

Bijlage Zoekverantwoording

Onderzoeksvraag & onderzoekskarakteristieken Droge mond

Onderzoeksvraag

Wat is het effect van begeleiding en behandeling op droge mond bij patiënten in de palliatieve fase?

Patients/Patiënten	Patiënten in de palliatieve fase met droge mond
Intervention/Interventie	Niet-medicamenteus: Voeding, mondverzorging, kauwgom, mondspoelingen met water of fysiologisch zout, ijs (ijsblokjes, gecrushed ijs, bevroren ananas), gustatoir (geur/ruiken), speelselsubstituten, TENS, acupunctuur, stoppen/wijzigen van medicatie met xerogene werking Medicamenteus: pilocarpine
Comparison/Vergelijking	Placebo, gebruikelijke zorg of andere interventie
Outcome(s)/Uitkomst(en)	Cruciaal: Droge mond Belangrijk: Bijwerkingen

Zoekstrategie

Embase

No.	Query	Results
#13	#4 AND (#8 OR #9 OR #10) NOT #12 NOT #6 OBS	1125
#12	#4 AND #7 NOT #6 RCT	298
#11	#4 AND #8 NOT #6	646
#10	'case control study'/de OR 'comparative study'/exp OR 'control group'/de OR 'controlled study'/de OR 'controlled clinical trial'/de OR 'crossover procedure'/de OR 'double blind procedure'/de OR 'phase 2 clinical trial'/de OR 'phase 3 clinical trial'/de OR 'phase 4 clinical trial'/de OR 'pretest posttest design'/de OR 'pretest posttest control group design'/de OR 'quasi experimental study'/de OR 'single blind procedure'/de OR 'triple blind procedure'/de OR (((control OR controlled) NEAR/6 trial):ti,ab,kw) OR (((control OR controlled) NEAR/6 (study OR studies)):ti,ab,kw) OR (((control OR controlled) NEAR/1 active):ti,ab,kw) OR 'open label*':ti,ab,kw OR (((double OR two OR three OR multi OR trial) NEAR/1 (arm OR arms)):ti,ab,kw) OR ((allocat* NEAR/10 (arm OR arms)):ti,ab,kw) OR placebo*:ti,ab,kw OR 'sham-control*':ti,ab,kw OR (((single OR double OR triple OR assessor) NEAR/1 (blind* OR masked)):ti,ab,kw) OR nonrandom*:ti,ab,kw OR 'non-random*':ti,ab,kw OR 'quasi-experiment*':ti,ab,kw OR crossover:ti,ab,kw OR 'cross over':ti,ab,kw OR 'parallel group*':ti,ab,kw OR 'factorial trial':ti,ab,kw OR ((phase NEAR/5 (study OR trial)):ti,ab,kw) OR ((case* NEAR/6 (matched OR control*)):ti,ab,kw) OR ((match* NEAR/6 (pair OR pairs OR cohort* OR control* OR group* OR healthy OR age OR sex OR gender OR patient* OR subject* OR participant*)):ti,ab,kw) OR ((propensity NEAR/6 (scor* OR match*)):ti,ab,kw) OR versus:ti OR vs:ti OR compar*:ti OR ((compar* NEAR/1 study):ti,ab,kw) OR (('major clinical study'/de OR 'clinical study'/de OR 'cohort analysis'/de OR 'observational study'/de OR 'cross-sectional study'/de OR 'multicenter study'/de OR 'correlational study'/de OR 'follow up'/de OR	14310058

	cohort*:ti,ab,kw OR 'follow up':ti,ab,kw OR followup:ti,ab,kw OR longitudinal*:ti,ab,kw OR prospective*:ti,ab,kw OR retrospective*:ti,ab,kw OR observational*:ti,ab,kw OR 'cross sectional*':ti,ab,kw OR cross?ectional*:ti,ab,kw OR multicent*:ti,ab,kw OR 'multi-cent*':ti,ab,kw OR consecutive*:ti,ab,kw) AND (group:ti,ab,kw OR groups:ti,ab,kw OR subgroup*:ti,ab,kw OR versus:ti,ab,kw OR vs:ti,ab,kw OR compar*:ti,ab,kw OR 'odds ratio*':ab OR 'relative odds':ab OR 'risk ratio*':ab OR 'relative risk*':ab OR 'rate ratio':ab OR aor:ab OR arr:ab OR rrr:ab OR (((('or' OR 'rr') NEAR/6 ci):ab)))	
#9	'major clinical study'/de OR 'clinical study'/de OR 'case control study'/de OR 'family study'/de OR 'longitudinal study'/de OR 'retrospective study'/de OR 'prospective study'/de OR 'comparative study'/de OR 'cohort analysis'/de OR ((cohort NEAR/1 (study OR studies)):ab,ti) OR (('case control' NEAR/1 (study OR studies)):ab,ti) OR (('follow up' NEAR/1 (study OR studies)):ab,ti) OR (observational NEAR/1 (study OR studies)) OR ((epidemiologic NEAR/1 (study OR studies)):ab,ti) OR (('cross sectional' NEAR/1 (study OR studies)):ab,ti)	6767914
#8	'clinical trial'/exp OR 'randomization'/exp OR 'single blind procedure'/exp OR 'double blind procedure'/exp OR 'crossover procedure'/exp OR 'placebo'/exp OR 'prospective study'/exp OR rct:ab,ti OR random*:ab,ti OR 'single blind':ab,ti OR 'randomised controlled trial':ab,ti OR 'randomized controlled trial'/exp OR placebo*:ab,ti	3302394
#7	'randomized controlled trial'/exp OR random*:ti,ab OR (((pragmatic OR practical) NEAR/1 'clinical trial*'):ti,ab) OR (((('non inferiority' OR noninferiority OR superiority OR equivalence) NEAR/3 trial*'):ti,ab) OR rct:ti,ab,kw	1839814
#6	#4 AND #5 SR	133
#5	'meta analysis'/exp OR 'meta analysis (topic)'/exp OR metaanaly*:ti,ab OR 'meta analy*':ti,ab OR metanaly*:ti,ab OR 'systematic review'/de OR 'cochrane database of systematic reviews'/jt OR prisma:ti,ab OR prospero:ti,ab OR (((systemati* OR scoping OR umbrella OR 'structured literature') NEAR/3 (review* OR overview*)):ti,ab) OR (((systemic* NEAR/1 review*):ti,ab) OR (((systemati* OR literature OR database* OR 'data base*') NEAR/10 search*):ti,ab) OR (((structured OR comprehensive* OR systemic*) NEAR/3 search*):ti,ab) OR (((literature NEAR/3 review*):ti,ab) AND (search*:ti,ab OR database*:ti,ab OR 'data base*':ti,ab)) OR (('data extraction':ti,ab OR 'data source*':ti,ab) AND 'study selection':ti,ab) OR ('search strategy':ti,ab AND 'selection criteria':ti,ab) OR ('data source*':ti,ab AND 'data synthesis':ti,ab) OR medline:ab OR pubmed:ab OR embase:ab OR cochrane:ab OR (((critical OR rapid) NEAR/2 (review* OR overview* OR synthes*)):ti) OR (((critical* OR rapid*) NEAR/3 (review* OR overview* OR synthes*)):ab) AND (search*:ab OR database*:ab OR 'data base*':ab)) OR metasynthes*:ti,ab OR 'meta synthes*':ti,ab	950632
#4	#3 NOT ('conference abstract'/it OR 'editorial'/it OR 'letter'/it OR 'note'/it) NOT (('animal'/exp OR 'animal experiment'/exp OR 'animal model'/exp OR 'nonhuman'/exp) NOT 'human'/exp)	2124

#3	#1 AND #2	3367
#2	'advance care planning'/exp OR 'advanced cancer'/exp OR 'aged hospital patient'/exp OR 'alzheimer disease'/exp OR 'amyotrophic lateral sclerosis'/exp OR 'elderly care'/exp OR 'degenerative disease'/exp/mj OR 'duchenne muscular dystrophy'/exp OR 'frail elderly'/exp OR 'frontotemporal dementia'/exp OR 'geriatrics'/exp OR 'geriatric patient'/exp OR 'hospice'/exp OR 'hospice care'/exp OR 'institutionalized elderly'/exp OR 'metastasis'/exp OR 'multiple sclerosis'/exp OR 'neurodegeneration with brain iron accumulation'/exp OR 'palliative therapy'/exp OR 'parkinson disease'/exp OR 'perry syndrome'/exp OR 'pick presenile dementia'/exp OR 'prion disease'/exp OR 'senile dementia'/exp OR 'striatonigral degeneration'/exp OR 'subacute combined degeneration'/exp OR 'synucleinopathy'/exp OR 'tauopathy'/exp OR 'terminal care'/de OR 'terminally ill patient'/exp OR 'very elderly'/exp OR 'wilson disease'/exp OR 'palliat*':ti,ab,kw OR 'reduced life expectanc*':ti,ab,kw OR 'end of life':ti,ab,kw OR 'terminally ill':ti,ab,kw OR 'terminal care':ti,ab,kw OR 'terminally sick':ti,ab,kw OR 'hospice*':ti,ab,kw OR 'terminal stage':ti,ab,kw OR 'advance* care*':ti,ab,kw OR 'advanced disease':ti,ab,kw OR 'advanced illness':ti,ab,kw OR 'life-limiting':ti,ab,kw OR 'metasta*':ti,kw OR (((('end stage' OR advanced) NEAR/5 (kidney OR renal OR ckd OR 'respiratory disease' OR 'chronic obstructive pulmonary disease' OR 'heart failure' OR 'cancer' OR neoplasm* OR carcinoma OR liver)):ti,ab,kw) OR frail*:de,ab,ti OR geriatric*:de,ab,ti OR ((oldest NEXT/1 old*):de,ab,ti) OR senium:de,ab,ti OR ((very NEXT/1 old*):de,ab,ti) OR septuagenarian*:de,ab,ti OR octagenarian*:de,ab,ti OR octogenarian*:de,ab,ti OR nonagenarian*:de,ab,ti OR centarian*:de,ab,ti OR centenarian*:de,ab,ti OR supercentenarian*:de,ab,ti OR 'degenerative disease':ti,kw OR 'neurodegenerative disease':ti,kw OR 'pick complex':ti,kw OR 'pick` s complex':ti,kw OR 'hallervorden spatz disease':ti,kw OR 'hallervorden spatz syndrome':ti,kw OR 'nbia disorder':ti,kw OR 'neurodegeneration with brain iron accumulation':ti,kw OR 'pantothenate kinase associated neurodegeneration':ti,kw OR 'perry syndrome':ti,kw OR parkinson:ti,kw OR 'senile confusion':ti,kw OR 'senile psychosis':ti,kw OR 'nigrostriatal degeneration':ti,kw OR 'nigrostriatal degeneration':ti,kw OR 'striatonigral degeneration':ti,kw OR 'strionigral degeneration':ti,kw OR 'synucleinopathy':ti,kw OR 'tauopathy':ti,kw OR 'wilson disease':ti,kw OR 'degeneratio hepato lenticularis':ti,kw OR 'hepatocerebral degeneration':ti,kw OR 'hepatolenticular degeneration':ti,kw OR 'hepatolenticular syndrome':ti,kw OR 'morbus wilson':ti,kw OR 'progressive lenticular degeneration':ti,kw OR 'wilson degeneration':ti,kw OR 'wilson syndrome':ti,kw OR 'chariot disease':ti,kw OR 'disseminated sclerosis':ti,kw OR 'insular sclerosis':ti,kw OR 'multiple sclerosis':ti,kw OR 'sclerosis multiplex':ti,kw OR 'lou gehrig disease':ti,kw OR 'lou gehrig` s disease':ti,kw OR 'amyotrophic lateral sclerosis':ti,kw OR duchenne:ti,kw	2755610
#1	'xerostomia'/exp/mj OR 'hyposalivation'/exp/mj OR 'hyposalivation*':ti,ab,kw OR 'hyposialia':ti,ab,kw OR	22497

zerostom*.ti,ab,kw OR xerostom*.ti,ab,kw OR asialia*.ti,ab,kw OR (((oral* OR mouth) NEAR/3 dry*):ti,ab,kw) OR 'sticky saliva':ti,ab,kw

Ovid/Medline

1	#	2	Searches	3	Results
4	12	5	(9 and (5 or 6 or 7)) not 10 not 11 OBS	6	1566
7	11	8	(9 and 8) not 10 RCT	9	447
10	10	11	4 and 9 SR	12	142
13	9	14	3 not ((exp animals/ or exp models, animal/) not humans/) not (letter/ or comment/ or editorial/)	15	3094
16	8	17	exp randomized controlled trial/ or randomized controlled trials as topic/ or random*.ti,ab. or rct?.ti,ab. or ((pragmatic or practical) adj "clinical trial*").ti,ab,kf. or ((non-inferiority or noninferiority or superiority or equivalence) adj3 trial*).ti,ab,kf.	18	1633776
19	7	20	Case-control Studies/ or clinical trial, phase ii/ or clinical trial, phase iii/ or clinical trial, phase iv/ or comparative study/ or control groups/ or controlled before-after studies/ or controlled clinical trial/ or double-blind method/ or historically controlled study/ or matched-pair analysis/ or single-blind method/ or (((control or controlled) adj6 (study or studies or trial)) or (compar* adj (study or studies)) or ((control or controlled) adj1 active) or "open label*" or ((double or two or three or multi or trial) adj (arm or arms)) or (allocat* adj10 (arm or arms)) or placebo* or "sham-control*" or ((single or double or triple or assessor) adj1 (blind* or masked)) or nonrandom* or "non-random*" or "quasi-experiment*" or "parallel group*" or "factorial trial" or "pretest posttest" or (phase adj5 (study or trial)) or (case* adj6 (matched or control*)) or (match* adj6 (pair or pairs or cohort* or control* or group* or healthy or age or sex or gender or patient* or subject* or participant*)) or (propensity adj6 (scor* or match*))) .ti,ab,kf. or (confounding adj6 adjust*).ti,ab. or (versus or vs or compar*).ti. or ((exp cohort studies/ or epidemiologic studies/ or multicenter study/ or observational study/ or seroepidemiologic studies/ or (cohort* or 'follow up' or followup or longitudinal* or prospective* or retrospective* or observational* or multicent* or 'multi-cent*' or consecutive*).ti,ab,kf.) and ((group or groups or subgroup* or versus or vs or compar*).ti,ab,kf. or ('odds ratio*' or 'relative odds' or 'risk ratio*' or 'relative risk*' or aor or arr or rrr).ab. or ("OR" or "RR") adj6 CI).ab.))	21	5480255
22	6	23	Epidemiologic studies/ or case control studies/ or exp cohort studies/ or Controlled Before-After Studies/ or Case control.tw. or cohort.tw. or Cohort analy\$.tw. or (Follow up adj (study or studies)).tw. or (observational adj (study or studies)).tw. or Longitudinal.tw. or Retrospective*.tw. or prospective*.tw. or consecutive*.tw. or Cross sectional.tw. or Cross-sectional studies/ or historically controlled study/ or interrupted time series analysis/ [Onder exp cohort studies vallen ook longitudinale, prospectieve en retrospectieve studies]	24	4499344
25	5	26	exp clinical trial/ or randomized controlled trial/ or exp clinical trials as topic/ or randomized controlled trials as topic/ or Random Allocation/ or Double-Blind Method/ or Single-Blind Method/ or (clinical trial, phase i or clinical trial, phase ii or clinical trial, phase iii or clinical trial, phase iv or controlled clinical trial or randomized controlled trial or	27	2616974

		multicenter study or clinical trial).pt. or random*.ti,ab. or (clinic* adj trial*).tw. or ((singl* or doubl* or treb* or tripl*) adj (blind\$3 or mask\$3)).tw. or Placebos/ or placebo*.tw.		
28	4	29 meta-analysis/ or meta-analysis as topic/ or (metaanaly* or meta-analy* or metanaly*).ti,ab,kf. or systematic review/ or cochrane.jw. or (prisma or prospero).ti,ab,kf. or ((systemati* or scoping or umbrella or "structured literature") adj3 (review* or overview*).ti,ab,kf. or (systemic* adj1 review*).ti,ab,kf. or ((systemati* or literature or database* or data-base*) adj10 search*).ti,ab,kf. or ((structured or comprehensive* or systemic*) adj3 search*).ti,ab,kf. or ((literature adj3 review*) and (search* or database* or data-base*).ti,ab,kf. or ("data extraction" or "data source*") and "study selection").ti,ab,kf. or ("search strategy" and "selection criteria").ti,ab,kf. or ("data source*" and "data synthesis").ti,ab,kf. or (medline or pubmed or embase or cochrane).ab. or ((critical or rapid) adj2 (review* or overview* or synthes*).ti. or (((critical* or rapid*) adj3 (review* or overview* or synthes*)) and (search* or database* or data-base*).ab. or (metasynthes* or meta-synthes*).ti,ab,kf. or exp Guideline/ or guideline.ti,ab,kf. or guidance.ti,ab,kf.	30	928156
31	3	32 1 and 2	33	3179
34	2	35 Terminal Care/ or Hospice Care/ or "Hospice and Palliative Care Nursing"/ or Terminally Ill/ or exp Neoplasm Metastasis/ or exp Advance Care Planning/ or exp Palliative Care/ or exp "Aged, 80 and over"/ or exp Frail Elderly/ or Alzheimer Disease/ or Amyotrophic Lateral Sclerosis/ or exp Neurodegenerative Diseases/ or Muscular Dystrophy, Duchenne/ or exp Dementia/ or exp Geriatrics/ or exp Multiple Sclerosis/ or Palliative Medicine/ or exp Parkinsonian Disorders/ or exp Prion Diseases/ or Striatonigral Degeneration/ or Synucleinopathies/ or palliat*.ti,ab,kf. or reduced life expectanc*.ti,ab,kf. or end of life.ti,ab,kf. or terminally ill.ti,ab,kf. or terminal care.ti,ab,kf. or terminally sick.ti,ab,kf. or hospice*.ti,ab,kf. or terminal stage.ti,ab,kf. or advance* care*.ti,ab,kf. or advanced disease.ti,ab,kf. or advanced illness.ti,ab,kf. or life-limiting.ti,ab,kf. or metasta*.ti,kf. or ((end stage or advanced) adj5 (kidney or renal or ckd or respiratory disease or chronic obstructive pulmonary disease or heart failure or cancer or neoplasm* or carcinoma or liver)).ti,ab,kf. or frail*.ti,ab,kf. or geriatri*.ti,ab,kf. or (oldest adj1 old*).ti,ab,kf. or senium.ti,ab,kf. or (very adj1 old*).ti,ab,kf. or septuagenarian*.ti,ab,kf. or octagenarian*.ti,ab,kf. or octogenarian*.ti,ab,kf. or nonagenarian*.ti,ab,kf. or centarian*.ti,ab,kf. or centenarian*.ti,ab,kf. or supercentenarian*.ti,ab,kf. or degenerative disease.ti,kf. or neurodegenerative disease.ti,kf. or pick complex.ti,kf. or hallervorden spatzi disease.ti,kf. or hallervorden spatzi syndrome.ti,kf. or nbia disorder.ti,kf. or neurodegeneration with brain iron accumulation.ti,kf. or pantothenate kinase associated neurodegeneration.ti,kf. or perry syndrome.ti,kf. or parkinson.ti,kf. or senile confusion.ti,kf. or senile psychosis.ti,kf. or nigrostriatal degeneration.ti,kf. or nigrostriatal degeneration.ti,kf. or striatonigral degeneration.ti,kf. or strionigral degeneration.ti,kf. or synucleinopathy.ti,kf. or tauopathy.ti,kf. or wilson disease.ti,kf. or degeneratio hepato lenticularis.ti,kf. or hepatocerebral degeneration.ti,kf. or hepatolenticular degeneration.ti,kf. or hepatolenticular syndrome.ti,kf. or morbus wilson.ti,kf. or progressive lenticular degeneration.ti,kf. or wilson	36	2256926

		degeneration.ti,kf. or wilson syndrome.ti,kf. or chariot disease.ti,kf. or disseminated sclerosis.ti,kf. or insular sclerosis.ti,kf. or multiple sclerosis.ti,kf. or sclerosis multiplex.ti,kf. or lou gehrig disease.ti,kf. or amyotrophic lateral sclerosis.ti,kf. or duchenne.ti,kf.	
37	1	38 exp *Xerostomia/ or hyposalivation*.ti,ab,kf. or hyposialia.ti,ab,kf. or zerostom*.ti,ab,kf. or xerostom*.ti,ab,kf. or asialia*.ti,ab,kf. or "sticky saliva".ti,ab,kf. or ((oral* or mouth) adj3 dry*).ti,ab,kf.	39 23459

Tabel 1. Resultaten van zoekactie van onderzoeksvraag UV1

Database	Aantal
Embase	1556
Ovid/Medline	2155
Totaal aantal resultaten	3711
Aantal geëxcludeerd (dubbelen)	946
Totaal aantal unieke resultaten	2765

Tabel 2. Overzicht van geëxcludeerde studies gebaseerd op beoordeling van de volledige tekst van onderzoeksvraag UV1

Referentie	Reden voor exclusie
Dhaliwal JS, Talip T, Rajam DT, Dhaliwal SKS, Murang ZR, Ming LC, Venkatasalu MR. A systematic review of interventional studies on oral care of palliative patients. <i>Ann Palliat Med.</i> 2022 Sep;11(9):2980-3000. doi: 10.21037/apm-22-215. Epub 2022 Aug 31. PMID: 36096743.	Overlap geïnccludeerde studie
Gil-Montoya JA, Silvestre FJ, Barrios R, Silvestre-Rangil J. Treatment of xerostomia and hyposalivation in the elderly: A systematic review. <i>Med Oral Patol Oral Cir Bucal.</i> 2016 May 1;21(3):e355-66. doi: 10.4317/medoral.20969. PMID: 27031061; PMCID: PMC4867210.	Verkeerde populatie
Martimbianco ALC, Prosdociami FC, Anauate-Netto C, Dos Santos EM, Mendes GD, Fragoso YD. Evidence-Based Recommendations for the Oral Health of Patients with Parkinson's Disease. <i>Neurol Ther.</i> 2021 Jun;10(1):391-400. doi: 10.1007/s40120-021-00237-4. Epub 2021 Mar 18. PMID: 33738711; PMCID: PMC8140025.	Geen inclusie van interventiestudies voor droge mond
Pérez-Nicolás C, Pecci-Lloret MP, Guerrero-Gironés J. Use and efficacy of mouthwashes in elderly patients: A systematic review of randomized clinical trials. <i>Ann Anat.</i> 2023 Feb;246:152026. doi: 10.1016/j.aanat.2022.152026. Epub 2022 Nov 17. PMID: 36402239.	Verkeerde populatie
Silva ARP, Bodanezi AV, Chrun ES, Lisboa ML, de Camargo AR, Munhoz EA. Palliative oral care in terminal cancer patients: Integrated review. <i>World J Clin Cases.</i> 2023 May 6;11(13):2966-2980. doi: 10.12998/wjcc.v11.i13.2966. PMID: 37215429; PMCID: PMC10198072.	Geen inclusie van interventiestudies voor droge mond
Towler P, Molassiotis A, Brearley SG. What is the evidence for the use of acupuncture as an intervention for symptom management in cancer supportive and palliative care: an integrative overview of reviews. <i>Support Care Cancer.</i> 2013 Oct;21(10):2913-23. doi: 10.1007/s00520-013-1882-8. Epub 2013 Jul 19. PMID: 23868190.	Verkeerde design
Venkatasalu MR, Murang ZR, Ramasamy DTR, Dhaliwal JS. Oral health problems among palliative and terminally ill patients: an integrated systematic review. <i>BMC Oral Health.</i> 2020 Mar 18;20(1):79. doi: 10.1186/s12903-020-01075-w. PMID: 32188452; PMCID: PMC7079519.	Geen inclusie van interventiestudies voor droge mond
Wu X, Chung VC, Hui EP, Ziea ET, Ng BF, Ho RS, Tsoi KK, Wong SY, Wu JC. Effectiveness of acupuncture and related therapies for palliative care of cancer: overview	Verkeerde design

of systematic reviews. Sci Rep. 2015 Nov 26;5:16776. doi: 10.1038/srep16776. PMID: 26608664; PMCID: PMC4660374.

Standish LJ, Kozak L, Congdon S. Acupuncture is underutilized in hospice and palliative medicine. Am J Hosp Palliat Care. 2008 Aug-Sep;25(4):298-308. doi: 10.1177/1049909108315916. Epub 2008 Jun 6. PMID: 18539767.

Bijlage Onderzoekskarakteristieken UV 1 droge mond

Tabellen karakteristieken geselecteerde studies

Author, publication year: Hammond 2023							
Include d studies in the review	Study characteristics	Patient characteristics	Intervention (I)	Comparison / control (C)	Follow-up	Outcome measures and effect size	Comments
<p>A. Davis 2017 B. Kvalheim 2019 C. Monsen 2021 D. Morales-Bozo 2017 E. Nikles 2015 F. Puntillo 2014 G. VonStein 2019</p>	<p><u>Type of study:</u> All kinds of studies with original data</p> <p><u>Search date:</u> 31-12-2021</p> <p><u>Number of included studies (see comments):</u> N= 11</p> <p><u>Country</u> A. USA B. Norway C. Norway D. Chile E. Australia F. USA G. USA</p> <p><u>Source of funding:</u> Flinders university</p> <p><u>Inclusion criteria:</u> - Patients of any age in palliative, end-of-life care or critical care experiencing thirst and/or dry mouth - Primary outcome has to be efficacy of thirst/dry mouth intervention - OECD countries</p> <p><u>Exclusion criteria:</u> - Not clinical setting</p>	<p><u>N total at baseline:</u> A. 10 B. 30 C. 88 D. 74 E. 17 F. 252 G. 103</p> <p><u>Age, mean:</u> A. 53.0 B. 68.5 C. 64.3 (I), 63.5 (C) D. 66.7 E. 64.7 F. 54.5 (I), 55.5 (C) G. 60.3 (I), 62.8 (C)</p> <p>Gender, male (%): A. 20.0 B. 43.0 C. 34.0 (I), 20.0 (C) D. 8.0 E. 29.4 F. 53.5 (I), 56.0 (C) G. 53.0 (I), 59.0 (C)</p> <p>Study setting: A. Private practice/academic pain and palliative care clinic B. Palliative care units at a hospital and a nursing home C. Hospice inpatient unit D. Diagnostic service of a dentistry</p>	<p>A. Mango-flavored toothpick infused with 2.25mg spilanthol B. 17% watery solution of glycerol (oral moisturizer) for 3 days C. Salvia officinalis mouth rinse (10-15ml) twice for 30 seconds 4 times a day, for 4 days D. Herbal saliva substitute (linseed and chamomile) 2ml 4 times a day for 1 week E. Pilocarpine drops 4% 3 days F. Oral swab wipes, sterile ice-cold water sprays and menthol lip moisturizer for 15 mins for 2 days G. Oral swabs with ice water and lip moisturizer with menthol on an hourly schedule</p>	<p>A. Mango-flavored toothpick only B. Oxygenated glycerol triester (Aequasyl) or Saliant for 3 days C. Normal saline mouth rinse to be used as needed for 4 days D. Conventional saliva substitute 2ml 4 times a day for 1 week E. Placebo F. Usual care G. Oral swabs with ice water and lip moisturizer with menthol as needed without schedule</p>	<p><u>Length of follow-up:</u> A. Not applicable B. 2 hours post-intervention C. 4 days D. 1 week E. Not applicable F. Not applicable G. Not applicable</p> <p>Loss to follow-up not reported in review.</p>	<p>A. The intervention group had an 626% increase over baseline in saliva production in mg/min, compared to a 440% increase in the control group (p<0.01). Salivary pH increased to 6.28 in the intervention group and 6.08 in the control group (p=0.04).</p> <p>B. <i>Xerostomia immediately after:</i> Aequasyl: OR 13.10 (95%CI 6.15-27.90) Glycerol: OR 38.59 (95%CI 18.73-79.48) Salient: OR 16.95 (95%CI 7.19-39.97) Difference between aequasyl and glycerol statistically significant (p<0.01)</p> <p><i>Xerostomia 2 hours later:</i></p>	<p>This review assessed the effect of interventions on dry mouth or feeling of thirst in all kinds of study designs. Only the intervention studies with a control condition are reported in this table (n=7)</p>

	- Non-English language	university department E. Palliative care units F. ICUs in an urban tertiary medical center G. ICUs at an acute care community teaching hospital	over a 7-hour period			<p>Aequasyl: OR 8.79 (95%CI 4.70-16.46) Glycerol: OR 0.93 (95%CI 0.57-1.51) Salient: OR 9.76 (95%CI 4.68-20.36) Difference between glycerol and aequasyl and salient was significant ($p < 0.01$)</p> <p>The majority of patients (19/30) preferred glycerol ($p < 0.001$).</p> <p><i>C. EORTC QLQ-OH17 dry mouth item:</i> Both rinses resulted in improved ratings after 5 days (SO 2.39, NS 2.82, $p = 0.063$)</p> <p><i>Numerical rating scale for dry mouth:</i> Reported improvements higher in the SO group (score 5.8 day 1 and 3.7 day 5) than in the NS group (score 5.4 day 1 and 4.6 day 5), as indicated by group-by day interaction ($p = 0.045$)</p> <p><i>D. Relief of symptoms associated with xerostomia:</i> Sensation of dry mouth: 6.4 (I) vs 5.0 (C), $p = 0.02$ Sensation of thick saliva: 5.4 (I) vs 4.0 (C), $p = 0.05$ Sensation of burning</p>
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						<p>tongue: 2.7 (I) vs 2.4 (C), p=0.12 Need to drink liquids to swallow: 4.4(I) vs 2.9 (C), p=0.15 Sensation of difficulty in swallowing food: 3.9 (I) vs 2.1 (C), p<0.01</p> <p>E. Two out of 4 who completed the study were responders (all three cycles favoured pilocarpine with a 2-point minimal improvement in the numerical score compared to placebo) and two non-responders.</p> <p>F. Thirst intensity score: 3.6 (I) vs 4.7 (C), p<0.01 Thirst distress score: 3.2 (I) vs 3.7 (C), p<0.01</p> <p>G. Thirst intensity score: 3.7 (I) vs 5.4 (C), p=0.02 Thirst distress score: 2.7 (I) vs 4.2 (C), p=0.07 Dry mouth symptoms: 3.5 (I) vs 5.2 (C), p<0.01</p>	
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Author, publication year: Hanchanale 2015							
Include d studies in the review	Study characteristics	Patient characteristics	Intervention (I)	Comparison / control (C)	Follow-up	Outcome measures and effect size	Comments
A. Davies 1998	<u>Type of study:</u> Primary research	<u>N total at baseline:</u> A. 62	A. Artificial saliva for 2 weeks	A. Pilocarpine for 2 weeks	<u>Length of follow-up:</u>	A. Mean change in VAS score:	Only the studies with a

B. Davies 2000 C. Sweeney 1997	<u>Search date:</u> 25-02-2014 <u>Number of included studies (see comments):</u> N= 6 <u>Country</u> A. UK B. UK C. UK <u>Source of funding:</u> Not reported <u>Inclusion criteria:</u> - Adults with advanced cancer <u>Exclusion criteria:</u> - Patients with head and neck cancer who had radiotherapy or surgery, or those with autoimmune diseases or graft versus host disease	B. 41 C. 35 <u>Age:</u> Not reported No other patient details given.	B. Artificial saliva for 5 days C. Artificial saliva for 7 days	B. Chewing gum for 5 days C. Placebo	A. post-intervention B. post-intervention C. post-intervention <u>Loss-to-follow-up:</u> A. 37 B. 15 C. 9	+12% artificial saliva vs +46% pilocarpine (p<0.01) B. Mean change in VAS score: +22.4mm artificial saliva vs +30.1 chewing gum (p=0.49) C. No statistically significant difference of both interventions	control group are reported in this table (n=3)
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Risk of bias tabellen

Author, publication year: Hammond 2023		
Item	Yes, partial yes or no	Explanation
1. Did the research questions and inclusion criteria for the review include the components of PICO?	Yes	
2. Did the report of the review contain an explicit statement that the review methods were established prior to the conduct of the review and did the report justify any significant deviations from the protocol?	No	
3. Did the review authors explain their selection of the study designs for inclusion in the review?	No	
4. Did the review authors use a comprehensive literature search strategy?	Partial yes	Did not look at references or grey literature
5. Did the review authors perform study selection in duplicate?	Yes	
6. Did the review authors perform data extraction in duplicate?	Yes	
7. Did the review authors provide a list of excluded studies and justify the exclusions?	No	
8. Did the review authors describe the included studies in adequate detail?	Yes	
9. Did the review authors use a satisfactory technique for assessing the risk of bias (RoB) in individual studies that were included in the review?	Yes	
10. Did the review authors report on the sources of funding for the studies included in the review?	No	

11. If meta-analysis was performed did the review authors use appropriate methods for statistical combination of results?	N.A.	
12. If meta-analysis was performed, did the review authors assess the potential impact of RoB in individual studies on the results of the meta-analysis or other evidence synthesis?	N.A.	
13. Did the review authors account for RoB in individual studies when interpreting/ discussing the results of the review?	Yes	
14. Did the review authors provide a satisfactory explanation for, and discussion of, any heterogeneity observed in the results of the review?	N.A.	
15. If they performed quantitative synthesis did the review authors carry out an adequate investigation of publication bias (small study bias) and discuss its likely impact on the results of the review?	N.A.	
16. Did the review authors report any potential sources of conflict of interest, including any funding they received for conducting the review?	No	

Author, publication year: Hanchanale 2015		
Item	Yes, partial yes or no	Explanation
1. Did the research questions and inclusion criteria for the review include the components of PICO?	Yes	
2. Did the report of the review contain an explicit statement that the review methods were established prior to the conduct of the review and did the report justify any significant deviations from the protocol?	No	
3. Did the review authors explain their selection of the study designs for inclusion in the review?	No	
4. Did the review authors use a comprehensive literature search strategy?	Partial yes	Did not look at references or grey literature
5. Did the review authors perform study selection in duplicate?	No	
6. Did the review authors perform data extraction in duplicate?	Yes	
7. Did the review authors provide a list of excluded studies and justify the exclusions?	No	
8. Did the review authors describe the included studies in adequate detail?	No	No details on participants were given such as age or disease, country of study not reported
9. Did the review authors use a satisfactory technique for assessing the risk of bias (RoB) in individual studies that were included in the review?	Yes	
10. Did the review authors report on the sources of funding for the studies included in the review?	No	
11. If meta-analysis was performed did the review authors use appropriate methods for statistical combination of results?	N.A.	
12. If meta-analysis was performed, did the review authors assess the potential impact of RoB in individual studies on the results of the meta-analysis or other evidence synthesis?	N.A.	
13. Did the review authors account for RoB in individual studies when interpreting/ discussing the results of the review?	Yes	
14. Did the review authors provide a satisfactory explanation for, and discussion of, any heterogeneity observed in the results of the review?	N.A.	

