

# **Surgical management of otitis media with effusion in children**

**Clinical Guideline**

**February 2008**

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# **Surgical management of otitis media with effusion in children**

National Collaborating Centre for Women's  
and Children's Health

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**Search strategies**

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# Clinical presentation

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MEDLINE 1950 to June Week 1 2007

VT\_signs\_symptoms\_medline\_140607

#	Search History	Results
1	exp CHILD/	1185829
2	child\$.tw.	648241
3	exp INFANT/	737771
4	infan\$.tw.	232922
5	(baby or babies).tw.	34558
6	or/1-5	1714195
7	OTITIS MEDIA WITH EFFUSION/	3998
8	(otitis media\$ adj3 effusion\$).tw.	1942
9	(middle ear adj3 effusion\$).tw.	1482
10	glue ear\$.tw.	264
11	((serous\$ or secretor\$) adj3 otitis media\$).tw.	1248
12	or/7-11	5447
13	exp HEARING LOSS/	39891
14	CHILD BEHAVIOR DISORDERS/	14716
15	MOTOR SKILLS DISORDERS/	912
16	clums\$.tw.	757
17	DEVELOPMENTAL DISORDERS/	9923
18	ATTENTION/	37079
19	SPEECH DISORDERS/	8358
20	LANGUAGE DEVELOPMENT/	5823
21	LANGUAGE DEVELOPMENT DISORDERS/	2816
22	LEARNING DISORDERS/	9923
23	EDUCATIONAL STATUS/	23837
24	((academic\$ or school\$ or read\$ or writ\$ or language\$) adj3 (perform\$ or achiev\$ or attain\$ or abilit\$ or skill\$)).tw.	15263
25	READING/	11184
26	(literacy or numeracy).tw.	2701
27	COMMUNICATION/	42948
28	MUSCULOSKELETAL EQUILIBRIUM/	7392
29	balanc\$.tw.	103703
30	INTERPERSONAL RELATIONS/	36422
31	SOCIAL BEHAVIOR/	20409
32	"PLAY AND PLAYTHINGS"/	4938
33	or/13-32	354295
34	and/6,12,33	610
35	EARACHE/	371
36	FEVER/	23612
37	IRRITABLE MOOD/	511

#	Search History	Results
38	NAUSEA/	9972
39	VOMITING/	15332
40	(ear\$1 adj3 discharge\$.tw.	221
41	malaise.tw.	3539
42	or/35-41	46814
43	and/6,12,42	43
44	(report\$ adj3 symptom\$.ti.	853
45	and/6,12,44	2
46	or/34,43,45	652
47	limit 46 to human	649

**EMBASE** 1980 to 2007 Week 23

VT\_signs\_symptoms\_embase\_140607

#	Search History	Results
1	exp CHILD/	572867
2	child\$.tw.	438976
3	infan\$.tw.	157351
4	(baby or babies).tw.	25033
5	CHILDHOOD/	11825
6	INFANCY/	2968
7	or/1-6	801973
8	exp SECRETORY OTITIS MEDIA/	1943
9	(otitis media\$ adj3 effusion\$.tw.	1867
10	MIDDLE EAR EFFUSION/	1497
11	(middle ear adj3 effusion\$.tw.	1298
12	glue ear\$.tw.	171
13	((serous\$ or secretor\$) adj3 otitis media\$.tw.	868
14	or/8-13	4312
15	HEARING LOSS/	11019
16	BEHAVIOR DISORDER/	19556
17	CHILD BEHAVIOR/	10617
18	DEVELOPMENTAL COORDINATION DISORDER/	237
19	clums\$.tw.	636
20	DEVELOPMENTAL DISORDER/	11115
21	ATTENTION/	15384
22	SELECTIVE ATTENTION/	1222
23	SPEECH DISORDER/	6080
24	SPEECH DEVELOPMENT/	1172
25	LANGUAGE DEVELOPMENT/	3161
26	LANGUAGE DISABILITY/	4970
27	LEARNING DISORDER/	8056
28	exp ACADEMIC ACHIEVEMENT/	12709
29	((academic\$ or school\$ or read\$ or writ\$ or language\$) adj3 (perform\$ or achiev\$ or attain\$ or abilit\$ or skill\$)).tw.	11393
30	READING/	7564

## Surgical management of otitis media with effusion in children

#	Search History	Results
31	(literacy or numeracy).tw.	1790
32	INTERPERSONAL COMMUNICATION/	22919
33	BALANCE DISORDER/	861
34	BODY EQUILIBRIUM/	2995
35	balanc\$.tw.	87020
36	SOCIAL INTERACTION/	11526
37	PLAY/	1798
38	or/15-37	225129
39	and/7,14,38	361
40	OTALGIA/	1175
41	FEVER/	55279
42	IRRITABILITY/	5799
43	NAUSEA/	69553
44	VOMITING/	57511
45	(ear\$1 adj3 discharge\$.tw.	201
46	MALAISE/	6399
47	or/40-46	142408
48	and/7,14,47	103
49	(report\$ adj3 symptom\$.ti.	725
50	and/7,14,49	2
51	or/39,48,50	455

