Database: Ovid MEDLINE(R) and Epub Ahead of Print, In-Process, In-Data-Review & Other Non-Indexed Citations, Daily and Versions <1946 to November 17, 2023>
Search date: November 20, 2023

General search:

Line	Search	Results
1	((fetus or fetal or foetus or foetal) and heart and (monitor$ or tracing$)).ti.	797
2	Cardiotocography/ or *Heart Rate, Fetal/	4472
3	*Fetal Distress/ or Fetal Distress/di, dg	2317
4	*Electrocardiography/ or Arrhythmias, Cardiac/	128660
5	(Heart Rate/ or Heart Rate Determination/) and (Fetal Heart/ or Fetus/ or Fetal Monitoring/ or fetus.ti. or fetal.ti. or foetus.ti. or foetal.ti.)	3939
6	((fetus or fetal or foetus or foetal) adj5 (heart rate or tracing$)).ti,ab.	7954
7	Cardiotocogr$.ti. or (fetal heart rate monitor$ or fetal heart rate tracing$ or foetal heart rate monitor$ or foetal heart rate tracing$ or category II tracing$ or category III tracing$).ti,ab.	2377
8	Fetal Monitoring/ and (heart or tracing$).ti.	1189
9	fetal heart rate/ and (tracing$ or monitor$).ti,ab.	2028
10	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9	141882
11	(Auscultation/ or Heart Auscultation/) and intermittent$.ti,ab.	126
12	(intermittent$ adj auscultation).ti,ab.	142
13	11 or 12	197
14	Heart Rate, Fetal/ or Fetal Distress/ or Fetal Heart/ or Fetus/ or Fetal Monitoring/ or (fetus or fetal or foetus or foetal).ti,ab.	363442
15	13 and 14	136
16	10 or 15	141916
17	exp labor, obstetric/ or exp labor complications, obstetric/ or exp delivery, obstetric/ or exp parturition/	194095
18	(intrapart$ or intra-part$).mp. or (labor$ or labour$).ti.	146578
19	17 or 18	308657
20	16 and 19	6875
21	limit 20 to (english language and humans)	5248
22	limit 21 to yr="2003 -Current"	2472
23	*prenatal care/ or *prenatal diagnosis/ or *fetal movement/ or (antenatal surveillance or antepartum surveillance or stress test$ or nonstress test$ or kick count$ or non-stress test$).mp. or (antenatal or antepartum or prenatal).ti.	100144
24	22 not 23	2309

Question 2

Line	Search	Results
25	(tracing$ or "category i" or "category ii" or "category iii" or (categor* adj2 (i or ii or iii))).ti,ab.	52172
26	"National Institute of Child Health and Human Development (U.S.)"/ or ((NICHD or National Institute of Child Health) and Human Development).ti,ab.	1637
27	exp Tachycardia/ or Bradycardia/ or Fetal Distress/ or (baseline or variabilit$ or tachycard$ or bradycard$ or fluctuation$ or acceleration$ or deceleration$ or sinusoidal$ or indeterminat$ or abnormal or nonreassur$ or non-reassur$ or distress).ti,ab.	1892207
28	25 or 26 or 27	1940602
29	24 and 28	1514
30	(intervention$ or manage$).ti.	700183
31	exp Posture/ or Patient Positioning/ or (position adj2 chang$).ti,ab. or patient position$.ti,ab.	94503
32	Oxygen/ or Oxygen Inhalation Therapy/ or oxygen.ti. or (oxygen adj2 (administ$ or supplement$ or therap$ or inhal$ or manage$ or interven$)).ti,ab.	269025
33	Tocolysis/ or Tocolytic Agents/ or (amnioinfusion$ or tocoly$).ti,ab.	5063
34	Duration of Therapy/ or time factors/ or duration$.ti.	1259565
35	Cesarean Section/ or Cesarean Section, Repeat/ or Extraction, Obstetrical/ or Vacuum Extraction, Obstetrical/ or (cesarean$ or cesarian$ or caesarean$ or caesarian$ or c-section$ or operative vaginal deliver$).ti. or (deliver$ adj2 (operative$ or extraction$ or vacuum$ or forcep$)).ti.	61454
36	Resuscitation/ or resuscitat$.ti,ab.	84680
37	30 or 31 or 32 or 33 or 34 or 35 or 36	2395702
38	29 and 37	739
39	(cesarean$ or cesarian$ or caesarean$ or caesarian$ or c-section$ or operative vaginal deliver$ or operative deliver$).ti.	28807
40	24 and 39	243
41	unnecessary procedures/ or (rate$ or prevent$).ti.	585237
42	40 and 41	58
43	38 or 42	753
44	32 and intrauterine resuscitat$.ti,ab.	31
45	43 or 44	770
46	(induc$ not (cesarean$ or cesarian$ or caesarean$ or caesarian$ or c-section$ or operative vaginal deliver$ or operative deliver$)).ti.	1094927
47	45 not 46	727