15. If they performed quantitative synthesis did the review authors carry out an adequate investigation of publication bias (small study bias) and discuss its likely impact on the results of the review?	N.A.	
16. Did the review authors report any potential sources of conflict of interest, including any funding they received for conducting the review?	No	Not reported

GRADE profielen

Artificial saliva vs pilocarpine

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Artificial saliva	Pilocarpine	Relative (95%CI)	Absolute	
Visual Analogue Scale (VAS)											
1	RCT	Very serious ¹	Not serious	Not serious	Very serious ²	None	26	26	-	Mean change +12% vs +46% (p=0.003, 95%CI 12-55%)	VERY LOW

¹ Unclear randomization, lack of blinding, high risk of attrition bias

² Large confidence interval

Artificial saliva vs chewing gum

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Artificial saliva	Chewing gum	Relative (95%CI)	Absolute	
Visual Analogue Scale (VAS)											
1	RCT	Very serious ¹	Not serious	Not serious	Very serious ²	None	26	26		Mean change +22.4mm vs +30.1mm (p=0.49, 95%CI -15.9;30.4).	VERY LOW

¹ Unclear randomization, lack of blinding, high risk of attrition bias

² Large confidence interval

Artificial saliva vs placebo

Quality assessment	No of patients	Effect	
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No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Artificial saliva	Placebo	Relative (95%CI)	Absolute	Quality
Visual Analogue Scale (VAS)											
1	RCT	Serious ¹	Not serious	Not serious	Very serious ²	None	15	16		9 out of 15 patients (60%) in the Saliva Orthana group and 10 out of 16 patients (62.5%) in the placebo group reported improvement at 1 week follow-up (not significant)	VERY LOW

¹ Creation of randomization sequence unclear, funded by industry

² Very small sample size, no confidence intervals reported

Herbal artificial saliva (linseed + chamomile) vs conventional artificial saliva

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Herbal artificial saliva	Conventional artificial saliva	Relative (95%CI)	Absolute	
Relief of sensation of dry mouth (VAS scale)											
1	RCT	Serious ¹	Not serious	Not serious	Serious ²	None	74	74		6.4 herbal group vs 5.0 conventional group (p=0.02)	LOW
Relief of sensation of thick saliva (VAS scale)											
1	RCT	Serious ¹	Not serious	Not serious	Serious ²	None	74	74		5.4 herbal group vs 4.0 conventional group (p=0.05)	LOW
Relief of sensation of burning tongue (VAS scale)											
1	RCT	Serious ¹	Not serious	Not serious	Serious ²	None	74	74		2.7 herbal group vs 2.4 conventional	LOW

										al group (p=0.012)	
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¹ Creation of randomization sequence unclear

² No confidence intervals reported

Pilocarpine vs placebo

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Pilocarpine	Placebo	Relative (95%CI)	Absolute	
Numerical Rating Scale											
1	RCT	Very serious ¹	Not serious	Not serious	Very serious ²	None	4	4		Two out of 4 were responders (improving on NRS with pilocarpine but not with placebo)	VERY LOW

¹ Very high risk of attrition bias, unclear analysis

² Very small sample size, no confidence intervals

Oral moisturizers

Quality assessment							No of patients			Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Glycerol	Aequasyal	Salient	Relative (95%CI)	Absolute	
Likert-scale												
1	RCT	Serious ¹	Not serious	Not serious	Very serious ²	None	30	30	30	Immediately after: Aequasyal: OR 13.10, glycerol: OR 38.59, Salient: OR 16.95 2 hours later: Aequasyal: OR 8.79, Glycerol: OR 0.93, Salient: OR 9.76	VERY LOW	

¹ Unclear randomization, lack of blinding

² Large confidence intervals for before-after comparison, no confidence interval given for comparisons between interventions

Mouth rinse (salvia officinalis vs saline)

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Salvia Officinalis	Normal Saline	Relative (95%CI)	Absolute	
EORTC CHC-OH17 item xerostomia											
1	RCT	Serious ¹	Not serious	Not serious	Serious ²	None	33	39		After 5 days the scores were 2.39 vs 2.82 (p=0.06). Day by group interaction significant (p=0.036).	LOW
Numerical Rating Scale											
1	RCT	Serious ¹	Not serious	Not serious	Serious ²	None	44	44		After 5 days the scores were 3.7 vs 4.6 (p=0.19). Day by group interaction was significant (p=0.045).	LOW

¹ Use of envelopes for randomization, patients and providers not blinded for treatment

² Confidence interval not reported

Toothpicks with mango flavor (spilanthol vs normal)

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Toothpick with spilanthol	Normal toothpick	Relative (95%CI)	Absolute	
Saliva production in mg/min											

1	Non-randomized within subject design	Very serious ¹	Not serious	Not serious	Very serious ²	None	10	10		626% increase from baseline in spilanthol group vs 440% increase in control group (p<0.01)	VERY LOW
Saliva pH											
1	Non-randomized within subject design	Very serious ¹	Not serious	Not serious	Very serious ²	None	10	10		6.28 spilanthol group vs 6.08 control group (p=0.04)	

¹ Not randomized, details lacking and paper not available

² Very small sample size, confidence intervals not reported

Thirst bundle (oral swab wipes, sterile ice-cold water sprays, and a menthol lip moisturizer) vs usual care

No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Thirst bundle	Usual care	Relative (95%CI)	Absolute	
Thirst intensity (Numerical Rating Scale)											
1	RCT	Very serious ¹	Not serious	Not serious	Not serious ²	None	127	125		3.6 thirst bundle groups vs 4.7 usual care (p<0.01)	LOW
Thirst distress (Numerical Rating Scale)											
1	RCT	Very serious ¹	Not serious	Not serious	Not serious ²	None	127	125		3.2 thirst bundle group vs 3.7 usual care (p<0.01)	LOW

¹ Randomized by envelope, not blinded

Thirst bundle (oral swab wipes, sterile ice-cold water sprays, and a menthol lip moisturizer) every hour vs on demand

No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Thirst bundle	Thirst bundle on	Relative (95%CI)	Absolute	

							every hour	deman d			
Thirst intensity (Numerical Rating Scale)											
1	Non-randomized experimental study	Very serious ¹	Not serious	Not serious	Serious ²	None	62	41		3.7 every hour group vs 5.4 on demand group (p=0.02)	VERY LOW
Thirst distress (Numerical Rating Scale)											
1	Non-randomized experimental study	Very serious ¹	Not serious	Not serious	Serious ²	None	62	41		2.7 every hour group vs 4.2 on demand group (p=0.07)	VERY LOW
Dry mouth (Numerical Rating Scale)											
1	Non-randomized experimental study	Very serious ¹	Not serious	Not serious	Serious ²	None	62	41		3.5 every hour group vs 5.2 on demand group (p<0.01)	VERY LOW

¹ Not randomized, not blinded

² Confidence intervals not reported

Onderzoeksvraag & onderzoekskarakteristieken Infecties en ontstekingen in de mond

Onderzoeksvraag

Wat is het effect van begeleiding en behandeling op infecties en ontstekingen in de mond (stomatitis, orale mucositis, candidiasis) bij patiënten in de palliatieve fase?

Patients/Patiënten	Patiënten in de palliatieve fase met een schimmelinfectie, virale infectie of bacteriële infectie van de mond
Intervention/Interventie	Medicamenteus: Corticosteroïden, tetracycline, zilvernitraat, lidocaïne, miconazol, fluconazol, itraconazol, chloorhexidine gel/spoeling, hextriël, aciclovir/valacyclovir, metronidazol, clindamycine Niet-medicamenteus: Caphosol, low level lasertherapie, mondverzorging
Comparison/Vergelijking	Placebo, gebruikelijke zorg of andere interventie
Outcome(s)/Uitkomst(en)	Cruciaal: Infecties in de mond Belangrijk: Bijwerkingen

Zoekstrategie

Embase

No.	Query	Results
#41	#34 AND #36 NOT #40 RCT	931
#40	#34 AND #35 SR	610
#39	'case control study'/de OR 'comparative study'/exp OR 'control group'/de OR 'controlled study'/de OR 'controlled clinical trial'/de OR 'crossover procedure'/de OR 'double blind procedure'/de OR 'phase 2 clinical trial'/de OR 'phase 3 clinical trial'/de OR 'phase 4 clinical trial'/de OR 'pretest posttest design'/de OR 'pretest posttest control group design'/de OR 'quasi experimental study'/de OR 'single blind procedure'/de OR 'triple blind procedure'/de OR (((control OR controlled) NEAR/6 trial):ti,ab,kw) OR (((control OR controlled) NEAR/6 (study OR studies)):ti,ab,kw) OR (((control OR controlled) NEAR/1 active):ti,ab,kw) OR 'open label*':ti,ab,kw OR (((double OR two OR three OR multi OR trial) NEAR/1 (arm OR arms)):ti,ab,kw) OR ((allocat* NEAR/10 (arm OR arms)):ti,ab,kw) OR placebo*:ti,ab,kw OR 'sham-control*':ti,ab,kw OR (((single OR double OR triple OR assessor) NEAR/1 (blind* OR masked)):ti,ab,kw) OR nonrandom*:ti,ab,kw OR 'non-random*':ti,ab,kw OR 'quasi-experiment*':ti,ab,kw OR crossover:ti,ab,kw OR 'cross over':ti,ab,kw OR 'parallel group*':ti,ab,kw OR 'factorial trial':ti,ab,kw OR ((phase NEAR/5 (study OR trial)):ti,ab,kw) OR ((case* NEAR/6 (matched OR control*)):ti,ab,kw) OR ((match* NEAR/6 (pair OR pairs OR cohort* OR control* OR group* OR healthy OR age OR sex OR gender OR patient* OR subject* OR participant*)):ti,ab,kw) OR ((propensity NEAR/6 (scor* OR match*)):ti,ab,kw) OR versus:ti OR vs:ti OR compar*:ti OR ((compar* NEAR/1 study):ti,ab,kw) OR (('major clinical study'/de OR 'clinical study'/de OR 'cohort analysis'/de OR 'observational study'/de OR 'cross-sectional study'/de OR 'multicenter study'/de OR 'correlational study'/de OR 'follow up'/de OR cohort*:ti,ab,kw OR 'follow up':ti,ab,kw OR followup:ti,ab,kw OR longitudinal*:ti,ab,kw OR prospective*:ti,ab,kw OR retrospective*:ti,ab,kw OR observational*:ti,ab,kw OR 'cross sectional*':ti,ab,kw OR cross?ectional*:ti,ab,kw OR multicent*:ti,ab,kw	14311088

	OR 'multi-cent*':ti,ab,kw OR consecutive*':ti,ab,kw) AND (group:ti,ab,kw OR groups:ti,ab,kw OR subgroup*':ti,ab,kw OR versus:ti,ab,kw OR vs:ti,ab,kw OR compar*':ti,ab,kw OR 'odds ratio*':ab OR 'relative odds':ab OR 'risk ratio*':ab OR 'relative risk*':ab OR 'rate ratio':ab OR aor:ab OR arr:ab OR rrr:ab OR (((('or' OR 'rr') NEAR/6 ci):ab)))	
#38	'major clinical study'/de OR 'clinical study'/de OR 'case control study'/de OR 'family study'/de OR 'longitudinal study'/de OR 'retrospective study'/de OR 'prospective study'/de OR 'comparative study'/de OR 'cohort analysis'/de OR ((cohort NEAR/1 (study OR studies)):ab,ti) OR (('case control' NEAR/1 (study OR studies)):ab,ti) OR (('follow up' NEAR/1 (study OR studies)):ab,ti) OR (observational NEAR/1 (study OR studies)) OR ((epidemiologic NEAR/1 (study OR studies)):ab,ti) OR (('cross sectional' NEAR/1 (study OR studies)):ab,ti)	6767914
#37	'clinical trial'/exp OR 'randomization'/exp OR 'single blind procedure'/exp OR 'double blind procedure'/exp OR 'crossover procedure'/exp OR 'placebo'/exp OR 'prospective study'/exp OR rct:ab,ti OR random*':ab,ti OR 'single blind':ab,ti OR 'randomised controlled trial':ab,ti OR 'randomized controlled trial'/exp OR placebo*':ab,ti	3302394
#36	'randomized controlled trial'/exp OR random*':ti,ab OR (((pragmatic OR practical) NEAR/1 'clinical trial*'):ti,ab) OR (((('non inferiority' OR noninferiority OR superiority OR equivalence) NEAR/3 trial*'):ti,ab) OR rct:ti,ab,kw	1839814
#35	'meta analysis'/exp OR 'meta analysis (topic)'/exp OR metaanaly*':ti,ab OR 'meta analy*':ti,ab OR metanaly*':ti,ab OR 'systematic review'/de OR 'cochrane database of systematic reviews'/jt OR prisma:ti,ab OR prospero:ti,ab OR (((systemati* OR scoping OR umbrella OR 'structured literature') NEAR/3 (review* OR overview*)):ti,ab) OR ((systemic* NEAR/1 review*):ti,ab) OR (((systemati* OR literature OR database* OR 'data base*') NEAR/10 search*):ti,ab) OR (((structured OR comprehensive* OR systemic*) NEAR/3 search*):ti,ab) OR (((literature NEAR/3 review*):ti,ab) AND (search*':ti,ab OR database*':ti,ab OR 'data base*':ti,ab)) OR (('data extraction':ti,ab OR 'data source*':ti,ab) AND 'study selection':ti,ab) OR ('search strategy':ti,ab AND 'selection criteria':ti,ab) OR ('data source*':ti,ab AND 'data synthesis':ti,ab) OR medline:ab OR pubmed:ab OR embase:ab OR cochrane:ab OR (((critical OR rapid) NEAR/2 (review* OR overview* OR synthes*)):ti) OR (((critical* OR rapid*) NEAR/3 (review* OR overview* OR synthes*)):ab) AND (search*':ab OR database*':ab OR 'data base*':ab)) OR metasynthes*':ti,ab OR 'meta synthes*':ti,ab	733409
#34	#18 NOT ('conference abstract'/it OR 'editorial'/it OR 'letter'/it OR 'note'/it) NOT (('animal'/exp OR 'animal experiment'/exp OR 'animal model'/exp OR 'nonhuman'/exp) NOT 'human'/exp)	7732
#33	#31 NOT #32	4
#32	#18 AND #31 8 sleutelartikelen gevonden	8
#31	#19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30	12
#30	'interventions for treating oral candidiasis for patients with cancer receiving treatment' AND [2007]/py	1
#29	'interventions for preventing oral mucositis for patients with cancer receiving treatment' AND [2007]/py	1

#28	'interventions for the prevention and treatment of herpes simplex virus in patients being treated for cancer'	1
#27	'appropriate antibiotic prescribing for the general dentist'	1
#26	'mouth care for nasopharyngeal cancer patients undergoing radiotherapy'	1
#25	'oral mucosal disease: recurrent aphthous stomatitis'	1
#24	'a prospective, randomized trial for the prevention of mucositis in patients undergoing hematopoietic stem cell transplantation'	1
#23	'the role of basic oral care and good clinical practice principles in the management of oral mucositis'	1
#22	'updated clinical practice guidelines for the prevention and treatment of mucositis'	1
#21	'pharmacological management of recurrent oral mucosal ulceration'	1
#20	'prevention of oral mucositis in patients treated with high-dose chemotherapy and bone marrow transplantation'	1
#19	'silver nitrate cautery in aphthous stomatitis: a randomized controlled trial'	1
#18	#3 AND #17	9680
#17	#4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16	1110076
#16	'low level laser therapy'/exp OR 'mouth hygiene'/exp OR 'caphosol'/exp OR 'cryotherapy'/exp OR caphosol:ti,ab,kw OR 'cold laser therapy':ti,ab,kw OR 'laser biostimulation':ti,ab,kw OR 'soft laser therapy':ti,ab,kw OR 'therapeutic laser therapy':ti,ab,kw OR (((low OR light) NEAR/3 ('laser therap*' OR 'laser treat*')):ti,ab,kw) OR (((('photo-biomodulat*' OR photobiomodulat*) NEAR/3 (therap* OR treat*)):ti,ab,kw) OR (((dental OR mouth OR oral* OR tooth OR teeth) NEAR/3 (hygien* OR care OR rins* OR wash*)):ti,ab,kw)	156613
#15	'clindamycin'/exp OR 'antirobe':ti,ab,kw OR 'aquadrops':ti,ab,kw OR 'cleocine':ti,ab,kw OR 'clindamycin':ti,ab,kw OR 'clindamycine':ti,ab,kw OR 'clindasol':ti,ab,kw OR 'clindomycin':ti,ab,kw OR 'clinimycin':ti,ab,kw OR 'dalacin':ti,ab,kw OR 'sobelin':ti,ab,kw OR 'sobeline':ti,ab,kw OR 'zindaclin':ti,ab,kw	63696
#14	'metronidazole'/exp OR 'acea':ti,ab,kw OR 'acromona':ti,ab,kw OR 'amevan':ti,ab,kw OR 'amiyodazol':ti,ab,kw OR 'anabact':ti,ab,kw OR 'anaerobex':ti,ab,kw OR 'anerobia':ti,ab,kw OR 'arcazol':ti,ab,kw OR 'arilin':ti,ab,kw OR 'ariline':ti,ab,kw OR 'aristogyl':ti,ab,kw OR 'asiazole':ti,ab,kw OR 'asuzol':ti,ab,kw OR 'atrivyl':ti,ab,kw OR 'biotazol':ti,ab,kw OR 'camezol':ti,ab,kw OR 'clont':ti,ab,kw OR 'cont':ti,ab,kw OR 'danizol':ti,ab,kw OR 'deflamon':ti,ab,kw OR 'dumozol':ti,ab,kw OR 'efloran':ti,ab,kw OR 'elyzol':ti,ab,kw OR 'emedal':ti,ab,kw OR 'endazole':ti,ab,kw OR 'entizol':ti,ab,kw OR 'farnat':ti,ab,kw OR 'fladex':ti,ab,kw OR 'flagenase':ti,ab,kw OR 'flagesol':ti,ab,kw OR 'flagil':ti,ab,kw OR 'flagizole':ti,ab,kw OR 'flagyl':ti,ab,kw OR 'flasinyl':ti,ab,kw OR 'flazol':ti,ab,kw OR 'flegyl':ti,ab,kw OR 'fossyol':ti,ab,kw OR 'frotin':ti,ab,kw OR 'giardyl':ti,ab,kw OR 'gineflavir':ti,ab,kw OR 'grinazole':ti,ab,kw OR 'helminzol':ti,ab,kw OR 'ivemetro':ti,ab,kw OR 'klion':ti,ab,kw OR 'klont':ti,ab,kw OR 'kreucosan':ti,ab,kw OR 'marphazole':ti,ab,kw OR 'medazol':ti,ab,kw OR 'metragyl':ti,ab,kw OR 'metranidazole':ti,ab,kw OR	87483

	'metrocream':ti,ab,kw OR 'metrocreme':ti,ab,kw OR 'metroderme':ti,ab,kw OR 'metrodinazole':ti,ab,kw OR 'metrogalen':ti,ab,kw OR 'metrogel':ti,ab,kw OR 'metrolag':ti,ab,kw OR 'metrolex':ti,ab,kw OR 'metrolotion':ti,ab,kw OR 'metrolyl':ti,ab,kw OR 'metromidol':ti,ab,kw OR 'metronid':ti,ab,kw OR 'metronidanol':ti,ab,kw OR 'metronidasol':ti,ab,kw OR 'metronidazol':ti,ab,kw OR 'metronidazole':ti,ab,kw OR 'metronidazone':ti,ab,kw OR 'metronide':ti,ab,kw OR 'metronil':ti,ab,kw OR 'metronizadole':ti,ab,kw OR 'metroring':ti,ab,kw OR 'metrosa':ti,ab,kw OR 'metrotop':ti,ab,kw OR 'metrozin':ti,ab,kw OR 'metrozine':ti,ab,kw OR 'metryl':ti,ab,kw OR 'monasin':ti,ab,kw OR 'nalox':ti,ab,kw OR 'nidagyl':ti,ab,kw OR 'nidazol':ti,ab,kw OR 'noritate':ti,ab,kw OR 'novonidazole':ti,ab,kw OR 'nuvessa':ti,ab,kw OR 'orvagil':ti,ab,kw OR 'otrozol':ti,ab,kw OR 'patryl':ti,ab,kw OR 'protogyl':ti,ab,kw OR 'protostat':ti,ab,kw OR 'protostate':ti,ab,kw OR 'protozol':ti,ab,kw OR 'qualigyl':ti,ab,kw OR 'robaz':ti,ab,kw OR 'rodazid':ti,ab,kw OR 'rodermil':ti,ab,kw OR 'rosadan':ti,ab,kw OR 'rosalox':ti,ab,kw OR 'rosazol':ti,ab,kw OR 'rosiced':ti,ab,kw OR 'rozacreme':ti,ab,kw OR 'rozagel':ti,ab,kw OR 'rozamet':ti,ab,kw OR 'rozetic':ti,ab,kw OR 'rozex':ti,ab,kw OR 'rozex gel':ti,ab,kw OR 'satric':ti,ab,kw OR 'servizol':ti,ab,kw OR 'sharizole':ti,ab,kw OR 'supplin':ti,ab,kw OR 'surimol':ti,ab,kw OR 'takimetol':ti,ab,kw OR 'torgyl':ti,ab,kw OR 'trichazol':ti,ab,kw OR 'trichex':ti,ab,kw OR 'trichogynaedron':ti,ab,kw OR 'trichomol':ti,ab,kw OR 'trichopol':ti,ab,kw OR 'trichopole':ti,ab,kw OR 'trichozole':ti,ab,kw OR 'tricocet':ti,ab,kw OR 'tricom':ti,ab,kw OR 'triconex':ti,ab,kw OR 'trikacide':ti,ab,kw OR 'trikozol':ti,ab,kw OR 'trivazol':ti,ab,kw OR 'trogiar':ti,ab,kw OR 'unigo':ti,ab,kw OR 'vandazole':ti,ab,kw OR 'zadstat':ti,ab,kw OR 'zyomet':ti,ab,kw	
#13	'valaciclovir'/exp OR 'rapivir':ti,ab,kw OR 'talavir':ti,ab,kw OR 'vacv':ti,ab,kw OR 'valaciclovir':ti,ab,kw OR 'valacyclovir':ti,ab,kw OR 'valciclovir':ti,ab,kw OR 'valcyclor':ti,ab,kw OR 'valcyclovir':ti,ab,kw OR 'valdacir':ti,ab,kw OR 'valherpes':ti,ab,kw OR 'valtrex':ti,ab,kw OR 'virval':ti,ab,kw OR 'zelitrex':ti,ab,kw	10920
#12	'aciclovir'/exp OR 'acerpes':ti,ab,kw OR 'acevir':ti,ab,kw OR 'acevirex':ti,ab,kw OR 'aciclin':ti,ab,kw OR 'aciclinlabiale':ti,ab,kw OR 'aciclobene':ti,ab,kw OR 'aciclobeta':ti,ab,kw OR 'aciclodan':ti,ab,kw OR 'acicloftal':ti,ab,kw OR 'aciclor':ti,ab,kw OR 'aciclosina':ti,ab,kw OR 'aciclostad':ti,ab,kw OR 'aciclovir':ti,ab,kw OR 'acihexal':ti,ab,kw OR 'acitop':ti,ab,kw OR 'acivision':ti,ab,kw OR 'aclova':ti,ab,kw OR 'aclovir':ti,ab,kw OR 'aclovirax':ti,ab,kw OR 'activir':ti,ab,kw OR 'acyclofoam':ti,ab,kw OR 'acycloguanosine':ti,ab,kw OR 'acyclostad':ti,ab,kw OR 'acyclovidar':ti,ab,kw OR 'acyclovir':ti,ab,kw OR 'acylene':ti,ab,kw OR 'acyrax':ti,ab,kw OR 'acyron':ti,ab,kw OR 'acyrova':ti,ab,kw OR 'acyvir':ti,ab,kw OR 'alovex':ti,ab,kw OR 'alovexlabiale':ti,ab,kw OR 'amodivyr':ti,ab,kw OR 'antix':ti,ab,kw OR 'apicol':ti,ab,kw OR 'avaclyr':ti,ab,kw OR 'avirax':ti,ab,kw OR 'avix':ti,ab,kw OR 'avorax':ti,ab,kw OR 'axoviral':ti,ab,kw OR 'azovir':ti,ab,kw OR 'bearax':ti,ab,kw OR 'bel labial':ti,ab,kw OR 'cicloferon':ti,ab,kw OR 'cicloviral':ti,ab,kw OR 'cicloviran':ti,ab,kw OR 'civral':ti,ab,kw OR 'clovicin':ti,ab,kw OR 'clovir':ti,ab,kw OR	57879