**CINAHL** 1982 to June Week 2 2007

VT\_signs\_symptoms\_cinahl\_140607

#	Search History	Results
1	exp CHILD/	141152
2	child\$.tw.	82793
3	infan\$.tw.	20825
4	(baby or babies).tw.	7488
5	or/1-4	167159
6	OTITIS MEDIA WITH EFFUSION/	269
7	(otitis media\$ adj3 effusion\$.tw.	206
8	(middle ear adj3 effusion\$.tw.	77
9	glue ear\$.tw.	34
10	((serous\$ or secretor\$) adj3 otitis media\$.tw.	31
11	or/6-10	439
12	exp HEARING LOSS, PARTIAL/	1993
13	CHILD BEHAVIOR DISORDERS/	1450
14	MOTOR SKILLS/	1898
15	clums\$.tw.	65
16	exp CHILD DEVELOPMENT DISORDERS/	994
17	ATTENTION/	1189
18	SPEECH DISORDERS/	851
19	LANGUAGE DEVELOPMENT/	1709



#	Search History	Results
20	LEARNING DISORDERS/	1812
21	exp ACADEMIC PERFORMANCE/	2137
22	EDUCATIONAL STATUS/	7375
23	((academic\$ or school\$ or read\$ or writ\$ or language\$) adj3 (perform\$ or achiev\$ or attain\$ or abilit\$ or skill\$)).tw.	3392
24	READING/	1526
25	LITERACY/	1337
26	(literacy or numeracy).tw.	1618
27	COMMUNICATION/	12585
28	BALANCE, POSTURAL/	2590
29	balanc\$.tw.	10750
30	INTERPERSONAL RELATIONS/	7429
31	SOCIAL BEHAVIOR/	1916
32	"PLAY AND PLAYTHINGS"/	1595
33	or/12-32	57562
34	and/5,11,33	60
35	EARACHE/	76
36	FEVER/	1664
37	irritab\$.tw.	1053
38	NAUSEA/	507
39	VOMITING/	576
40	(ear\$1 adj3 discharge\$).tw.	13
41	malaise.tw.	225
42	or/35-41	3961
43	and/5,11,42	7
44	(report\$ adj3 symptom\$).ti.	148
45	and/5,11,44	1
46	or/34,43,45	67

# Diagnosis

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MEDLINE 1950 to July Week 2 2007

VT\_assessment\_medline\_190707

#	Search History	Results
1	exp CHILD/	1190787
2	child\$.tw.	651927
3	exp INFANT/	740268
4	infan\$.tw.	233882
5	(baby or babies).tw.	34717
6	or/1-5	1721301
7	OTITIS MEDIA WITH EFFUSION/	4008
8	(otitis media\$ adj3 effusion\$).tw.	1951
9	(middle ear adj3 effusion\$).tw.	1487
10	glue ear\$.tw.	265
11	((serous\$ or secretor\$) adj3 otitis media\$).tw.	1252
12	or/7-11	5468
13	MEDICAL HISTORY TAKING/	13087
14	(clinical\$ adj3 histor\$).tw.	14839
15	PHYSICAL EXAMINATION/	21873
16	(tuning adj3 fork\$).tw.	230
17	rinne\$.tw.	72
18	weber\$.tw.	4338
19	OTOSCOPY/	224
20	(otoscopy or otoscopic\$).tw.	945
21	auriscop\$.tw.	6
22	pneumo?otoscop\$.tw.	3
23	AUDIOMETRY/	11339
24	AUDIOMETRY, PURE-TONE/	5355
25	audiometr\$.tw.	7622
26	audiogram\$.tw.	2090
27	audiograph\$.tw.	56
28	ACOUSTIC IMPEDANCE TESTS/	2500
29	tympanometr\$.tw.	1444
30	tympanogram\$.tw.	612
31	myringotom\$.tw.	927
32	tympanocentesis\$.tw.	246
33	MAGNETIC RESONANCE IMAGING/	158642
34	(magnetic\$ adj5 resonance\$ adj5 imaging\$).tw.	72609
35	or/13-34	248552
36	and/6,12,35	1375
37	limit 36 to "diagnosis (optimized)"	213
38	diagnos\$.ti.	329498

#	Search History	Results
39	and/6,12,38	121
40	or/37,39	305
41	limit 40 to humans	304

**EMBASE** 1980 to 2007 Week 28

VT\_assessment\_embase\_190707

#	Search History	Results
1	exp CHILD/	576308
2	child\$.tw.	442144
3	infan\$.tw.	158373
4	(baby or babies).tw.	25198
5	CHILDHOOD/	11888
6	INFANCY/	3001
7	or/1-6	807316
8	exp SECRETORY OTITIS MEDIA/	1955
9	(otitis media\$ adj3 effusion\$).tw.	1876
10	MIDDLE EAR EFFUSION/	1501
11	(middle ear adj3 effusion\$).tw.	1302
12	glue ear\$.tw.	172
13	((serous\$ or secretor\$) adj3 otitis media\$).tw.	870
14	or/8-13	4332
15	ANAMNESIS/	57754
16	(clinical\$ adj3 histor\$).tw.	12953
17	PHYSICAL EXAMINATION/	49307
18	(tuning adj3 fork\$).tw.	211
19	rinne\$.tw.	52
20	weber\$.tw.	2720
21	OTOSCOPY/	1061
22	(otoscopy or otoscopic\$).tw.	866
23	auriscop\$.tw.	3
24	pneumo?otoscop\$.tw.	4
25	AUDIOMETRY/	6122
26	PURE TONE AUDIOMETRY/	2230
27	IMPEDANCE AUDIOMETRY/	219
28	audiometr\$.tw.	5259
29	audiogram\$.tw.	1766
30	AUDIOGRAPHY/	1436
31	audiograph\$.tw.	37
32	TYMPANOMETRY/	1562
33	tympanometr\$.tw.	1201
34	tympanogram\$.tw.	510
35	MYRINGOTOMY/	1526
36	myringotom\$.tw.	817
37	tympanocentesis\$.tw.	240
38	NUCLEAR MAGNETIC RESONANCE IMAGING/	178723

