# THE DEVELOPMENTAL COORDINATION DISORDER QUESTIONNAIRE 2007® (DCDQ'07)

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 Wilson, B.N., Crawford, S.G., Green, D., Roberts, G., Aylott, A., & Kaplan, B. (2009).
Psychometric Properties of the Revised Developmental Coordination Disorder Questionnaire. *Physical & Occupational Therapy in Pediatrics*, 29(2):182-202.

<b>COORDINATION QUESTIONNAIRE</b>	(REVISED 2007)	Year	Mon	Day
Name of Child:	– Today's Date:			
Person completing Questionnaire:	_ Child's Birth:			
Relationship to child:	Child's Age:			

Most of the motor skills that this questionnaire asks about are things that your child does with his or her hands, or when moving.

A child's coordination may improve each year as they grow and develop. For this reason, it will be easier for you to answer the questions if you think about other children that you know who <u>are the same age as your child</u>.

Please compare the degree of coordination your child has with other children of the same age when answering the questions.

Circle the <u>one</u> number that best describes your child. If you change your answer and want to circle another number, please <u>circle the correct response twice</u>.

	Not at all like your child 1	A bit like your child 2	Moderately like your child 3	Quite a bit like your child 4	Extremely like your child 5
1.	Your child throws a ball i	n a controlled and a	accurate fashion.		
	1	2	3	4	5
2.	Your child <i>catches</i> a smameters).	all <i>ball</i> (e.g., tennis	s ball size) thrown	from a distance of	6 to 8 feet (1.8 to 2.4
	1	2	3	4	5
3.	Your child hits an approa	ching ball or birdie	with a bat or racque	et accurately.	
	1	2	3	4	5
4.	Your child jumps easily o	ver obstacles found	in garden or play e	nvironment.	
	1	2	3	4	5
5.	Your child <i>runs</i> as fast an	d in a <i>similar</i> way t	o other children of t	he same gender and	l age.
	1	2	3	4	5
6.	If your child has a <i>plan</i> effectively complete the equipment, building a hou	task (e.g., buildi	ng a cardboard or	cushion "fort," n	
	1	2	3	4	5 (OVER)

	Not at all like your child	A bit like your child	Moderately like your child	Quite a bit like your child	Extremely like your child
	1	2	3	4	5
7.	Your child's printing or <i>w</i> the class.	<i>riting</i> or drawing ir	n class is <i>fast</i> enoug	h to keep up with th	e rest of the children in
	1	2	3	4	5
8.	Your child's printing or <i>w</i> is not yet printing, he or recognize.				
	1	2	3	4	5
9.	Your child uses appropria tightness of grasp on the p				excessive pressure or
	1	2	3	4	5
10.	Your child <i>cuts</i> out picture	es and <i>shapes</i> accur	ately and easily.		
	1	2	3	4	5
11.	Your child is interested in	and likes participat	ing in sports or act	ive games requiring	good motor skills.
	1	2	3	4	5
12.	Your child learns <i>new mot</i> or time than other childrer			g) easily and does no	ot require more practice
	1	2	3	4	5
13.	Your child is quick and co	mpetent in tidying	up, putting on shoe	s, tying shoes, dressi	ng, etc.
	1	2	3	4	5
14.	Your child would <i>never</i> be clumsy that he or she mig				
	1	2	3	4	5
15.	Your child does <i>not fatigu</i> periods.	ue easily or appear	to slouch and "fall	out" of the chair if	required to sit for long
	1	2	3	4	5
					Thank you.

#### COORDINATION QUESTIONNAIRE (DCDQ'07): SCORE SHEET

Name:			Date:	
Birth Date:			Age:	
	Control During Movement	Fine Motor/ Handwriting	General Coordination	
1. Throws ball				
2. Catches ball				
3. Hits ball/birdie				
4. Jumps over				
5. Runs				
6. Plans activity				
7. Writing fast				
8. Writing legibly				
9. Effort and pressure				
10. Cuts				
11. Likes sports				
12. Learning new skills				
13. Quick and competent				
14. "Bull in shop"				
15. Does not fatigue				
TOTAL	/ <b>30</b> Control during Movement	+ / 20 Fine Motor/ Handwriting	+ / 25 = _ General Coordination	/ <u>-</u> TOTAL
For Children Ages 5 years15-4647-75probably not	DCD or suspect DO			
For Children Ages 8 years15-55indication of56-75probably not	DCD or suspect DO			
For Children Ages 10 years15-57indication of58-75probably not	DCD or suspect DO			
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# Computing the Chronological Age