	<p>'cloviran':ti,ab,kw OR 'colsor':ti,ab,kw OR 'cusiviral':ti,ab,kw OR 'cyclivex':ti,ab,kw OR 'cyclomed':ti,ab,kw OR 'cyclorax':ti,ab,kw OR 'cyclostad':ti,ab,kw OR 'cyclovax':ti,ab,kw OR 'cyclovir':ti,ab,kw OR 'cycloviran':ti,ab,kw OR 'cyllanvir':ti,ab,kw OR 'danovir':ti,ab,kw OR 'deherp':ti,ab,kw OR 'dravyr':ti,ab,kw OR 'dumophar':ti,ab,kw OR 'duvimex':ti,ab,kw OR 'eduvir':ti,ab,kw OR 'efriviral':ti,ab,kw OR 'efrivirallabiale':ti,ab,kw OR 'entir':ti,ab,kw OR 'erlvirax':ti,ab,kw OR 'erpizon':ti,ab,kw OR 'eurovir':ti,ab,kw OR 'exavir':ti,ab,kw OR 'expit':ti,ab,kw OR 'faulviral':ti,ab,kw OR 'genvir':ti,ab,kw OR 'gerpevir':ti,ab,kw OR 'glenlip':ti,ab,kw OR 'hascovir':ti,ab,kw OR 'helposol':ti,ab,kw OR 'hermix sofix':ti,ab,kw OR 'herpefug':ti,ab,kw OR 'herpesedermyl':ti,ab,kw OR 'herpesin':ti,ab,kw OR 'herpetad':ti,ab,kw OR 'herpex':ti,ab,kw OR 'herpirax':ti,ab,kw OR 'herplexim':ti,ab,kw OR 'herpofug':ti,ab,kw OR 'herpolips':ti,ab,kw OR 'herpoviric':ti,ab,kw OR 'herpoviric rp creme':ti,ab,kw OR 'hevipoint':ti,ab,kw OR 'heviran':ti,ab,kw OR 'inmerax':ti,ab,kw OR 'innovirax':ti,ab,kw OR 'invirum':ti,ab,kw OR 'isavir':ti,ab,kw OR 'juviral':ti,ab,kw OR 'kendix':ti,ab,kw OR 'labiriad':ti,ab,kw OR 'laciken':ti,ab,kw OR 'lavirk':ti,ab,kw OR 'leramex':ti,ab,kw OR 'lermex':ti,ab,kw OR 'lesaclor':ti,ab,kw OR 'libravir':ti,ab,kw OR 'lipovir':ti,ab,kw OR 'lisovyr':ti,ab,kw OR 'livixon':ti,ab,kw OR 'lovir':ti,ab,kw OR 'lovire':ti,ab,kw OR 'maclov':ti,ab,kw OR 'marvir':ti,ab,kw OR 'matrovir':ti,ab,kw OR 'maynor':ti,ab,kw OR 'medovir':ti,ab,kw OR 'norum':ti,ab,kw OR 'olvit':ti,ab,kw OR 'oppvir':ti,ab,kw OR 'ophavir':ti,ab,kw OR 'poviral':ti,ab,kw OR 'proviral':ti,ab,kw OR 'provirsan':ti,ab,kw OR 'qualiclovir':ti,ab,kw OR 'quavir':ti,ab,kw OR 'ranvir':ti,ab,kw OR 'raxclo':ti,ab,kw OR 'sitavig':ti,ab,kw OR 'sitavir':ti,ab,kw OR 'supraviran':ti,ab,kw OR 'syntovir':ti,ab,kw OR 'telviran':ti,ab,kw OR 'tuclor':ti,ab,kw OR 'uniplex':ti,ab,kw OR 'vacrax':ti,ab,kw OR 'vacrovir':ti,ab,kw OR 'vicorax':ti,ab,kw OR 'viraban':ti,ab,kw OR 'viractive':ti,ab,kw OR 'viralex':ti,ab,kw OR 'viralief':ti,ab,kw OR 'viranti':ti,ab,kw OR 'virasorb':ti,ab,kw OR 'viratop':ti,ab,kw OR 'virax':ti,ab,kw OR 'vircella':ti,ab,kw OR 'virest':ti,ab,kw OR 'virex':ti,ab,kw OR 'virless':ti,ab,kw OR 'viroclear':ti,ab,kw OR 'virogon':ti,ab,kw OR 'virolan':ti,ab,kw OR 'virolex':ti,ab,kw OR 'viromed':ti,ab,kw OR 'vironida':ti,ab,kw OR 'viropump':ti,ab,kw OR 'viruderm':ti,ab,kw OR 'virules':ti,ab,kw OR 'virupos':ti,ab,kw OR 'viruseen':ti,ab,kw OR 'vivir':ti,ab,kw OR 'voraclor':ti,ab,kw OR 'wariviron':ti,ab,kw OR 'warviron':ti,ab,kw OR 'xorox':ti,ab,kw OR 'zaclovir':ti,ab,kw OR 'zetavir':ti,ab,kw OR 'zevin':ti,ab,kw OR 'zirvin':ti,ab,kw OR 'zivaxlabiale':ti,ab,kw OR 'zoral':ti,ab,kw OR 'zorax':ti,ab,kw OR 'zorel':ti,ab,kw OR 'zoter':ti,ab,kw OR 'zovicrem':ti,ab,kw OR 'zovir':ti,ab,kw OR 'zovirax':ti,ab,kw OR 'zoviraxlabiale':ti,ab,kw OR 'zoylex':ti,ab,kw OR 'zumasid':ti,ab,kw OR 'zyclir':ti,ab,kw OR 'zyvir':ti,ab,kw</p>	
#11	<p>'hexetidine'/exp OR 'elsix':ti,ab,kw OR 'hexetidine':ti,ab,kw OR 'hexoral':ti,ab,kw OR 'hextril':ti,ab,kw OR 'oraldene':ti,ab,kw OR 'sterilate':ti,ab,kw OR 'sterisil':ti,ab,kw OR 'sterisol':ti,ab,kw OR 'triocil':ti,ab,kw</p>	407

#10	'chlorhexidine'/exp OR 'chlorhex':ti,ab,kw OR 'chlorhexidin':ti,ab,kw OR 'chlorhexidine':ti,ab,kw OR 'chlorohex':ti,ab,kw OR 'chlorohexidine':ti,ab,kw OR 'chlorohexidine acetate':ti,ab,kw OR 'chlorohexydine':ti,ab,kw OR 'clohexidine':ti,ab,kw OR 'clorhexidine':ti,ab,kw OR 'lisium':ti,ab,kw OR 'nibitane':ti,ab,kw OR 'nolvasan':ti,ab,kw OR 'nolvascin':ti,ab,kw OR 'rotersept':ti,ab,kw OR 'sterilon':ti,ab,kw OR 'tubilicid':ti,ab,kw OR 'tubulicid':ti,ab,kw OR 'umbipro':ti,ab,kw	26903
#9	'itraconazole'/exp OR 'canadiol':ti,ab,kw OR 'candistat':ti,ab,kw OR 'canditral':ti,ab,kw OR 'carexa':ti,ab,kw OR 'forcanox':ti,ab,kw OR 'fungitraxx':ti,ab,kw OR 'fungitrazol':ti,ab,kw OR 'furolnok':ti,ab,kw OR 'hitrazole':ti,ab,kw OR 'hongoseril':ti,ab,kw OR 'hyphanox':ti,ab,kw OR 'icona':ti,ab,kw OR 'itraconazole':ti,ab,kw OR 'itodal':ti,ab,kw OR 'itrac':ti,ab,kw OR 'itracon':ti,ab,kw OR 'itraconazol':ti,ab,kw OR 'itraconazole':ti,ab,kw OR 'itragerm':ti,ab,kw OR 'itraisdin':ti,ab,kw OR 'itralek':ti,ab,kw OR 'itranax':ti,ab,kw OR 'itrizole':ti,ab,kw OR 'itzol':ti,ab,kw OR 'konitra':ti,ab,kw OR 'lozanoc':ti,ab,kw OR 'micogal':ti,ab,kw OR 'mytra':ti,ab,kw OR 'norspor':ti,ab,kw OR 'nufatrac':ti,ab,kw OR 'onikonazole':ti,ab,kw OR 'onmel':ti,ab,kw OR 'oriconazole':ti,ab,kw OR 'orungal':ti,ab,kw OR 'pulmazole':ti,ab,kw OR 'sempera':ti,ab,kw OR 'sinozol':ti,ab,kw OR 'siros':ti,ab,kw OR 'sparanox':ti,ab,kw OR 'spazol':ti,ab,kw OR 'spherazole':ti,ab,kw OR 'sporacid':ti,ab,kw OR 'sporal':ti,ab,kw OR 'sporamelt':ti,ab,kw OR 'sporanox':ti,ab,kw OR 'sporlab':ti,ab,kw OR 'spornar':ti,ab,kw OR 'sporonox':ti,ab,kw OR 'spyrocon':ti,ab,kw OR 'tolsura':ti,ab,kw OR 'trachon':ti,ab,kw OR 'triasporin':ti,ab,kw OR 'trisporal':ti,ab,kw	36529
#8	'ketoconazole'/exp OR 'akorazol':ti,ab,kw OR 'anfuhex':ti,ab,kw OR 'antanazol':ti,ab,kw OR 'beatoconazole':ti,ab,kw OR 'bigazol':ti,ab,kw OR 'botaderm':ti,ab,kw OR 'cetonax':ti,ab,kw OR 'comozol':ti,ab,kw OR 'conazol':ti,ab,kw OR 'cremosan':ti,ab,kw OR 'daktagold':ti,ab,kw OR 'dandrazol':ti,ab,kw OR 'dezoral':ti,ab,kw OR 'ebercept':ti,ab,kw OR 'extina':ti,ab,kw OR 'folicalm':ti,ab,kw OR 'formyco':ti,ab,kw OR 'fugen':ti,ab,kw OR 'funet':ti,ab,kw OR 'fungarest':ti,ab,kw OR 'fungaway':ti,ab,kw OR 'funginoc':ti,ab,kw OR 'fungoral':ti,ab,kw OR 'ilgem':ti,ab,kw OR 'kapalerm':ti,ab,kw OR 'kapanek':ti,ab,kw OR 'kenazol':ti,ab,kw OR 'kenazole':ti,ab,kw OR 'kesnazol':ti,ab,kw OR 'ketazol':ti,ab,kw OR 'ketocanazole':ti,ab,kw OR 'ketoconazol':ti,ab,kw OR 'ketoconazole':ti,ab,kw OR 'ketoderma':ti,ab,kw OR 'ketoisdin':ti,ab,kw OR 'ketomed':ti,ab,kw OR 'ketomicin':ti,ab,kw OR 'ketomicol':ti,ab,kw OR 'ketona':ti,ab,kw OR 'ketonova':ti,ab,kw OR 'ketopine':ti,ab,kw OR 'ketozal':ti,ab,kw OR 'ketozol':ti,ab,kw OR 'ketozone':ti,ab,kw OR 'ketozolin':ti,ab,kw OR 'kezon':ti,ab,kw OR 'kilipso':ti,ab,kw OR 'konact':ti,ab,kw OR 'konatural':ti,ab,kw OR 'kuric':ti,ab,kw OR 'larry':ti,ab,kw OR 'lusanoc':ti,ab,kw OR 'micoral':ti,ab,kw OR 'mikanisal':ti,ab,kw OR 'mizole':ti,ab,kw OR 'mizoron':ti,ab,kw OR 'mycofebrin':ti,ab,kw OR 'nastil':ti,ab,kw OR 'nazole':ti,ab,kw OR 'nisoral':ti,ab,kw OR 'nizoblue':ti,ab,kw OR 'nizoral':ti,ab,kw OR 'nyoxep':ti,ab,kw OR 'orifungal':ti,ab,kw OR 'oronazol':ti,ab,kw OR 'oxocanazole':ti,ab,kw OR 'oxoconazole':ti,ab,kw OR 'oxonazol':ti,ab,kw OR 'panfungol':ti,ab,kw OR 'pasalen':ti,ab,kw OR 'picamic':ti,ab,kw OR	33666

	'prenalon':ti,ab,kw OR 'pristinex':ti,ab,kw OR 'profungal':ti,ab,kw OR 'sebizole':ti,ab,kw OR 'sinazol':ti,ab,kw OR 'spendor':ti,ab,kw OR 'sporum':ti,ab,kw OR 'sporoxy':ti,ab,kw OR 'sporozol':ti,ab,kw OR 'tedol':ti,ab,kw OR 'termizol':ti,ab,kw OR 'terzolin':ti,ab,kw OR 'xolegel':ti,ab,kw OR 'zorinax':ti,ab,kw	
#7	('fluconazole'/exp OR 'alozof':ti,ab,kw OR 'arnazole':ti,ab,kw OR 'azocan':ti,ab,kw OR 'baten':ti,ab,kw OR 'beagyne':ti,ab,kw OR 'biozole':ti,ab,kw OR 'biozole':ti,ab,kw OR 'bicanz thrush relief':ti,ab,kw OR 'boots thrush':ti,ab,kw OR 'candid':ti,ab,kw OR 'candifix':ti,ab,kw OR 'candifluc':ti,ab,kw OR 'caneclear':ti,ab,kw OR 'canesoral':ti,ab,kw OR 'canesten thrush oral':ti,ab,kw OR 'careway thrush relief':ti,ab,kw OR 'cryptal':ti,ab,kw OR 'dermaspor':ti,ab,kw OR 'dermyc':ti,ab,kw OR 'difiucan':ti,ab,kw OR 'diflazon':ti,ab,kw OR 'diflu':ti,ab,kw OR 'diflucan':ti,ab,kw OR 'difluzol':ti,ab,kw OR 'difnazol':ti,ab,kw OR 'dizolo':ti,ab,kw OR 'elazor':ti,ab,kw OR 'exomax':ti,ab,kw OR 'farviron':ti,ab,kw OR 'femgin':ti,ab,kw OR 'femiflo':ti,ab,kw OR 'flocan':ti,ab,kw OR 'flozole':ti,ab,kw OR 'flucalit':ti,ab,kw OR 'flucand':ti,ab,kw OR 'flucanol':ti,ab,kw OR 'flucazol':ti,ab,kw OR 'flucess':ti,ab,kw OR 'fluco':ti,ab,kw OR 'flucocaps':ti,ab,kw OR 'flucoderm':ti,ab,kw OR 'flucodrug':ti,ab,kw OR 'flucofast':ti,ab,kw OR 'flucofin':ti,ab,kw OR 'flucohexal':ti,ab,kw OR 'flucol':ti,ab,kw OR 'flucona':ti,ab,kw OR 'fluconax':ti,ab,kw OR 'fluconazin':ti,ab,kw OR 'fluconazol':ti,ab,kw OR 'fluconazole':ti,ab,kw OR 'fluconer':ti,ab,kw OR 'flucoral':ti,ab,kw OR 'flucoran':ti,ab,kw OR 'flucoric':ti,ab,kw OR 'flucorta':ti,ab,kw OR 'flucosept':ti,ab,kw OR 'flucostatin':ti,ab,kw OR 'flucostenol':ti,ab,kw OR 'flucovein':ti,ab,kw OR 'flucovim':ti,ab,kw OR 'flucozal':ti,ab,kw OR 'fludicon':ti,ab,kw OR 'fludizol':ti,ab,kw OR 'flugyn':ti,ab,kw OR 'flukatriel':ti,ab,kw OR 'flukazol':ti,ab,kw OR 'flukezol':ti,ab,kw OR 'flukimex':ti,ab,kw OR 'flumicon':ti,ab,kw OR 'flumycon':ti,ab,kw OR 'flunazul':ti,ab,kw OR 'flunco':ti,ab,kw OR 'flunizol':ti,ab,kw OR 'flunoc':ti,ab,kw OR 'fluores':ti,ab,kw OR 'flusenil':ti,ab,kw OR 'fluxazol':ti,ab,kw OR 'forcan':ti,ab,kw OR 'fukole':ti,ab,kw OR 'fulkor':ti,ab,kw OR 'fumay':ti,ab,kw OR 'funadel':ti,ab,kw OR 'funazol':ti,ab,kw OR 'funex':ti,ab,kw OR 'fungata':ti,ab,kw OR 'fungolon':ti,ab,kw OR 'fungram':ti,ab,kw OR 'fungustatin':ti,ab,kw OR 'fungyn':ti,ab,kw OR 'funzela':ti,ab,kw OR 'fuxilidin':ti,ab,kw OR 'govazol':ti,ab,kw OR 'gynofloran':ti,ab,kw OR 'gynosant':ti,ab,kw OR 'klaider':ti,ab,kw OR 'kyrin':ti,ab,kw OR 'lavisal':ti,ab,kw OR 'lefunzol':ti,ab,kw OR 'loitin':ti,ab,kw OR 'medoflucon':ti,ab,kw OR 'miconix':ti,ab,kw OR 'mutum':ti,ab,kw OR 'mycazole':ti,ab,kw OR 'mycocyst':ti,ab,kw OR 'mycomax':ti,ab,kw OR 'mycoest':ti,ab,kw OR 'mycosyst':ti,ab,kw OR 'mycozal':ti,ab,kw OR 'oneflu':ti,ab,kw OR 'oxifugol':ti,ab,kw OR 'oxifungol':ti,ab,kw OR 'plunazol':ti,ab,kw OR 'prinazole':ti,ab,kw OR 'sixanol':ti,ab,kw OR 'solona':ti,ab,kw OR 'stabilanol':ti,ab,kw OR 'stalene':ti,ab,kw OR 'syscan':ti,ab,kw OR 'tedim':ti,ab,kw OR 'tinazole':ti,ab,kw OR 'treflucan':ti,ab,kw OR 'triflucan':ti,ab,kw OR 'trimikos':ti,ab,kw OR 'zemyc':ti,ab,kw OR 'zerfun':ti,ab,kw OR 'zidonil':ti,ab,kw OR 'zoldicam':ti,ab,kw OR 'zoloder':ti,ab,kw OR 'zoltrix':ti,ab,kw) AND 'miconazole'/exp OR 'acorvio':ti,ab,kw OR	11345

	'acromizol':ti,ab,kw OR 'aflorix':ti,ab,kw OR 'albistat':ti,ab,kw OR 'aloid':ti,ab,kw OR 'amykon':ti,ab,kw OR 'andergin':ti,ab,kw OR 'becarin':ti,ab,kw OR 'brentan':ti,ab,kw OR 'candiplas':ti,ab,kw OR 'conofite':ti,ab,kw OR 'covarex':ti,ab,kw OR 'daktar':ti,ab,kw OR 'daktarin':ti,ab,kw OR 'decozol':ti,ab,kw OR 'deralbine':ti,ab,kw OR 'derma mycotral':ti,ab,kw OR 'derma-mycotral':ti,ab,kw OR 'dermacure':ti,ab,kw OR 'dermamycotral':ti,ab,kw OR 'dermonistat':ti,ab,kw OR 'diamifan':ti,ab,kw OR 'epi monistat':ti,ab,kw OR 'epimonistat':ti,ab,kw OR 'escortin':ti,ab,kw OR 'femeron':ti,ab,kw OR 'florid':ti,ab,kw OR 'florid d':ti,ab,kw OR 'funcort':ti,ab,kw OR 'funga':ti,ab,kw OR 'fungares':ti,ab,kw OR 'fungi m':ti,ab,kw OR 'fungi-m':ti,ab,kw OR 'fungiquim':ti,ab,kw OR 'fungos':ti,ab,kw OR 'fungtopic':ti,ab,kw OR 'liconar':ti,ab,kw OR 'loramyc':ti,ab,kw OR 'medacter':ti,ab,kw OR 'micatin':ti,ab,kw OR 'micoffen':ti,ab,kw OR 'miconal':ti,ab,kw OR 'miconazol':ti,ab,kw OR 'miconazole':ti,ab,kw OR 'micotef':ti,ab,kw OR 'micozole':ti,ab,kw OR 'micreme':ti,ab,kw OR 'micronazole':ti,ab,kw OR 'mikonazol':ti,ab,kw OR 'minaza':ti,ab,kw OR 'minazol':ti,ab,kw OR 'minostate':ti,ab,kw OR 'monistat':ti,ab,kw OR 'mycoban':ti,ab,kw OR 'mycoheal oral gel':ti,ab,kw OR 'myconasol':ti,ab,kw OR 'mycorine':ti,ab,kw OR 'mykoderm':ti,ab,kw OR 'mysocort':ti,ab,kw OR 'nazoderam':ti,ab,kw OR 'neomicol':ti,ab,kw OR 'nilozanoc':ti,ab,kw OR 'nizacol':ti,ab,kw OR 'noxraxin':ti,ab,kw OR 'oravig':ti,ab,kw OR 'pitrion':ti,ab,kw OR 'podakrin':ti,ab,kw OR 'prilagin':ti,ab,kw OR 'ranozol':ti,ab,kw OR 'resolve thrush':ti,ab,kw OR 'resolve tinea':ti,ab,kw OR 'shinaderm':ti,ab,kw OR 'sitamic':ti,ab,kw OR 'skindure':ti,ab,kw OR 'tibozole':ti,ab,kw OR 'zarin':ti,ab,kw OR 'zimycan':ti,ab,kw OR 'zolagel':ti,ab,kw	
#6	'silver nitrate'/exp OR 'negatin':ti,ab,kw OR 'nitras argenti':ti,ab,kw OR 'silver nitrate':ti,ab,kw OR 'silvernitate':ti,ab,kw	11370
#5	'tetracycline'/exp OR 'tetracycline derivative'/exp OR 'achromycin':ti,ab,kw OR 'acromicina':ti,ab,kw OR 'acromycin':ti,ab,kw OR 'actisite':ti,ab,kw OR 'agromicina':ti,ab,kw OR 'ambamycin':ti,ab,kw OR 'ambramicina':ti,ab,kw OR 'ambramycin':ti,ab,kw OR 'ambrazoo':ti,ab,kw OR 'apocyclin':ti,ab,kw OR 'apotetra':ti,ab,kw OR 'artomycin':ti,ab,kw OR 'austramycin':ti,ab,kw OR 'beatacycline':ti,ab,kw OR 'bicycline':ti,ab,kw OR 'biotetra':ti,ab,kw OR 'bitacycline':ti,ab,kw OR 'bristaciclina':ti,ab,kw OR 'bristacyclin':ti,ab,kw OR 'bristacyclina':ti,ab,kw OR 'bristacycline':ti,ab,kw OR 'bristocycline':ti,ab,kw OR 'brodspec':ti,ab,kw OR 'cadicycline':ti,ab,kw OR 'calociclina':ti,ab,kw OR 'cefracycline':ti,ab,kw OR 'ciclotetryl':ti,ab,kw OR 'clinitetrin':ti,ab,kw OR 'combicyclin':ti,ab,kw OR 'conmycin':ti,ab,kw OR 'copharlan':ti,ab,kw OR 'criseociclina':ti,ab,kw OR 'cyclabid':ti,ab,kw OR 'cyclindif':ti,ab,kw OR 'cyclomycetin':ti,ab,kw OR 'cyclomycin':ti,ab,kw OR 'cyclopar':ti,ab,kw OR 'cyclophen':ti,ab,kw OR 'deschloraureomycin':ti,ab,kw OR 'deschlorbiomycin':ti,ab,kw OR 'deschloraureomycin':ti,ab,kw OR 'deschlorobiomycin':ti,ab,kw OR 'dhatracin':ti,ab,kw OR 'diaciclina':ti,ab,kw OR 'dicyclin forte':ti,ab,kw OR 'dumocyclin':ti,ab,kw OR 'dumocyclina':ti,ab,kw OR 'dumocycline':ti,ab,kw OR 'economycin':ti,ab,kw OR 'enkacyclin':ti,ab,kw OR 'epsilontetracycline':ti,ab,kw OR 'fabacyclin':ti,ab,kw OR	221175

	'farciclina':ti,ab,kw OR 'fermentmycin':ti,ab,kw OR 'fermycine':ti,ab,kw OR 'floramycin':ti,ab,kw OR 'florocycline':ti,ab,kw OR 'hestacyclin':ti,ab,kw OR 'hostaciclina':ti,ab,kw OR 'hostacyclin':ti,ab,kw OR 'hostacycline':ti,ab,kw OR 'hydracycline':ti,ab,kw OR 'hydromycin':ti,ab,kw OR 'ibicycyl':ti,ab,kw OR 'ikacycline':ti,ab,kw OR 'italicycline':ti,ab,kw OR 'kemoclin':ti,ab,kw OR 'kristacyclin':ti,ab,kw OR 'latycin':ti,ab,kw OR 'lenocin':ti,ab,kw OR 'mediacycline':ti,ab,kw OR 'medicyclin':ti,ab,kw OR 'medocycline':ti,ab,kw OR 'mervacycline':ti,ab,kw OR 'micipan':ti,ab,kw OR 'murazine':ti,ab,kw OR 'mysteclin':ti,ab,kw OR 'mystecline':ti,ab,kw OR 'myszeklin':ti,ab,kw OR 'neocycline':ti,ab,kw OR 'neotetrine':ti,ab,kw OR 'novotetra':ti,ab,kw OR 'ofticlin':ti,ab,kw OR 'omegamycin':ti,ab,kw OR 'omnaze':ti,ab,kw OR 'oricyclin':ti,ab,kw OR 'panciclina':ti,ab,kw OR 'pancycline' werkstoff':ti,ab,kw OR 'panmycin':ti,ab,kw OR 'pansan':ti,ab,kw OR 'pantocycline':ti,ab,kw OR 'parenciclina':ti,ab,kw OR 'pervasol':ti,ab,kw OR 'polarcyclin':ti,ab,kw OR 'polfamycin':ti,ab,kw OR 'polycycline':ti,ab,kw OR 'polycyline':ti,ab,kw OR 'polyotic':ti,ab,kw OR 'porcycline':ti,ab,kw OR 'premocycline':ti,ab,kw OR 'purocyclina':ti,ab,kw OR 'quadricycline':ti,ab,kw OR 'quimocyclar':ti,ab,kw OR 'quirvetin':ti,ab,kw OR 'recycline':ti,ab,kw OR 'remicyclin':ti,ab,kw OR 'reseomycin':ti,ab,kw OR 'resomicina':ti,ab,kw OR 'resteclin':ti,ab,kw OR 'retet':ti,ab,kw OR 'ricycline':ti,ab,kw OR 'rimatet':ti,ab,kw OR 'robicyclan':ti,ab,kw OR 'robitet':ti,ab,kw OR 'sanclomycine':ti,ab,kw OR 'sarocycline':ti,ab,kw OR 'servitet':ti,ab,kw OR 'spaciclina':ti,ab,kw OR 'steclin':ti,ab,kw OR 'stilciclina':ti,ab,kw OR 'subamycin':ti,ab,kw OR 'supramycin':ti,ab,kw OR 'tefilin':ti,ab,kw OR 'teracyn':ti,ab,kw OR 'tesyklin':ti,ab,kw OR 'tetrabakat':ti,ab,kw OR 'tetrabid':ti,ab,kw OR 'tetrabien':ti,ab,kw OR 'tetrabiopital':ti,ab,kw OR 'tetrabior':ti,ab,kw OR 'tetrablet':ti,ab,kw OR 'tetrabon':ti,ab,kw OR 'tetrachel':ti,ab,kw OR 'tetraciclone':ti,ab,kw OR 'tetraciclina':ti,ab,kw OR 'tetraciklin':ti,ab,kw OR 'tetracitro':ti,ab,kw OR 'tetracon':ti,ab,kw OR 'tetracyclin':ti,ab,kw OR 'tetracycline':ti,ab,kw OR 'tetracyline':ti,ab,kw OR 'tetracyn':ti,ab,kw OR 'tetradecin':ti,ab,kw OR 'tetrafil':ti,ab,kw OR 'tetralen':ti,ab,kw OR 'tetralonga':ti,ab,kw OR 'tetralution':ti,ab,kw OR 'tetramax':ti,ab,kw OR 'tetramed':ti,ab,kw OR 'tetramig':ti,ab,kw OR 'tetrana':ti,ab,kw OR 'tetranase':ti,ab,kw OR 'tetranol':ti,ab,kw OR 'tetraplus':ti,ab,kw OR 'tetrarco':ti,ab,kw OR 'tetraseptin':ti,ab,kw OR 'tetrasuiss':ti,ab,kw OR 'tetrecu':ti,ab,kw OR 'tetrosol':ti,ab,kw OR 'thuricyclin':ti,ab,kw OR 'topicycline':ti,ab,kw OR 'totomycin':ti,ab,kw OR 'triclina':ti,ab,kw OR 'triphacyclin':ti,ab,kw OR 'tsiklomitsin':ti,ab,kw OR 'umetracil':ti,ab,kw OR 'veracin':ti,ab,kw	
#4	'corticosteroid'/exp/mj OR corticosteroid*:ti,ab,kw OR glucocorticoid*:ti,ab,kw OR 'adrenal cortex hormone*':ti,ab,kw OR corticoid*:ti,ab,kw	559096
#3	#1 AND #2	25508
#2	'advance care planning'/exp OR 'advanced cancer'/exp OR 'aged hospital patient'/exp OR 'alzheimer disease'/exp OR 'amyotrophic lateral sclerosis'/exp OR 'elderly care'/exp OR 'degenerative disease'/exp/mj OR 'duchenne muscular dystrophy'/exp OR 'frail elderly'/exp OR 'frontotemporal dementia'/exp OR 'geriatrics'/exp OR 'geriatric	7752620

	<p>patient'/exp OR 'hospice'/exp OR 'hospice care'/exp OR 'institutionalized elderly'/exp OR 'metastasis'/exp OR 'multiple sclerosis'/exp OR 'neurodegeneration with brain iron accumulation'/exp OR 'palliative therapy'/exp OR 'parkinson disease'/exp OR 'perry syndrome'/exp OR 'pick presenile dementia'/exp OR 'prion disease'/exp OR 'senile dementia'/exp OR 'striatonigral degeneration'/exp OR 'subacute combined degeneration'/exp OR 'synucleinopathy'/exp OR 'tauopathy'/exp OR 'terminal care'/de OR 'terminally ill patient'/exp OR 'very elderly'/exp OR 'wilson disease'/exp OR 'palliat*':ti,ab,kw OR 'reduced life expectanc*':ti,ab,kw OR 'end of life':ti,ab,kw OR 'terminally ill':ti,ab,kw OR 'terminal care':ti,ab,kw OR 'terminally sick':ti,ab,kw OR 'hospice*':ti,ab,kw OR 'terminal stage':ti,ab,kw OR 'advance* care*':ti,ab,kw OR 'advanced disease':ti,ab,kw OR 'advanced illness':ti,ab,kw OR 'life-limiting':ti,ab,kw OR 'metasta*':ti,kw OR (('end stage' OR advanced) NEAR/5 (kidney OR renal OR ckd OR 'respiratory disease' OR 'chronic obstructive pulmonary disease' OR 'heart failure' OR 'cancer' OR neoplasm* OR carcinoma OR liver)):ti,ab,kw) OR frail*:de,ab,ti OR geriatri*:de,ab,ti OR ((oldest NEXT/1 old*):de,ab,ti) OR senium:de,ab,ti OR ((very NEXT/1 old*):de,ab,ti) OR septuagenarian*:de,ab,ti OR octagenarian*:de,ab,ti OR octogenarian*:de,ab,ti OR nonagenarian*:de,ab,ti OR centarian*:de,ab,ti OR centenarian*:de,ab,ti OR supercentenarian*:de,ab,ti OR 'degenerative disease':ti,kw OR 'neurodegenerative disease':ti,kw OR 'pick complex':ti,kw OR 'pick`s complex':ti,kw OR 'hallervorden spatz disease':ti,kw OR 'hallervorden spatz syndrome':ti,kw OR 'nbia disorder':ti,kw OR 'neurodegeneration with brain iron accumulation':ti,kw OR 'pantothenate kinase associated neurodegeneration':ti,kw OR 'perry syndrome':ti,kw OR parkinson:ti,kw OR 'senile confusion':ti,kw OR 'senile psychosis':ti,kw OR 'nigroneostriatal degeneration':ti,kw OR 'nigrostriatal degeneration':ti,kw OR 'striatonigral degeneration':ti,kw OR 'strionigral degeneration':ti,kw OR 'synucleinopathy':ti,kw OR 'tauopathy':ti,kw OR 'wilson disease':ti,kw OR 'degeneratio hepato lenticularis':ti,kw OR 'hepatocerebral degeneration':ti,kw OR 'hepatolenticular degeneration':ti,kw OR 'hepatolenticular syndrome':ti,kw OR 'morbus wilson':ti,kw OR 'progressive lenticular degeneration':ti,kw OR 'wilson degeneration':ti,kw OR 'wilson syndrome':ti,kw OR 'chariot disease':ti,kw OR 'disseminated sclerosis':ti,kw OR 'insular sclerosis':ti,kw OR 'multiple sclerosis':ti,kw OR 'sclerosis multiplex':ti,kw OR 'lou gehrig disease':ti,kw OR 'lou gehrig`s disease':ti,kw OR 'amyotrophic lateral sclerosis':ti,kw OR duchenne:ti,kw OR 'cancer':ti,kw OR 'cancer patient'/exp OR neoplasm*':ti,kw OR 'oral oncology':ti,ab,kw OR 'neoplasm'/exp OR 'cancer chemotherapy'/exp</p>	
#1	<p>'mouth infection'/exp OR 'mouth ulcer'/exp OR 'mouth inflammation'/exp OR ('mucosa inflammation'/exp AND (mouth:ti,ab,kw OR oral:ti,ab,kw)) OR (((mucosa OR mouth OR oral OR dental OR tooth OR teeth OR buccal) NEAR/3 (infection* OR ulcer* OR inflammati* OR candidiasis)):ti,ab,kw) OR thrush:ti,ab,kw OR stomatitis:ti,ab,kw</p>	246335