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#	Search History	Results
39	(magnetic\$ adj5 resonance\$ adj5 imaging\$.tw.	69489
40	or/15-39	300147
41	and/7,14,40	1133
42	limit 41 to "diagnosis (optimized)"	178
43	diagnos\$.ti.	182507
44	and/7,14,43	82
45	or/42,44	226

### CINAHL 1982 to July Week 1 2007

VT\_assessment\_cinahl\_190707

#	Search History	Results
1	exp CHILD/	142420
2	child\$.tw.	83447
3	infan\$.tw.	20927
4	(baby or babies).tw.	7555
5	or/1-4	168597
6	OTITIS MEDIA WITH EFFUSION/	270
7	(otitis media\$ adj3 effusion\$.tw.	207
8	(middle ear adj3 effusion\$.tw.	79
9	glue ear\$.tw.	34
10	((serous\$ or secretor\$) adj3 otitis media\$.tw.	31
11	or/6-10	441
12	PATIENT HISTORY TAKING/	4525
13	(clinical\$ adj3 histor\$.tw.	866
14	PHYSICAL EXAMINATION/	7889
15	(tuning adj3 fork\$.tw.	40
16	rinne\$.tw.	9
17	weber\$.tw.	166
18	OTOSCOPY/	5
19	(otoscopy or otoscopic\$.tw.	93
20	auriscop\$.tw.	0
21	pneumo?otoscop\$.tw.	0
22	AUDIOMETRY/	800
23	AUDIOMETRY, PURE-TONE/	758
24	audiometr\$.tw.	610
25	audiogram\$.tw.	172
26	audiograph\$.tw.	1
27	ACOUSTIC IMPEDANCE TESTS/	399
28	tympanometr\$.tw.	141
29	tympanogram\$.tw.	41
30	myringotom\$.tw.	53
31	tympanocentesis\$.tw.	16
32	MAGNETIC RESONANCE IMAGING/	8685
33	(magnetic\$ adj5 resonance\$ adj5 imaging\$.tw.	3315
34	or/12-33	22719

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#	Search History	Results
35	diagnos\$.tw.	63916
36	and/5,11,34-35	22

# Natural history or resolution

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**MEDLINE** 1950 to August Week 2 2007

VT\_natural\_history\_medline\_170807

#	Search History	Results
1	exp CHILD/	1196581
2	child\$.tw.	655795
3	exp INFANT/	743551
4	infan\$.tw.	234991
5	(baby or babies).tw.	34948
6	or/1-5	1729797
7	OTITIS MEDIA WITH EFFUSION/	4084
8	(otitis media\$ adj3 effusion\$).tw.	2003
9	(middle ear adj3 effusion\$).tw.	1522
10	glue ear\$.tw.	265
11	((serous\$ or secretor\$) adj3 otitis media\$).tw.	1265
12	or/7-11	5562
13	REMISSION, SPONTANEOUS/	12955
14	(spontaneous\$ adj3 (resolution\$ or resolv\$ or remission\$ or recover\$ or improv\$ or heal\$ or disappear\$ or clear\$ or cure\$ or course\$)).tw.	16676
15	(natural\$ adj3 (history or course\$ or develop\$)).tw.	29460
16	(disease\$ adj3 (develop\$ or evol\$ or progress\$)).tw.	84040
17	clinical course\$.tw.	35216
18	(duration adj5 effusion\$).tw.	117
19	season\$.ti.	15620
20	untreated\$.ti.	4991
21	((resolution or relaps\$ or recur\$) adj3 rate\$).tw.	26472
22	or/13-21	215622
23	and/6,12,22	274
24	limit 23 to yr="2000 - 2007"	86
25	limit 24 to humans	86

**EMBASE** 1980 to 2007 Week 33

VT\_natural\_history\_embase\_170807

#	Search History	Results
1	exp CHILD/	579679
2	child\$.tw.	445335
3	infan\$.tw.	159225
4	(baby or babies).tw.	25352
5	CHILDHOOD/	11959
6	INFANCY/	3025

