

Outcome	Study	N	Intervention/exposure	n/N	Control group	n/N	OR or HR (95% CI)	Comments	
NTD	Carmichael 2003 ¹³³ Case-control study	1077	Infants/fetuses diagnosed with NTD		Infants/fetuses with no defects			Diet: different types (during first trimester of pregnancy)	
			Diet to lose weight	29/538	Diet to lose weight	14/539	OR 2.1 (1.1 to 4.1) ^a		
			Fasting diet	17/538	Fasting diet	3/539	OR 5.8 (1.7 to 20.0) ^a		
			Other special diet	17/538	Other special diet	3/539	OR 1.0 (0.3 to 3.1) ^a		
			Eating disorder	18/538	Eating disorder	11/539	OR 1.7 (0.8 to 3.6) ^a		
			Any special diet or eating disorder	61/538	Any special diet or eating disorder	31/539	OR 2.1 (1.3 to 3.3) ^a		
			Binge eating (self-reported dieting behaviour for any time during 3 months before pregnancy or during pregnancy)	36/538	Binge eating (self-reported dieting behaviour for any time during 3 months before pregnancy or during pregnancy)	44/539	OR 0.8 (0.5 to 1.3) ^a		
NTD	Yazdy 2010 ¹⁴⁷ Case-control study	1394	Infants with NTD		Infants with no major congenital anomalies				
			Glycemic index low < 60	522/698	Glycemic index low < 60	594/696	OR 2.0 (1.5 to 2.6) ^a		
			Glycemic index high ≥ 60	176/698	Glycemic index high ≥ 60	102/696	OR 1.5 (1.1 to 2.0) ^b		
			Glycemic load low < 205	668/698	Glycemic load low < 205	683/696	OR 2.4 (1.2 to 4.6) ^a		
			Glycemic load high ≥ 205	30/698	Glycemic load high ≥ 205	13/696	OR 1.8 (0.8 to 4.0) ^b		
			Subgroup BMI ≥ 30 kg/m ² (100)	Glycemic index low < 60	23/36	Glycemic index low < 60	53/64	OR 2.7 (1.1 to 7.0) ^a	
				Glycemic index high ≥ 60	13/36	Glycemic index high ≥ 60	11/64	OR 2.0 (0.6 to 7.3) ^b	
			Subgroup BMI < 30 kg/m ² (816)	Glycemic load low < 205	32/36	Glycemic load low < 205	59/64	OR 1.5 (0.4 to 5.9) ^a	
				Glycemic load high ≥ 205	4/36	Glycemic load high ≥ 205	5/64	OR 0.9 (0.2 to 4.7) ^b	
				Glycemic index low < 60	138/185	Glycemic index low < 60	540/631	OR 2.0 (1.4 to 3.0) ^a	
				Glycemic index high ≥ 60	47/185	Glycemic index high ≥ 60	91/631	OR 1.7 (1.1 to 2.7) ^b	
				Glycemic load low < 205	177/185	Glycemic load low < 205	623/631	OR 3.8 (1.4 to 10.5) ^a	
				Glycemic load high ≥ 205	8/185	Glycemic load high ≥ 205	8/631	OR 3.3 (1.0 to 10.6) ^b	
			Cord abnormalities	Magann 2002 ⁷⁷ Cohort study	750	Exercise: different levels		No exercise	18/217
Light	15/222						OR 0.80 (0.39 to 1.63) ^a		
Moderate	7/73						OR 1.17 (0.47 to 2.93) ^a		
Heavy	9/238						OR 0.43 (0.19 to 0.99) ^a		

