Table D.1.g. Delivery complications and physical activity, pregnant and postpartum women

Black font is from original GRADE Evidence Profile from the systematic review (Davenport 2019 *(6)*) to support the 2019 Canadian Guideline for Physical Activity Throughout Pregnancy. One systematic review was included that addressed the relationship between physical activity and risk of caesarean delivery *(16)*.

Quality assessment							№ of participants		Effect		Quality	Importance
№ of studies **Review (AMSTAR 2 rating)**	**Study design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**exercise (acute or chronic)**	**no exercise or different frequency, intensity, duration, volume or type of**	**Relative (95% CI)**	**Absolute (95% CI)**		
Association between exercise-only interventions or prenatal exercise and **preterm/prelabour rupture of membranes**												
2 [a]	randomized trials	not serious [b]	serious [c]	not serious	serious [d]	none	3/99 (3.0%)	3/99 (3.0%)	**OR 1.01** (0.20 to 5.16)	**0 fewer per 1 000** (from 24 fewer to 109 more)	⊕⊕◯◯ LOW	CRITICAL
5 (pooled estimate of effect, n = 4; 1 study reported narratively)	cohort studies	serious [e]	not serious	not serious	serious [d]	none	79/747 (10.6%)	68/830 (8.2%)	**OR 1.13** (0.79 to 1.62)	**10 more per 1 000** (from 16 fewer to 44 more)	⊕◯◯◯ VERY LOW	CRITICAL
							Narrative Summary: No association between weekly minutes of exercise and risk of preterm rupture of membranes (n = 190, Putnam et al. 2013)					
Association between exercise-only interventions and **cesarean section**												
47 (pooled estimate of effect, n = 46; 1 study reported narratively)	randomized trials	not serious [f]	not serious	not serious	not serious	none	892/4006 (22.3%)	965/3994 (24.2%)	**OR 0.91** (0.79 to 1.05)	**17 fewer per 1 000** (from 9 more to 41 fewer)	⊕⊕⊕⊕ HIGH	CRITICAL
							Narrative Summary: The superiority exercise- only interventions by Kariminia et al. (2004) reported similar rates of caesarean section between the walking group (n=1255) and the pelvic rocking exercise group (n=1292).					

Du 2018 *(16)* Low 10 randomized trials	not serious	not serious	not serious	serious [d]	none	Among pregnant women with overweight or obesity, there was no significant difference in the incidence of **caesarean delivery** between physical activity intervention groups vs. standard antenatal care (RR = 1.02 [95% CI, 0.87 to 1.20]], 10 RCTs, n=982, I^2=0%).	⊕⊕⊕◯ MODERATE	CRITICAL

Quality assessment							№ of participants		Effect		Quality	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	exercise (acute or chronic)	no exercise or different frequency, intensity, duration, volume or type of exercise	Relative (95% CI)	Absolute (95% CI)		
Association between prenatal exercise and **caesarean section/instrumental delivery**												
2	cohort studies	serious [g]	not serious	not serious	not serious	none	14/77 (18.2%)	33/67 (49.3%)	**OR 0.19** (0.08 to 0.42)	**337 fewer per 1 000** (from 203 fewer to 420 fewer)	⊕◯◯◯ VERY LOW	CRITICAL
1	cross-sectional study	serious [g]	serious [h]	not serious	not serious [i]	none	355/1773 (20.0%)	406/1989 (20.4%)	**OR 0.98** (0.83 to 1.14)	**3 fewer per 1 000** (from 22 more to 29 fewer)	⊕◯◯◯ VERY LOW	CRITICAL
Association between exercise-only interventions and **diastasis recti**												
1	randomized trials	serious [j]	serious [h]	not serious	not serious [i]	none	Narrative Summary: The superiority trial by Banerjee et al. (2013) (n=50) indicated a protective effect of abdominal exercises on diastasis rectus abdominis measured at 3 days postpartum compared to routine antenatal exercise.				⊕⊕◯◯ LOW	CRITICAL
1	non-randomized intervention study	serious [k]	serious [h]	not serious	not serious [i]	none	1/8 (12.5%)	9/10 (90.0%)	OR 0.02 (0.00 to 0.30)	**747 fewer per 1 000** (from -- to 170 fewer)	⊕◯◯◯ VERY LOW	CRITICAL

Abbreviations: CI = confidence interval; MD = mean difference; OR = odds ratio

[a] One study reported no cases of preterm/prelabour rupture of membranes (not estimable result) and were not included in the pooled analysis.
[b] No serious risk of bias. Unclear risk of selection bias; unknown if allocation concealment was adequate.
[c] Serious inconsistency. Heterogeneity was not estimable.
[d] Serious imprecision. The 95% CI crossed the line of no effect, and was wide, such that interpretation of the data would be different if the true effect were at one end of the CI or the other.
[e] Serious risk of bias. High risk of performance bias (potentially flawed measurement of the exposure; unknown validity of physical activity measure). Reporting bias was an issue in one study (incomplete reporting of data such that it could not be included in the meta-analysis; results were reported narratively).
[f] No serious risk of bias. Unclear risk of selection bias; it was unknown if allocation concealment was adequate. Reporting bias was an issue in one study (incomplete reporting of data such that it could not be included in the meta-analysis; results were reported narratively).
[g] Serious risk of bias. High risk of performance bias (potentially flawed measurement of the exposure; unknown validity of retrospective physical activity measure).
[h] Serious inconsistency. Only one study was included.
[i] No serious imprecision; only one study but already downgraded for serious inconsistency for this reason.

[j] Serious risk of bias. High risk of performance and attrition bias. Unclear risk of selection bias; it was unknown if sequence generation and allocation concealment were adequate. Reporting bias was an issue in one study (incomplete reporting of data such that it could not be included in the meta-analysis; results were reported narratively).

[k] Serious risk of bias. High risk of performance bias.