#	Search History	Results
7	or/1-6	812460
8	exp SECRETORY OTITIS MEDIA/	1960
9	(otitis media\$ adj3 effusion\$).tw.	1883
10	MIDDLE EAR EFFUSION/	1506
11	(middle ear adj3 effusion\$).tw.	1304
12	glue ear\$.tw.	172
13	((serous\$ or secretor\$) adj3 otitis media\$).tw.	871
14	or/8-13	4347
15	REMISSION/	22355
16	(spontaneous\$ adj3 (resolution\$ or resolv\$ or remission\$ or recover\$ or improv\$ or heal\$ or disappear\$ or clear\$ or cure\$ or course\$)).tw.	14806
17	DISEASE COURSE/	138701
18	(natural\$ adj3 (history or course\$ or develop\$)).tw.	25544
19	(disease\$ adj3 (develop\$ or evol\$ or progress\$)).tw.	75613
20	clinical course\$.tw.	28178
21	(duration adj5 effusion\$).tw.	108
22	season\$.ti.	9881
23	untreated\$.ti.	3805
24	((resolution or relaps\$ or recur\$) adj3 rate\$).tw.	24485
25	or/15-24	299357
26	and/7,14,25	268
27	limit 26 to yr= "2000 - 2007"	100

**CINAHL** 1982 to August Week 2 2007

VT\_natural\_history\_cinahl\_170807

#	Search History	Results
1	exp CHILD/	144209
2	child\$.tw.	84490
3	infan\$.tw.	21135
4	(baby or babies).tw.	7648
5	or/1-4	170707
6	OTITIS MEDIA WITH EFFUSION/	278
7	(otitis media\$ adj3 effusion\$).tw.	208
8	(middle ear adj3 effusion\$).tw.	81
9	glue ear\$.tw.	34
10	((serous\$ or secretor\$) adj3 otitis media\$).tw.	31
11	or/6-10	449
12	DISEASE REMISSION/	742
13	(spontaneous\$ adj3 (resolution\$ or resolv\$ or remission\$ or recover\$ or improv\$ or heal\$ or disappear\$ or clear\$ or cure\$ or course\$)).tw.	518
14	DISEASE PROGRESSION/	5574
15	(natural\$ adj3 (history or course\$ or develop\$)).tw.	1455
16	(disease\$ adj3 (develop\$ or evol\$ or progress\$)).tw.	3798
17	clinical course\$.tw.	993
18	(duration adj5 effusion\$).tw.	16

## Surgical management of otitis media with effusion in children

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#	Search History	Results
19	season\$.ti.	1464
20	untreated\$.ti.	194
21	((resolution or relaps\$ or recur\$) adj3 rate\$).tw.	1021
22	or/12-21	14435
23	and/5,11,22	18
24	limit 23 to yr="2000 - 2007"	13



# Surgical and non-surgical management

MEDLINE 1950 to August Week 5 2007

VT\_surgical\_nonsurgical\_management\_medline\_RCT\_SR\_cohort\_100907

#	Search History	Results
1	randomized controlled trial.pt.	242026
2	controlled clinical trial.pt.	76175
3	DOUBLE BLIND METHOD/	93291
4	SINGLE BLIND METHOD/	11312
5	RANDOM ALLOCATION/	58962
6	RANDOMIZED CONTROLLED TRIALS/	50846
7	or/1-6	410206
8	((single or double or triple or treble) adj5 (blind\$ or mask\$)).tw,sh.	90914
9	clinical trial.pt.	441091
10	exp CLINICAL TRIALS/	196388
11	(clinic\$ adj5 trial\$).tw,sh.	117774
12	PLACEBOS/	26592
13	placebo\$.tw,sh.	117749
14	random\$.tw,sh.	509181
15	or/8-14	856558
16	or/7,15	864769
17	META ANALYSIS/	7726
18	meta analysis.pt.	16466
19	(metaanaly\$ or meta-analy\$ or (meta adj analy\$)).tw,sh.	29356
20	(systematic\$ adj5 (review\$ or overview\$)).tw,sh.	14485
21	(methodologic\$ adj5 (review\$ or overview\$)).tw,sh.	1731
22	or/17-21	40389
23	review\$.pt.	1316241
24	(medline or medlars or embase or cinahl or cochrane or psycinfo or psychinfo or psychlit or psyclit or "web of science" or "science citation" or scisearch).tw.	26371
25	((hand or manual\$) adj2 search\$).tw.	2966
26	(electronic database\$ or bibliographic database\$ or computeri?ed database\$ or online database\$).tw,sh.	4443
27	(pooling or pooled or mantel haenszel).tw,sh.	27034
28	(peto or dersimonian or der simonian or fixed effect).tw,sh.	1179
29	or/24-28	55098
30	23 and 29	22353
31	or/22,30	54136
32	letter.pt.	602755
33	case report.tw.	127451
34	comment.pt.	340010
35	editorial.pt.	208719
36	historical article.pt.	244916

