
James & al. (2017)	2	1	1	0	2	2	1	2	1	2	2	16	72	Moderate
James & al (2015)	2	2	2	2	1	2	1	1	1	2	2	18	81	High
Kinnucan & al. (2010)	2	1	1	2	1	2	1	0	1	1	2	14	63	Low
Klingels & al. (2012)	2	1	1	2	2	2	2	2	2	2	2	20	90	Very high
Krumlinde-Sundholm	2	1	2	1	1	2	1	1	2	2	2	17	77	Moderate

& al. (2002)															
Kuczynski & al. (2016)	2	1	2	2	2	2	2	2	2	2	2	21	95	Very high	
Kurtaran & al. (2015)	1	1	1	0	1	2	1	2	1	1	2	13	59	Very low	
Law & al. (2008)	1	1	2	1	1	2	1	0	1	1	2	13	59	Very low	
O'Malley & al. (1977)	1	2	1	1	1	2	0	0	1	1	2	12	54	Very low	
Robert & al. (2013)	2	2	2	2	1	2	2	1	1	2	2	19	86	High	
Russo & al. (2019)	2	2	2	2	1	2	2	1	1	2	2	20	90	Very high	
Sakzewski & al. (2010)	2	2	0	2	2	2	2	1	2	2	2	19	86	High	
Simon- Martinez & al. (2018)	2	1	2	2	2	2	2	1	1	2	2	19	86	High	
Surkar & al. (2018)	2	1	2	2	2	1	2	2	1	2	2	19	86	High	
Van Roon & al. (2005)	2	1	1	2	2	1	2	2	1	2	2	18	81	High	
Woodward & al. (2019)	2	1	2	2	2	2	2	2	1	2	2	20	90	Very high	

Legend: Design requirement: Q1: Question/objective sufficiently described?; Q2: Study design evident and appropriate?; Q3: Method of subject/comparison group selection or source of information/input variables described and appropriate?; Q4: Subject (and comparison group, if applicable) characteristics sufficiently described?; Q8: Outcome and (if applicable) exposure measure(s) well defined and robust to measurement / misclassification bias? Means of assessment reported?; Q9: Sample size appropriate?; Q10: Analytic methods described/justified and appropriate?; Q11: Some estimate of variance is reported for the main results?; Q12: Controlled for confounding?; Q13: Results reported in sufficient detail?; Q14: Conclusions supported by the results?

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