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Coronary heart disease (adult)	Roseboom 2000 ¹³⁸ Cohort study	736	Diet: famine		Unexposed to famine:			
			Exposed in late gestation	3/120	Conceived after	6/232	Exposed late gestation vs not exposed prenatally: OR 0.8 (0.2 to 2.8)	
			Exposed in mid-gestation	1/108	Born before	8/208	Exposed mid-gestation: OR 3.0 (0.0 to 2.2)	
	de Rooij 2006 ¹³⁴ Cohort study	694	Diet: famine		Unexposed to famine:		Exposed early: OR 3.0 (1.1 to 8.0)	
			Exposed in late gestation	7/120	Conceived after	14/197	Exposed generally vs not exposed prenatally: OR 0.79 (0.42 to 1.49) ^a	
			Exposed in mid-gestation	4/100	Born before	15/215	Exposed late: OR 0.82 (0.35 to 1.92) ^a	
Metabolic syndrome (adult)	de Rooij 2007 ⁶⁸ Cohort study	783	Diet: famine		Unexposed to famine:		Exposed mid: OR 0.55 (0.19 to 1.60) ^a	
			Exposed in late gestation	54/141	Conceived after	64/214	Exposed early: OR 1.16 (0.43 to 3.11) ^a	
			Exposed in mid-gestation	34/116	Born before	71/238	General: OR 1.2 (0.9 to 1.7)	
	de Rooij 2006 ¹³⁴ Cohort study	694	Diet: famine		Unexposed to famine:		Exposed late: OR 1.4 (0.9 to 2.1)	Metabolic syndrome definition according to NCEP (National Cholesterol Educational Programme)
			Exposed in late gestation	40/120	Conceived after	59/197	Exposed mid: OR not available	
			Exposed in mid-gestation	28/100	Born before	65/215	Exposed early: OR 1.4 (0.6 to 1.5) ^a	
	Exposed in early gestation	22/62			Exposed generally vs not exposed prenatally: OR 1.09 (0.78 to 1.51) ^a			
	Exposed in late gestation				Exposed late: OR 1.16 (0.75 to 1.79) ^a			
	Exposed in early gestation				Exposed mid: OR 0.90 (0.56 to 1.47) ^a			
					Exposed early: OR 1.28 (0.73 to 2.24) ^a			

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Hypertension (adult)	Lumey 2009 ⁷⁶ Cohort study	638	Diet: famine	224/344	Unexposed to famine (hospital control subjects)	168/294	OR 1.40 (1.02 to 1.93) ^a	<i>p</i> = 0.03 Systolic blood pressure ≥ 140 mmHg or diastolic blood pressure ≥ 90 mmHg or prior diagnosis with medication
Breast cancer	Painter 2006 ¹³⁵ Cohort study	475	Diet: famine		Unexposed to famine:		HR (all exposed) 2.6 (0.9 to 7.7) ^a	<i>p</i> < 0.005 (Cox regression)
			Exposed in late gestation	3/82	Conceived after	1/126	HR 2.6 (0.9 to 7.7) ^b	Adjusted for maternal cancer status
			Exposed in mid-gestation	3/77	Born before	4/144	HR 2.5 (0.8 to 7.4) ^b	Adjusted for birthweight
			Exposed in early gestation	4/46			HR 4.0 (1.1 to 14.5) ^b	Adjusted for BMI
Cleft lip or palate or both	Vujkovic 2007 ¹⁴² Case-control study	381	Diet: Western vs prudent Western (by tertile)		Diet: Western vs prudent Western (by tertile)		T1: ref. T2: OR 1.3 (0.8 to 2.2) ^a T3: OR 1.9 (1.2 to 3.1) ^a	Adjusted for periconception maternal folic acid intake and/or multivitamin intake
			T1 (127)	58/203	T1 (127)	69/178	T2: OR 1.2 (0.7 to 2.1) ^b T3: OR 1.7 (1.0 to 3.0) ^b	The Western diet case group consisted of 12 cleft palate-only mothers in T1, 7 mothers in T2 and 13 mothers in T3
			T2 (127)	67/203	T2 (127)	60/178	T2: OR 1.2 (0.8 to 2.1) ^b T3: OR 1.8 (1.0 to 2.9) ^b	In the prudent dietary pattern, 6 cases were present in T1, 12 cases in T2 and 14 cases in T3
			T3 (127) Prudent (by tertile)	78/203	T3 (127) Prudent (by tertile)	49/178	T1: ref. T2: OR 0.9 (0.5 to 1.4) ^a T3: OR 1.1 (0.7 to 1.8) ^a	Tertiles were calculated by summing of intake food groups weighted by their factor loadings. The factor score for each pattern was calculated by adding up the intakes of the food groups weighted by the factor loadings
			T1 (127)	68/203	T1 (127)	59/178	T2: OR 0.8 (0.5 to 1.4) ^b T3: OR 1.3 (0.8 to 1.8) ^b	
			T2 (127)	64/203	T2 (127)	63/178	T2: OR 0.7 (0.5 to 1.2) ^b T3: OR 1.0 (0.6 to 1.7) ^b	
			T3 (127)	71/203	T3 (127)	56/178	T1: ref. T2: OR 1.3 (0.8 to 2.2) ^a T3: OR 1.9 (1.2 to 3.1) ^a	T1: lowest tertile of the daily pattern scores; T2: middle tertile of the daily pattern scores; T3: highest tertile of the daily pattern scores