## Surgical management of otitis media with effusion in children

#	Search History	Results
37	or/32-36	1221343
38	16 not 37	831952
39	31 not 37	51035
40	or/38-39	857997
41	COHORT STUDIES/	76820
42	LONGITUDINAL STUDIES/	47301
43	FOLLOW-UP STUDIES/	346295
44	PROSPECTIVE STUDIES/	228222
45	((cohort\$ or follow-up or follow?up or inciden\$ or longitudinal or prospective) adj1 (stud\$ or research or analys\$)).tw.	160647
46	or/41-45	676542
47	or/40,46	1397430
48	exp CHILD/	1202152
49	child\$.tw.	659833
50	exp INFANT/	746549
51	infan\$.tw.	236077
52	(baby or babies).tw.	35101
53	or/48-52	1737886
54	OTITIS MEDIA WITH EFFUSION/	4096
55	(otitis media\$ adj3 effusion\$).tw.	2015
56	(middle ear adj3 effusion\$).tw.	1523
57	glue ear\$.tw.	265
58	((serous\$ or secretor\$) adj3 otitis media\$).tw.	1266
59	or/54-58	5579
60	MIDDLE EAR VENTILATION/	1643
61	(ventilati\$ adj3 (tube\$ or ear\$)).tw.	1423
62	(tube\$ adj3 ear\$1).tw.	480
63	grommet\$.tw.	367
64	tympanostom\$.tw.	744
65	t-tube\$.tw.	1899
66	myringotom\$.tw.	944
67	ADENOIDECTOMY/	2618
68	adenoidectom\$.tw.	1626
69	TONSILLECTOMY/	5752
70	tonsillectom\$.tw.	4625
71	or/60-70	13122
72	and/47,53,59,71	571
73	HEARING AIDS/	5251
74	NASAL DECONGESTANTS/	1158
75	HISTAMINE H1 ANTAGONISTS/	12522
76	((nasal\$ or intranasal\$) adj3 steroid\$).tw.	391
77	ANTI-BACTERIAL AGENTS/	167617
78	(cranial\$ adj3 osteopath\$).tw.	53
79	craniosacral\$.tw.	38
80	MASSAGE/	3394
81	autoinflation\$.tw.	37
82	HOMEOPATHY/	3124

#	Search History	Results
83	ACUPUNCTURE/	614
84	PROBIOTICS/	3152
85	probiotic\$.tw.	3121
86	ADJUVANTS, IMMUNOLOGIC/	24494
87	immuno?stimulant\$.tw.	1021
88	FOOD HABITS/	12545
89	(diet\$ adj3 (modif\$ or restrict\$)).tw.	11882
90	or/73-89	245344
91	and/47,53,59,90	169
92	waiting.tw.	13629
93	and/47,53,59,92	36
94	or/72,91,93	692
95	limit 94 to humans	691

**EMBASE** 1980 to 2007 Week 36

VT\_surgical\_nonsurgical\_management\_embase\_RCT\_SR\_cohort\_100907

#	Search History	Results
1	CLINICAL TRIALS/	472918
2	(clinic\$ adj5 trial\$.ti,ab,sh.	110456
3	SINGLE BLIND PROCEDURE/	7024
4	DOUBLE BLIND PROCEDURE/	66443
5	RANDOM ALLOCATION/	23878
6	CROSSOVER PROCEDURE/	19410
7	PLACEBO/	103924
8	placebo\$.ti,ab,sh.	152961
9	random\$.ti,ab,sh.	384317
10	RANDOMIZED CONTROLLED TRIALS/	148552
11	((single or double or triple or treble) adj (blind\$ or mask\$)).ti,ab,sh.	86972
12	randomi?ed control\$ trial\$.tw.	26696
13	or/1-12	779225
14	META ANALYSIS/	31878
15	((meta adj analy\$) or metaanalys\$ or meta-analy\$).ti,ab,sh.	39196
16	(systematic\$ adj5 (review\$ or overview\$)).ti,sh,ab.	21651
17	(methodologic\$ adj5 (review\$ or overview\$)).ti,ab,sh.	1425
18	or/14-17	52903
19	review.pt.	826469
20	(medline or medlars or embase).ab.	18987
21	(scisearch or science citation index).ab.	555
22	(psychlit or psyclit or psychinfo or psycinfo or cinahl or cochrane).ab.	5882
23	((hand or manual\$) adj2 search\$).tw.	2178
24	(electronic database\$ or bibliographic database\$ or computeri?ed database\$ or online database\$).tw.	3435
25	(pooling or pooled or mantel haenszel).tw.	22052
26	(peto or dersimonian or "der simonian" or fixed effect).tw.	662
27	or/20-26	44759

## Surgical management of otitis media with effusion in children

#	Search History	Results
28	19 and 27	14874
29	or/18,28	61538
30	case study.tw,sh.	20302
31	abstract report.tw,sh.	71201
32	note.tw,sh.	235873
33	short survey.tw,sh.	395656
34	letter.tw,sh.	379595
35	case report.tw,sh.	962447
36	editorial.tw,sh.	237237
37	or/30-36	2183895
38	13 not 37	692644
39	29 not 38	26434
40	or/38-39	719078
41	COHORT ANALYSIS/	44155
42	LONGITUDINAL STUDY/	16194
43	FOLLOW UP/	234951
44	PROSPECTIVE STUDY/	68638
45	((cohort\$ or follow-up or follow?up or inciden\$ or longitudinal or prospective) adj1 (stud\$ or research or analys\$)).tw.	143024
46	or/41-45	409379
47	or/40,46	1043022
48	exp CHILD/	584176
49	child\$.tw.	447613
50	infan\$.tw.	159848
51	(baby or babies).tw.	25479
52	CHILDHOOD/	12015
53	INFANCY/	3050
54	or/48-53	817026
55	exp SECRETORY OTITIS MEDIA/	1980
56	(otitis media\$ adj3 effusion\$).tw.	1891
57	MIDDLE EAR EFFUSION/	1512
58	(middle ear adj3 effusion\$).tw.	1302
59	glue ear\$.tw.	175
60	((serous\$ or secretor\$) adj3 otitis media\$).tw.	871
61	or/55-60	4358
62	MIDDLE EAR VENTILATION/	246
63	(ventilati\$ adj3 (tube\$ or ear\$)).tw.	1270
64	(tube\$ adj3 ear\$1).tw.	375
65	grommet\$.tw.	335
66	TYMPANOSTOMY TUBE/	1258
67	tympanostom\$.tw.	711
68	T TUBE/	832
69	t-tube\$.tw.	1441
70	MYRINGOTOMY/	1548
71	myringotom\$.tw.	822
72	ADENOIDECTOMY/	1360
73	adenoidectom\$.tw.	1243