Costs

Line	Search	Results
25	exp economics/ or exp economics, hospital/ or exp economics, medical/ or economics, nursing/ or economics, pharmaceutical/	667441
26	cost of illness/ or exp "costs and cost analysis"/ or "cost-benefit analysis"/ or exp "health care costs"/ or exp cost control/ or exp "fees and charges"/ or exp resource allocation/ or exp cost sharing/ or exp health expenditures/ or exp budgets/ or value of life/	316888
27	(cost or costs or economic$).ti.	188705

28	(pharmacoeconomic$ or pharmaco-economic$ or cost-effective$ or budget* or financ* or fee or fees or saving* or price* or pricing* or fund or funds or funding* or funded or ration or rations or rationing* or rationed).ti,ab.	600979
29	(economic$ adj analy$).ti,ab.	8572
30	(expenditure$ not energy).ti,ab.	37760
31	(value adj2 (money or monetary)).ti,ab.	3103
32	(resource$ adj allocat$).ti,ab.	13606
33	25 or 26 or 27 or 28 or 29 or 30 or 31 or 32	1175301
34	24 and 33	64

Database: Cochrane
Search date: November 17, 2023

ID	Search	Hits
#1	[mh "heart rate, fetal"] OR [mh "fetal distress"] OR [mh "fetal heart"] OR [mh fetus] OR [mh "fetal monitoring"] OR (fetus OR fetal OR foetus OR foetal):ti	5473
#2	[mh cardiotocography] OR [mh "heart rate"] OR [mh "heart rate determination"] OR (cardiotocogr* OR monitor* OR heart rate OR tracing*):ti	39351
#3	heart:ti AND (monitor* OR tracing*):ti	514
#4	#2 OR #3	39351
#5	#1 AND #4	888
#6	(fetal heart rate monitor* OR fetal heart rate tracing* OR foetal heart rate monitor* OR foetal heart rate tracing* OR category II tracing OR category III tracing OR intermittent auscultation):ti	77
#7	#5 OR #6	889
#8	[mh "labor, obstetric"] OR [mh "labor complications, obstetric"] OR [mh "delivery, obstetric"] OR [mh parturition]	12946
#9	intrapart* OR intra-part* OR (labor* OR labour*):ti	12950
#10	#8 OR #9	22618
#11	#7 AND #10 with Cochrane Library publication date Between Jan 2003 and Dec 2023	370

Database: ClinicalTrials.gov
Search date: November 20, 2023

Condition/disease: fetal heart
Other terms: monitoring OR tracing
62 studies

Bridge Search
Database: Ovid MEDLINE(R) and Epub Ahead of Print, In-Process, In-Data-Review & Other Non-Indexed Citations, Daily and Versions
Search date: January 31, 2025