#	Searches	Results
25	(20 and 23) not 24 RCT	238
24	21 and 22 SR	91
23	exp randomized controlled trial/ or randomized controlled trials as topic/ or random*.ti,ab. or rct?.ti,ab. or ((pragmatic or practical) adj "clinical trial*").ti,ab,kf. or ((non-inferiority or noninferiority or superiority or equivalence) adj3 trial*).ti,ab,kf.	1634137
22	meta-analysis/ or meta-analysis as topic/ or (metaanaly* or meta-analy* or metanaly*).ti,ab,kf. or systematic review/ or cochrane.jw. or (prisma or prospero).ti,ab,kf. or ((systemati* or scoping or umbrella or "structured literature") adj3 (review* or overview*)).ti,ab,kf. or (systemic* adj1 review*).ti,ab,kf. or ((systemati* or literature or database* or data-base*) adj10 search*).ti,ab,kf. or ((structured or comprehensive* or systemic*) adj3 search*).ti,ab,kf. or ((literature adj3 review*) and (search* or database* or data-base*)).ti,ab,kf. or (("data extraction" or "data source*") and "study selection").ti,ab,kf. or ("search strategy" and "selection criteria").ti,ab,kf. or ("data source*" and "data synthesis").ti,ab,kf. or (medline or pubmed or embase or cochrane).ab. or ((critical or rapid) adj2 (review* or overview* or synthes*)).ti. or (((critical* or rapid*) adj3 (review* or overview* or synthes*)) and (search* or database* or data-base*)).ab. or (metasynthes* or meta-synthes*).ti,ab,kf.	684780
21	20 not ((exp animals/ or exp models, animal/) not humans/) not (letter/ or comment/ or editorial/)	2145
20	4 or 19	2239
19	1 and 2 and 18	1614
18	or/5-17	505302
17	Clindamycin/ or antirope.ti,ab,kf. or aquadrops.ti,ab,kf. or cleocine.ti,ab,kf. or clindamycin.ti,ab,kf. or clindamycine.ti,ab,kf. or clindasol.ti,ab,kf. or clindomycin.ti,ab,kf. or clinimycin.ti,ab,kf. or dalacin.ti,ab,kf. or sobelin.ti,ab,kf. or sobeline.ti,ab,kf. or zindaclin.ti,ab,kf.	14100
16	Metronidazole/ or acea.ti,ab,kf. or acromona.ti,ab,kf. or amevan.ti,ab,kf. or amiyodazol.ti,ab,kf. or anabact.ti,ab,kf. or anaerobex.ti,ab,kf. or anerobia.ti,ab,kf. or arcazol.ti,ab,kf. or arilin.ti,ab,kf. or ariline.ti,ab,kf. or aristogyl.ti,ab,kf. or asiazole.ti,ab,kf. or asuzol.ti,ab,kf. or atrivyl.ti,ab,kf. or biotazol.ti,ab,kf. or camezol.ti,ab,kf. or clont.ti,ab,kf. or cont.ti,ab,kf. or danizol.ti,ab,kf. or deflamon.ti,ab,kf. or dumozol.ti,ab,kf. or efloran.ti,ab,kf. or elyzol.ti,ab,kf. or emedal.ti,ab,kf. or endazole.ti,ab,kf. or entizol.ti,ab,kf. or farnat.ti,ab,kf. or fladex.ti,ab,kf. or flagenase.ti,ab,kf. or flagesol.ti,ab,kf. or flagil.ti,ab,kf. or flagizole.ti,ab,kf. or flagyl.ti,ab,kf. or flasinyl.ti,ab,kf. or flazol.ti,ab,kf. or flegyl.ti,ab,kf. or fossyol.ti,ab,kf. or frotin.ti,ab,kf. or giardyl.ti,ab,kf. or gineflavir.ti,ab,kf. or grinazole.ti,ab,kf. or helminzol.ti,ab,kf. or ivemetro.ti,ab,kf. or klion.ti,ab,kf. or klont.ti,ab,kf. or kreucosan.ti,ab,kf. or marphazole.ti,ab,kf. or medazol.ti,ab,kf. or metragyl.ti,ab,kf. or metranidazole.ti,ab,kf. or metrocream.ti,ab,kf. or metrocreme.ti,ab,kf. or metroderme.ti,ab,kf. or metrodinazole.ti,ab,kf. or metrogalen.ti,ab,kf. or metrogel.ti,ab,kf. or metrolag.ti,ab,kf. or metrolex.ti,ab,kf. or metro lotion.ti,ab,kf. or metrolyl.ti,ab,kf. or metromidol.ti,ab,kf. or metronid.ti,ab,kf. or metronidanol.ti,ab,kf. or metronidasol.ti,ab,kf. or metronidazol.ti,ab,kf. or metronidazole.ti,ab,kf. or metronidazone.ti,ab,kf. or metronide.ti,ab,kf. or metronil.ti,ab,kf. or metronizadol.ti,ab,kf. or metroring.ti,ab,kf. or metrosa.ti,ab,kf. or metrotop.ti,ab,kf. or metrozin.ti,ab,kf. or metrozine.ti,ab,kf. or metryl.ti,ab,kf. or monasin.ti,ab,kf. or nalox.ti,ab,kf. or nidagyl.ti,ab,kf. or nidazol.ti,ab,kf. or noritate.ti,ab,kf. or novonidazole.ti,ab,kf. or nuvessa.ti,ab,kf. or orvagil.ti,ab,kf. or otrozol.ti,ab,kf. or patryl.ti,ab,kf. or protogyl.ti,ab,kf. or protostat.ti,ab,kf. or protostate.ti,ab,kf. or protozol.ti,ab,kf. or qualigyl.ti,ab,kf. or robaz.ti,ab,kf. or rodazid.ti,ab,kf. or rodermil.ti,ab,kf. or rosadan.ti,ab,kf. or rosaloxti,ab,kf. or rosazol.ti,ab,kf. or rosiced.ti,ab,kf. or rozacreme.ti,ab,kf. or rozagel.ti,ab,kf. or rozamet.ti,ab,kf. or rozetic.ti,ab,kf. or rozex.ti,ab,kf. or rozex gel.ti,ab,kf. or satric.ti,ab,kf. or servizol.ti,ab,kf. or sharizole.ti,ab,kf. or supplin.ti,ab,kf. or surimol.ti,ab,kf. or takimetol.ti,ab,kf. or torgyl.ti,ab,kf. or trichazol.ti,ab,kf. or trichex.ti,ab,kf. or trichogynaedron.ti,ab,kf. or trichomol.ti,ab,kf. or trichopol.ti,ab,kf. or trichopole.ti,ab,kf. or trichozole.ti,ab,kf. or tricocet.ti,ab,kf. or tricom.ti,ab,kf. or triconex.ti,ab,kf. or trikacide.ti,ab,kf. or trikozol.ti,ab,kf. or trivazol.ti,ab,kf. or trogiar.ti,ab,kf. or unigo.ti,ab,kf. or vandazole.ti,ab,kf. or zadstat.ti,ab,kf. or zyomet.ti,ab,kf.	25064
15	Valacyclovir/ or rapivir.ti,ab,kf. or talavir.ti,ab,kf. or vacv.ti,ab,kf. or valaciclovir.ti,ab,kf. or valacyclovir.ti,ab,kf. or valciclovir.ti,ab,kf. or valcyclor.ti,ab,kf. or valacyclovir.ti,ab,kf. or valdacir.ti,ab,kf. or valherpes.ti,ab,kf. or valtrex.ti,ab,kf. or virval.ti,ab,kf. or zelitrex.ti,ab,kf.	2835
14	Acyclovir/ or acerpes.ti,ab,kf. or acevir.ti,ab,kf. or acevirex.ti,ab,kf. or aciclin.ti,ab,kf. or aciclinlabiale.ti,ab,kf. or aciclobene.ti,ab,kf. or aciclobeta.ti,ab,kf. or aciclodan.ti,ab,kf. or acicloftal.ti,ab,kf. or aciclor.ti,ab,kf. or aciclosina.ti,ab,kf. or aciclostad.ti,ab,kf. or aciclovir.ti,ab,kf. or acihexal.ti,ab,kf. or acitop.ti,ab,kf. or acivision.ti,ab,kf. or aclova.ti,ab,kf. or aclovir.ti,ab,kf. or aclovirax.ti,ab,kf. or activir.ti,ab,kf. or acyclofoam.ti,ab,kf. or acycloguanosine.ti,ab,kf. or acyclostad.ti,ab,kf. or acyclovidar.ti,ab,kf. or acyclovir.ti,ab,kf. or acylene.ti,ab,kf. or acyrax.ti,ab,kf. or acyron.ti,ab,kf. or acyrova.ti,ab,kf. or acyvir.ti,ab,kf. or alovex.ti,ab,kf. or alovexlabiale.ti,ab,kf. or amodivyr.ti,ab,kf. or antix.ti,ab,kf. or apicol.ti,ab,kf. or avaclyr.ti,ab,kf. or avirax.ti,ab,kf. or	22344

	avix.ti,ab,kf. or avorax.ti,ab,kf. or axoviral.ti,ab,kf. or azovir.ti,ab,kf. or bearax.ti,ab,kf. or bel labial.ti,ab,kf. or cicloferon.ti,ab,kf. or ciclofiral.ti,ab,kf. or cicloviran.ti,ab,kf. or civral.ti,ab,kf. or clovicin.ti,ab,kf. or clovir.ti,ab,kf. or cloviran.ti,ab,kf. or colsor.ti,ab,kf. or cusiviral.ti,ab,kf. or cyclivex.ti,ab,kf. or cyclomed.ti,ab,kf. or cyclorax.ti,ab,kf. or cyclostad.ti,ab,kf. or cyclovax.ti,ab,kf. or cyclovir.ti,ab,kf. or cycloviran.ti,ab,kf. or cyllanvir.ti,ab,kf. or danovir.ti,ab,kf. or deherp.ti,ab,kf. or dravyr.ti,ab,kf. or dumophar.ti,ab,kf. or duvimex.ti,ab,kf. or eduvir.ti,ab,kf. or efriviral.ti,ab,kf. or efrivirallabiale.ti,ab,kf. or entir.ti,ab,kf. or ervlirax.ti,ab,kf. or erpizon.ti,ab,kf. or eurovir.ti,ab,kf. or exavir.ti,ab,kf. or expit.ti,ab,kf. or faulviral.ti,ab,kf. or genvir.ti,ab,kf. or gerpevir.ti,ab,kf. or glenlip.ti,ab,kf. or hascovir.ti,ab,kf. or helposol.ti,ab,kf. or hermix sofix.ti,ab,kf. or herpefug.ti,ab,kf. or herpesedermil.ti,ab,kf. or herpesin.ti,ab,kf. or herpetad.ti,ab,kf. or herpex.ti,ab,kf. or herpirax.ti,ab,kf. or herplexim.ti,ab,kf. or herpofug.ti,ab,kf. or herpolips.ti,ab,kf. or herpoviric.ti,ab,kf. or herpoviric rp creme.ti,ab,kf. or hevipoirt.ti,ab,kf. or heviran.ti,ab,kf. or inmerax.ti,ab,kf. or innovirax.ti,ab,kf. or invirum.ti,ab,kf. or isavir.ti,ab,kf. or juviral.ti,ab,kf. or kendix.ti,ab,kf. or labiriad.ti,ab,kf. or laciken.ti,ab,kf. or lavirk.ti,ab,kf. or leramex.ti,ab,kf. or lermex.ti,ab,kf. or lesaclor.ti,ab,kf. or libravir.ti,ab,kf. or lipovir.ti,ab,kf. or lisovyr.ti,ab,kf. or livixon.ti,ab,kf. or loviri.ti,ab,kf. or lovire.ti,ab,kf. or maclov.ti,ab,kf. or marvir.ti,ab,kf. or matrovir.ti,ab,kf. or maynor.ti,ab,kf. or medovir.ti,ab,kf. or norum.ti,ab,kf. or olvit.ti,ab,kf. or oppvir.ti,ab,kf. or ophthavir.ti,ab,kf. or poviral.ti,ab,kf. or proviral.ti,ab,kf. or provirsan.ti,ab,kf. or qualiclovir.ti,ab,kf. or quavir.ti,ab,kf. or ranvir.ti,ab,kf. or raxclo.ti,ab,kf. or sitavig.ti,ab,kf. or sitavir.ti,ab,kf. or supraviran.ti,ab,kf. or syntovir.ti,ab,kf. or telviran.ti,ab,kf. or tuclor.ti,ab,kf. or uniplex.ti,ab,kf. or vacrax.ti,ab,kf. or vacrovir.ti,ab,kf. or vicorax.ti,ab,kf. or viraban.ti,ab,kf. or viractive.ti,ab,kf. or viralex.ti,ab,kf. or viralief.ti,ab,kf. or viranti.ti,ab,kf. or virasorb.ti,ab,kf. or viratop.ti,ab,kf. or virax.ti,ab,kf. or vircella.ti,ab,kf. or virest.ti,ab,kf. or virex.ti,ab,kf. or virless.ti,ab,kf. or viroclear.ti,ab,kf. or virogon.ti,ab,kf. or virolan.ti,ab,kf. or virolex.ti,ab,kf. or viromed.ti,ab,kf. or vironida.ti,ab,kf. or viropump.ti,ab,kf. or viruderm.ti,ab,kf. or virules.ti,ab,kf. or virupos.ti,ab,kf. or viruseen.ti,ab,kf. or vivir.ti,ab,kf. or voraclor.ti,ab,kf. or wariviron.ti,ab,kf. or warviron.ti,ab,kf. or xorox.ti,ab,kf. or zaclovir.ti,ab,kf. or zetavir.ti,ab,kf. or zevin.ti,ab,kf. or zirvin.ti,ab,kf. or zivaxlabiale.ti,ab,kf. or zoral.ti,ab,kf. or zorax.ti,ab,kf. or zorel.ti,ab,kf. or zoter.ti,ab,kf. or zovicrem.ti,ab,kf. or zovir.ti,ab,kf. or zovirax.ti,ab,kf. or zoviraxlabiale.ti,ab,kf. or zoylex.ti,ab,kf. or zumasid.ti,ab,kf. or zyclir.ti,ab,kf. or zyvir.ti,ab,kf.	
13	Hexetidine/ or elsix.ti,ab,kf. or hexetidine.ti,ab,kf. or hexoral.ti,ab,kf. or hextril.ti,ab,kf. or oraldene.ti,ab,kf. or sterilate.ti,ab,kf. or sterilil.ti,ab,kf. or sterilol.ti,ab,kf. or triocil.ti,ab,kf.	185
12	Chlorhexidine/ or chlorhex*.ti,ab,kf. or lisium.ti,ab,kf. or nibitane.ti,ab,kf. or nolvasan.ti,ab,kf. or nolvascin.ti,ab,kf. or rotersept.ti,ab,kf. or sterilon.ti,ab,kf. or tubilicid.ti,ab,kf. or tubulicid.ti,ab,kf. or umbipro.ti,ab,kf.	14767
11	Itraconazole/ or canadiol.ti,ab,kf. or candistat.ti,ab,kf. or canditral.ti,ab,kf. or carexa.ti,ab,kf. or forcanox.ti,ab,kf. or fungitraxx.ti,ab,kf. or fungitrazol.ti,ab,kf. or furolnok.ti,ab,kf. or hitrazole.ti,ab,kf. or hongoseril.ti,ab,kf. or hyphanox.ti,ab,kf. or icona.ti,ab,kf. or intraconazole.ti,ab,kf. or itodal.ti,ab,kf. or itrac.ti,ab,kf. or itracon.ti,ab,kf. or itraconazol.ti,ab,kf. or itraconazole.ti,ab,kf. or itragerm.ti,ab,kf. or itraisdin.ti,ab,kf. or itralek.ti,ab,kf. or itranax.ti,ab,kf. or itrizole.ti,ab,kf. or itzol.ti,ab,kf. or konitra.ti,ab,kf. or lozanoc.ti,ab,kf. or micogal.ti,ab,kf. or mytra.ti,ab,kf. or norspor.ti,ab,kf. or nufatrac.ti,ab,kf. or onikonazole.ti,ab,kf. or onmel.ti,ab,kf. or oriconazole.ti,ab,kf. or orungal.ti,ab,kf. or pulmazole.ti,ab,kf. or sempera.ti,ab,kf. or sinozol.ti,ab,kf. or siros.ti,ab,kf. or sparanox.ti,ab,kf. or spazol.ti,ab,kf. or spherazole.ti,ab,kf. or sporacid.ti,ab,kf. or sporal.ti,ab,kf. or sporamelt.ti,ab,kf. or sporanox.ti,ab,kf. or sporlab.ti,ab,kf. or spornar.ti,ab,kf. or sporonox.ti,ab,kf. or spyrocon.ti,ab,kf. or tolsura.ti,ab,kf. or trachon.ti,ab,kf. or triasporin.ti,ab,kf. or trisporal.ti,ab,kf.	11968
10	Ketoconazole/ or akorazol.ti,ab,kf. or anfuhex.ti,ab,kf. or antanazol.ti,ab,kf. or beatoconazole.ti,ab,kf. or bigazol.ti,ab,kf. or botaderm.ti,ab,kf. or cetonax.ti,ab,kf. or comozol.ti,ab,kf. or conazol.ti,ab,kf. or cremosan.ti,ab,kf. or daktagold.ti,ab,kf. or dandrazol.ti,ab,kf. or dezoral.ti,ab,kf. or ebercept.ti,ab,kf. or extina.ti,ab,kf. or folicalm.ti,ab,kf. or formyco.ti,ab,kf. or fugen.ti,ab,kf. or funet.ti,ab,kf. or fungarest.ti,ab,kf. or fungaway.ti,ab,kf. or funginoc.ti,ab,kf. or fungoral.ti,ab,kf. or ilgem.ti,ab,kf. or kapalerm.ti,ab,kf. or kapanek.ti,ab,kf. or kenazol.ti,ab,kf. or kenazole.ti,ab,kf. or kesnazol.ti,ab,kf. or ketazol.ti,ab,kf. or ketocanazole.ti,ab,kf. or ketoconazol.ti,ab,kf. or ketoconazole.ti,ab,kf. or ketoderm.ti,ab,kf. or ketoisdin.ti,ab,kf. or ketomed.ti,ab,kf. or ketomicin.ti,ab,kf. or ketomicol.ti,ab,kf. or ketona.ti,ab,kf. or ketonova.ti,ab,kf. or ketopine.ti,ab,kf. or ketozal.ti,ab,kf. or ketozol.ti,ab,kf. or ketozole.ti,ab,kf. or ketozolin.ti,ab,kf. or kezon.ti,ab,kf. or kilipso.ti,ab,kf. or konact.ti,ab,kf. or konaturil.ti,ab,kf. or kuric.ti,ab,kf. or larry.ti,ab,kf. or lusanoc.ti,ab,kf. or micoral.ti,ab,kf. or mikanisal.ti,ab,kf. or mizole.ti,ab,kf. or mizoron.ti,ab,kf. or mycofebrin.ti,ab,kf. or nastil.ti,ab,kf. or nazole.ti,ab,kf. or nisoral.ti,ab,kf. or nizoblue.ti,ab,kf. or nizoral.ti,ab,kf. or nyoxep.ti,ab,kf. or orifungal.ti,ab,kf. or oronazol.ti,ab,kf. or oxocanazol.ti,ab,kf. or oxoconazole.ti,ab,kf. or oxonazol.ti,ab,kf. or panfungol.ti,ab,kf. or pasalen.ti,ab,kf. or picamic.ti,ab,kf. or prenalon.ti,ab,kf. or pristinex.ti,ab,kf. or profungal.ti,ab,kf. or sebizole.ti,ab,kf. or sinazol.ti,ab,kf. or spendor.ti,ab,kf. or sporium.ti,ab,kf. or sporoxyl.ti,ab,kf. or sporozol.ti,ab,kf. or tedol.ti,ab,kf. or termizol.ti,ab,kf. or terzolin.ti,ab,kf. or xolegel.ti,ab,kf. or zorinax.ti,ab,kf.	10241

9	(flucanazol* or alozof or arnazole or azocan or baten or beagyne or biozole or biozolene or blicanz thrush relief or boots thrush or cancid or candifix or candifluc or caneclear or canesoral or canesten thrush oral or careway thrush relief or cryptal or dermaspor or dermyc or difiucan or diflazon or diflu or diflucan or difluzol or difnazol or dizolo or elazor or exomax or farviron or femgin or femiflo or flocan or flozole or flucalit or flucand or flucanol or flucazol or flucess or fluco or flucocaps or flucoderm or flucodrug or flucofast or flucofin or flucohexal or flucol or flucona or fluconax or fluconazin or fluconazol or fluconazole or fluconer or flucoral or flucoran or flucoric or flucorta or flucosept or flucostatin or flucostenol or flucovein or flucovim or flucozal or fludicon or fludizol or flugyn or flukatril or flukazol or flukezol or flukimex or flumicon or flumycon or flunazol or flunco or flunizol or flunoc or fluores or flusenil or fluxazol or forcan or fukole or fulkor or fumay or funadel or funazol or funex or fungata or fungolon or fungram or fungustatin or fungyn or funzela or fuxilidin or govazol or gynofloran or gynosan or klaider or kyrin or lavisa or lefunzol or loitin or medoflucon or miconix or mutum or mycazole or mycocyst or mycomax or mycorest or mycosyst or mycozal or oneflu or oxifugol or oxifungol or plunazol or prinazole or sixanol or solona or stabilanol or stalene or syscan or tedim or tinazole or treflucan or triflucan or trimikos or zemyc or zerfun or zidonil or zoldicam or zoloder or zoltrix).ti,ab,kf.	14909
8	Miconazole/ or acorvio.ti,ab,kf. or acromizol.ti,ab,kf. or aflorix.ti,ab,kf. or albistat.ti,ab,kf. or aloid.ti,ab,kf. or amykon.ti,ab,kf. or andergin.ti,ab,kf. or becarin.ti,ab,kf. or brentan.ti,ab,kf. or candiplas.ti,ab,kf. or conofite.ti,ab,kf. or covarex.ti,ab,kf. or daktar.ti,ab,kf. or daktarin.ti,ab,kf. or decozol.ti,ab,kf. or deralbine.ti,ab,kf. or derma mycotral.ti,ab,kf. or derma-mycotral.ti,ab,kf. or dermacure.ti,ab,kf. or dermamycotral.ti,ab,kf. or dermonistat.ti,ab,kf. or diamifan.ti,ab,kf. or epi monistat.ti,ab,kf. or epimonistat.ti,ab,kf. or escortin.ti,ab,kf. or femeron.ti,ab,kf. or florid.ti,ab,kf. or florid d.ti,ab,kf. or funcort.ti,ab,kf. or funga.ti,ab,kf. or fungares.ti,ab,kf. or fungi m.ti,ab,kf. or fungi-m.ti,ab,kf. or fungiquim.ti,ab,kf. or fungos.ti,ab,kf. or fungtopic.ti,ab,kf. or liconar.ti,ab,kf. or loramyc.ti,ab,kf. or medacter.ti,ab,kf. or micatin.ti,ab,kf. or micoffen.ti,ab,kf. or miconal.ti,ab,kf. or miconazol.ti,ab,kf. or miconazole.ti,ab,kf. or micotef.ti,ab,kf. or micozole.ti,ab,kf. or micreme.ti,ab,kf. or micronazole.ti,ab,kf. or mikonazol.ti,ab,kf. or minaza.ti,ab,kf. or minazol.ti,ab,kf. or minostate.ti,ab,kf. or monistat.ti,ab,kf. or mycoban.ti,ab,kf. or mycoheal oral gel.ti,ab,kf. or myconasol.ti,ab,kf. or mycorine.ti,ab,kf. or mykoderm.ti,ab,kf. or mysocort.ti,ab,kf. or nazoderm.ti,ab,kf. or neomicol.ti,ab,kf. or nilozanoc.ti,ab,kf. or nizacol.ti,ab,kf. or noxraxin.ti,ab,kf. or oravig.ti,ab,kf. or pitrion.ti,ab,kf. or podakrin.ti,ab,kf. or prilagin.ti,ab,kf. or ranazol.ti,ab,kf. or resolve thrush.ti,ab,kf. or resolve tineas.ti,ab,kf. or shinaderm.ti,ab,kf. or sitamic.ti,ab,kf. or skindure.ti,ab,kf. or tibozole.ti,ab,kf. or zarin.ti,ab,kf. or zimycan.ti,ab,kf. or zolagel.ti,ab,kf.	6910
7	Silver Nitrate/ or negatin.ti,ab,kf. or nitras argenti.ti,ab,kf. or silver nitrate.ti,ab,kf. or silvernitraat.ti,ab,kf.	7071
6	Tetracycline/ or achromycin.ti,ab,kf. or acromicina.ti,ab,kf. or acromycin.ti,ab,kf. or actisite.ti,ab,kf. or agromicina.ti,ab,kf. or ambamycin.ti,ab,kf. or ambramicina.ti,ab,kf. or ambramycin.ti,ab,kf. or ambrazoo.ti,ab,kf. or apocyclin.ti,ab,kf. or apotetra.ti,ab,kf. or artomycin.ti,ab,kf. or austramycin.ti,ab,kf. or beatacycline.ti,ab,kf. or bicycline.ti,ab,kf. or biotetra.ti,ab,kf. or bitacycline.ti,ab,kf. or bristaciclina.ti,ab,kf. or bristacyclin.ti,ab,kf. or bristacyclina.ti,ab,kf. or bristacycline.ti,ab,kf. or bristocycline.ti,ab,kf. or brodspec.ti,ab,kf. or cadicycline.ti,ab,kf. or calociclina.ti,ab,kf. or cefracycline.ti,ab,kf. or ciclotetryl.ti,ab,kf. or clinitetrin.ti,ab,kf. or combicyclin.ti,ab,kf. or conmycin.ti,ab,kf. or copharlan.ti,ab,kf. or criseociclina.ti,ab,kf. or cyclabid.ti,ab,kf. or cyclindif.ti,ab,kf. or cyclomycetin.ti,ab,kf. or cyclomycin.ti,ab,kf. or cyclopom.ti,ab,kf. or cyclopen.ti,ab,kf. or deschloroauriomyacin.ti,ab,kf. or deschlorbiomyacin.ti,ab,kf. or deschloroauriomyacin.ti,ab,kf. or dhatracin.ti,ab,kf. or diaciclina.ti,ab,kf. or dicyclin forte.ti,ab,kf. or dumocyclin.ti,ab,kf. or dumocyclina.ti,ab,kf. or dumocycline.ti,ab,kf. or economycin.ti,ab,kf. or enkacyclin.ti,ab,kf. or epsilontetracycline.ti,ab,kf. or fabacyclin.ti,ab,kf. or farciclina.ti,ab,kf. or fermentmycin.ti,ab,kf. or fermycine.ti,ab,kf. or floramicina.ti,ab,kf. or florocycline.ti,ab,kf. or hestacyclin.ti,ab,kf. or hostaciclina.ti,ab,kf. or hostacyclin.ti,ab,kf. or hostacycline.ti,ab,kf. or hydracycline.ti,ab,kf. or hydromycin.ti,ab,kf. or ibicyn.ti,ab,kf. or ikacycline.ti,ab,kf. or italcycline.ti,ab,kf. or kemoclin.ti,ab,kf. or kristacyclin.ti,ab,kf. or latycin.ti,ab,kf. or lenocin.ti,ab,kf. or mediacycline.ti,ab,kf. or medicyclin.ti,ab,kf. or medocycline.ti,ab,kf. or mervacycline.ti,ab,kf. or micipan.ti,ab,kf. or murazine.ti,ab,kf. or mysteclin.ti,ab,kf. or mystecline.ti,ab,kf. or myszeklin.ti,ab,kf. or neocycline.ti,ab,kf. or neotetrine.ti,ab,kf. or novotetra.ti,ab,kf. or ofticlin.ti,ab,kf. or omegamycin.ti,ab,kf. or omnaze.ti,ab,kf. or oricyclin.ti,ab,kf. or panciclina.ti,ab,kf. or pancycline wirkstoff.ti,ab,kf. or panmycin.ti,ab,kf. or pansan.ti,ab,kf. or pantocycline.ti,ab,kf. or parenciclina.ti,ab,kf. or pervasol.ti,ab,kf. or polarcyclin.ti,ab,kf. or polfamycin.ti,ab,kf. or polycycline.ti,ab,kf. or polyocycline.ti,ab,kf. or polyotic.ti,ab,kf. or porocycline.ti,ab,kf. or premocycline.ti,ab,kf. or purocyclina.ti,ab,kf. or quadricycline.ti,ab,kf. or quimocyclar.ti,ab,kf. or quirvetin.ti,ab,kf. or recycline.ti,ab,kf. or remicyclin.ti,ab,kf. or reseomycin.ti,ab,kf. or resomicina.ti,ab,kf. or resteclin.ti,ab,kf. or retet.ti,ab,kf. or ricycline.ti,ab,kf. or rimatet.ti,ab,kf. or robicyclan.ti,ab,kf. or robitet.ti,ab,kf. or sanclomycine.ti,ab,kf. or sarocycline.ti,ab,kf. or servitet.ti,ab,kf. or spaciclina.ti,ab,kf. or steclin.ti,ab,kf. or stiliciclina.ti,ab,kf. or subamycin.ti,ab,kf. or supramycin.ti,ab,kf. or tefilin.ti,ab,kf. or teracyn.ti,ab,kf. or tesyklin.ti,ab,kf. or tetrabakat.ti,ab,kf. or	48411