#	Search History	Results
74	TONSILLECTOMY/	2792
75	tonsillectom\$.tw.	2854
76	or/62-75	9819
77	and/47,54,61,76	396
78	HEARING AID/	4878
79	DECONGESTIVE AGENT/	2287
80	ANTIHISTAMINIC AGENT/	17629
81	((nasal\$ or intranasal\$) adj3 steroid\$).tw.	386
82	ANTIBIOTIC AGENT/	108873
83	CRANIOSACRAL THERAPY/	23
84	(cranial\$ adj3 osteopath\$).tw.	54
85	craniosacral\$.tw.	37
86	MASSAGE/	3143
87	autoinflation\$.tw.	35
88	HOMEOPATHY/	3549
89	ACUPUNCTURE/	9672
90	PROBIOTIC AGENT/	4401
91	probiotic\$.tw.	3223
92	IMMUNOSTIMULATING AGENT/	1497
93	immuno?stimulant\$.tw.	866
94	(diet\$ adj3 (modif\$ or restrict\$)).tw.	10113
95	or/78-94	159862
96	and/47,54,61,95	154
97	waiting.tw.	11111
98	and/47,54,61,97	31
99	or/77,96,98	476

**CINAHL** 1982 to August Week 5 2007

VT\_surgical\_nonsurgical\_management\_cinahl\_RCT\_SR\_cohort\_100907

#	Search History	Results
1	exp CLINICAL TRIALS/	47023
2	clinical trial.pt.	22538
3	(clinic\$ adj5 trial\$).tw,sh.	11894
4	SINGLE-BLIND STUDIES/	2419
5	DOUBLE-BLIND STUDIES/	8955
6	TRIPLE-BLIND STUDIES/	36
7	((single or double or triple or treble) adj5 (blind\$ or mask\$)).tw,sh.	6566
8	RANDOM ASSIGNMENT/	16139
9	random\$.tw.	44184
10	RANDOMIZED CONTROLLED TRIALS/	35797
11	randomi?ed control\$ trial\$.tw.	9627
12	PLACEBOS/	3742
13	placebo\$.tw.	9144
14	or/1-13	78590

## Surgical management of otitis media with effusion in children

#	Search History	Results
15	META ANALYSIS/	5600
16	((meta adj analy\$) or metaanalys\$ or meta-analy\$).tw.	3924
17	SYSTEMATIC REVIEW/	3272
18	systematic review.pt.	9449
19	(systematic\$ adj5 (review\$ or overview\$)).tw.	7460
20	LITERATURE REVIEW/	2455
21	or/15-20	18061
22	("review" or "review studies" or "review academic" or "review tutorial").ti,ab,sh,pt.	95801
23	(medline or medlars or embase or cochrane or scisearch or psycinfo or psychinfo or psychlit or psyclit or "web of science" or "science citation").tw.	8009
24	((hand or manual\$) adj2 search\$).tw.	926
25	(electronic database\$ or bibliographic database\$ or computeri?ed database\$ or online database\$).tw.	1483
26	(pooling or pooled or mantel haenszel).tw.	2106
27	(peto or dersimonian or "der simonian" or fixed effect).tw.	361
28	or/23-27	10381
29	and/22,28	6047
30	or/21,29	19692
31	letter.pt.	46133
32	commentary.pt.	65979
33	editorial.pt.	76517
34	or/31-33	155368
35	14 not 34	69568
36	30 not 34	16998
37	or/35-36	79598
38	PROSPECTIVE STUDIES/	58395
39	((cohort\$ or follow-up or follow?up or inciden\$ or longitudinal or prospective) adj1 (stud\$ or research or analys\$)).tw.	18364
40	or/38-39	63947
41	or/37,40	133010
42	exp CHILD/	145380
43	child\$.tw.	85124
44	infan\$.tw.	21281
45	(baby or babies).tw.	7686
46	or/42-45	172051
47	OTITIS MEDIA WITH EFFUSION/	283
48	(otitis media\$ adj3 effusion\$).tw.	210
49	(middle ear adj3 effusion\$).tw.	82
50	glue ear\$.tw.	34
51	((serous\$ or secretor\$) adj3 otitis media\$).tw.	32
52	or/47-51	455
53	MIDDLE EAR VENTILATION/	276
54	(ventilati\$ adj3 (tube\$ or ear\$)).tw.	120
55	(tube\$ adj3 ear\$1).tw.	18
56	grommet\$.tw.	29
57	tympanostom\$.tw.	118
58	t-tube\$.tw.	21