1	((fetus or fetal or foetus or foetal) and heart and (monitor$ or tracing$)).ti.	819
2	Cardiotocography/ or *Heart Rate, Fetal/	4601
3	*Fetal Distress/ or Fetal Distress/di, dg	2326
4	*Electrocardiography/ or Arrhythmias, Cardiac/	131393
5	(Heart Rate/ or Heart Rate Determination/) and (Fetal Heart/ or Fetus/ or Fetal Monitoring/ or fetus.ti. or fetal.ti. or foetus.ti. or foetal.ti.)	3954
6	((fetus or fetal or foetus or foetal) adj5 (heart rate or tracing$)).ti,ab.	8185
7	Cardiotocogr$.ti. or (fetal heart rate monitor$ or fetal heart rate tracing$ or foetal heart rate monitor$ or foetal heart rate tracing$ or category II tracing$ or category III tracing$).ti,ab.	2466
8	Fetal Monitoring/ and (heart or tracing$).ti.	1219
9	fetal heart rate/ and (tracing$ or monitor$).ti,ab.	2091
10	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9	144912
11	(Auscultation/ or Heart Auscultation/) and intermittent$.ti,ab.	132
12	(intermittent$ adj auscultation).ti,ab.	150
13	11 or 12	206
14	Heart Rate, Fetal/ or Fetal Distress/ or Fetal Heart/ or Fetus/ or Fetal Monitoring/ or (fetus or fetal or foetus or foetal).ti,ab.	377325
15	13 and 14	145
16	10 or 15	144946
17	exp labor, obstetric/ or exp labor complications, obstetric/ or exp delivery, obstetric/ or exp parturition/	200720
18	(intrapart$ or intra-part$).mp. or (labor$ or labour$).ti.	152599
19	17 or 18	320444
20	16 and 19	7042
21	limit 20 to (english language and humans)	5394
22	limit 21 to yr="2023 -Current"	269
23	*prenatal care/ or *prenatal diagnosis/ or *fetal movement/ or (antenatal surveillance or antepartum surveillance or stress test$ or nonstress test$ or kick count$ or non-stress test$).mp. or (antenatal or antepartum or prenatal).ti.	104798
24	22 not 23	252

Database: PubMed
Search date: January 31, 2025

Search number	Query	Results	Sort By
1	((fetus[ti] OR fetal[ti] OR foetus[ti] OR "foetal"[ti]) AND heart[ti] AND (monitor*[ti] OR tracing*[ti]))	819	
2	Cardiotocography[Mesh:NoExp] OR "Heart Rate, Fetal"[Majr:NoExp]	4,601	
3	"Fetal Distress"[Majr:NoExp] OR "Fetal Distress"[Mesh:NoExp]	3,561	
4	Electrocardiography[Majr:NoExp] OR "Arrhythmias, Cardiac"[Mesh:NoExp]	131,344	
5	("Heart Rate"[Mesh:NoExp] OR "Heart Rate Determination"[Mesh:NoExp]) AND ("Fetal Heart"[Mesh:NoExp] OR Fetus[Mesh:NoExp] OR "Fetal Monitoring"[Mesh:NoExp] OR fetus[ti] OR fetal[ti] OR foetus[ti] OR "foetal"[ti])	3,954	
6	((fetus[tiab] OR fetal[tiab] OR foetus[tiab] OR "foetal"[tiab]) AND ("heart rate"[tiab] OR tracing*[tiab]))	10,666	
7	Cardiotocogr*[ti] OR "fetal heart rate monitor*"[tiab] OR "fetal heart rate tracing*"[tiab] OR "foetal heart rate monitor*"[tiab] OR "foetal heart rate tracing*"[tiab] OR "category II tracing*"[tiab] OR "category III tracing*"[tiab]	2,507	
8	"Fetal Monitoring"[Mesh:NoExp] AND (heart[ti] OR tracing*[ti])	1,219	
9	Heart Rate, Fetal[mesh] AND (tracing*[tiab] OR monitor*[tiab])	2,152	
10	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9	147,763	
11	(Auscultation[Mesh:NoExp] OR "Heart Auscultation"[Mesh:NoExp]) AND intermittent*[tiab]	134	
12	(intermittent*[tiab] AND auscultation[tiab])	242	
13	#11 OR #12	282	
14	"Heart Rate, Fetal"[Mesh:NoExp] OR "Fetal Distress"[Mesh:NoExp] OR "Fetal Heart"[Mesh:NoExp] OR Fetus[Mesh:NoExp] OR "Fetal Monitoring"[Mesh:NoExp] OR (fetus[tiab] OR fetal[tiab] OR foetus[tiab] OR "foetal"[tiab])	385,775	
15	#13 AND #14	164	