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Antisocial personality disorder	Neugebauer 1999 ⁸⁰ Cohort study	76,630	Diet: famine western Holland		Unexposed to famine	50/45,007		Adjusted for social class (manual laborers including farmers and non-manual laborers) The comparison between the odds of antisocial personality disorder associated with moderate vs severe exposure is statistically significant; the comparison between the moderately exposed and unexposed is not		
			By trimester							
			First, second or third	26/14,310			OR 1.6 (1.02 to 2.6)			
			First and/or second	20/9252			OR 2.0 (1.2 to 3.3) ^b			
			First only	6/2443			OR 2.0 (1.2 to 3.5)			
			First and second only	6/2223			OR 2.5 (1.5 to 4.2) ^b			
			Second only	9/4586			OR 2.2 (0.95 to 5.0)			
			Third only	5/5058			OR 2.9 (1.2 to 6.7) ^b			
			By severity				OR 2.4 (1.04 to 5.7)			
			Severely exposed	26/14,310			OR 3.0 (1.3 to 7.0) ^b			
Dyslipidaemia (adult)	Lumey 2009 ⁷⁶ Cohort study	638	Diet: famine	96/344	Unexposed to famine (hospital control subjects)	85/294	OR 1.8 (0.9 to 3.6)	<i>p</i> =0.39 Ratio of total cholesterol to high-density lipoprotein cholesterol > 5.0 or use of cholesterol-lowering medication		
			Moderately exposed	10/9615			OR 2.1 (1.03 to 4.4) ^b			
							OR 0.9 (0.4 to 2.2)			
							OR 1.1 (0.4 to 2.7) ^b			
Obesity (adults)	Ravelli 1976 ¹³⁶ Cohort study	307,700	Diet: famine (by trimester)		Unexposed to famine (by trimester)			Obesity was defined as a value of weight for height ≥ 120% of the standard <i>p</i> <0.005 Not significant <i>p</i> <0.0005 Not significant		
			Third	51/6200			Third		148/11,200	OR 0.62 (0.45 to 0.85) ^a
			Second and third	126/7500			Second and third		286/17,600	OR 1.03 (0.84 to 1.28) ^a
			First and second	119/4300			First and second		230/15,900	OR 1.94 (1.55 to 2.43) ^a
			First	41/2500			First		162/10,500	OR 1.06 (0.75 to 1.50) ^a