#	Search History	Results
59	myringotom\$.tw.	56
60	ADENOIDECTOMY/	238
61	adenoidectom\$.tw.	125
62	TONSILLECTOMY/	516
63	tonsillectom\$.tw.	326
64	or/53-63	1034
65	and/46,52,64	131
66	HEARING AIDS/	2468
67	VASOCONSTRICTOR AGENTS, NASAL/	166
68	HISTAMINE H1 ANTAGONISTS/	504
69	((nasal\$ or intranasal\$) adj3 steroid\$).tw.	55
70	ANTIBIOTICS/	7087
71	CRANIOSACRAL THERAPY/	142
72	(cranial\$ adj3 osteopath\$).tw.	31
73	craniosacral\$.tw.	118
74	exp MASSAGE/	3450
75	autoinflation\$.tw.	2
76	HOMEOPATHY/	1940
77	ACUPUNCTURE/	3430
78	PROBIOTICS/	541
79	probiotic\$.tw.	366
80	immuno?stimulant\$.tw.	16
81	(diet\$ adj3 (modif\$ or restrict\$)).tw.	1033
82	or/66-81	20316
83	and/46,52,82	47
84	waiting.tw.	2976
85	and/46,52,84	8
86	or/65,83,85	165
87	and/41,86	72

# Management in children with Down's syndrome and children with cleft palate

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MEDLINE 1950 to August Week 5 2007

VT\_surgical\_nonsurgical\_management\_down\_cleft\_medline\_100907

#	Search History	Results
1	DOWN SYNDROME/	16741
2	(down\$ adj2 syndrome\$.tw.	12712
3	CLEFT PALATE/	13461
4	(cleft\$ adj2 palate\$.tw.	7412
5	or/1-4	34072
6	exp CHILD/	1202152
7	child\$.tw.	659833
8	exp INFANT/	746549
9	infan\$.tw.	236077
10	(baby or babies).tw.	35101
11	or/6-10	1737886
12	OTITIS MEDIA WITH EFFUSION/	4096
13	(otitis media\$ adj3 effusion\$.tw.	2015
14	(middle ear adj3 effusion\$.tw.	1523
15	glue ear\$.tw.	265
16	((serous\$ or secretor\$) adj3 otitis media\$.tw.	1266
17	or/12-16	5579
18	MIDDLE EAR VENTILATION/	1643
19	(ventilati\$ adj3 (tube\$ or ear\$)).tw.	1423
20	(tube\$ adj3 ear\$1).tw.	480
21	grommet\$.tw.	367
22	tympanostom\$.tw.	744
23	t-tube\$.tw.	1899
24	myringotom\$.tw.	944
25	ADENOIDECTOMY/	2618
26	adenoidectom\$.tw.	1626
27	TONSILLECTOMY/	5752
28	tonsillectom\$.tw.	4625
29	or/18-28	13122
30	and/5,11,17,29	89
31	HEARING AIDS/	5251
32	NASAL DECONGESTANTS/	1158
33	HISTAMINE H1 ANTAGONISTS/	12522
34	((nasal\$ or intranasal\$) adj3 steroid\$.tw.	391



#	Search History	Results
35	ANTI-BACTERIAL AGENTS/	167617
36	(cranial\$ adj3 osteopath\$.tw.	53
37	craniosacral\$.tw.	38
38	MASSAGE/	3394
39	autoinflation\$.tw.	37
40	HOMEOPATHY/	3124
41	ACUPUNCTURE/	614
42	PROBIOTICS/	3152
43	probiotic\$.tw.	3121
44	ADJUVANTS, IMMUNOLOGIC/	24494
45	immuno?stimulant\$.tw.	1021
46	FOOD HABITS/	12545
47	(diet\$ adj3 (modif\$ or restrict\$)).tw.	11882
48	or/31-47	245344
49	and/5,11,17,48	8
50	waiting.tw.	13629
51	and/5,11,17,50	0
52	or/30,49,51	91
53	limit 52 to humans	91

**EMBASE** 1980 to 2007 Week 36

VT\_surgical\_nonsurgical\_management\_down\_cleft\_embase\_100907

#	Search History	Results
1	DOWN SYNDROME/	10983
2	(down\$ adj2 syndrome\$.tw.	10025
3	CLEFT PALATE/	6139
4	(cleft\$ adj2 palate\$.tw.	4481
5	or/1-4	19573
6	exp CHILD/	584176
7	child\$.tw.	447613
8	infan\$.tw.	159848
9	(baby or babies).tw.	25479
10	CHILDHOOD/	12015
11	INFANCY/	3050
12	or/6-11	817026
13	exp SECRETORY OTITIS MEDIA/	1980
14	(otitis media\$ adj3 effusion\$.tw.	1891
15	MIDDLE EAR EFFUSION/	1512
16	(middle ear adj3 effusion\$.tw.	1302
17	glue ear\$.tw.	175
18	((serous\$ or secretor\$) adj3 otitis media\$.tw.	871
19	or/13-18	4358
20	MIDDLE EAR VENTILATION/	246
21	(ventilati\$ adj3 (tube\$ or ear\$)).tw.	1270