16	#10 OR #15	147,805	
17	"labor, obstetric"[Mesh] OR Obstetric Labor Complication[Mesh] OR Delivery, Obstetric [Mesh] OR parturition[Mesh]	200,632	
18	(intrapart*[tw] OR intra-part*[tw]) OR (labor*[ti] OR labour*[ti])	152,532	
19	#17 OR #18	320,308	
20	#16 AND #19	8,127	
21	"prenatal care"[Majr:NoExp] OR "prenatal diagnosis"[Majr:NoExp] OR "fetal movement"[Majr:NoExp] OR ("antenatal surveillance"[tw] OR "antepartum surveillance"[tw] OR "stress test*"[tw] OR "nonstress test*"[tw] OR "kick count*"[tw] OR "non-stress test*"[tw]) OR (antenatal[ti] OR antepartum[ti] OR prenatal[ti])	105,109	
22	#20 NOT #21	7,407	
23	english[la] AND (publisher[sb] OR inprocess[sb] OR pubmednotmedline[sb] OR (pubstatusnihms AND publisher[sb]) OR (pubstatuspmcsd AND publisher[sb])) - Saved search	6,143,803	Most Recent
24	#22 and #23	171	
25	#22 and #23	49	from 2023 - 2025
26	#22 and #23	33	from 2023/8/1 - 2025/1/31

Additional Bridge Search
Database: Ovid MEDLINE(R) and Epub Ahead of Print, In-Process, In-Data-Review & Other Non-Indexed Citations, Daily and Versions
Search date: June 25, 2025

Line	Search	Results
1	((fetus or fetal or foetus or foetal) and heart and (monitor$ or tracing$)).ti.	830
2	Cardiotocography/ or *Heart Rate, Fetal/	4646
3	*Fetal Distress/ or Fetal Distress/di, dg	2337
4	*Electrocardiography/ or Arrhythmias, Cardiac/	132203
5	(Heart Rate/ or Heart Rate Determination/) and (Fetal Heart/ or Fetus/ or Fetal Monitoring/ or fetus.ti. or fetal.ti. or foetus.ti. or foetal.ti.)	3959
6	((fetus or fetal or foetus or foetal) adj5 (heart rate or tracing$)).ti,ab.	8267
7	Cardiotocogr$.ti. or (fetal heart rate monitor$ or fetal heart rate tracing$ or foetal heart rate monitor$ or foetal heart rate tracing$ or category II tracing$ or category III tracing$).ti,ab.	2500
8	Fetal Monitoring/ and (heart or tracing$).ti.	1229
9	fetal heart rate/ and (tracing$ or monitor$).ti,ab.	2119
10	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9	145834
11	(Auscultation/ or Heart Auscultation/) and intermittent$.ti,ab.	133
12	(intermittent$ adj auscultation).ti,ab.	153
13	11 or 12	209
14	Heart Rate, Fetal/ or Fetal Distress/ or Fetal Heart/ or Fetus/ or Fetal Monitoring/ or (fetus or fetal or foetus or foetal).ti,ab.	382154
15	13 and 14	148
16	10 or 15	145869
17	exp labor, obstetric/ or exp labor complications, obstetric/ or exp delivery, obstetric/ or exp parturition/	202692
18	(intrapart$ or intra-part$).mp. or (labor$ or labour$).ti.	154668
19	17 or 18	324194
20	16 and 19	7089
21	limit 20 to (english language and humans)	5429
22	limit 21 to yr="2025 -Current"	59
23	(meta analys$3 or metaanalys$3 or systematic review$1).mp.	580066
24	(meta-analysis or metaanalysis or "meta analysis" or systematic review$1 or systematic overview or collaborative review or collaborative overview or quantitative review or quantitative overview or quantitative synthesis).ti.	394821
25	meta analysis as topic/	26373
26	(meta analysis or systematic review).pt.	383171
27	23 or 24 or 25 or 26	580487
28	Randomized controlled trials/ or exp clinical trials as topic/ or Cross-over studies/ or double-blind method/ or Matched-pair analysis/ or Random allocation/ or placebos/ or Pragmatic Clinical Trials as Topic/	712059
29	(randomized controlled trial or clinical trial or pragmatic clinical trial).pt.	968692
30	(randomi$ or research integration or research overview or meta-regression or metaregression or mega-regression or megaregression or integrative review or integrative overview).ti.	343591
31	((controlled adj20 trial$) or (clinical adj20 trial$)).ti,ab.	949983