Enter the date that the DCDQ was completed and the child's Date of Birth (D.O.B.) on the first page of the questionnaire. Compute the chronological age by subtracting (first) the days, then the month and finally the year of birth. For example, if the questionnaire was completed on March 21, 2007, and the child was born on February 2, 2000, the child's chronological age would be calculated as shown in the first table:

	Yr	Mon	Day
DCDQ completion	2007	03	21
Child's D.O.B.	2000	02	02
Chronological age	7 yrs	1 mon	19 day

	Year	Month	Day
DCDQ completion	<del>2007</del> 2006	14 02 03	51 <del>21</del>
Child's D.O.B.	2000	06	28
Chronological age	6 years	8 month	23 days

If the day of the month in which the child was born is larger than the day of the month of questionnaire completion, add 30 days to the day of testing and subtract one month from the month of testing. Similarly, if necessary, a month of testing can be borrowed by adding 12 months to the month of testing and subtracting one year from the testing year, as shown above in the table on the right.

#### **Computing a Total Score**

<u>Re-enter</u> the numbers circled for all items of the questionnaire onto the Score Sheet (4<sup>th</sup> page).

Total each column to compute the 3 <u>Factor Scores</u>, and add all Factor Scores to compute a <u>Total Score</u>. *Double check your addition*.

## Interpretation of Scores on the DCDQ

Using the child's chronological age at the time the questionnaire was completed, find the appropriate age grouping on the left column of the table below. Scan across that row to find the range of scores which the child's score falls within. This range will indicate whether the child's score is an "Indication of, or Suspect for, DCD", or "Probably not DCD".

Age Group	Indication of, or Suspect for, DCD	Probably not DCD
5 years <i>to</i> 7 years 11 months	15 - 46	47 - 75
8 years 0 months <i>to</i> 9 years 11 months	15 - 55	56 - 75
10 years 0 months <i>to</i> 15 years	15 - 57	58 - 75

## **Reporting of DCDQ`07 results**

As outlined above, the DCDQ cannot be used alone to identify DCD. When using the questionnaire in a verbal or written report about a child, the terms ``indication of possible DCD``, ``suspect for DCD``, or ``probably not DCD`` should be used, as this test alone cannot be used to diagnose DCD.

## Sensitivity and Specificity

It is sometimes desirable, especially when a diagnosis is not clear, to report the sensitivity and specificity of the test scores. The most accurate predictive values of the *DCDQ*`07 are reported in the table below according to the different age ranges. If overall values for the questionnaire are required, however, the overall sensitivity is 84.6% and the specificity is 70.8%.

Age Group	Sensitivity and Specificity
5 years <i>to</i>	Sensitivity=75.0%
7 years 11 months	Specificity=71.4%
8 years 0 months <i>to</i>	Sensitivity=88.6%
9 years 11 months	Specificity=66.7%
10 years 0 months <i>to</i>	Sensitivity=88.5%
15 years	Specificity=75.6%

The purpose of a screening instrument is to identify whether a child has a particular condition. Rarely is a screening tool alone 100% accurate in identifying all children with a condition while at the same time not falsely identifying any children who do not. When evaluating a screening tool such as the *DCDQ* '07, the degree of accuracy in identifying children with possible DCD (sensitivity) must be compared to the accuracy in correctly identifying children who do not have the condition (specificity). This "trade off" is common to all diagnostic tests because when one of these predictive values increases, the other decreases. By design, the *DCDQ*'07 is most accurate in identifying children who may have DCD. It may identify children who do not have the condition, but further motor testing should reveal whether DCD is indeed present.

#### References

- Wilson BN, Kaplan BJ, Crawford SG, Campbell A, Dewey D. (2000) Reliability and validity of a parent questionnaire on childhood motor skills. *Am J Occup Ther* 54(5): 484-493.
- American Psychiatric Association (2000) DSM-IV-TR. Diagnostic and Statistical Manual of Mental Disorders, 4<sup>th</sup> Ed. text revision. American Psychiatric Association, Washington, DC, USA.
- Wilson, B.N., Crawford, S.G., Green, D., Roberts, G., Aylott, A., & Kaplan, B. (2009). Psychometric Properties of the Revised Developmental Coordination Disorder Questionnaire. *Physical & Occupational Therapy in Pediatrics*, 29(2):182-202.