## Surgical management of otitis media with effusion in children

#	Search History	Results
22	(tube\$ adj3 ear\$1).tw.	375
23	grommet\$.tw.	335
24	TYMPANOSTOMY TUBE/	1258
25	tympanostom\$.tw.	711
26	T TUBE/	832
27	t-tube\$.tw.	1441
28	MYRINGOTOMY/	1548
29	myringotom\$.tw.	822
30	ADENOIDECTOMY/	1360
31	adenoidectom\$.tw.	1243
32	TONSILLECTOMY/	2792
33	tonsillectom\$.tw.	2854
34	or/20-33	9819
35	and/5,12,19,34	68
36	HEARING AID/	4878
37	DECONGESTIVE AGENT/	2287
38	ANTIHISTAMINIC AGENT/	17629
39	((nasal\$ or intranasal\$) adj3 steroid\$).tw.	386
40	ANTIBIOTIC AGENT/	108873
41	CRANIOSACRAL THERAPY/	23
42	(cranial\$ adj3 osteopath\$).tw.	54
43	craniosacral\$.tw.	37
44	MASSAGE/	3143
45	autoinflation\$.tw.	35
46	HOMEOPATHY/	3549
47	ACUPUNCTURE/	9672
48	PROBIOTIC AGENT/	4401
49	probiotic\$.tw.	3223
50	IMMUNOSTIMULATING AGENT/	1497
51	immuno?stimulant\$.tw.	866
52	(diet\$ adj3 (modif\$ or restrict\$)).tw.	10113
53	or/36-52	159862
54	and/5,12,19,53	10
55	waiting.tw.	11111
56	and/5,12,19,55	1
57	or/35,54,56	71

CINAHL 1982 to August Week 5 2007

VT\_surgical\_nonsurgical\_management\_down\_cleft\_cinahl\_100907

#	Search History	Results
1	DOWN SYNDROME/	1425
2	(down\$ adj2 syndrome\$).tw.	1058
3	CLEFT PALATE/	870
4	(cleft\$ adj2 palate\$).tw.	475

#	Search History	Results
5	or/1-4	2486
6	exp CHILD/	145380
7	child\$.tw.	85124
8	infan\$.tw.	21281
9	(baby or babies).tw.	7686
10	or/6-9	172051
11	OTITIS MEDIA WITH EFFUSION/	283
12	(otitis media\$ adj3 effusion\$).tw.	210
13	(middle ear adj3 effusion\$).tw.	82
14	glue ear\$.tw.	34
15	((serous\$ or secretor\$) adj3 otitis media\$).tw.	32
16	or/11-15	455
17	MIDDLE EAR VENTILATION/	276
18	(ventilati\$ adj3 (tube\$ or ear\$)).tw.	120
19	(tube\$ adj3 ear\$1).tw.	18
20	grommet\$.tw.	29
21	tympanostom\$.tw.	118
22	t-tube\$.tw.	21
23	myringotom\$.tw.	56
24	ADENOIDECTOMY/	238
25	adenoidectom\$.tw.	125
26	TONSILLECTOMY/	516
27	tonsillectom\$.tw.	326
28	or/17-27	1034
29	and/5,10,16,28	4
30	HEARING AIDS/	2468
31	VASOCONSTRICTOR AGENTS, NASAL/	166
32	HISTAMINE H1 ANTAGONISTS/	504
33	((nasal\$ or intranasal\$) adj3 steroid\$).tw.	55
34	ANTIBIOTICS/	7087
35	CRANIOSACRAL THERAPY/	142
36	(cranial\$ adj3 osteopath\$).tw.	31
37	craniosacral\$.tw.	118
38	exp MASSAGE/	3450
39	autoinflation\$.tw.	2
40	HOMEOPATHY/	1940
41	ACUPUNCTURE/	3430
42	PROBIOTICS/	541
43	probiotic\$.tw.	366
44	immuno?stimulant\$.tw.	16
45	(diet\$ adj3 (modif\$ or restrict\$)).tw.	1033
46	or/30-45	20316
47	and/5,10,16,46	0
48	waiting.tw.	2976
49	and/5,10,16,48	0
50	or/29,47,49	4

Other NICE guidelines produced by the National Collaborating Centre for Women's and Children's Health include:

- Antenatal care: routine care for the healthy pregnant woman
- Fertility: assessment and treatment for people with fertility problems
- Caesarean section
- Type 1 diabetes: diagnosis and management of type 1 diabetes in children and young people
- Long-acting reversible contraception: the effective and appropriate use of long-acting reversible contraception
- Urinary incontinence: the management of urinary incontinence in women
- Heavy menstrual bleeding
- Feverish illness in children: assessment and initial management in children younger than 5 years
- Urinary tract infection in children: diagnosis, treatment and long-term management
- Intrapartum care: care of healthy women and their babies during childbirth
- Atopic eczema in children: management of atopic eczema in children from birth up to the age of 12 years

Guidelines in production include:

- Antenatal care (update)
- Diabetes in pregnancy
- Induction of labour (update)
- Surgical site infection
- Diarrhoea and vomiting in children under 5
- When to suspect child maltreatment
- Meningitis and meningococcal disease in children
- Neonatal jaundice
- Idiopathic constipation in children
- Hypertension in pregnancy

Enquiries regarding the above guidelines can be addressed to:

**National Collaborating Centre for Women's and Children's Health**

King's Court  
Fourth Floor  
2–16 Goodge Street  
London  
W1T 2QA  
enquiries@ncc-wch.org.uk

A version of this guideline for parents/carers and the public is available from the NICE website ([www.nice.org.uk/CG060](http://www.nice.org.uk/CG060)) or from the NHS Response Line (0870 1555 455); quote reference number N1462.

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