	tetrabid.ti,ab,kf. or tetrabien.ti,ab,kf. or tetrabiophtal.ti,ab,kf. or tetrabior.ti,ab,kf. or tetrablet.ti,ab,kf. or tetrabon.ti,ab,kf. or tetrachel.ti,ab,kf. or tetraciclène.ti,ab,kf. or tetraciclina.ti,ab,kf. or tetraciklin.ti,ab,kf. or tetracitro.ti,ab,kf. or tetracon.ti,ab,kf. or tetracyclin.ti,ab,kf. or tetracycline.ti,ab,kf. or tetracyline.ti,ab,kf. or tetracyn.ti,ab,kf. or tetradecin.ti,ab,kf. or tetrafil.ti,ab,kf. or tetralen.ti,ab,kf. or tetralonga.ti,ab,kf. or tetralution.ti,ab,kf. or tetramax.ti,ab,kf. or tetramed.ti,ab,kf. or tetramig.ti,ab,kf. or tetrana.ti,ab,kf. or tetranase.ti,ab,kf. or tetrano.ti,ab,kf. or tetraplus.ti,ab,kf. or tetrarco.ti,ab,kf. or tetrasetin.ti,ab,kf. or tetrasuiss.ti,ab,kf. or tetrecu.ti,ab,kf. or tetrosol.ti,ab,kf. or thuricyclin.ti,ab,kf. or topicycline.ti,ab,kf. or totomycin.ti,ab,kf. or triclina.ti,ab,kf. or triphacyclin.ti,ab,kf. or tsiklomitsin.ti,ab,kf. or umetracil.ti,ab,kf. or veracin.ti,ab,kf.	
5	exp *Adrenal Cortex Hormones/ or corticosteroid*.ti,ab,kf. or glucocorticoid*.ti,ab,kf. or adrenal cortex hormone*.ti,ab,kf. or corticoid*.ti,ab,kf.	345540
4	1 and 2 and 3	688
3	Low-Level Light Therapy/ or exp Oral Hygiene/ or caphosol.ti,ab,kf. or cold laser therapy.ti,ab,kf. or laser biostimulation.ti,ab,kf. or soft laser therapy.ti,ab,kf. or therapeutic laser therapy.ti,ab,kf. or ((low or light) adj3 (laser therap* or laser treat*)).ti,ab,kf. or ((photo-biomodulat* or photobiomodulat*) adj3 (therap* or treat*)).ti,ab,kf. or ((dental or mouth or oral* or tooth or teeth) adj3 (hygien* or care or rins* or wash*)).ti,ab,kf.	68301
2	Terminal Care/ or Hospice Care/ or "Hospice and Palliative Care Nursing"/ or Terminally Ill/ or exp Neoplasm Metastasis/ or exp Advance Care Planning/ or exp Palliative Care/ or exp "Aged, 80 and over"/ or exp Frail Elderly/ or Alzheimer Disease/ or Amyotrophic Lateral Sclerosis/ or exp Neurodegenerative Diseases/ or Muscular Dystrophy, Duchenne/ or exp Dementia/ or exp Geriatrics/ or exp Multiple Sclerosis/ or Palliative Medicine/ or exp Parkinsonian Disorders/ or exp Prion Diseases/ or Striatonigral Degeneration/ or Synucleinopathies/ or palliat*.ti,ab,kf. or reduced life expectanc*.ti,ab,kf. or end of life.ti,ab,kf. or terminally ill.ti,ab,kf. or terminal care.ti,ab,kf. or terminally sick.ti,ab,kf. or hospice*.ti,ab,kf. or terminal stage.ti,ab,kf. or advance* care*.ti,ab,kf. or advanced disease.ti,ab,kf. or advanced illness.ti,ab,kf. or life-limiting.ti,ab,kf. or metasta*.ti,ab,kf. or ((end stage or advanced) adj5 (kidney or renal or ckd or respiratory disease or chronic obstructive pulmonary disease or heart failure or cancer or neoplasm* or carcinoma or liver)).ti,ab,kf. or frail*.ti,ab,kf. or geriatri*.ti,ab,kf. or (oldest adj1 old*).ti,ab,kf. or senium.ti,ab,kf. or (very adj1 old*).ti,ab,kf. or septuagenarian*.ti,ab,kf. or octagenarian*.ti,ab,kf. or octogenarian*.ti,ab,kf. or nonagenarian*.ti,ab,kf. or centarian*.ti,ab,kf. or centenarian*.ti,ab,kf. or supercentenarian*.ti,ab,kf. or degenerative disease.ti,ab,kf. or neurodegenerative disease.ti,ab,kf. or pick complex.ti,ab,kf. or hallervorden spatz disease.ti,ab,kf. or hallervorden spatz syndrome.ti,ab,kf. or nbia disorder.ti,ab,kf. or neurodegeneration with brain iron accumulation.ti,ab,kf. or pantothenate kinase associated neurodegeneration.ti,ab,kf. or perry syndrome.ti,ab,kf. or parkinson.ti,ab,kf. or senile confusion.ti,ab,kf. or senile psychosis.ti,ab,kf. or nigrostriatal degeneration.ti,ab,kf. or nigrostriatal degeneration.ti,ab,kf. or striatonigral degeneration.ti,ab,kf. or strionigral degeneration.ti,ab,kf. or synucleinopathy.ti,ab,kf. or tauopathy.ti,ab,kf. or wilson disease.ti,ab,kf. or degeneratio hepato lenticularis.ti,ab,kf. or hepatocerebral degeneration.ti,ab,kf. or hepatolenticular degeneration.ti,ab,kf. or hepatolenticular syndrome.ti,ab,kf. or morbus wilson.ti,ab,kf. or progressive lenticular degeneration.ti,ab,kf. or wilson degeneration.ti,ab,kf. or wilson syndrome.ti,ab,kf. or chariot disease.ti,ab,kf. or disseminated sclerosis.ti,ab,kf. or insular sclerosis.ti,ab,kf. or multiple sclerosis.ti,ab,kf. or sclerosis multiplex.ti,ab,kf. or lou gehrig disease.ti,ab,kf. or amyotrophic lateral sclerosis.ti,ab,kf. or duchenne.ti,ab,kf. or cancer.ti,ab,kf. or neoplasm*.ti,ab,kf. or exp cancer patient/	3418154
1	((exp Mouth Diseases/ or exp Burning Mouth Syndrome/ or exp Mouth/) and exp Infections/) or exp Inflammation/ or ((mouth or oral or dental or tooth or teeth or buccal) adj3 (infection* or ulcer* or inflammati*)).ti,ab,kf. or thrush.ti,ab,kf. or stomatitis.ti,ab,kf.	502948

Tabel 1. Resultaten van zoekactie van onderzoeksvraag UV2

Database	Aantal
Embase	1541
Ovid/Medline	329
Totaal aantal resultaten	1870
Aantal geëxcludeerd (dubbelen)	130
Totaal aantal unieke resultaten	1740

Tabel 2. Overzicht van geëxcludeerde studies gebaseerd op beoordeling van de volledige tekst van onderzoeksvraag UV2

Referentie	Reden voor exclusie
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<p>Jones JA, Chavarri-Guerra Y, Corrêa LBC, Dean DR, Epstein JB, Fregnani ER, Lee J, Matsuda Y, Mercadante V, Monsen RE, Rajimakers NJH, Saunders D, Soto-Perez-de-Celis E, Sousa MS, Tonkaboni A, Vissink A, Yeoh KS, Davies AN. MASCC/ISOO expert opinion on the management of oral problems in patients with advanced cancer. <i>Support Care Cancer</i>. 2022 Nov;30(11):8761-8773. doi: 10.1007/s00520-022-07211-2. Epub 2022 Jun 18. PMID: 35717462; PMCID: PMC9633484.</p>	<p>Geen inclusie van vergelijkende studies.</p>
<p>Silva ARP, Bodanezi AV, Chrun ES, Lisboa ML, de Camargo AR, Munhoz EA. Palliative oral care in terminal cancer patients: Integrated review. <i>World J Clin Cases</i>. 2023 May 6;11(13):2966-2980. doi: 10.12998/wjcc.v11.i13.2966. PMID: 37215429; PMCID: PMC10198072.</p>	<p>Geen inclusie van interventiestudies voor infecties van de mond.</p>
<p>Venkatasalu MR, Murang ZR, Ramasamy DTR, Dhaliwal JS. Oral health problems among palliative and terminally ill patients: an integrated systematic review. <i>BMC Oral Health</i>. 2020 Mar 18;20(1):79. doi: 10.1186/s12903-020-01075-w. PMID: 32188452; PMCID: PMC7079519.</p>	<p>Geen inclusie van interventiestudies voor infecties van de mond.</p>

Bijlage Onderzoekskarakteristieken

Niet van toepassing.

Onderzoeksvraag & onderzoekskarakteristieken Pijn in de mond

Onderzoeksvraag

Wat is het effect van begeleiding en behandeling op pijn in de mond bij patiënten in de palliatieve fase?

Patients/Patiënten	Patiënten in de palliatieve fase met pijn in de mond
Intervention/Interventie	Niet-medicamenteus: Mondverzorging, (aanpassing van de) voeding, caphosol, coating agents Medicamenteus: Paracetamol, opioïden (systemisch), xylocaine viskeus (lokaal), morfine mondspoeling (lokaal)
Comparison/Vergelijking	Placebo, gebruikelijke zorg of andere interventie
Outcome(s)/Uitkomst(en)	Cruciaal: Pijn in de mond Belangrijk: Bijwerkingen

Zoekstrategie

Embase

#29	#26 OR #27 OR #28	921
#28	#20 AND (#24 OR #25) NOT #26 NOT #27 OBS	334
#27	#20 AND #23 NOT #26 Clinical trials	495
#26	#20 AND #22 SR	92
#25	'case control study'/de OR 'comparative study'/exp OR 'control group'/de OR 'controlled study'/de OR 'controlled clinical trial'/de OR 'crossover procedure'/de OR 'double blind procedure'/de OR 'phase 2 clinical trial'/de OR 'phase 3 clinical trial'/de OR 'phase 4 clinical trial'/de OR 'pretest posttest design'/de OR 'pretest posttest control group design'/de OR 'quasi experimental study'/de OR 'single blind procedure'/de OR 'triple blind procedure'/de OR (((control OR controlled) NEAR/6 trial):ti,ab,kw) OR (((control OR controlled) NEAR/6 (study OR studies)):ti,ab,kw) OR (((control OR controlled) NEAR/1 active):ti,ab,kw) OR 'open label*':ti,ab,kw OR (((double OR two OR three OR multi OR trial) NEAR/1 (arm OR arms)):ti,ab,kw) OR ((allocat* NEAR/10 (arm OR arms)):ti,ab,kw) OR placebo*:ti,ab,kw OR 'sham-control*':ti,ab,kw OR (((single OR double OR triple OR assessor) NEAR/1 (blind* OR masked)):ti,ab,kw) OR nonrandom*:ti,ab,kw OR 'non-random*':ti,ab,kw OR 'quasi-experiment*':ti,ab,kw OR crossover:ti,ab,kw OR 'cross over':ti,ab,kw OR 'parallel group*':ti,ab,kw OR 'factorial trial':ti,ab,kw OR ((phase NEAR/5 (study OR trial)):ti,ab,kw) OR ((case* NEAR/6 (matched OR control*)):ti,ab,kw) OR ((match* NEAR/6 (pair OR pairs OR cohort* OR control* OR group* OR healthy OR age OR sex OR gender OR patient* OR subject* OR participant*)):ti,ab,kw) OR ((propensity NEAR/6 (scor* OR match*)):ti,ab,kw) OR versus:ti OR vs:ti OR compar*:ti OR ((compar* NEAR/1 study):ti,ab,kw) OR (('major clinical study'/de OR 'clinical study'/de OR 'cohort analysis'/de OR 'observational study'/de OR 'cross-sectional study'/de OR 'multicenter study'/de OR 'correlational study'/de OR 'follow up'/de OR cohort*:ti,ab,kw OR 'follow up':ti,ab,kw OR followup:ti,ab,kw OR longitudinal*:ti,ab,kw OR prospective*:ti,ab,kw OR retrospective*:ti,ab,kw OR observational*:ti,ab,kw OR 'cross sectional*':ti,ab,kw OR cross?ectional*:ti,ab,kw OR multigent*:ti,ab,kw OR 'multi-cent*':ti,ab,kw OR consecutive*:ti,ab,kw) AND (group:ti,ab,kw OR groups:ti,ab,kw OR subgroup*:ti,ab,kw OR versus:ti,ab,kw OR vs:ti,ab,kw OR compar*:ti,ab,kw OR 'odds ratio*':ab OR 'relative odds':ab OR 'risk ratio*':ab OR 'relative risk*':ab OR 'rate ratio':ab OR aor:ab OR arr:ab OR rrr:ab OR (((or' OR 'rr') NEAR/6 ci):ab)))	14418354
#24	'major clinical study'/de OR 'clinical study'/de OR 'case control study'/de OR 'family study'/de OR 'longitudinal study'/de OR 'retrospective study'/de OR 'prospective study'/de OR 'comparative study'/de OR 'cohort analysis'/de OR ((cohort NEAR/1 (study OR studies)):ab,ti) OR (('case control' NEAR/1 (study OR studies)):ab,ti) OR (('follow up' NEAR/1 (study OR studies)):ab,ti) OR	6767914

	(observational NEAR/1 (study OR studies)) OR ((epidemiologic NEAR/1 (study OR studies)):ab,ti) OR (('cross sectional' NEAR/1 (study OR studies)):ab,ti)	
#23	'clinical trial'/exp OR 'randomization'/exp OR 'single blind procedure'/exp OR 'double blind procedure'/exp OR 'crossover procedure'/exp OR 'placebo'/exp OR 'prospective study'/exp OR rct:ab,ti OR random*:ab,ti OR 'single blind':ab,ti OR 'randomised controlled trial':ab,ti OR 'randomized controlled trial'/exp OR placebo*:ab,ti	3302394
#22	'meta analysis'/exp OR 'meta analysis (topic)'/exp OR metaanaly*:ti,ab OR 'meta analy*:ti,ab OR metanaly*:ti,ab OR 'systematic review'/de OR 'cochrane database of systematic reviews'/jt OR prisma:ti,ab OR prospero:ti,ab OR (((systemati* OR scoping OR umbrella OR 'structured literature') NEAR/3 (review* OR overview*)):ti,ab) OR ((systemic* NEAR/1 review*):ti,ab) OR (((systemati* OR literature OR database* OR 'data base*') NEAR/10 search*):ti,ab) OR (((structured OR comprehensive* OR systemic*) NEAR/3 search*):ti,ab) OR (((literature NEAR/3 review*):ti,ab) AND (search*:ti,ab OR database*:ti,ab OR 'data base*':ti,ab)) OR (('data extraction':ti,ab OR 'data source*':ti,ab) AND 'study selection':ti,ab) OR ('search strategy':ti,ab AND 'selection criteria':ti,ab) OR ('data source*':ti,ab AND 'data synthesis':ti,ab) OR medline:ab OR pubmed:ab OR embase:ab OR cochrane:ab OR (((critical OR rapid) NEAR/2 (review* OR overview* OR synthes*)):ti) OR (((critical* OR rapid*) NEAR/3 (review* OR overview* OR synthes*)):ab) AND (search*:ab OR database*:ab OR 'data base*':ab)) OR metasynthes*:ti,ab OR 'meta synthes*':ti,ab	962092
#21	#15 AND #20 sleutelartikelen niet meer gevonden als gevolg van palliatief zoekblok	0
#20	#1 AND #19 NOT ('conference abstract'/it OR 'editorial'/it OR 'letter'/it OR 'note'/it) NOT (('animal'/exp OR 'animal experiment'/exp OR 'animal model'/exp OR 'nonhuman'/exp) NOT 'human'/exp)	1377
#19	'advance care planning'/exp OR 'advanced cancer'/exp OR 'aged hospital patient'/exp OR 'alzheimer disease'/exp OR 'amyotrophic lateral sclerosis'/exp OR 'elderly care'/exp OR 'degenerative disease'/exp/mj OR 'duchenne muscular dystrophy'/exp OR 'frail elderly'/exp OR 'frontotemporal dementia'/exp OR 'geriatrics'/exp OR 'geriatric patient'/exp OR 'hospice'/exp OR 'hospice care'/exp OR 'institutionalized elderly'/exp OR 'metastasis'/exp OR 'multiple sclerosis'/exp OR 'neurodegeneration with brain iron accumulation'/exp OR 'palliative therapy'/exp OR 'parkinson disease'/exp OR 'perry syndrome'/exp OR 'pick presenile dementia'/exp OR 'prion disease'/exp OR 'senile dementia'/exp OR 'striatonigral degeneration'/exp OR 'subacute combined degeneration'/exp OR 'synucleinopathy'/exp OR 'tauopathy'/exp OR 'terminal care'/de OR 'terminally ill patient'/exp OR 'very elderly'/exp OR 'wilson disease'/exp OR 'palliat*':ti,ab,kw OR 'reduced life expectanc*':ti,ab,kw OR 'end of life':ti,ab,kw OR 'terminally ill':ti,ab,kw OR 'terminal care':ti,ab,kw OR 'terminally sick':ti,ab,kw OR 'hospice*':ti,ab,kw OR 'terminal stage':ti,ab,kw OR 'advance* care*':ti,ab,kw OR 'advanced disease':ti,ab,kw OR 'advanced illness':ti,ab,kw OR 'life-limiting':ti,ab,kw OR 'metasta*':ti,kw OR (((end stage' OR advanced) NEAR/5 (kidney OR renal OR ckd OR 'respiratory disease' OR 'chronic obstructive pulmonary disease' OR 'heart failure' OR 'cancer' OR neoplasm* OR carcinoma OR liver)):ti,ab,kw) OR frail*:de,ab,ti OR geriatr*:de,ab,ti OR ((oldest NEXT/1 old*):de,ab,ti) OR senium:de,ab,ti OR ((very NEXT/1 old*):de,ab,ti) OR septuagenarian*:de,ab,ti OR octagenarian*:de,ab,ti OR octogenarian*:de,ab,ti OR nonagenarian*:de,ab,ti OR centarian*:de,ab,ti OR centenarian*:de,ab,ti OR supercentenarian*:de,ab,ti OR 'degenerative disease':ti,kw OR 'neurodegenerative disease':ti,kw OR 'pick complex':ti,kw OR 'pick's complex':ti,kw OR 'hallervorden spatx disease':ti,kw OR 'hallervorden spatx syndrome':ti,kw OR 'nbia disorder':ti,kw OR 'neurodegeneration with brain iron accumulation':ti,kw OR 'pantothenate kinase associated neurodegeneration':ti,kw OR 'perry syndrome':ti,kw OR parkinson:ti,kw OR 'senile confusion':ti,kw OR 'senile psychosis':ti,kw OR 'nigrostriatal degeneration':ti,kw OR 'nigrostriatal degeneration':ti,kw OR 'striatonigral degeneration':ti,kw OR 'strionigral degeneration':ti,kw OR 'synucleinopathy':ti,kw OR 'tauopathy':ti,kw OR 'wilson disease':ti,kw OR 'degeneratio hepato lenticularis':ti,kw OR 'hepatocerebral degeneration':ti,kw OR 'hepatolenticular dEgeneration':ti,kw OR 'hepatolenticular syndrome':ti,kw OR 'morbus wilson':ti,kw OR 'progressive lenticular degeneration':ti,kw OR 'wilson degeneration':ti,kw OR 'wilson syndrome':ti,kw OR 'chariot disease':ti,kw OR 'disseminated	2782201

	sclerosis':ti,kw OR 'insular sclerosis':ti,kw OR 'multiple sclerosis':ti,kw OR 'sclerosis multiplex':ti,kw OR 'lou gehrig disease':ti,kw OR 'lou gehrig`s disease':ti,kw OR 'amyotrophic lateral sclerosis':ti,kw OR 'duchenne':ti,kw	
#18	#15 NOT #16 Cochrane reviews niet gevonden	2
#17	#2 AND #15 sleutelartikelen gevonden met de specifieke set	3
#16	#1 AND #15 sleutelartikelen gevonden met de sensitieve set	9
#15	#4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 sleutelartikelen	11
#14	'interventions for treating oral candidiasis for patients with cancer receiving treatment' AND cochrane AND [2007]/py	1
#13	'interventions for preventing oral mucositis for patients with cancer receiving treatment' AND cochrane AND [2007]/py	1
#12	'transdermal fentanyl during high-dose chemotherapy and autologous stem cell support'	1
#11	'comparison of a patient-controlled analgesia system with continuous infusion for administration of diamorphine for mucositis'	1
#10	('02782391':is OR '15315053':is OR 'journal of oral and maxillofacial surgery'/jt) AND '68':vi AND '2010':py AND '9':ip AND 2159	1
#9	'. updated clinical practice guidelines for the prevention and treatment of mucositis'	1
#8	'. updated clinical practice guidelines for the prevention and treatment of mucositis'	1
#7	'randomized trial of opioids versus tricyclic antidepressants for radiation-induced mucositis pain in head and neck cancer'	1
#6	'. potential utility of the peripheral analgesic properties of morphine in stomatitis-related pain: a pilot study'	1
#5	'effect of topical morphine for mucositis-associated pain following concomitant chemoradiotherapy for head and neck carcinoma'	1
#4	'polyvinylpyrrolidone-sodium hyaluronate gel (gelclair): a bioadherent oral gel for the treatment of oral mucositis and other painful oral lesions'	1
#3	#1 NOT #2	5517
#2	'pain'/exp/mj AND 'mouth'/exp/mj OR 'mouth pain'/exp OR 'burning mouth syndrome'/exp OR 'burning tongue syndrome'/exp OR 'glossodynia'/exp OR 'glossal pain':ti,ab,kw OR 'glossalgia':ti,ab,kw OR 'glossodynia':ti,ab,kw OR 'lingual pain':ti,ab,kw OR 'pain in the tongue':ti,ab,kw OR 'painful tongue':ti,ab,kw OR 'sore tongue':ti,ab,kw OR 'tongue pain':ti,ab,kw OR 'burning pain in the tongue':ti,ab,kw OR 'glossopyrosis':ti,ab,kw OR 'lingual dysaesthesia':ti,ab,kw OR 'lingual dysesthesia':ti,ab,kw OR 'tongue dysesthesia':ti,ab,kw OR 'burning oral pain':ti,ab,kw OR 'burning pain in the oral cavity':ti,ab,kw OR 'oral dysaesthesia':ti,ab,kw OR 'oral dysesthesia':ti,ab,kw OR 'oral pyrosis':ti,ab,kw OR 'orolingual paraesthesia':ti,ab,kw OR 'oropyrosis':ti,ab,kw OR 'stomatopyrosis':ti,ab,kw OR ((burning NEAR/4 (mouth OR oral OR tongue)):ti,ab,kw) OR 'mouth pain':ti,ab,kw OR 'oral pain':ti,ab,kw OR 'orodynia':ti,ab,kw OR 'pain in the mouth':ti,ab,kw OR 'pain in the oral cavity':ti,ab,kw OR 'painful mouth':ti,ab,kw OR 'sore mouth':ti,ab,kw OR 'stomatalgia':ti,ab,kw OR 'stomatodynia':ti,ab,kw	9373
#1	'pain'/exp/mj AND 'mouth'/exp/mj OR 'mouth pain'/exp OR 'burning mouth syndrome'/exp OR 'burning tongue syndrome'/exp OR 'glossodynia'/exp OR 'glossal pain':ti,ab,kw OR 'glossalgia':ti,ab,kw OR 'glossodynia':ti,ab,kw OR 'lingual pain':ti,ab,kw OR 'pain in the tongue':ti,ab,kw OR 'painful tongue':ti,ab,kw OR 'sore tongue':ti,ab,kw OR 'tongue pain':ti,ab,kw OR 'burning pain in the tongue':ti,ab,kw OR 'glossopyrosis':ti,ab,kw OR 'lingual dysaesthesia':ti,ab,kw OR 'lingual dysesthesia':ti,ab,kw OR 'tongue dysesthesia':ti,ab,kw OR 'burning oral pain':ti,ab,kw OR 'burning pain in the oral cavity':ti,ab,kw OR 'oral dysaesthesia':ti,ab,kw OR 'oral dysesthesia':ti,ab,kw OR 'oral pyrosis':ti,ab,kw OR 'orolingual paraesthesia':ti,ab,kw OR 'oropyrosis':ti,ab,kw OR 'stomatopyrosis':ti,ab,kw OR (((burning OR pain OR painful) NEAR/3 (mouth OR oral OR tongue OR mucositis OR stomatitis OR 'mucosa biop*')):ti,ab,kw) OR 'mouth pain':ti,ab,kw OR 'oral pain':ti,ab,kw OR 'orodynia':ti,ab,kw OR 'pain in the mouth':ti,ab,kw OR 'pain in the oral cavity':ti,ab,kw OR 'painful mouth':ti,ab,kw OR 'sore mouth':ti,ab,kw OR 'stomatalgia':ti,ab,kw OR 'stomatodynia':ti,ab,kw	14761

Ovid/Medline

#	Searches	Results
12	9 or 10 or 11	696
11	(4 and (7 or 8)) not 9 not 10 OBS	369
10	(4 and 6) not 9 Clinical trials	273
9	4 and 5 SR	54
8	Case-control Studies/ or clinical trial, phase ii/ or clinical trial, phase iii/ or clinical trial, phase iv/ or comparative study/ or control groups/ or controlled before-after studies/ or controlled clinical trial/ or double-blind method/ or historically controlled study/ or matched-pair analysis/ or single-blind method/ or (((control or controlled) adj6 (study or studies or trial)) or (compar* adj (study or studies)) or ((control or controlled) adj1 active) or "open label*" or ((double or two or three or multi or trial) adj (arm or arms)) or (allocat* adj10 (arm or arms)) or placebo* or "sham-control*" or ((single or double or triple or assessor) adj1 (blind* or masked)) or nonrandom* or "non-random*" or "quasi-experiment*" or "parallel group*" or "factorial trial" or "pretest posttest" or (phase adj5 (study or trial)) or (case* adj6 (matched or control*)) or (match* adj6 (pair or pairs or cohort* or control* or group* or healthy or age or sex or gender or patient* or subject* or participant*)) or (propensity adj6 (scor* or match*))) .ti,ab,kf. or (confounding adj6 adjust*).ti,ab. or (versus or vs or compar*).ti. or ((exp cohort studies/ or epidemiologic studies/ or multicenter study/ or observational study/ or seroepidemiologic studies/ or (cohort* or 'follow up' or followup or longitudinal* or prospective* or retrospective* or observational* or multicent* or 'multi-cent*' or consecutive*).ti,ab,kf.) and ((group or groups or subgroup* or versus or vs or compar*).ti,ab,kf. or ('odds ratio*' or 'relative odds' or 'risk ratio*' or 'relative risk*' or aor or arr or rrr).ab. or (("OR" or "RR") adj6 CI).ab.))	5511272
7	Epidemiologic studies/ or case control studies/ or exp cohort studies/ or Controlled Before-After Studies/ or Case control.tw. or cohort.tw. or Cohort analy\$.tw. or (Follow up adj (study or studies)).tw. or (observational adj (study or studies)).tw. or Longitudinal.tw. or Retrospective*.tw. or prospective*.tw. or consecutive*.tw. or Cross sectional.tw. or Cross-sectional studies/ or historically controlled study/ or interrupted time series analysis/ [Onder exp cohort studies vallen ook longitudinale, prospectieve en retrospectieve studies]	4532548
6	exp clinical trial/ or randomized controlled trial/ or exp clinical trials as topic/ or randomized controlled trials as topic/ or Random Allocation/ or Double-Blind Method/ or Single-Blind Method/ or (clinical trial, phase i or clinical trial, phase ii or clinical trial, phase iii or clinical trial, phase iv or controlled clinical trial or randomized controlled trial or multicenter study or clinical trial).pt. or random*.ti,ab. or (clinic* adj trial*).tw. or ((singl* or doubl* or treb* or tripl*) adj (blind\$3 or mask\$3)).tw. or Placebos/ or placebo*.tw.	2633127
5	meta-analysis/ or meta-analysis as topic/ or exp guideline/ or (metaanaly* or meta-analy* or metanaly*).ti,ab,kf. or systematic review/ or cochrane.jw. or (prisma or prospero).ti,ab,kf. or ((systemati* or scoping or umbrella or "structured literature") adj3 (review* or overview*)).ti,ab,kf. or (systemic* adj1 review*).ti,ab,kf. or ((systemati* or literature or database* or data-base*) adj10 search*).ti,ab,kf. or ((structured or comprehensive* or systemic*) adj3 search*).ti,ab,kf. or ((literature adj3 review*) and (search* or database* or data-base*)).ti,ab,kf. or (("data extraction" or "data source") and "study selection").ti,ab,kf. or ("search strategy" and "selection criteria").ti,ab,kf. or ("data source*" and "data synthesis").ti,ab,kf. or (medline or pubmed or embase or cochrane).ab. or ((critical or rapid) adj2 (review* or overview* or synthes*)).ti. or (((critical* or rapid*) adj3 (review* or overview* or synthes*)) and (search* or database* or data-base*)).ab. or (metasynthes* or meta-synthes*).ti,ab,kf. or guideline*.ti,ab,kf.	1122258
4	3 not ((exp animals/ or exp models, animal/) not humans/) not (letter/ or comment/ or editorial/)	1009
3	1 and 2	1033

2	<p>Terminal Care/ or Hospice Care/ or "Hospice and Palliative Care Nursing"/ or Terminally Ill/ or exp Neoplasm Metastasis/ or exp Advance Care Planning/ or exp Palliative Care/ or exp "Aged, 80 and over"/ or exp Frail Elderly/ or Alzheimer Disease/ or Amyotrophic Lateral Sclerosis/ or exp Neurodegenerative Diseases/ or Muscular Dystrophy, Duchenne/ or exp Dementia/ or exp Geriatrics/ or exp Multiple Sclerosis/ or Palliative Medicine/ or exp Parkinsonian Disorders/ or exp Prion Diseases/ or Striatonigral Degeneration/ or Synucleinopathies/ or palliat*.ti,ab,kf. or reduced life expectanc*.ti,ab,kf. or end of life.ti,ab,kf. or terminally ill.ti,ab,kf. or terminal care.ti,ab,kf. or terminally sick.ti,ab,kf. or hospice*.ti,ab,kf. or terminal stage.ti,ab,kf. or advance* care*.ti,ab,kf. or advanced disease.ti,ab,kf. or advanced illness.ti,ab,kf. or life-limiting.ti,ab,kf. or metasta*.ti,ab,kf. or ((end stage or advanced) adj5 (kidney or renal or ckd or respiratory disease or chronic obstructive pulmonary disease or heart failure or cancer or neoplasm* or carcinoma or liver)).ti,ab,kf. or frail*.ti,ab,kf. or geriatri*.ti,ab,kf. or (oldest adj1 old*).ti,ab,kf. or senium.ti,ab,kf. or (very adj1 old*).ti,ab,kf. or septuagenarian*.ti,ab,kf. or octagenarian*.ti,ab,kf. or octogenarian*.ti,ab,kf. or nonagenarian*.ti,ab,kf. or centarian*.ti,ab,kf. or centenarian*.ti,ab,kf. or supercentenarian*.ti,ab,kf. or degenerative disease.ti,kf. or neurodegenerative disease.ti,kf. or pick complex.ti,kf. or hallervorden spatz disease.ti,kf. or hallervorden spatz syndrome.ti,kf. or nbia disorder.ti,kf. or neurodegeneration with brain iron accumulation.ti,kf. or pantothenate kinase associated neurodegeneration.ti,kf. or perry syndrome.ti,kf. or parkinson.ti,kf. or senile confusion.ti,kf. or senile psychosis.ti,kf. or nigrostriatal degeneration.ti,kf. or nigrostriatal degeneration.ti,kf. or striatonigral degeneration.ti,kf. or strionigral degeneration.ti,kf. or synucleinopathy.ti,kf. or tauopathy.ti,kf. or wilson disease.ti,kf. or degeneratio hepato lenticularis.ti,kf. or hepatocerebral degeneration.ti,kf. or hepatolenticular degeneration.ti,kf. or hepatolenticular syndrome.ti,kf. or morbus wilson.ti,kf. or progressive lenticular degeneration.ti,kf. or wilson degeneration.ti,kf. or wilson syndrome.ti,kf. or chariot disease.ti,kf. or disseminated sclerosis.ti,kf. or insular sclerosis.ti,kf. or multiple sclerosis.ti,kf. or sclerosis multiplex.ti,kf. or lou gehrig disease.ti,kf. or amyotrophic lateral sclerosis.ti,kf. or duchenne.ti,kf.</p>	2266154
1	<p>(exp Mouth/ and exp Pain/) or glossal pain.ti,ab,kf. or glossalgia.ti,ab,kf. or glossodynia.ti,ab,kf. or lingual pain.ti,ab,kf. or pain in the tongue.ti,ab,kf. or painful tongue.ti,ab,kf. or sore tongue.ti,ab,kf. or tongue pain.ti,ab,kf. or burning pain in the tongue.ti,ab,kf. or glossopyrosis.ti,ab,kf. or lingual dysaesthesia.ti,ab,kf. or lingual dysesthesia.ti,ab,kf. or tongue dysesthesia.ti,ab,kf. or burning oral pain.ti,ab,kf. or burning pain in the oral cavity.ti,ab,kf. or oral dysaesthesia.ti,ab,kf. Or oral dysesthesia.ti,ab,kf. or oral pyrosis.ti,ab,kf. or orolingual paraesthesia.ti,ab,kf. or oropyrosis.ti,ab,kf. or stomatopyrosis.ti,ab,kf. or ((burning or pain or painful) adj3 (mouth or oral or tongue or mucositis or stomatitis or mucosa biop*)).ti,ab,kf. or mouth pain.ti,ab,kf. or oral pain.ti,ab,kf. or orodynia.ti,ab,kf. or pain in the mouth.ti,ab,kf. or pain in the oral cavity.ti,ab,kf. or painful mouth.ti,ab,kf. or sore mouth.ti,ab,kf. or stomatalgia.ti,ab,kf. or stomatodynia.ti,ab,kf.</p>	11482