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IGT or type 2 diabetes mellitus (adults)	Stanner 1997 ¹⁴¹ Cohort study	357	Diet: famine		Unexposed to famine			Diabetes mellitus and IGT were classified according to World Health Organization criteria
			Known diabetes	4/169	Known diabetes	7/188	OR 0.63 (0.18 to 2.18) ^a	
			Newly diagnosed diabetes	3/169	Newly diagnosed diabetes	5/188	OR 0.66 (0.16 to 2.81) ^a	
	IGT	16/169	IGT	16/188	OR 1.12 (0.54 to 2.32) ^a			
	Ravelli 1998 ¹³⁷ Cohort study	702	Diet: famine		Unexposed to famine		General OR 1.19 (0.79 to 1.79) ^a	
			Exposed in late gestation	24/116	Conceived after	33/221		
			Exposed in mid-gestation	14/100	Born before	30/202		
			Exposed in early gestation	10/63				
Artificial rupture of membranes	Clapp 1990 ⁶⁴ Cohort study	131	Physical activity: exercise regularly at or above 50% of preconceptional level throughout pregnancy	20/87	Discontinued regular exercise regimen before the end of the first trimester	22/44	OR 0.33 (0.14 to 0.65) ^a	p=0.01
Stimulation for abnormal labour pattern	Clapp 1990 ⁶⁴ Cohort study	131	Physical activity: exercise regularly at or above 50% of preconceptional level throughout pregnancy	11/87	Discontinued regular exercise regimen before the end of the first trimester	9/44	OR 0.56 (0.21 to 1.48) ^a	
Meconium in fluid	Clapp 1990 ⁶⁴ Cohort study	131	Physical activity: exercise regularly at or above 50% of preconceptional level throughout pregnancy	12/87	Discontinued regular exercise regimen before the end of the first trimester	11/44	OR 0.48 (0.19 to 1.20) ^a	p=0.01
Abnormal heart rate	Clapp 1990 ⁶⁴ Cohort study	131	Physical activity: exercise regularly at or above 50% of preconceptional level throughout pregnancy	12/87	Discontinued regular exercise regimen before the end of the first trimester	11/44	OR 0.48 (0.19 to 1.20) ^a	
Nuchal cord	Clapp 1990 ⁶⁴ Cohort study	131	Physical activity: exercise regularly at or above 50% of preconceptional level throughout pregnancy	23/87	Discontinued regular exercise regimen before the end of the first trimester	24/44	OR 0.30 (0.14 to 0.64) ^a	p=0.01
Threatened abortion	Dale 1982 ⁶⁷ Cohort study	33	Physical activity: running	1/21	Not active women: not participating in any type of exercise programme	1/11	OR 0.50 (0.03 to 8.85) ^a	

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Chorioamnionitis secondary to prolonged rupture of membranes	Dale 1982 ⁶⁷ Cohort study	33	Physical activity: running	0/21	Not active women: not participating in any type of exercise programme	1/11	OR 0.16 (0.01 to 4.35) ^a	
Failure to progress with oxytocin augmentation	Dale 1982 ⁶⁷ Cohort study	33	Physical activity: running	3/21	Not active women: not participating in any type of exercise programme	3/11	OR 0.44 (0.07 to 2.70) ^a	
Anaemia (mother)	Dale 1982 ⁶⁷ Cohort study	33	Physical activity: running	3/21	Not active women: not participating in any type of exercise programme	2/11	OR 0.75 (0.11 to 5.30) ^a	
Anaemia	Magann 2002 ⁷⁷ Cohort study	750	Exercise: different levels		No exercise	n=217 12.91 ± 0.87		p=0.442
			Light	n=222 12.78 ± 0.94			OR -0.13 (-0.30 to 0.04) ^a	
			Moderate	n=73 12.98 ± 0.79			OR 0.07 (-0.15 to 0.29) ^a	
			Heavy	n=238 13.0 ± 2.19			OR 0.09 (-0.21 to 0.39) ^a	

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Asphyxia/ meconium staining/fetal distress	Dale 1982 ⁶⁷ Cohort study	33	Physical activity: running	0/21	Not active women: not participating in any type of exercise programme	4/11	OR 0.04 (0.00 to 0.81) ^a	
Sepsis	Dale 1982 ⁶⁷ Cohort study	33	Physical activity: running	0/21	Not active women: not participating in any type of exercise programme	1/11	OR 0.16 (0.01 to 4.35) ^a	

HR, hazard ratio; IGT, impaired glucose tolerance.

a Unadjusted value.

b Adjusted value.