32	(placebo$1 or random allocat$ or cross-over studies or matched-pair$1).mp.	443353
33	((singl$ or doubl$ or treb$ or tripl$) adj20 (blind$ or mask$)).mp.	297034
34	28 or 29 or 30 or 31 or 32 or 33	2026532
35	34 not ("non-randomized controlled trials as topic"/ or non-randomi$.ti.)	2022984
36	35 not 27	1831169
37	27 or 36	2411656
38	22 and 37	9
39	exp guidelines as topic/ or guideline adherence/	198636
40	(guideline or practice guideline or consensus development conference or consensus development conference nih).pt.	51752
41	(guideline$ or standard or standards or consensus conference or consensus development).ti.	190075
42	consensus development conference$.mp.	16588
43	39 or 40 or 41 or 42	368528
44	22 and 43	2
45	44 not 38	1

Database: PubMed
Search date: June 25, 2025

Search number	Query	Results
1	(fetus[ti] OR fetal[ti] OR foetus[ti] OR "foetal"[ti]) AND heart[ti] AND (monitor*[ti] OR tracing*[ti])	830
2	Cardiotocography[Mesh] OR "Heart Rate, Fetal"[Majr]	4643
3	"Fetal Distress"[Majr] OR "Fetal Distress"[Mesh]	3580
4	Electrocardiography[Majr] OR "Arrhythmias, Cardiac"[Mesh]	300759
5	("Heart Rate"[Mesh] OR "Heart Rate Determination"[Mesh]) AND ("Fetal Heart"[Mesh] OR Fetus[Mesh] OR "Fetal Monitoring"[Mesh] OR fetus[ti] OR fetal[ti] OR foetus[ti] OR foetal[ti])	8789
6	(fetus[tiab] OR fetal[tiab] OR foetus[tiab] OR foetal[tiab]) AND (heart rate[tiab] OR tracing*[tiab])	10803
7	Cardiotocogr*[ti] OR fetal heart rate monitor*[tiab] OR fetal heart rate tracing*[tiab] OR foetal heart rate monitor*[tiab] OR foetal heart rate tracing*[tiab] OR category II tracing*[tiab] OR category III tracing*[tiab]	2547
8	"Fetal Monitoring"[Mesh] AND (heart[ti] OR tracing*[ti])	1687
9	Heart Rate, Fetal[mesh] AND (tracing*[tiab] OR monitor*[tiab])	2180
10	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9	317204
11	(Auscultation[Mesh] OR "Heart Auscultation"[Mesh]) AND intermittent*[tiab]	154
12	intermittent*[tiab] AND auscultation[tiab]	249
13	#11 OR #12	308
14	"Heart Rate, Fetal"[Mesh] OR "Fetal Distress"[Mesh] OR "Fetal Heart"[Mesh] OR Fetus[Mesh] OR "Fetal Monitoring"[Mesh] OR fetus[tiab] OR fetal[tiab] OR foetus[tiab] OR foetal[tiab]	446922
15	#13 AND #14	168
16	#10 OR #15	317246

17	"labor, obstetric"[Mesh] OR Obstetric Labor Complication[Mesh] OR Delivery, Obstetric [Mesh] OR parturition[Mesh]	202594
18	intrapart*[tiab] OR intra-part*[tiab] OR puerper*[tiab] OR birth*[tiab] OR childbirth*[tiab] OR labor*[ti] OR labour*[ti] OR deliver*[ti]	785346
19	#17 OR #18	877643
20	#16 AND #19	12252
21	english[la] AND (publisher[sb] OR inprocess[sb] OR pubmednotmedline[sb] OR (pubstatusnihms AND publisher[sb]) OR (pubstatuspmcsd AND publisher[sb]))	6447956
22	#20 AND #21	412
23	#20 AND #21 from 2025 – 2025	40
24	meta analysis[tiab] OR meta-analysis[tiab] OR systematic review[tiab] OR quantitative review[tiab] OR quantitative overview[tiab] OR randomized controlled[tiab] OR randomized control[tiab] OR randomised controlled[tiab] OR randomised control[tiab] OR clinical trial[tiab] OR guideline[tiab] OR guidelines[tiab] OR standard[tiab] OR standards[tiab] OR consensus[tiab] OR recommendation statement*[tiab] OR committee opinion*[tiab]	2853064
25	#23 AND #24	18