Tabel 1. Resultaten van zoekactie van onderzoeksvraag UV3

Database	Aantal
Embase	921
Ovid/Medline	696
Totaal aantal resultaten	1617
Aantal geëxcludeerd (dubbelen)	294
Totaal aantal unieke resultaten	1323

Tabel 2. Overzicht van geëxcludeerde studies gebaseerd op beoordeling van de volledige tekst van onderzoeksvraag UV3

Referentie	Reden voor exclusie
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Silva ARP, Bodanezi AV, Chrun ES, Lisboa ML, de Camargo AR, Munhoz EA. Palliative oral care in terminal cancer patients: Integrated review. World J Clin Cases. 2023 May 6;11(13):2966-2980. doi: 10.12998/wjcc.v11.i13.2966. PMID: 37215429; PMCID: PMC10198072.	Verkeerde design
Longworth J, Szafron M, Gruza A, Da Silva K. Cannabis and cannabinoid medications for the treatment of chronic orofacial pain: A scoping review. Dent Rev. 2023 March 3(1);100063.	Verkeerde patiëntenpopulatie
Jones JA, Chavarri-Guerra Y, Corrêa LBC, Dean DR, Epstein JB, Fregnani ER, Lee J, Matsuda Y, Mercadante V, Monsen RE, Rajimakers NJH, Saunders D, Soto-Perez-de-Celis E, Sousa MS, Tonkaboni A, Vissink A, Yeoh KS, Davies AN. MASCC/ISOO expert opinion on the management of oral problems in patients with advanced cancer. Support Care Cancer. 2022 Nov;30(11):8761-8773. doi: 10.1007/s00520-022-07211-2. Epub 2022 Jun 18. PMID: 35717462; PMCID: PMC9633484.	Verkeerde design
Hoppe C, Kutschan S, Dörfler J, Büntzel J, Büntzel J, Huebner J. Zinc as a complementary treatment for cancer patients: a systematic review. Clin Exp Med. 2021 May;21(2):297-313. doi: 10.1007/s10238-020-00677-6. Epub 2021 Jan 26. PMID: 33496846; PMCID: PMC8053661.	Verkeerde patiëntenpopulatie
Tinti S, Cassani G, Pinna I, Alberti A, Destrebecq A. Neoplasie testa-collo e cure palliative, sintomi e qualità di vita: revisione della letteratura [Head and neck neoplasms and palliative care, symptoms and quality of life: literature review.]. Recent Prog Med. 2020 Dec;111(12):722-732. Italian. doi: 10.1701/3509.34963. PMID: 33362169.	Niet verkrijgbaar in Engels
Ritwik P, Chrisentery-Singleton TE. Oral and dental considerations in pediatric cancers. Cancer Metastasis Rev. 2020 Mar;39(1):43-53. doi: 10.1007/s10555-020-09842-5. PMID: 31989506.	Verkeerde design
Manoharan V, Fareed N, Battur H, Khanagar S, Praveena J. Effectiveness of mouthrinses in prevention and treatment of radiation induced mucositis: A systematic review. J Cancer Res Ther. 2020 Dec;16(Supplement):S1-S10. doi: 10.4103/jcrt.JCRT_176_18. PMID: 33380645.	Verkeerde patiëntenpopulatie
Venkatasalu MR, Murang ZR, Ramasamy DTR, Dhaliwal JS. Oral health problems among palliative and terminally ill patients: an integrated systematic review. BMC Oral Health. 2020 Mar 18;20(1):79. doi: 10.1186/s12903-020-01075-w. PMID: 32188452; PMCID: PMC7079519.	Verkeerde design
Pan CX, Morrison RS, Ness J, Fugh-Berman A, Leipzig RM. Complementary and alternative medicine in the management of pain, dyspnea, and nausea and vomiting near the end of life. A systematic review. J Pain Symptom Manage. 2000 Nov;20(5):374-87. doi: 10.1016/s0885-3924(00)00190-1. PMID: 11068159.	Verkeerde patiëntenpopulatie

Bijlage Onderzoekskarakteristieken UV 3 Pijn in de mond

Tabel 3. Studiekarakteristieken

Author, publication year: Monsen, 2021						
Study characteristics	Patient characteristics	Intervention (I)	Comparison / control (C)	Follow-up	Outcome measures and effect size	Comments
Type of study: RCT Setting: Hospice	<u>Inclusion criteria:</u> - Admission to hospice - Age 18 years or older	Salvia Officinalis (SO) rinse, consisting of 2.5g SO herbal tea/100 ml	Normal saline (NS) rinse. Rinsing twice for 30 seconds with 10-15ml for	<u>Length of follow-up:</u> 5 days <u>Loss-to-follow-up:</u>	<i>EORTC QLQ-OH17 item #35 mouth soreness:</i> There was no	Other outcomes such as dry mouth not reported in this table.

Country: Norway	- Diagnosis of advanced cancer - Reported current oral discomfort	water. Rinsing twice for 30 seconds with 10-15ml for four times a day. Four days in total.	four times a day. Four days in total.	Intervention : N=11 (25%) Reasons (decline in health status, no longer wanting to participate)	significant improvement in mouth soreness in both groups after 5 days of use.	
Source of funding: Lovisenberg Diaconal Hospital, Bundi Cancer Support Foundation, Kirsten Ronnings Endowment, and South-Eastern Norway Regional Health Authority	<p><u>Exclusion criteria:</u></p> <ul style="list-style-type: none"> - Estimated life expectancy of 2 weeks or less - Using antifungal medication - Currently receiving head or neck radiation therapy - Epileptic - Diabetes - Condition interfering with study participation <p><u>N total at baseline:</u> Intervention: 44 Control: 44</p> <p><u>Important prognostic factors:</u> Age, mean (SD): I: 64.3 (9.4) C: 63.5 (11.8)</p> <p>Sex: I: 34% M C: 20% M</p> <p>The use of opiate medication was more frequent in the intervention group (93%) than the control group (77%, p=0.049).</p>			Control: N=4 (9%) Reasons (decline in health status, no longer wanting to participate, wanted SO intervention)		

Author, publication year: Kvalheim, 2019

Study characteristics	Patient characteristics	Intervention (I)	Comparison / control (C)	Follow-up	Outcome measures and effect size	Comments
Type of study: RCT, cross-over	<u>Inclusion criteria:</u> - Xerostomia - Institutionalized palliative care	17% watery solution of glycerol, one application	1. Oxygenated glycerol triester (Aequasyl),	<u>Length of follow-up:</u> Two hours	<i>Discomfort/pain immediately after:</i> Aequasyl: OR 3.35 (95%CI 1.85;6.06)	

Setting: Palliative care units	- Curative treatment of existing diseases completed or terminated		one application	<u>Loss-to-follow-up:</u> None	Glycerol: OR 8.39 (95%CI 4.12;17.08) Salient: OR 4.70 (95%CI 2.63;8.39) Difference between glycerol and other interventions significant (p<0.01)	
Country: Norway	- WHO performance status III or over				<i>Discomfort/pain 2 hours later:</i> Aequasyl: OR 5.69 (95%CI 3.20;10.12) Glycerol: OR 1.85 (95%CI 1.00;3.45) Salient: OR 5.61 (95%CI 3.15;10.02) Difference between glycerol and other two interventions significant (p<0.05)	
Source of funding: None	- Cognitively functioning - Capable of giving responses to a limited questionnaire				The majority of patients (19/30) preferred glycerol (p<0.001).	
	- Expected to stay at the care center for a minimum of 3 days					
	<u>Exclusion criteria:</u> - Treated with chemotherapy or radiotherapy for head or neck cancer					
	<u>N total at baseline:</u> N=30					
	<u>Important prognostic factors:</u> Age, mean: 68 years Sex: 43% M					

Tabel 4. Risico op bias

Author, publication year	Random sequence generation (selection bias)	Allocation concealment (selection bias)	Blinding of patient and personnel (performance bias)	Blinding of outcome assessor (detection bias)	Follow-up and ITT or per protocol analysis (attrition bias)	Selective reporting	Other bias
Monsen, 2021	Low risk <i>Web-based randomization</i>	Unclear <i>Use of envelopes, details missing</i>	High risk <i>Not possible to blind for taste</i>	Low risk <i>Blinded</i>	Low risk Drop-out difference not significant	Low risk <i>Matches registration</i>	N.A.
Kvalheim, 2019	High risk <i>Randomization generated by project leader</i>	Low risk Cross-over trial	High risk <i>Patients blinded but not personnel</i>	Unclear <i>Blinding not reported</i>	Low risk <i>Complete data</i>	Unclear <i>No registration available</i>	N.A.

Tabel 5. GRADE beoordeling

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Salvia Officinalis	Normal Saline	Relative (95%CI)	Absolute	
EORTC CHC-OH17 item mouth soreness											
1	RCT	Serious ¹	Not serious	Not serious	Serious ²	None	33	39		After 5 days the scores were 1.26 vs 1.27 (p=0.92). Day by group interaction not significant (p=0.46).	LOW

¹ Use of envelopes for randomization, patients and providers not blinded for treatment

² Confidence interval not reported

Quality assessment							No of patients			Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Glycerol	Aequasyal	Salient	Relative (95%CI)	Absolute	
Likert-scale												
1	RCT	Serious ¹	Not serious	Not serious	Very serious ²	None	30	30	30	Immediately after: Aequasyal: OR 3.35, glycerol: OR 8.39, Salient: OR 4.70 2 hours later: Aequasyal: OR 5.69, Glycerol: OR 1.85, Salient: OR 5.61	VERY LOW	

¹ Unclear randomization, lack of blinding

² Large confidence intervals for before-after comparison, no confidence interval given for comparisons between interventions

Onderzoeksvraag & onderzoekskarakteristieken Slikstoornissen

Onderzoeksvraag

Wat is het effect van begeleiding en behandeling op slikstoornissen bij patiënten in de palliatieve fase?

Patients/Patiënten	Patiënten in de palliatieve fase met slikstoornissen
Intervention/Interventie	Niet medicamenteus: Logopedie, myotomie, voeding, neuromusculaire stimulatie, elektrische stimulatie, acupunctuur Medicamenteus: Botulinetoxine injectie, baclofen, rotigotine, apomorfine, cholinesteraseremmers, immunosuppresiva
Comparison/Vergelijking	Placebo, gebruikelijke zorg of andere interventie
Outcome(s)/Uitkomst(en)	Cruciaal: Slikstoornissen Belangrijk: Bijwerkingen

Zoekstrategie

Embase

No.	Query	Results
#8	#4 AND #7 SR	467
#7	#5 OR #6	1637158
#6	'meta analysis'/exp OR 'meta analysis (topic)/exp OR metaanaly*:ti,ab OR 'meta analy*:ti,ab OR metanaly*:ti,ab OR 'systematic review'/de OR 'cochrane database of systematic reviews'/jt OR prisma:ti,ab OR prospero:ti,ab OR (((systemati* OR scoping OR umbrella OR 'structured literature') NEAR/3 (review* OR overview*)):ti,ab) OR ((systemic* NEAR/1 review*):ti,ab) OR (((systemati* OR literature OR database* OR 'data base*') NEAR/10 search*):ti,ab) OR (((structured OR comprehensive* OR systemic*) NEAR/3 search*):ti,ab) OR (((literature NEAR/3 review*):ti,ab) AND (search*:ti,ab OR database*:ti,ab OR 'data base*:ti,ab)) OR (('data extraction':ti,ab OR 'data source*:ti,ab) AND 'study selection':ti,ab) OR ('search strategy':ti,ab AND 'selection criteria':ti,ab) OR ('data source*:ti,ab AND 'data synthesis':ti,ab) OR medline:ab OR pubmed:ab OR embase:ab OR cochrane:ab OR (((critical OR rapid) NEAR/2 (review* OR overview* OR synthes*)):ti) OR (((critical* OR rapid*) NEAR/3 (review* OR overview* OR synthes*)):ab) AND (search*:ab OR database*:ab OR 'data base*:ab)) OR metasynthes*:ti,ab OR 'meta synthes*':ti,ab	944771
#5	('practice guideline'/exp OR guideline*:ti,kw OR (((nursing OR clinical) NEAR/2 protocol*):ti,ab,kw)) AND [2018-2023]/py	281172
#4	#3 NOT ('conference abstract'/it OR 'editorial'/it OR 'letter'/it OR 'note'/it) NOT (('animal'/exp OR 'animal experiment'/exp OR 'animal model'/exp OR 'nonhuman'/exp) NOT 'human'/exp)	9789
#3	#1 AND #2	16114
#2	'advance care planning'/exp OR 'advanced cancer'/exp OR 'aged hospital patient'/exp OR 'alzheimer disease'/exp OR 'amyotrophic lateral sclerosis'/exp OR 'elderly care'/exp OR 'degenerative disease'/exp/mj OR 'duchenne muscular dystrophy'/exp OR 'frail elderly'/exp OR 'frontotemporal dementia'/exp OR 'geriatrics'/exp OR 'geriatric patient'/exp OR 'hospice'/exp OR 'hospice care'/exp OR 'institutionalized elderly'/exp OR 'metastasis'/exp OR 'multiple sclerosis'/exp OR 'neurodegeneration with brain iron accumulation'/exp OR 'palliative therapy'/exp OR 'parkinson disease'/exp OR 'perry syndrome'/exp OR 'pick presenile dementia'/exp OR 'prion disease'/exp OR 'senile dementia'/exp OR 'striatonigral degeneration'/exp OR 'subacute combined degeneration'/exp OR 'synucleinopathy'/exp OR 'taupathy'/exp OR 'terminal care'/de OR 'terminally ill patient'/exp OR 'very elderly'/exp OR 'wilson disease'/exp OR 'palliat*':ti,ab,kw OR 'reduced life expectanc*':ti,ab,kw OR 'end of life':ti,ab,kw OR 'terminally ill':ti,ab,kw OR 'terminal care':ti,ab,kw OR 'terminally sick':ti,ab,kw OR 'hospice*':ti,ab,kw OR 'terminal stage':ti,ab,kw OR 'advance* care*':ti,ab,kw OR 'advanced disease':ti,ab,kw OR 'advanced illness':ti,ab,kw OR 'life-limiting':ti,ab,kw OR 'metasta*':ti,kw OR (('end stage' OR advanced) NEAR/5 (kidney OR renal OR ckd OR	2744948

	'respiratory disease' OR 'chronic obstructive pulmonary disease' OR 'heart failure' OR 'cancer' OR neoplasm* OR carcinoma OR liver)):ti,ab,kw) OR frail*:de,ab,ti OR geriatri*:de,ab,ti OR ((oldest NEXT/1 old*):de,ab,ti) OR senium:de,ab,ti OR ((very NEXT/1 old*):de,ab,ti) OR septuagenarian*:de,ab,ti OR octagenarian*:de,ab,ti OR octogenarian*:de,ab,ti OR nonagenarian*:de,ab,ti OR centarian*:de,ab,ti OR centenarian*:de,ab,ti OR supercentenarian*:de,ab,ti OR 'degenerative disease':ti,kw OR 'neurodegenerative disease':ti,kw OR 'pick complex':ti,kw OR 'pick`s complex':ti,kw OR 'hallervorden spatx disease':ti,kw OR 'hallervorden spatx syndrome':ti,kw OR 'nbia disorder':ti,kw OR 'neurodegeneration with brain iron accumulation':ti,kw OR 'pantothenate kinase associated neurodegeneration':ti,kw OR 'perry syndrome':ti,kw OR parkinson:ti,kw OR 'senile confusion':ti,kw OR 'senile psychosis':ti,kw OR 'nigrostriatal degeneration':ti,kw OR 'nigrostriatal degeneration':ti,kw OR 'striatonigral degeneration':ti,kw OR 'strionigral degeneration':ti,kw OR 'synucleinopathy':ti,kw OR 'tauopathy':ti,kw OR 'wilson disease':ti,kw OR 'degeneratio hepato lenticularis':ti,kw OR 'hepatocerebral degeneration':ti,kw OR 'hepatolenticular degeneration':ti,kw OR 'hepatolenticular syndrome':ti,kw OR 'morbus wilson':ti,kw OR 'progressive lenticular degeneration':ti,kw OR 'wilson degeneration':ti,kw OR 'wilson syndrome':ti,kw OR 'chariot disease':ti,kw OR 'disseminated sclerosis':ti,kw OR 'insular sclerosis':ti,kw OR 'multiple sclerosis':ti,kw OR 'sclerosis multiplex':ti,kw OR 'lou gehrig disease':ti,kw OR 'lou gehrig`s disease':ti,kw OR 'amyotrophic lateral sclerosis':ti,kw OR duchenne:ti,kw	
#1	dysphagia/exp/mj OR 'odynophagia'/exp OR 'odynophag*':ti,ab,kw OR 'aphagopraxia':ti,ab,kw OR 'dysphag*':ti,ab,kw OR (((deglut* OR swallow*) NEAR/3 (difficult* OR disorder* OR problem* OR dysfunction* OR difficult* OR impair* OR pain*)):ti,ab,kw)	81459

Ovid/Medline

#	Searches	Results
7	3 and (4 or 6) SR	423
6	meta-analysis/ or meta-analysis as topic/ or (metaanaly* or meta-analy* or metanaly*).ti,ab,kf. or systematic review/ or cochrane.jw. or (prisma or prospero).ti,ab,kf. or ((systemati* or scoping or umbrella or "structured literature") adj3 (review* or overview*)).ti,ab,kf. or (systemic* adj1 review*).ti,ab,kf. or ((systemati* or literature or database* or data-base*) adj10 search*).ti,ab,kf. or ((structured or comprehensive* or systemic*) adj3 search*).ti,ab,kf. or ((literature adj3 review*) and (search* or database* or data-base*)).ti,ab,kf. or (("data extraction" or "data source") and "study selection").ti,ab,kf. or ("search strategy" and "selection criteria").ti,ab,kf. or ("data source" and "data synthesis").ti,ab,kf. or (medline or pubmed or embase or cochrane).ab. or ((critical or rapid) adj2 (review* or overview* or synthes*)).ti. or (((critical* or rapid*) adj3 (review* or overview* or synthes*)) and (search* or database* or data-base*)).ab. or (metasynthes* or meta-synthes*).ti,ab,kf.	680557
5	limit 4 to yr="2018 -Current"	42844
4	exp Practice Guideline/ or guideline*.ti,kf. or ((clinical or nursing) adj2 protocol).ti,kf.	125475
3	1 and 2	14216
2	Terminal Care/ or Hospice Care/ or "Hospice and Palliative Care Nursing"/ or Terminally Ill/ or exp Neoplasm Metastasis/ or exp Advance Care Planning/ or exp Palliative Care/ or exp "Aged, 80 and over"/ or exp Frail Elderly/ or Alzheimer Disease/ or Amyotrophic Lateral Sclerosis/ or exp Neurodegenerative Diseases/ or Muscular Dystrophy, Duchenne/ or exp Dementia/ or exp Geriatrics/ or exp Multiple Sclerosis/ or Palliative Medicine/ or exp Parkinsonian Disorders/ or exp Prion Diseases/ or Striatonigral Degeneration/ or Synucleinopathies/ or palliat*.ti,ab,kf. or reduced life expectanc*.ti,ab,kf. or end of life.ti,ab,kf. or terminally ill.ti,ab,kf. or terminal care.ti,ab,kf. or terminally sick.ti,ab,kf. or hospice*.ti,ab,kf. or terminal stage.ti,ab,kf. or advance* care*.ti,ab,kf. or advanced disease.ti,ab,kf. or advanced illness.ti,ab,kf. or life-limiting.ti,ab,kf. or metasta*.ti,kf. or ((end stage or advanced) adj5 (kidney or renal or ckd or respiratory disease or chronic obstructive pulmonary disease or heart failure or cancer or neoplasm* or carcinoma or liver)).ti,ab,kf. or frail*.ti,ab,kf. or geriatri*.ti,ab,kf. or (oldest adj1 old*).ti,ab,kf. or senium.ti,ab,kf. or (very adj1 old*).ti,ab,kf. or septuagenarian*.ti,ab,kf. or octagenarian*.ti,ab,kf. or octogenarian*.ti,ab,kf. or nonagenarian*.ti,ab,kf. or centarian*.ti,ab,kf. or centenarian*.ti,ab,kf. or supercentenarian*.ti,ab,kf. or degenerative disease.ti,kf. or neurodegenerative disease.ti,kf. or pick complex.ti,kf. or hallervorden spatx disease.ti,kf. or hallervorden	2252929

	spatz syndrome.ti,kf. or nbia disorder.ti,kf. or neurodegeneration with brain iron accumulation.ti,kf. or pantothenate kinase associated neurodegeneration.ti,kf. or perry syndrome.ti,kf. or parkinson.ti,kf. or senile confusion.ti,kf. or senile psychosis.ti,kf. or nigrostriatal degeneration.ti,kf. or nigrostriatal degeneration.ti,kf. or striatonigral degeneration.ti,kf. or strionigral degeneration.ti,kf. or synucleinopathy.ti,kf. or tauopathy.ti,kf. or wilson disease.ti,kf. or degeneratio hePato lenticularis.ti,kf. or hepatocerebral degeneration.ti,kf. or hepatolenticular degeneration.ti,kf. or hepatolenticular syndrome.ti,kf. or morbus wilson.ti,kf. or progressive lenticular degeneration.ti,kf. or wilson degeneration.ti,kf. or wilson syndrome.ti,kf. or chariot disease.ti,kf. or disseminated sclerosis.ti,kf. or insular sclerosis.ti,kf. or multiple sclerosis.ti,kf. or sclerosis multiplex.ti,kf. or lou gehrig disease.ti,kf. or amyotrophic lateral sclerosis.ti,kf. or duchenne.ti,kf.	
1	exp Deglutition Disorders/ or odynophag*.ti,ab,kf. or aphagopraxia.ti,ab,kf. or dysphag*.ti,ab,kf. or ((deglut* or swallow*) adj3 (difficult* or disorder* or problem* or dysfunction* or difficult* or impair* or pain*)).ti,ab,kf.	83169

Tabel 1. Resultaten van zoekactie van onderzoeksvraag UV4

Database	Aantal
Embase	467
Ovid/Medline	423
Totaal aantal resultaten	890
Aantal geëxcludeerd (dubbelen)	256
Totaal aantal unieke resultaten	634

Tabel 2. Overzicht van geëxcludeerde studies gebaseerd op beoordeling van de volledige tekst van onderzoeksvraag UV4

Referentie	Reden voor exclusie
Affoo RH, Foley N, Rosenbek J, Kevin Shoemaker J, Martin RE. Swallowing dysfunction and autonomic nervous system dysfunction in Alzheimer's disease: a scoping review of the evidence. J Am Geriatr Soc. 2013 Dec;61(12):2203-2213. doi: 10.1111/jgs.12553. PMID: 24329892.	Overlap geïnccludeerde studie
Alagiakrishnan K, Bhanji RA, Kurian M. Evaluation and management of oropharyngeal dysphagia in different types of dementia: a systematic review. Arch Gerontol Geriatr. 2013 Jan-Feb;56(1):1-9. doi: 10.1016/j.archger.2012.04.011. Epub 2012 May 19. PMID: 22608838.	Overlap geïnccludeerde studie
Alali D, Ballard K, Bogaardt H. Treatment Effects for Dysphagia in Adults with Multiple Sclerosis: A Systematic Review. Dysphagia. 2016 Oct;31(5):610-8. doi: 10.1007/s00455-016-9738-2. Epub 2016 Aug 4. PMID: 27488370.	Overlap geïnccludeerde studie
Australian and New Zealand Society for Geriatric Medicine. Australian and New Zealand Society for Geriatric Medicine. Position statement - dysphagia and aspiration in older people*. Australas J Ageing. 2011 Jun;30(2):98-103. doi: 10.1111/j.1741-6612.2011.00537.x. PMID: 21672120.	Verkeerde design
Ashford J, McCabe D, Wheeler-Hegland K, Frymark T, Mullen R, Musson N, Schooling T, Hammond CS. Evidence-based systematic review: Oropharyngeal dysphagia behavioral treatments. Part III--impact of dysphagia treatments on populations with neurological disorders. J Rehabil Res Dev. 2009;46(2):195-204. PMID: 19533533.	Overlap geïnccludeerde studie
Bai AV, Agostini F, Bernetti A, Mangone M, Fidenzi G, D'Urzo R, Ruggiero M, Murgia M, Santilli V, Paoloni M, Ruoppolo G, Masiero S. State of the evidence about rehabilitation interventions in patients with dysphagia. Eur J Phys Rehabil Med. 2021 Dec;57(6):900-911. doi: 10.23736/S1973-9087.21.06716-2. Epub 2021 Feb 4. PMID: 33541045.	Verkeerde design

Baijens LW, Speyer R. Effects of therapy for dysphagia in Parkinson's disease: systematic review. <i>Dysphagia</i> . 2009 Mar;24(1):91-102. doi: 10.1007/s00455-008-9180-1. Epub 2008 Oct 18. PMID: 18931877.	Verkeerde interventies
Ballesteros-Pomar MD, Cherubini A, Keller H, Lam P, Rolland Y, Simmons SF. Texture-Modified Diet for Improving the Management of Oropharyngeal Dysphagia in Nursing Home Residents: An Expert Review. <i>J Nutr Health Aging</i> . 2020;24(6):576-581. doi: 10.1007/s12603-020-1377-5. PMID: 32510109.	Verkeerde design
Baronti F. Rehabilitation von Parkinsonpatienten [Rehabilitation of parkinsonian patients]. <i>Ther Umsch</i> . 2007 Jan;64(1):29-33. German. doi: 10.1024/0040-5930.64.1.29. PMID: 17221822.	Verkeerde taal, verkeerde design
Battel I, Calvo I, Walshe M. Interventions Involving Biofeedback to Improve Swallowing in People With Parkinson Disease and Dysphagia: A Systematic Review. <i>Arch Phys Med Rehabil</i> . 2021 Feb;102(2):314-322. doi: 10.1016/j.apmr.2020.06.033. Epub 2020 Aug 27. PMID: 32861667.	Overlap geïnccludeerde studie
Bilney B, Morris ME, Perry A. Effectiveness of physiotherapy, occupational therapy, and speech pathology for people with Huntington's disease: a systematic review. <i>Neurorehabil Neural Repair</i> . 2003 Mar;17(1):12-24. doi: 10.1177/0888439002250448. PMID: 12645441.	Verkeerde design
Burnip E, Wallace E, Gozdzikowska K, Huckabee ML. A Systematic Review of Rehabilitation for Corticobulbar Symptoms in Adults with Huntington's Disease. <i>J Huntingtons Dis</i> . 2020;9(1):1-12. doi: 10.3233/JHD-190384. PMID: 31744013; PMCID: PMC7081106.	Overlap geïnccludeerde studie
Calandra-Buonaura G, Alfonsi E, Vignatelli L, Benarroch EE, Giannini G, Iranzo A, Low PA, Martinelli P, Provini F, Quinn N, Tolosa E, Wenning GK, Abbruzzese G, Bower P, Antonini A, Bhatia KP, Bonavita J, Pellicchia MT, Pizzorni N, Tison F, Ghorayeb I, Meissner WG, Ozawa T, Pacchetti C, Pozzi NG, Vicini C, Schindler A, Cortelli P, Kaufmann H. Dysphagia in multiple system atrophy consensus statement on diagnosis, prognosis and treatment. <i>Parkinsonism Relat Disord</i> . 2021 May;86:124-132. doi: 10.1016/j.parkreldis.2021.03.027. Epub 2021 Mar 30. PMID: 33839029.	Verkeerde design
Chang MC, Park JS, Lee BJ, Park D. Effectiveness of pharmacologic treatment for dysphagia in Parkinson's disease: a narrative review. <i>Neurol Sci</i> . 2021 Feb;42(2):513-519. doi: 10.1007/s10072-020-04865-w. Epub 2020 Nov 17. PMID: 33201362.	Verkeerde interventie
Chang MC, Park JS, Lee BJ, Park D. The Effect of Deep Brain Stimulation on Swallowing Function in Parkinson's Disease: A Narrative Review. <i>Dysphagia</i> . 2021 Oct;36(5):786-799. doi: 10.1007/s00455-020-10214-y. Epub 2021 Jan 2. PMID: 33389176.	Overlap geïnccludeerde studie
Cheng I, Sasegbon A, Hamdy S. Effects of pharmacological agents for neurogenic oropharyngeal dysphagia: A systematic review and meta-analysis. <i>Neurogastroenterol Motil</i> . 2022 Mar;34(3):e14220. doi: 10.1111/nmo.14220. Epub 2021 Aug 1. PMID: 34337829; PMCID: PMC9285593.	Verkeerde patiëntengroep
Cosentino G, Todisco M, Giudice C, Tassorelli C, Alfonsi E. Assessment and treatment of neurogenic dysphagia in stroke and Parkinson's disease. <i>Curr Opin Neurol</i> . 2022 Dec 1;35(6):741-752. doi: 10.1097/WCO.0000000000001117. Epub 2022 Oct 11. PMID: 36226719.	Verkeerde design
Dashtelei AA, Khatoonabadi AR, Bakhtiari J. Therapeutic Approaches to Dysphagia Treatment in Parkinson Disease: A Review. <i>Arch Neurosci</i> . 2019;6(4):e64921. https://doi.org/10.5812/ans.64921 .	Verkeerde design
Deane KH, Whurr R, Clarke CE, Playford ED, Ben-Shlomo Y. Non-pharmacological therapies for dysphagia in Parkinson's disease. <i>Cochrane Database Syst Rev</i> .	Geen studies gevonden

