

Comparison 1: Massage techniques compared with usual care (no massage)

Source: Smith CA, Levett KM, Collins CT, Dahlen HG, Ee CC, Suganuma M. Massage, reflexology and other manual methods for pain management in labour. Cochrane Database Syst Rev. 2018:CD009290 (in press).

No. of studies	Study design	Quality assessment					No. of participants		Effect		Certainty (GRADE)	Importance
		Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Massage	Usual care	Relative (95% CI)	Absolute (95% CI)		
Pain intensity - first stage of labour												
6	RCTs	serious ^a	not serious	not serious	not serious	none	180	182	-	SMD 0.81 lower (1.06 lower to 0.56 lower)	⊕⊕⊕○ MODERATE	critical
Pain intensity - second stage of labour												
2	RCTs	serious ^a	serious ^b	not serious	very serious ^c	none	62	62	-	SMD 0.98 lower (2.23 lower to 0.26 higher)	⊕○○○ VERY LOW	critical
Use of pharmacological pain relief												
4	RCTs	serious ^a	serious ^b	not serious	serious ^d	none	71/185 (38.4%)	104/183 (56.8%)	RR 0.81 (0.37-1.74)	108 fewer per 1000 (from 358 fewer to 421 more)	⊕○○○ VERY LOW	critical
Satisfaction with childbirth experience												
1	RCT	serious ^e	not serious	not serious	very serious ^c	none	30	30	-	MD 0.47 higher (0.13 lower to 1.07 higher)	⊕○○○ VERY LOW	critical
Satisfaction with childbirth experience												
1	RCT	serious ^e	not serious	not serious	serious ^f	none	19/30 (63.3%)	10/30 (33.3%)	RR 1.90 (1.07-3.38)	300 more per 1000 (from 23 more to 793 more)	⊕⊕○○ LOW	critical
Sense of control in labour												
1	RCT	not serious	not serious	not serious	serious ^g	none	72	52	-	MD 14.05 higher (3.77 higher to 24.33 higher)	⊕⊕⊕○ MODERATE	critical
Sense of control in labour (shortened Labour Agency Scale)												
1	RCT	serious ^e	not serious	not serious	serious ^g	none	28	28	-	MD 6.1 lower (11.68 lower to 0.52 lower)	⊕⊕○○ LOW	critical
Anxiety in labour												
1	RCT	serious ^e	not serious	not serious	serious ^g	none	30	30	-	MD 16.27 lower (27.03 lower to 5.51 lower)	⊕⊕○○ LOW	critical
Assisted vaginal birth												
4	RCTs	serious ^a	not serious	not serious	serious ^d	none	25/185 (13.5%)	35/183 (19.1%)	RR 0.71 (0.44-1.13)	55 fewer per 1000 (from 25 more to 107 fewer)	⊕⊕○○ LOW	critical

No. of studies	Study design	Quality assessment					No. of participants		Effect		Certainty (GRADE)	Importance
		Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Massage	Usual care	Relative (95% CI)	Absolute (95% CI)		
Caesarean delivery												
6	RCTs	serious ^a	not serious	not serious	serious ^d	none	37/258 (14.3%)	49/256 (19.1%)	RR 0.75 (0.51-1.09)	48 fewer per 1000 (from 17 more to 94 fewer)	⊕⊕○○ LOW	critical
Augmentation												
5	RCTs	serious ^a	serious ^b	not serious	serious ^d	none	69/235 (29.4%)	98/233 (42.1%)	RR 0.77 (0.46-1.29)	97 fewer per 1000 (from 122 more to 227 fewer)	⊕○○○ VERY LOW	critical
Length of labour												
6	RCTs	serious ^a	serious ^b	not serious	serious ^d	none	258	256	-	MD 20.64 higher (58.24 lower to 99.52 higher)	⊕○○○ VERY LOW	critical
Apgar < 7 at 5 minutes												
2	RCTs	not serious	not serious	not serious	very serious ^{d,f}	none	3/109 (2.8%)	4/106 (3.8%)	RR 0.72 (0.17-3.14)	11 fewer per 1000 (from 31 fewer to 81 more)	⊕⊕○○ LOW	critical
Admission to neonatal intensive care unit												
2	RCTs	not serious	not serious	not serious	very serious ^{d,g}	none	9/118 (7.6%)	12/113 (10.6%)	RR 0.71 (0.31-1.62)	31 fewer per 1000 (from 66 more to 73 fewer)	⊕⊕○○ LOW	critical
Resuscitation of newborn												
2	RCTs	not serious	not serious	not serious	serious ^g	serious ^h	12/118 (10.2%)	27/113 (23.9%)	RR 0.43 (0.23-0.79)	136 fewer per 1000 (from 50 fewer to 184 fewer)	⊕⊕○○ LOW	critical

CI: confidence interval; MD: mean difference; RCT: randomized controlled trial; RR: risk ratio; SMD: standardized mean difference.

^a Most of the pooled effect derived from studies with a moderate or high risk of bias but without a substantial proportion (i.e. with < 50%) from studies with a high risk of bias.

^b Severe unexplained heterogeneity.

^c Small sample size and wide confidence interval crossing the line of no effect.

^d Wide confidence interval crossing the line of no effect.

^e Effect derived from a single study with a moderate risk of bias.

^f Small sample size and few events.

^g Small sample size.

^h A difference in rates of caesarean section between the intervention and control groups of one of the trials could have biased this finding in favour of the intervention, particularly as the definition of resuscitation in the trial included suction with or without an oxygen mask.