

Supplementary Online Content

Andersson O, Lindquist B, Lindgren M, Stjernqvist K, Domellöf M, Hellström-Westas L. Effect of delayed cord clamping on neurodevelopment at 4 years of age: a randomized clinical trial. *JAMA Pediatrics*. Published online May 26, 2015. doi:10.1001/jamapediatrics.2015.0358.

eTable 1. Neurodevelopment in 4-Year-Old Term-Born Boys Who Were Randomized at Birth to Delayed (≥ 180 s After Delivery) or Early (≤ 10 s) Umbilical Cord Clamping

eTable 2. Proportion of 4-Year-Old Boys With Neurodevelopmental Test Scores Below Cut-Off Levels, as Specified in the Text

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This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. Neurodevelopment in 4-year-old term-born boys who were randomized at birth to delayed (≥ 180 s after delivery) or early (≤ 10 s) umbilical cord clamping

		Cord clamping				Unadjusted		Adjusted ^a		
		Delayed	n	Early	n	Mean Difference (95% CI)	<i>P</i> value ^b	Mean Difference (95% CI)	<i>P</i> value ^c	
WPPSI-III, mean (SD)										
	Processing Speed Quotient	99.5 (7.0)	51	95.2 (10.1)	48	4.3 (0.8 to 7.7)	.02	4.2 (0.8 to 7.6)	.02	
Movement ABC, mean (SD)										
	Drawing Bicycle trail	9.1 (1.6)	56	8.4 (1.9)	52	0.7 (>0.0 to 1.4)	.04	0.8 (0.1 to 1.5)	.03	
ASQ, mean (SD)										
	Fine motor	51.2 (8.9)	56	47.1 (10.7)	55	4.1 (0.4 to 7.8)	.03	4.7 (1.0 to 8.4)	.01	
	Personal-social	54.8 (8.0)	57	50.4 (9.2)	56	4.4 (1.2 to 7.7)	.007	4.9 (1.6 to 8.3)	.004	

^aAdjusted for mothers educational level, fathers educational level and age at testing. ^b*P* value by Student's *T* test. ^c*P* value by ANCOVA. Abbreviations: WPPSI-III, Wechsler Preschool and Primary Scale of Intelligence (3rd ed.); Movement ABC, Movement Assessment Battery for Children (2nd ed.); ASQ, Ages & Stages Questionnaire (3rd ed.);

eTable 2. Proportion of 4-Year-Old Boys With Neurodevelopmental Test Scores Below Cut-Off Levels, as Specified in the Text

	Cord clamping				Unadjusted		Adjusted ^b	
	Delayed	n	Early	n	Odds ratio (95% CI)	P Value	Odds ratio (95% CI)	P Value
WPPSI-III, No. (%)								
Processing Speed Quotient < 85	1 (2.0)	51	6 (12.5)	48	0.1 (0.0 to 1.2)	.07	0.2 (0.0 to 1.1)	.06
Movement ABC, No. (%)								
Manual dexterity < 7 (15th percentile)	15 (26.8)	56	22 (42.3)	52	0.5 (0.2 to 1.1)	.09	0.4 (0.2 to 1.1)	.07
Drawing Bicycle trail < 7 (15th percentile)	2 (3.6)	56	12 (23.1)	52	0.1 (0.0 to 0.6)	.008	0.1 (0.0 to 0.6)	.008
ASQ, No. (%)								
Fine motor < 36.7	5 (8.9)	56	13 (23.6)	55	0.3 (0.1 to <1.0)	.04	0.2 (0.1 to 0.9)	.03

Analyses by logistic regression. ^aThe children were born at term and were randomized to delayed (≥ 180 s after delivery) or early (≤ 10 s) umbilical cord clamping. ^bAdjusted for mothers educational level, fathers educational level and age at testing. Abbreviations: WPPSI-III, Wechsler Preschool and Primary Scale of Intelligence (3rd ed.); Movement ABC, Movement Assessment Battery for Children (2nd ed.); ASQ, Ages & Stages Questionnaire (3rd ed.). The children were born at term and were randomized to delayed (≥ 180 s after delivery) or early (≤ 10 s) umbilical cord clamping. Data are numbers

eTable 3. Baseline and Background Characteristics of Term-Born Children Included in Randomized Trial on Delayed Versus Early Cord Clamping

		Participating	n	Not participating	n	P
Maternal data						
	Age, years	31.6 (4.3)	263	30.4 (4.8)	119	.01
	Weight, kg	67.3 (12.1)	260	66.4 (12.1)	119	
	Overweight, BMI>25	68 (38.2%)	225	29 (28.4%)	102	
	Hemoglobin at first antenatal visit, g/dL	12.9 (1.0)	257	12.7 (1.0)	117	
	Parity (including newborn child)	1.7 (0.8)	263	1.8 (0.9)	119	
Newborn data						
	Male, No. (%)	117 (44.5%)	263	62 (51.7%)	119	
	Gestational age, weeks	40.1 (1.0)	263	40.0 (1.1)	119	
	Apgar score 1 minute	8.8 (0.9)	263	8.8 (0.9)	119	
	Apgar score 5 minutes	9.8 (0.6)	263	9.8 (0.7)	119	
	No (%) with Apgar score 7–10 at 1 minute	256 (97.3%)	263	113 (95.0%)	119	
	Birth weight, kg	3.58 (0.50)	263	3.59 (0.41)	119	
	Birth length, cm	50.7 (2.0)	261	51.1 (1.7)	119	
	Birth head circumference, cm	34.7 (1.4)	262	35.0 (1.3)	122	.03
Umbilical blood sample						
	pH	7.26 (0.08)	234	7.27 (0.08)	110	
	Base deficit	4.9 (3.6)	232	4.4 (3.8)	109	
	Haemoglobin, g/dL	16.1 (1.7)	231	16.0 (1.7)	97	
	Mean Cell Volume, fL	105 (5)	231	105 (5)	97	
	Ferritin, ng/mL	228 (151)	255	213 (132)	115	
	Transferrin saturation, %	53.9 (17.0)	247	53.1 (16.5)	108	
	Transferrin receptors, mg/L	5.29 (1.90)	262	5.12 (1.67)	119	
One hour after birth						
	Respiratory symptoms ^a , No. (%)	20 (8.2%)	244	9 (7.9%)	114	
	Breastfed, No. (%)	179 (72.5%)	247	86 (76.8%)	112	
Data at 48 months						
	Weight, kg	17.2 (2.1)	256	17.1 (2.3)	48	
	Length, cm	104 (4)	256	104 (4)	47	

Data are means (SD) or No. (%). P by Students T test. ^a Respiratory rate >60 breaths/minute, presence of nostril flaring, grunting and/or intercostal retractions. The table shows data for the children who participated in the follow-up at four years of age (present study population), compared to the children who had withdrawn, and who did not participate in the follow-up.