2001;2001(1):CD002816. doi: 10.1002/14651858.CD002816. PMID: 11279766; PMCID: PMC8451952.	
Duan H, Jing Y, Li Y, Lian Y, Li J, Li Z. Rehabilitation treatment of multiple sclerosis. <i>Front Immunol.</i> 2023 Apr 6;14:1168821. doi: 10.3389/fimmu.2023.1168821. PMID: 37090712; PMCID: PMC10117641.	Verkeerde patiëntengroep
Dziewas R, Allescher HD, Aroyo I, Bartolome G, Beilenhoff U, Bohlender J, Breitbach-Snowdon H, Fheodoroff K, Glahn J, Heppner HJ, Hörmann K, Ledl C, Lücking C, Pokieser P, Schefold JC, Schröter-Morasch H, Schweikert K, Sparing R, Trapl-Grundschober M, Wallesch C, Warnecke T, Werner CJ, Weßling J, Wirth R, Pflug C. Diagnosis and treatment of neurogenic dysphagia - S1 guideline of the German Society of Neurology. <i>Neurol Res Pract.</i> 2021 May 4;3(1):23. doi: 10.1186/s42466-021-00122-3. PMID: 33941289; PMCID: PMC8094546.	Verkeerde design
Flynn E, Smith CH, Walsh CD, Walshe M. Modifying the consistency of food and fluids for swallowing difficulties in dementia. <i>Cochrane Database Syst Rev.</i> 2018 Sep 24;9(9):CD011077. doi: 10.1002/14651858.CD011077.pub2. PMID: 30251253; PMCID: PMC6513397.	Overlap geïnccludeerde studie
Gadenz CD, Moreira Tde C, Capobianco DM, Cassol M. Effects of Repetitive Transcranial Magnetic Stimulation in the Rehabilitation of Communication and Deglutition Disorders: Systematic Review of Randomized Controlled Trials. <i>Folia Phoniatr Logop.</i> 2015;67(2):97-105. doi: 10.1159/000439128. Epub 2015 Nov 19. PMID: 26580744.	Verkeerde patiëntenpopulatie
Gandhi P, Steele CM. Effectiveness of Interventions for Dysphagia in Parkinson Disease: A Systematic Review. <i>Am J Speech Lang Pathol.</i> 2022 Jan 18;31(1):463-485. doi: 10.1044/2021_AJSLP-21-00145. Epub 2021 Dec 10. PMID: 34890260; PMCID: PMC9159671.	Overlap geïnccludeerde studie
Hansen T, Beck AM, Kjaersgaard A, Poulsen I. Second update of a systematic review and evidence-based recommendations on texture modified foods and thickened liquids for adults (above 17 years) with oropharyngeal dysphagia. <i>Clin Nutr ESPEN.</i> 2022 Jun;49:551-555. doi: 10.1016/j.clnesp.2022.03.039. Epub 2022 Apr 6. PMID: 35623866.	Overlap geïnccludeerde studie
Hirschwald J, Hofacker J, Duncan S, Walshe M. Swallowing outcomes in dysphagia interventions in Parkinson's disease: a scoping review. <i>BMJ Evid Based Med.</i> 2023 Apr;28(2):111-118. doi: 10.1136/bmjebm-2022-112082. Epub 2022 Nov 11. PMID: 36368883; PMCID: PMC10086282.	Verkeerde design
Jost WH. Gastrointestinal motility problems in patients with Parkinson's disease. Effects of antiparkinsonian treatment and guidelines for management. <i>Drugs Aging.</i> 1997 Apr;10(4):249-58. doi: 10.2165/00002512-199710040-00002. PMID: 9108986.	Verkeerde design
Kelly K, Cumming S, Corry A, Gilsenan K, Tamone C, Vella K, Bogaardt H. The role of speech-language pathologists in palliative care: Where are we now? A review of the literature. <i>Progress in Palliative Care.</i> 2016 24:6, 315-323, DOI: 10.1080/09699260.2016.1141745	Verkeerde design
Kim JY, Kim H. Effects of behavioural swallowing therapy in patients with Parkinson's disease: A systematic review. <i>Int J Speech Lang Pathol.</i> 2023 Apr;25(2):269-280. doi: 10.1080/17549507.2022.2045356. Epub 2022 Mar 13. PMID: 35282718.	Overlap geïnccludeerde studie
Lefaucheur JP. A comprehensive database of published tDCS clinical trials (2005-2016). <i>Neurophysiol Clin.</i> 2016 Dec;46(6):319-398. doi: 10.1016/j.neucli.2016.10.002. Epub 2016 Nov 17. PMID: 27865707.	Verkeerde patiëntenpopulatie
Li CH, Hsieh SW, Huang P, Liu HY, Chen CH, Hung CH. Pharmacological Management of Dysphagia in Patients with Alzheimer's Disease: A Narrative Review. <i>Curr Alzheimer Res.</i> 2022 Nov 30. doi: 10.2174/1567205020666221130091507. Epub ahead of print. PMID: 36453507.	Verkeerde design

Lieu PK, Chong MS, Seshadri R. The impact of swallowing disorders in the elderly. <i>Ann Acad Med Singap.</i> 2001 Mar;30(2):148-54. PMID: 11379412.	Verkeerde design
López-Liria R, Parra-Egeda J, Vega-Ramírez FA, Aguilar-Parra JM, Trigueros-Ramos R, Morales-Gázquez MJ, Rocamora-Pérez P. Treatment of Dysphagia in Parkinson's Disease: A Systematic Review. <i>Int J Environ Res Public Health.</i> 2020 Jun 9;17(11):4104. doi: 10.3390/ijerph17114104. PMID: 32526840; PMCID: PMC7312221.	Overlap geïnccludeerde studie
Mancopes R, Smaoui S, Steele CM. Effects of Expiratory Muscle Strength Training on Videofluoroscopic Measures of Swallowing: A Systematic Review. <i>Am J Speech Lang Pathol.</i> 2020 Feb 7;29(1):335-356. doi: 10.1044/2019_AJSLP-19-00107. Epub 2020 Jan 30. PMID: 31999193.	Overlap geïnccludeerde studie
Melgaard D, Westergren A, Skrubbeltrang C, Smithard D. Interventions for Nursing Home Residents with Dysphagia-A Scoping Review. <i>Geriatrics (Basel).</i> 2021 May 21;6(2):55. doi: 10.3390/geriatrics6020055. PMID: 34064095; PMCID: PMC8162353.	Verkeerde patiëntengroep
Menezes C, Melo A. Does levodopa improve swallowing dysfunction in Parkinson's disease patients? <i>J Clin Pharm Ther.</i> 2009 Dec;34(6):673-6. doi: 10.1111/j.1365-2710.2009.01031.x. PMID: 20175800.	Verkeerde interventies
Miles A, Allen JE. Management of oropharyngeal neurogenic dysphagia in adults. <i>Curr Opin Otolaryngol Head Neck Surg.</i> 2015 Dec;23(6):433-9. doi: 10.1097/MOO.0000000000000206. PMID: 26371607.	Verkeerde design
Miller RG. Examining the evidence about treatment in ALS/MND. <i>Amyotroph Lateral Scler Other Motor Neuron Disord.</i> 2001 Mar;2(1):3-7. doi: 10.1080/146608201300079355. PMID: 11465930.	Verkeerde design
Miller N. Swallowing in Parkinson's disease: clinical issues and management. <i>Neurodegener Dis Manag.</i> 2017 Jun;7(3):205-217. doi: 10.2217/nmt-2017-0006. Epub 2017 Jun 20. PMID: 28632108.	Verkeerde design
Molina L, Santos-Ruiz S, Clavé P, González-de Paz L, Cabrera E. Nursing interventions in adult patients with oropharyngeal dysphagia: a systematic review. <i>Eur Geriatr Med.</i> 2018 Feb;9(1):5-21. doi: 10.1007/s41999-017-0009-z. Epub 2017 Dec 21. PMID: 34654278.	Verkeerde interventies
Ortega O, Martín A, Clavé P. Diagnosis and Management of Oropharyngeal Dysphagia Among Older Persons, State of the Art. <i>J Am Med Dir Assoc.</i> 2017 Jul 1;18(7):576-582. doi: 10.1016/j.jamda.2017.02.015. Epub 2017 Apr 12. PMID: 28412164.	Verkeerde design
Painter V, Le Couteur DG, Waite LM. Texture-modified food and fluids in dementia and residential aged care facilities. <i>Clin Interv Aging.</i> 2017 Aug 2;12:1193-1203. doi: 10.2147/CIA.S140581. PMID: 28814845; PMCID: PMC5546786.	Overlap geïnccludeerde studie
Park MS, Choi JY, Song YJ, Choi H, Park EJ, Ji ES. Systematic Review of Behavioral Therapy to Improve Swallowing Functions of Patients With Parkinson's Disease. <i>Gastroenterol Nurs.</i> 2019 Jan/Feb;42(1):65-78. doi: 10.1097/SGA.0000000000000358. PMID: 30585913.	Overlap geïnccludeerde studie
Patel B, Legacy J, Hegland KW, Okun MS, Herndon NE. A comprehensive review of the diagnosis and treatment of Parkinson's disease dysphagia and aspiration. <i>Expert Rev Gastroenterol Hepatol.</i> 2020 Jun;14(6):411-424. doi: 10.1080/17474124.2020.1769475. PMID: 32657208; PMCID: PMC10405619.	Verkeerde design
Pavelko S, Nye C. Dysphagia treatments for people with neurological disorders may offer limited improvement for selected swallowing outcomes based on limited evidence, Evidence-Based Communication Assessment and Intervention, 2009 3:3, 141-144, DOI: 10.1080/17489530903223691	Verkeerde design

Pizzorni N, Pirola F, Ciammola A, Schindler A. Management of dysphagia in Huntington's disease: a descriptive review. <i>Neurol Sci.</i> 2020 Jun;41(6):1405-1417. doi: 10.1007/s10072-020-04265-0. Epub 2020 Jan 27. PMID: 31989345.	Overlap geïnccludeerde studie
Remijn L, Sanchez F, Heijnen BJ, Windsor C, Speyer R. Effects of Oral Health Interventions in People with Oropharyngeal Dysphagia: A Systematic Review. <i>J Clin Med.</i> 2022 Jun 19;11(12):3521. doi: 10.3390/jcm11123521. PMID: 35743591; PMCID: PMC9225542.	Verkeerde patiëntenpopulatie
Russell JA, Ciucci MR, Connor NP, Schallert T. Targeted exercise therapy for voice and swallow in persons with Parkinson's disease. <i>Brain Res.</i> 2010 Jun 23;1341:3-11. doi: 10.1016/j.brainres.2010.03.029. Epub 2010 Mar 15. PMID: 20233583; PMCID: PMC2908992.	Verkeerde design
Safarpour Y, Mousavi T, Jabbari B. Botulinum Toxin Treatment in Multiple Sclerosis-a Review. <i>Curr Treat Options Neurol.</i> 2017 Aug 17;19(10):33. doi: 10.1007/s11940-017-0470-5. PMID: 28819801.	Verkeerde design
Schindler A, Pizzorni N, Cereda E, Cosentino G, Avenali M, Montomoli C, Abbruzzese G, Antonini A, Barbiera F, Benazzo M, Benarroch E, Bertino G, Clavè P, Cortelli P, Eleopra R, Ferrari C, Hamdy S, Huckabee ML, Lopiano L, Marchese-Ragona R, Masiero S, Michou E, Occhini A, Pacchetti C, Pfeiffer RF, Restivo DA, Rondanelli M, Ruoppolo G, Sandrini G, Schapira A, Stocchi F, Tolosa E, Valentino F, Zamboni M, Zangaglia R, Zappia M, Tassorelli C, Alfonsi E. Consensus on the treatment of dysphagia in Parkinson's disease. <i>J Neurol Sci.</i> 2021 Nov 15;430:120008. doi: 10.1016/j.jns.2021.120008. Epub 2021 Sep 27. PMID: 34624796.	Verkeerde design
Silva ARP, Bodanezi AV, Chrun ES, Lisboa ML, de Camargo AR, Munhoz EA. Palliative oral care in terminal cancer patients: Integrated review. <i>World J Clin Cases.</i> 2023 May 6;11(13):2966-2980. doi: 10.12998/wjcc.v11.i13.2966. PMID: 37215429; PMCID: PMC10198072.	Verkeerde design
Speyer R, Sutt AL, Bergström L, Hamdy S, Pommée T, Balaguer M, Kaale A, Cordier R. Neurostimulation in People with Oropharyngeal Dysphagia: A Systematic Review and Meta-Analysis of Randomised Controlled Trials-Part II: Brain Neurostimulation. <i>J Clin Med.</i> 2022 Feb 14;11(4):993. doi: 10.3390/jcm11040993. PMID: 35207265; PMCID: PMC8878820.	Verkeerde patiëntenpopulatie
Steele CM, Alsanei WA, Ayanikalath S, Barbon CE, Chen J, Cichero JA, Coutts K, Dantas RO, Duivesteyn J, Giosa L, Hanson B, Lam P, Lecko C, Leigh C, Nagy A, Namasivayam AM, Nascimento WV, Odendaal I, Smith CH, Wang H. The influence of food texture and liquid consistency modification on swallowing physiology and function: a systematic review. <i>Dysphagia.</i> 2015 Feb;30(1):2-26. doi: 10.1007/s00455-014-9578-x. Epub 2014 Oct 25. Erratum in: <i>Dysphagia.</i> 2015 Apr;30(2):272-3. PMID: 25343878; PMCID: PMC4342510.	Verkeerde patiëntenpopulatie
Sutton JP. Dysphagia in Parkinson's disease is responsive to levodopa. <i>Parkinsonism Relat Disord.</i> 2013 Mar;19(3):282-4. doi: 10.1016/j.parkreldis.2012.11.007. Epub 2013 Jan 18. PMID: 23333537.	Verkeerde design
Theodoros D, Aldridge D, Hill AJ, Russell T. Technology-enabled management of communication and swallowing disorders in Parkinson's disease: a systematic scoping review. <i>Int J Lang Commun Disord.</i> 2019 Mar;54(2):170-188. doi: 10.1111/1460-6984.12400. Epub 2018 Jun 19. PMID: 29923267.	Verkeerde patiëntengroep
Troche MS, Brandimore AE, Foote KD, Okun MS. Swallowing and deep brain stimulation in Parkinson's disease: a systematic review. <i>Parkinsonism Relat Disord.</i> 2013 Sep;19(9):783-8. doi: 10.1016/j.parkreldis.2013.05.001. Epub 2013 May 28. PMID: 23726461; PMCID: PMC3775508.	Verkeerde design

van Hooren MR, Baijens LW, Voskuilen S, Oosterloo M, Kremer B. Treatment effects for dysphagia in Parkinson's disease: a systematic review. <i>Parkinsonism Relat Disord.</i> 2014 Aug;20(8):800-7. doi: 10.1016/j.parkreldis.2014.03.026. Epub 2014 Apr 8. PMID: 24794097.	Overlap geïnccludeerde studie
Vellata C, Belli S, Balsamo F, Giordano A, Colombo R, Maggioni G. Effectiveness of Telerehabilitation on Motor Impairments, Non-motor Symptoms and Compliance in Patients With Parkinson's Disease: A Systematic Review. <i>Front Neurol.</i> 2021 Aug 26;12:627999. doi: 10.3389/fneur.2021.627999. PMID: 34512495; PMCID: PMC8427282.	Verkeerde patiëntenpopulatie
Venkatasalu MR, Murang ZR, Ramasamy DTR, Dhaliwal JS. Oral health problems among palliative and terminally ill patients: an integrated systematic review. <i>BMC Oral Health.</i> 2020 Mar 18;20(1):79. doi: 10.1186/s12903-020-01075-w. PMID: 32188452; PMCID: PMC7079519.	Verkeerde design
Vogel AP, Keage MJ, Johansson K, Schalling E. Treatment for dysphagia (swallowing difficulties) in hereditary ataxia. <i>Cochrane Database Syst Rev.</i> 2015 Nov 13;2015(11):CD010169. doi: 10.1002/14651858.CD010169.pub2. PMID: 26564018; PMCID: PMC8504981.	Geen studies gevonden
Wang R, Shih LC. Parkinson's disease - current treatment. <i>Curr Opin Neurol.</i> 2023 Aug 1;36(4):302-308. doi: 10.1097/WCO.0000000000001166. Epub 2023 May 29. PMID: 37366218.	Verkeerde design
Winiker K, Kertscher B. Behavioural interventions for swallowing in subjects with Parkinson's disease: A mixed methods systematic review. <i>Int J Lang Commun Disord.</i> 2023 Jul-Aug;58(4):1375-1404. doi: 10.1111/1460-6984.12865. Epub 2023 Mar 23. PMID: 36951546.	Overlap geïnccludeerde studie
Wood LD, Neumiller JJ, Setter SM, Dobbins EK. Clinical review of treatment options for select nonmotor symptoms of Parkinson's disease. <i>Am J Geriatr Pharmacother.</i> 2010 Aug;8(4):294-315. doi: 10.1016/j.amjopharm.2010.08.002. PMID: 20869620.	Verkeerde design
Yu H, Takahashi K, Bloom L, Quaynor SD, Xie T. Effect of Deep Brain Stimulation on Swallowing Function: A Systematic Review. <i>Front Neurol.</i> 2020 Jul 17;11:547. doi: 10.3389/fneur.2020.00547. PMID: 32765388; PMCID: PMC7380112.	Verkeerde design

Bijlage Onderzoekskarakteristieken UV 4 Slikstoornissen (4.2)

Tabellen karakteristieken geselecteerde studies

Author, publication year: Cheng 2022							
Included studies in the review	Study characteristics	Patient characteristics	Intervention (I)	Comparison / control (C)	Follow-up	Outcome measures and effect size	Comments
<p>A. Claus 2021 B. Troche 2010 C. Manor 2013 D. Pflug 2020 E. Xie 2018 F. Khedr 2019 G. Sasegbon 2021 H. Park 2018 I. Wu 2021</p>	<p><u>Type of study:</u> RCTs</p> <p><u>Search date:</u> April 2022</p> <p><u>Number of included studies:</u> N=9</p> <p><u>Country</u> A. Germany B. USA C. Israel D. Germany E. USA F. Egypt, UK G. UK, Greece H. Republic of Korea I. China</p> <p><u>Source of funding:</u> SR Authors state that the research did not receive any funding from agencies in the public, commercial, or not-for-profit sectors.</p> <p><u>Inclusion criteria:</u> - Parkinson's disease patients - Studies in either Chinese or English</p> <p><u>Exclusion criteria:</u></p>	<p><u>N total at baseline:</u> A. 45 B. 60 C. 42 D. 11 E. 11 F. 30 G. 12 H. 18 I. 56</p> <p><u>Age, mean (SD):</u> A. 67.2 (8.6) B. 67.6 (9.6) C. 68.6 (8.1) D. 63.4 (6.7) E. 68.5 (5.9) F. 54.7 (10.3) G. 70.0 (8.0) H. 59.1 (14.0) I. 64.0 (8.6)</p> <p><u>Mean disease duration (years):</u> A. 6.5 B. NR C. 8.1 D. 12.6 E. 14.2 F. 6.0 G. 4.8 H. NR I. 5.3</p>	<p>A. Expiratory muscle strength training (EMST) B. Expiratory muscle strength training (EMST) C. Video-assisted swallowing therapy D. Deep-brain stimulation of subthalamic nucleus and substantia nigra E. Deep-brain stimulation of subthalamic nucleus F. Bilateral repetitive transcranial magnetic stimulation (rTMS) G. Repetitive transcranial magnetic stimulation (rTMS), pharyngeal electrical stimulation (PES) H. Neuromuscular electrical stimulation (NMES) with effortful swallow + conventional dysphagia therapy (CDT) I. Acupuncture + conventional dysphagia therapy (CDT)</p>	<p>A. Sham EMST B. Sham EMST C. CDT D. Deep-brain stimulation of subthalamus only E. No stimulation F. Sham rTMS G. Sham rTMS, sham PES H. Sham NMES + CDT I. CDT</p>	<p><u>Length of follow-up:</u> A. Immediately following intervention, and 2 months later B. Immediately C. Immediately D. Immediately E. Immediately F. Immediately G. Immediately H. Immediately I. Immediately</p> <p><u>Loss-to-follow-up:</u> Not Reported.</p>	<p>Meta-analysis: Overall, dysphagia treatments for PD patients showed a significant medium pooled effect size (standardized mean difference (SMD) = 0.58, 95%CI 0.22;0.94, $p=0.001$). The pooled effect size of behavioural treatments was nonsignificant (SMD=0.69, 95%CI - 0.14;1.52, $p=0.10$), while stimulation treatments had a medium pooled effect size (SMD=0.54, 95%CI 0.15;0.92, $p=0.006$).</p> <p>Per treatment type: Expiratory muscle strength training: SMD=0.48, 95%CI - 0.66;1.63, $p=0.41$</p> <p>Video-assisted swallowing therapy: SMD=1.13, 95%CI 0.47;1.78, $p<0.001$</p> <p>Deep-brain stimulation: SMD=0.09, 95%CI - 0.59;0.76, $p=0.80$</p>	

	<ul style="list-style-type: none"> - Studies that included Parkinson's patients without dysphagia. - Not having a non-active control group. - Only using functional scores or non-validated subjective ratings of swallowing ability. 					<p>Repetitive Transcranial Magnetic Stimulation: SMD=0.44, 95%CI - 0.29;1.17, p=0.23</p> <p>Pharyngeal electrical stimulation: SMD=0.76, 95%CI - 1.01;2.50, p=0.40</p> <p>Neuromuscular electrical stimulation: SMD=1.58, 95%CI 0.49;2.68, p=0.005</p> <p>Acupuncture: SMD=0.82, 95%CI 0.27;1.37, p=0.003</p>	
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Author, publication year: Wu 2023							
Included studies in the review	Study characteristics	Patient characteristics	Intervention (I)	Comparison / control (C)	Follow-up	Outcome measures and effect size	Comments
A. Zhao 2015 B. Li 2018 C. Miu 2018 D. Shi 2020 E. Wang X 2020 F. Wang HY 2020 G. Wu 2021* H. Wang LJ 2020 I. Yin 2021 J. Xie 2022	<p><u>Type of study:</u> RCTs</p> <p><u>Search date:</u> October 2022</p> <p><u>Number of included studies:</u> N=10</p> <p><u>Country</u> A. China B. China C. China D. China E. China F. China G. China H. China I. China J. China</p>	<p><u>N total at baseline:</u> A. 58 B. 86 C. 56 D. 112 E. 40 F. 90 G. 56 H. 120 I. 60 J. 46</p> <p><u>Age, mean (SD):</u> A. I: 40-69, C: 36-70 (range) B. I: 59.4 (4.9), C: 58.5 (4.3) C. I: 67.5 (9.7), C: 67.9 (8.5) D. I: 65.6 (1.2), C: 55.5 (1.1)</p>	<p>A. Warming acupuncture and functional training, 30 minutes each day</p> <p>B. Electroacupuncture and functional training, 30 minutes five times a week for four weeks</p> <p>C. Acupuncture, prick bleeding and functional training, once a day for four weeks</p> <p>D. Warming acupuncture and functional training, 30 minutes each day</p> <p>E. Acupuncture, prick bleeding and functional training, 30 minutes each day for 20-30 days</p>	<p>A. Functional training only</p> <p>B. Functional training only</p> <p>C. Functional training only</p> <p>D. Functional training only</p> <p>E. Functional training only</p> <p>F. Functional training only</p> <p>G. Functional training only</p> <p>H. Functional training only</p> <p>I. Functional training and sham acupuncture</p> <p>J. Neuromuscular electrical stimulation and pharmacological treatment</p>	<p><u>Length of follow-up:</u> Not Reported.</p> <p><u>Loss-to-follow-up:</u> Not Reported.</p>	<p>Results from meta-analyses</p> <p>VFSS score (n=3, acupuncture + rehabilitation training vs rehabilitation training alone): MD=1.48, 95%CI 1.16;1.81, p<0.001</p> <p>SSA score (n=3, acupuncture vs control): MD=-3.08, 95%CI -4.01;-2.15, p<0.001</p> <p>Water swallow test (n=6, acupuncture + rehabilitation training vs rehabilitation</p>	<p>*Wu et al. 2021 also included in the Cheng et al. 2022 review (see above).</p>

<p><u>Source of funding:</u> National Natural Science Foundation of China; Key Research and Development Program of Science and Technology of Sichuan Province of China</p> <p><u>Inclusion criteria:</u> - Parkinson's disease patients who have been tested for swallowing function - Receiving acupuncture as standalone or adjunctive treatment - Any active control condition</p> <p><u>Exclusion criteria:</u> - Patients with dysphagia that was caused by previous stroke or disease - When acupuncture is combined with other Chinese medical methods - Control groups using Chinese medicine</p>	<p>E. I: 50-72, C: 52-70 (range) F. I: 59 (10), C: 59 (10) G. I: 63 (10), C: 65 (7) H. I: 54.0 (9.2), C: 52.0 (11) I. I: 63.2 (5.0), C: 65.0 (5.3) J. I: 65.3 (5.4), C: 64.8 (5.5)</p> <p><u>Mean disease duration, years:</u> A. NR B. I: 5.8, C: 6.0 C. I: 5.3, C: 5.2 D. I: 4.5 weeks, C: 4.5 weeks E. I: 234 days, C: 228 days F. I: 5.3, C: 5.3 G. I: 5.2, C: 5.4 H. I: 1, C: 1 I. I: 4.6, C: 4.9 J. I: 6.3, C: 6.3</p>	<p>F. Acupuncture, prick bleeding and functional training, 30 minutes five times a week for four weeks G. Acupuncture, prick bleeding and functional training, 30 minutes five times a week for six weeks H. Acupuncture and functional training, six times a week for 30 minutes, four weeks I. Thumbtack needle and functional training, once every two days for 24 hours each time J. Acupuncture and pharmacological treatment, six times a week for 30 minutes, four weeks</p>			<p>training alone): RR=1.40, 95%CI 1.25;1.58, p<0.001)</p> <p>Results per individual study A. Water swallow efficiency test: RR=1.67, 95%CI 1.11;2.50 B. VFSS scores: MD=1.22, 95%CI 0.69;1.75 C. Water swallow efficiency test: RR=1.47, 95%CI 0.99;2.18 D. Water swallow efficiency test: RR=1.32, 95%CI 0.83;1.55 E. Water swallow efficiency test: RR=1.13, 95%CI 0.83;1.55 F. VFSS scores: MD=1.45, 95%CI 0.75;2.15 G. Water swallow efficiency test: RR=1.37, 95%CI 1.04;1.80 H. VFSS scores: MD=1.74, 95%CI 1.12; 2.25 SSA scores: MD=-3.49, 95%CI -4.77;-2.21 I. SSA scores: MD=-2.83, 95%CI -5.50;-</p>
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						0.16 Water swallow efficiency test: RR=1.63, 95%CI 1.13; 2.34 J. SSA scores: MD=-2.55, 95%CI -4.11;-0.99	
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Author, publication year: Kesik 2021							
Included studies in the review	Study characteristics	Patient characteristics	Intervention (I)	Comparison / control (C)	Follow-up	Outcome measures and effect size	Comments
A. Tarameshlu 2019 B. Restivo 2013 C. Silverman 2017	<u>Type of study:</u> Review of semi-experimental studies, RCTs, mixed-design studies, and pretest-posttest controlled studies* <u>Search date:</u> Not reported <u>Number of included studies:</u> 4* <u>Country</u> A. Iran B. Italy C. USA <u>Source of funding:</u> Not reported <u>Inclusion criteria:</u> - MS patients with dysphagia	<u>N total at baseline:</u> A. 20 B. 20 C. 42 <u>Age:</u> A. 20-60 (range) B. 39.7 (mean) C. NR	A. Oral motor exercises and swallowing maneuvers (Mendelson's maneuver, Supraglottic swallowing, effort swallowing) B. Pharyngeal electrical stimulation (PES) in 10-minute sessions for 5 days C. Positive pressure device to strengthen respiratory muscles at home, 5 sets and 5 times per day, a total of 25 times per day	A. Routine care methods such as dietary modifications and appropriate positioning B. Sham PES C. Perform the same applications with a similar device without pressure	<u>Length of follow-up:</u> Not Reported <u>Loss-to-follow up:</u> Not Reported	A. Mann Assessment of Swallowing Ability: Effect size not reported by Kesik 2021. Original article: no single effect size is given but authors report a significant time x group interaction indicating that the intervention group's MASA scores were significantly better than the control group's scores (F (1.15,21.93)=43.69, p 0.001). Penetration-Aspiration Scale (PAS): Effect size not reported by Kesik 2021. Original article: no single effect size is reported, but authors report that there was a significant effect of	*This review originally included four studies. Only three are reported here (i.e., Bogaardt et al. 2009 was left out due to pretest-posttest design)

	<p>- Using at least one non-pharmacological intervention, - Published in Turkish or English, - Study performed between 2006 and 2020.</p> <p><u>Exclusion criteria:</u> - Studies with a pharmacological intervention</p>					<p>the intervention on PAS scores ($d = 3.18$ (I), $d = 2.26$ (C)) and that the scores were significantly different between I and C groups ($p < .0001$).</p> <p>B. The intervention reportedly significantly reduced dysphagia as measured with the PAS and videofluoroscopic measures, but both Kesik 2021 and the original article do not provide any statistics.</p> <p>C. Penetration-Aspiration Scale (PAS): Effect size not reported by Kesik 2021. Original article: no statistical test carried out. Descriptives findings show that in the intervention group 40% of patients improved, 45% remained unchanged 15% worsened, compared to the control group 14.3% improved, 64.3% remained unchanged, and 21.4% of patients worsened.</p> <p>Swallowing-Related Quality of Life Scale:</p>	
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						Effect size not reported by Kesik 2021. Original article: no significant difference found on overall SRQOL scores between intervention and control groups ($p=0.072$).	
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Author, publication year: Wen 2022							
Included studies in the review	Study characteristics	Patient characteristics	Intervention (I)	Comparison / control (C)	Follow-up	Outcome measures and effect size	Comments
A. Byeon 2016 B. Baijens 2013 C. Heijnen 2012 D. Marks 2001	<p><u>Type of study:</u> RCTs</p> <p><u>Search date:</u> Not reported</p> <p><u>Number of included studies:</u> 10*</p> <p><u>Country</u> A. Republic of Korea B. Netherlands C. Netherlands D. UK</p> <p><u>Source of funding:</u> Authors indicate this research was conducted without any funding.</p>	<p><u>N total at baseline:</u> A. 33 B. 90 C. 85 D. 28</p> <p><u>Age, mean(SD):</u> A. I: 63.8 (8.2), C: 65.1 (9.5) B. Not reported C. I: 68.3 (9.4), C: 66.4 (11.0) and 64.9 (7.0) D. 64.8 (15.7)</p> <p><u>Disease duration:</u> Not Reported</p>	<p>A. Expiratory muscle strength training (EMST) performed 20 min per day and 5 days a week for 4 weeks B. Traditional swallowing therapy (TST) 30 min a day for 15 days C. TST 30 for 13-15 session within 3-5 weeks D. None</p>	<p>A. EMST + postural techniques (PT) performed 20 min per day and 5 days a week for 4 weeks. B. TST + motor-level surface electrical stimulation (SES) 30 min a day for 15 days (control 1), TST + sensory-level SES 30 min a day for 15 days (control 2) C. TST + motor-level neuromuscular electrical stimulation (NMES) 30 for 13-15 session within 3-5 weeks (control 1), TST + sensory-level NMES 30 for 13-15 session within 3-5 weeks (control 2) D. Speech language therapy (control 1), Botulinum toxin injection (control 2)</p>	<p><u>Length of follow-up:</u> A. Immediately B. Immediately C. 3 months D. 1 and 2 months</p> <p><u>Loss-to-follow-up:</u> Not Reported</p>	<p>A. Video-fluoroscopy Scale Scores: Effect size not reported by Wen 2022. Original article: VFS scores went down from 35.1 to 22.5 in the EMST group vs from 33.5 to 16.2 in the EMST+PT group ($p<0.05$).</p> <p>B. Video-fluoroscopy Scale Scores and Fiberoptic Endoscopic Evaluation of Swallowing (FEES):</p>	*This review originally included ten studies. Only four are reported here, due to the other six studies already having been discussed in Cheng et al. 2022 (see above).

	<p><u>Inclusion criteria:</u></p> <ul style="list-style-type: none"> - Parkinson patients with swallowing disorders - Any rehabilitation treatments or physiotherapy interventions to improve the swallowing function of patients <p><u>Exclusion criteria:</u></p> <ul style="list-style-type: none"> - Data inaccessible 					<p>No significant differences between groups.</p> <p>C. Dysphagia Severity Scores: No significant differences between groups.</p> <p>D. Drooling Rating Scale: Effect size not reported by Wen 2022. Original article: Scores went down from 10 to 5.5 after 1 month in the SLT group and from 8 to 3 in the botox group. There was no follow-up score of the control group. The difference was not tested.</p>	
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Author, publication year: Essat 2019							
Included studies in the review	Study characteristics	Patient characteristics	Intervention (I)	Comparison / control (C)	Follow-up	Outcome measures and effect size	Comments
A. Ayres 2017 B. Logemann 2008 C. Robbins 2008 D. Reyes 2015 E. Cleary 2010 F. Wei 2017	<p><u>Type of study:</u> Review of RCTs, non-RCTs and within-subject cross-over design</p> <p><u>Search date:</u> May 2018 and August 2018</p> <p><u>Number of included studies:</u> 14*</p> <p><u>Country</u> A. Brazil B. USA C. USA D. Australia</p>	<p><u>N total at baseline:</u> A. 24 B. 228 C. 515 D. 18 E. 29 F. 217</p> <p><u>Age, mean:</u> Not Reported</p> <p><u>Disease:</u> A. Parkinson's disease</p>	A. Chin down posture training 4x30 min per week for 1 month plus written instructions regarding feeding B. Drink thin liquid in chin-down posture C. Drink liquids in a chin-down posture D. Inspiratory and respiratory muscle training (EMST), at a progressively increased	A. No intervention (control 1), only written feeding instructions (control 2) B. Drink nectar-thickened liquid with no postural adjustment (control 1), drink honey-thickened liquid with no postural adjustment (control 2) C. Drink nectar-thickened liquid in a	<p><u>Length of follow-up:</u> A. Immediately B. Immediately C. Immediately D. 2 months, 4 months E. Immediately, 30 minutes after treatment F. 6 months</p> <p><u>Loss-to-follow-up:</u> Not Reported</p>	A. Fibre-optic endoscopic swallowing score: no significant differences found between intervention and control groups. SWAL-QOL: no effect size given, but patients in the intervention group scored better on symptom frequency and mental health domains compared to the no intervention group ($p=.029$ and $p=.004$ respectively).	*This review originally included 14 studies. Only six studies are reported here, due to two other studies (Troche et al., 2010; Manor et al., 2013) already having been discussed in Cheng et al. 2022 (see above), and six other studies targeting dietary content instead of

	<p>E. Canada F. China</p> <p><u>Source of funding:</u> National Institute for Health Research (NIHR) Programme Grants for Applied Research Programme; NIHR Sheffield Biomedical Research Centre</p> <p><u>Inclusion criteria:</u> - Adults with neurodegenerative disorders of the motor system - Oral nutritional interventions - Having an active comparator or standard care as control condition.</p> <p><u>Exclusion criteria:</u> - Studies on tube feeding/gastrostomy, other dietary supplements (e.g. vitamins, minerals and herbs), drug interventions, acupuncture, transcranial direct current stimulation (TDCS) etc. Studies not on nutritional or eating behaviour</p>	<p>B. Parkinson's disease C. Parkinson's disease D. Huntington's disease E. ALS F. Parkinson's disease</p>	<p>resistance, five sets of five repetitions, six times a week for four months E. Lung Volume Recruitment (LVR) consisting of a manual breath stacking technique to help patients cough with enough force to clear respiratory obstructions. F. Swallowing management clinic with outpatient support: including long-term attention and overall management, multi-media training combined with feedback to raise awareness and education, out-of-hospital rehabilitation training, eating prescription, and a web chat platform to monitor, prompt and educate patients and for patients to ask questions</p>	<p>head-neutral position (control 1), drink honey-thickened liquid in a head-neutral position (control 2) D. Inspiratory and respiratory muscle training (EMST), fixed resistance, five sets of five repetitions, six times a week for four months E. No treatment F. Standard care, consisting of face and tongue training, and eating considerations</p>		<p>B. Aspiration rates (assessed during intervention): honey-thickened liquids resulted in the lowest proportion of patients who aspirated (44%) compared with nectar-thickened liquids (54%, $p < 0.001$) and the use of the chin-down posture (59%, $p < 0.001$).</p> <p>C. Aspiration rates (assessed during intervention): Honey-thickened aspiration rate 61%, vs 65% for nectar-thickened and 70% for chin-down posture, difference not significant.</p> <p>D. For both water-swallowing function and SWAL-QOL no significant differences were found between intervention and control group.</p> <p>E. Peak cough flow: authors report significant effect of LVR intervention on peak cough flow (statistics not available)</p> <p>F. Dysphagia rehabilitation efficiency: increased dysphagia recovery in the intervention group (68.3%) compared with the control group (17%) ($p < 0.01$); Mis-inhalation incidence rate: lower in the intervention group than in the control group ($p < 0.01$)</p>	<p>swallowing difficulty.</p>
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Risk of bias tabellen

Author, publication year: Cheng 2022		
Item	Yes, partial yes or no	Explanation
1. Did the research questions and inclusion criteria for the review include the components of PICO?	Yes	
2. Did the report of the review contain an explicit statement that the review methods were established prior to the conduct of the review and did the report justify any significant deviations from the protocol?	Yes	
3. Did the review authors explain their selection of the study designs for inclusion in the review?	No	No explanation was given why they only included RCTs.
4. Did the review authors use a comprehensive literature search strategy?	Yes	
5. Did the review authors perform study selection in duplicate?	Yes	
6. Did the review authors perform data extraction in duplicate?	Yes	
7. Did the review authors provide a list of excluded studies and justify the exclusions?	No	Reasons for exclusion of unspecified studies was given, but no list of which studies were specifically excluded and for what reason.
8. Did the review authors describe the included studies in adequate detail?	Partial yes	Description of included studies lacked some detail pertaining to studies' design and setting.
9. Did the review authors use a satisfactory technique for assessing the risk of bias (RoB) in individual studies that were included in the review?	Yes	
10. Did the review authors report on the sources of funding for the studies included in the review?	No	No information on the funding source of individual included studies is provided, nor did authors indicate to have searched for this information.

11. If meta-analysis was performed did the review authors use appropriate methods for statistical combination of results?	Yes	
12. If meta-analysis was performed, did the review authors assess the potential impact of RoB in individual studies on the results of the meta-analysis or other evidence synthesis?	Partial yes	They performed a sensitivity analyses excluding the study with high risk of bias, but not with moderate risk of bias.
13. Did the review authors account for RoB in individual studies when interpreting/ discussing the results of the review?	Partial yes	The discussion section outlines the high RoB of most studies, but not necessarily on an individual basis.
14. Did the review authors provide a satisfactory explanation for, and discussion of, any heterogeneity observed in the results of the review?	Partial yes	A hypothesis for the found heterogeneity is stated in the discussion.
15. If they performed quantitative synthesis did the review authors carry out an adequate investigation of publication bias (small study bias) and discuss its likely impact on the results of the review?	Yes	
16. Did the review authors report any potential sources of conflict of interest, including any funding they received for conducting the review?	Yes	A potential conflict of interest of one of the authors was indeed stated. No funding sources were given (i.e., authors state that project did not receive any funding from any kind of sector).

Author, publication year: Wu 2023		
Item	Yes, partial yes or no	Explanation
1. Did the research questions and inclusion criteria for the review include the components of PICO?	Yes	
2. Did the report of the review contain an explicit statement that the review methods were established prior to the conduct of the review and did the report justify any significant deviations from the protocol?	Yes	

3. Did the review authors explain their selection of the study designs for inclusion in the review?	No	No explanation was given why they only included RCTs.
4. Did the review authors use a comprehensive literature search strategy?	Yes	
5. Did the review authors perform study selection in duplicate?	Yes	.
6. Did the review authors perform data extraction in duplicate?	Yes	
7. Did the review authors provide a list of excluded studies and justify the exclusions?	No	Reasons for exclusion of unspecified studies was given, but no list of which studies were specifically excluded and for what reason.
8. Did the review authors describe the included studies in adequate detail?	Partial yes	Description of included studies lacked some detail pertaining to studies' design and setting.
9. Did the review authors use a satisfactory technique for assessing the risk of bias (RoB) in individual studies that were included in the review?	Yes	
10. Did the review authors report on the sources of funding for the studies included in the review?	No	No information on the funding source of individual included studies is provided, nor did authors indicate to have searched for this information.
11. If meta-analysis was performed did the review authors use appropriate methods for statistical combination of results?	Yes	
12. If meta-analysis was performed, did the review authors assess the potential impact of RoB in individual studies on the results of the meta-analysis or other evidence synthesis?	No	Authors did not investigate impact of variable RoB rates on analysis results.
13. Did the review authors account for RoB in individual studies when interpreting/ discussing the results of the review?	No	RoB is not mentioned during the discussion of the results.
14. Did the review authors provide a satisfactory explanation for, and	Yes	

discussion of, any heterogeneity observed in the results of the review?		
15. If they performed quantitative synthesis did the review authors carry out an adequate investigation of publication bias (small study bias) and discuss its likely impact on the results of the review?	No	Publication bias tests were not conducted due to low number of studies in review (10).
16. Did the review authors report any potential sources of conflict of interest, including any funding they received for conducting the review?	Yes	Authors indicated the absence of any commercial or financial relationships that would count as a conflict of interest.

Author, publication year: Kesik 2021		
Item	Yes, partial yes or no	Explanation
1. Did the research questions and inclusion criteria for the review include the components of PICO?	Yes	
2. Did the report of the review contain an explicit statement that the review methods were established prior to the conduct of the review and did the report justify any significant deviations from the protocol?	No	No mention is made of registering the protocol.
3. Did the review authors explain their selection of the study designs for inclusion in the review?	No	No explanation given for including the study designs of their choosing.
4. Did the review authors use a comprehensive literature search strategy?	Partial yes	Did not look at references or grey literature, and search date missing.
5. Did the review authors perform study selection in duplicate?	No	Not mentioned.
6. Did the review authors perform data extraction in duplicate?	No	Not mentioned.
7. Did the review authors provide a list of excluded studies and justify the exclusions?	No	Reasons for exclusion of unspecified studies was given, but no list of which studies were specifically excluded and for what reason.

8. Did the review authors describe the included studies in adequate detail?	No	Too little detail provided per study.
9. Did the review authors use a satisfactory technique for assessing the risk of bias (RoB) in individual studies that were included in the review?	No	No risk of bias was assessed.
10. Did the review authors report on the sources of funding for the studies included in the review?	No	No information on the funding source of individual included studies is provided, nor did authors indicate to have searched for this information.
11. If meta-analysis was performed did the review authors use appropriate methods for statistical combination of results?	N.A.	
12. If meta-analysis was performed, did the review authors assess the potential impact of RoB in individual studies on the results of the meta-analysis or other evidence synthesis?	N.A.	
13. Did the review authors account for RoB in individual studies when interpreting/ discussing the results of the review?	No	No RoB analysis was conducted (see 9).
14. Did the review authors provide a satisfactory explanation for, and discussion of, any heterogeneity observed in the results of the review?	No	Heterogeneity was not assessed.
15. If they performed quantitative synthesis did the review authors carry out an adequate investigation of publication bias (small study bias) and discuss its likely impact on the results of the review?	N.A.	
16. Did the review authors report any potential sources of conflict of interest, including any funding they received for conducting the review?	No	Authors did not include any kind of Conflict of Interest statement in their publication.

Author, publication year: Wen 2022

Item	Yes, partial yes or no	Explanation
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1. Did the research questions and inclusion criteria for the review include the components of PICO?	Yes	
2. Did the report of the review contain an explicit statement that the review methods were established prior to the conduct of the review and did the report justify any significant deviations from the protocol?	No	No protocol registration mentioned
3. Did the review authors explain their selection of the study designs for inclusion in the review?	Partial yes	In the introduction they indicate previous SRs failed to provide sufficient evidence due to lack of controlled studies.
4. Did the review authors use a comprehensive literature search strategy?	Partial yes	Although enough databases were searched, the search string was limited.
5. Did the review authors perform study selection in duplicate?	Yes	
6. Did the review authors perform data extraction in duplicate?	Yes	
7. Did the review authors provide a list of excluded studies and justify the exclusions?	No	Reasons for exclusion of unspecified studies was given, but no list of which studies were specifically excluded and for what reason.
8. Did the review authors describe the included studies in adequate detail?	Yes	
9. Did the review authors use a satisfactory technique for assessing the risk of bias (RoB) in individual studies that were included in the review?	Yes	
10. Did the review authors report on the sources of funding for the studies included in the review?	No	Individual studies' funding sources were not extracted.
11. If meta-analysis was performed did the review authors use appropriate methods for statistical combination of results?	N.A.	
12. If meta-analysis was performed, did the review authors assess the potential impact of RoB in individual studies on the results of the meta-analysis or other evidence synthesis?	N.A.	

13. Did the review authors account for RoB in individual studies when interpreting/ discussing the results of the review?	No	Authors did not discuss the explicit impact of some of the lower-quality studies on the results of the review.
14. Did the review authors provide a satisfactory explanation for, and discussion of, any heterogeneity observed in the results of the review?	No	Heterogeneity in studies was not assessed nor addressed.
15. If they performed quantitative synthesis did the review authors carry out an adequate investigation of publication bias (small study bias) and discuss its likely impact on the results of the review?	N.A.	
16. Did the review authors report any potential sources of conflict of interest, including any funding they received for conducting the review?	Yes	Authors disclosed a lack of financial (or otherwise) conflicting interests.

Author, publication year: Essat 2019

Item	Yes, partial yes or no	Explanation
1. Did the research questions and inclusion criteria for the review include the components of PICO?	Yes	
2. Did the report of the review contain an explicit statement that the review methods were established prior to the conduct of the review and did the report justify any significant deviations from the protocol?	Yes	
3. Did the review authors explain their selection of the study designs for inclusion in the review?	No	Authors did not give an explanation for their selection of RCTs and within-subject studies.
4. Did the review authors use a comprehensive literature search strategy?	Yes	
5. Did the review authors perform study selection in duplicate?	Partial yes	Title-selection done by one author, subsequent title + abstract selection done by two independent reviewers.
6. Did the review authors perform data extraction in duplicate?	No	One author performed data extraction, which was checked by another author.

7. Did the review authors provide a list of excluded studies and justify the exclusions?	No	Reasons for exclusion of unspecified studies was given, but no list of which studies were specifically excluded and for what reason.
8. Did the review authors describe the included studies in adequate detail?	Partial yes	Details on and outcome data missing.
9. Did the review authors use a satisfactory technique for assessing the risk of bias (RoB) in individual studies that were included in the review?	Yes	
10. Did the review authors report on the sources of funding for the studies included in the review?	No	Reasons for exclusion of unspecified studies was given, but no list of which studies were specifically excluded and for what reason.
11. If meta-analysis was performed did the review authors use appropriate methods for statistical combination of results?	N.A.	
12. If meta-analysis was performed, did the review authors assess the potential impact of RoB in individual studies on the results of the meta-analysis or other evidence synthesis?	N.A.	
13. Did the review authors account for RoB in individual studies when interpreting/ discussing the results of the review?	No	Authors discussed the low sample sizes of some studies, but did not discuss RoB-related issues in relation to the conclusions.
14. Did the review authors provide a satisfactory explanation for, and discussion of, any heterogeneity observed in the results of the review?	No	Heterogeneity of individual studies not discussed.
15. If they performed quantitative synthesis did the review authors carry out an adequate investigation of publication bias (small study bias) and discuss its likely impact on the results of the review?	N.A.	
16. Did the review authors report any potential sources of conflict of interest, including any funding they received for conducting the review?	Yes	Yes, authors included a conflict of interest statement, including information on funding sources.

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GRADE beoordeling

Deep-brain stimulation (DBS) of subthalamic nucleus & substantia nigra vs. DBS of only subthalamic nucleus

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	DBS Subth.nucl. + SN	DBS Subth.nucl.	Relative (95%CI)	Absolute	
<i>Penetration-aspiration scale [Cheng 2022]</i>											
1	RCT	Very serious ¹	Not serious	Not serious	Serious ²	None	11	11	—	SMD = 0.04 [95%CI - 0.80;0.87]	VERY LOW

¹ Missing outcome data for half of patients, cross-over design with risk of carry-over effects

² Small sample size

Deep-brain stimulation (DBS) subthalamic nucleus & substantia nigra vs. No DBS

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	DBS	No DBS	Relative (95%CI)	Absolute	
<i>Penetration-aspiration scale (specifically frequency of aspiration) [Cheng 2022]</i>											
1	RCT	Very serious ¹	Not serious	Not serious	Serious ²	None	11	11	—	Substudy 1: SMD = -0.48 [95%CI -1.49;0.53] Substudy 2: SMD = 0.81 [95%CI -0.30;1.91]	VERY LOW

¹ Cross-over design with risk of carry-over effects, selection of the reported results

² Small sample size

Repetitive transcranial magnetic stimulation (rTMS) vs. sham rTMS

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Stimulation	Sham stimulation	Relative (95%CI)	Absolute	
<i>Penetration-aspiration scale [Cheng 2022]</i>											
2	RCT	Very serious ¹	Not serious	Not serious	Very serious ²	None	28	20	—	Study 1: SMD = 0.42 [95%CI - 0.62;1.47] Study 2: SMD = -0.61 [95%CI -0.97;2.18] and SMD = 0.35 [95%CI - 0.98;1.69]	VERY LOW

¹ cCross-over design with risk of carry-over effects, deviation of intended intervention; unclear randomization, outcome measurement issues

² Large confidence interval, small sample sizes

Neuromuscular electrical stimulation (NMES) + conventional dysphagia therapy (CDT) vs. Sham NMES + CDT

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	NMES + CDT	Sham NMES + CDT	Relative (95%CI)	Absolute	
<i>Penetration-aspiration scale [Cheng 2022]</i>											
1	RCT	Very serious ¹	Not serious	Not serious	Serious ²	None	9	9	—	SMD = 1.58 [95%CI 0.49;2.68]	VERY LOW

¹ Deviation from intended intervention, outcome measurement issues

² Small sample size, large confidence interval

Motor NMES + Traditional Swallowing Therapy (TST) vs. sensory NMES + TST vs. only TST

Quality assessment							No of patients			Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	mNMES+TST	sNMES+TST	TST only	Relative (95%CI)	Absolute	
<i>Dysphagia severity scores, Swallowing quality of life scores, MDADI [Wen 2022]</i>												
1	RCT	Very serious ¹	Not serious	Not serious	Serious ²	None	28	27	30	—	No statistics sizes reported, authors report that all groups displayed significant improvement on dysphagia severity scores after treatment; additionally, only minor and non-significant difference between groups.	VERY LOW

¹ Randomization not sufficient, no allocation concealment

² Lack of detailed outcome data

Pharyngeal electrical stimulation (PES) vs. Sham PES

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Stimulation	Sham stimulation	Relative (95%CI)	Absolute	
<i>Penetration-aspiration scale [Cheng 2022, Kesik 2021]</i>											

2	RCT	Very serious ¹	Not serious	Not serious	Very serious ²	None	13	13	—	Study 1: SMD = 0.75 [95%CI -1.01;2.50]. Study 2: a significant effect of the intervention on PAS scores (d = 3.18 (I), d = 2.26 (C)) (p<.0001).	VERY LOW
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¹ Cross-over design with risk of carry-over effects, deviation from intended intervention

² Large confidence interval, small sample sizes

Acupuncture + CDT vs. CDT only

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Acupuncture + CDT	CDT Only	Relative (95%CI)	Absolute	
<i>Swallowing reaction time [Wu 2023]</i>											
1	RCT	Very serious ¹	Not serious	Not serious	Serious ²	None	28	28	—	SMD = 0.82 [95%CI 0.27;1.37]	VERY LOW

¹ Randomization issues, lack of blinding, outcome measurement issues

² Small sample size

Acupuncture + functional training (FT) vs. Functional training only

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Acupuncture + FT	FT Only	Relative (95%CI)	Absolute	
<i>Video-fluoroscopic swallowing study score [Wu 2023]</i>											
3	RCT	Very serious ¹	Not serious	Not serious	Not serious	None	148	148	—	SMD = 1.48 [95%CI 1.16, 1.81]	LOW
<i>Standardized swallowing assessment score [Wu 2023]</i>											
3	RCT	Very serious ²	Not serious	Not serious	Not serious	None	112	114	—	SMD = -3.08 [95%CI -4.01;-2.15]	LOW
<i>Water swallow test swallowing efficiency rate [Wu 2023]</i>											
6	RCT	Very serious ³	Not serious	Not serious	Not serious	None	192	190	RR: 1.40 [95%CI: 1.25;1.58, p < 0.001]	—	LOW

¹ Issues with allocation concealment, issues with blinding of participants and outcome assessment

² Issues with allocation concealment and blinding of outcome assessment

³ Potential selection bias, issues with allocation concealment, issues with outcome assessment blinding

Expiratory Muscle Strength Training (EMST) vs. Sham EMST

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	EMST	Sham EMST	Relative (95%CI)	Absolute	
<i>Fibre-optic endoscopic evaluation of swallowing Score [Cheng 2022]</i>											
1	RCT	Not serious	Not serious	Not serious	Very serious ¹	None	24	21	—	SMD = 1.08 [95%CI 0.45;1.71]	LOW
<i>Penetration-aspiration scale [Cheng 2022]</i>											
1	RCT	Serious ²	Not serious	Not serious	Very serious ¹	None	30	30	—	SMD = -0.08 [95%CI -0.59;0.42]	VERY LOW

¹ Small sample size, large confidence interval

² Unclear randomization process

Expiratory Muscle Strength Training (EMST) at increasing resistance vs. EMST at fixed resistance

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	EMST Increasing resistance	EMST Fixed resistance	Relative (95%CI)	Absolute	
<i>Water swallowing test, SWAL-QOL [Essat 2019]</i>											
1	RCT	Serious ¹	Not serious	Not serious	Very serious ²	None	9	9	—	For both water-swallowing function and SWAL-QOL no significant differences were found between intervention and control group.	VERY LOW

¹ Unclear blinding of participants or personnel, unclear blinding of outcome assessment

² Small sample size, pilot trial

Postural training (PT) + Expiratory Muscle Strength Training (EMST) vs. EMST only

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	ESM+PT	Only EMST	Relative (95%CI)	Absolute	
<i>Video-fluoroscopic swallowing score [Wen 2022]</i>											
1	RCT	Very serious ¹	Not serious	Not serious	Serious ²	None	18	15	—	VFS scores went down from 35.1 to 22.5 in the EMST group vs from 33.5 to 16.2 in the EMST+PT group (p<0.05).	VERY LOW

¹ Unclear risk with allocation concealment, issues with blinding of participants or personnel

² Small sample size

Postural training (PT) + feeding instructions vs. Feeding instructions only vs. No treatment

Quality assessment							No of patients			Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	PT + feeding instr.	Feeding instr. only	No treatment	Relative (95%CI)	Absolute	
<i>Clinical evaluation of swallowing, FEES, SWAL-QOL [Essat 2019]</i>												
1	Non-randomized CT	Very serious ¹	Not serious	Not serious	Serious ²	None	10	6	8	—	No effect sizes provided in SR. Significant improvements in clinically evaluated symptoms of dysphagia when swallowing solid and liquid consistencies (p<.001 and p=.022 respectively) compared to the other two groups. PT + feeding instr. Group also scored better on items of the SWAL-QOL compared to both other groups (p=.029, p=.004). No PT effect found in FEES measurements.	VERY LOW

¹ No allocation randomization and no concealment, high risk of selection bias

² Small sample size

Video-Assistant Swallowing (VAS) therapy vs. Conventional dysphagia therapy (CDT)

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	VAST	CDT	Relative (95%CI)	Absolute	
<i>Fibre-optic endoscopic evaluation of wallowing Score [Cheng 2022]</i>											
1	RCT	Very serious ¹	Not serious	Not serious	Serious ²	None	21	21	—	SMD = 1.13 [95%CI 0.47;1.78]	VERY LOW

¹ Unclear randomization process, selection of reported outcomes

² Small sample size

Lung volume recruitment (LVR) vs. No treatment

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	LVR	No treatment	Relative (95%CI)	Absolute	
<i>Peak cough flow measure [Essat 2019]</i>											
1	RCT	Not evaluated by SR ¹	Not serious	Not serious	Serious ²	Very little information given ¹	29	29	—	No effect size given. Authors report significant positive effect on peak cough flow (PCF) during unassisted coughing, hawking, throat clearing, and forced expiration.	VERY LOW

¹ Essat et al. SR was unable to perform RoB assessment as this was a conference paper, cross-over design with risk of carry-over

² Small sample size

Traditional Swallowing Therapy (TST) + sensory SES vs. TST + motor SES vs. only TST

Quality assessment							No of patients			Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	TST+sSES	TST+mSES	TST only	Relative (95%CI)	Absolute	
<i>Video-fluoroscopic swallowing score & fibre-optic endoscopic evaluation of swallowing [Wen 2022]</i>												
1	RCT	Very serious ¹	Not serious	Not serious	Serious ²	None	30	30	30	—	No statistics reported, authors found no statistical differences between groups, and conclude that surface electrical stimulation is not effective.	VERY LOW

¹ Issues with randomization process, selection bias, issues with blinding of participants or personnel

² Small sample size

Traditional dysphagia therapy (TDT) vs. No TDT (routine care)

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	CDT	No CDT, routine care	Relative (95%CI)	Absolute	

Mann assessment of swallowing ability (MASA) score [Kesik 2021]											
1	RCT	Not evaluated by SR ¹	Not serious	Not serious	Serious ¹	None	10	10	—	Main effect of the Time × Group interaction was significant ($P < 0.001$). A large effect sizes were found for MASA score in both the TDT ($d = 3.91$) and the routine care ($d = 1.11$) groups.	VERY LOW

¹ Kesik et al.'s SR does not feature a risk of bias assessment

² Small sample size

Speech and language training (SLT) vs. botulinum injection vs. no treatment

Quality assessment							No of patients			Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	SLT	Botulinum	No treatment	Relative (95%CI)	Absolute	
Drooling rating scale (Marks et al.)												
1	RCT	Very serious ¹	Not serious	Serious ²	Very serious ³	None	6	Unknown	unknown	—	No statistics reported, but authors report that the severity of salivation was significantly reduced in both comparison groups compared to the blank control group.	VERY LOW

¹ Unclear random sequence generation, unclear allocation concealment, issues with participant or personnel blinding, incomplete outcome data through attrition

² Drooling used as outcome, indirect measure of swallowing performance

³ Small sample size, lack of information on subgroup sample sizes

Thin liquid + Chin-down posture (CDP) vs. Nectar-thickened (NT) liquid (no CDP) vs. Honey-thickened (HT) liquid (no CDP)

Quality assessment							No of patients			Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Thin liquid + CDP	NT liquid (no CDP)	HT liquid (no CDP)	Relative (95%CI)	Absolute	
Aspiration rates [Essat 2019]												
2	RCT	Very serious ¹	Not serious	Not serious	Serious ²	None	487	461	351	—	Study 1: Honey-thickened liquids resulted in lowest proportion of patients who aspirated (44%)	VERY LOW

											<p>compared with nectar-thickened liquids (54%, $p < .001$) and the use of the chin-down posture (59%, $p < .0001$)</p> <p>Study 2: No significant differences in aspiration rates found between conditions.</p>	
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¹ Unclear allocation randomization and concealment, unclear blinding of outcome assessment, risk of carry-over effect due to sequential design, unclear blinding of outcome assessment.

² Non-congruent effects

Swallowing management clinic (SMC) vs. Routine care

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	SMC	Routine care	Relative (95%CI)	Absolute	
<i>Dysphagia rehabilitation efficiency score; mis-inhalation incidence rate [Essat 2019]</i>											
1	Non-randomized CT	Very serious ¹	Not serious	Not serious	Serious ²		117	100	—	Increased dysphagia recovery in the intervention group (68.3%) compared with the control group (17%) ($p < .01$). Mis-inhalation rate also observed to be lower in the intervention group than in the control group ($p < .01$)	VERY LOW

¹ No random allocation, no allocation concealment, unclear blinding of personnel or participants, and unclear blinding of outcome assessment

² No confidence intervals reported

Onderzoeksvraag & onderzoekskarakteristieken Smaakstoornissen

Onderzoeksvraag

Wat is het effect van begeleiding en behandeling op smaakstoornissen bij patiënten in de palliatieve fase?

Patients/Patiënten	Patiënten in de palliatieve fase met smaakstoornissen
Intervention/Interventie	Niet-medicamenteus: Voeding, mondverzorging, kauwgom, staken van roken, logopedie voor reukrevalidatie, consult met een diëtist, tandarts, mondhygiënist, KNO-arts of neuroloog Medicamenteus: Zinksulfaatdrank, clonazepam
Comparison/Vergelijking	Placebo, gebruikelijke zorg of andere interventie
Outcome(s)/Uitkomst(en)	Cruciaal: Smaakstoornissen Belangrijk: Bijwerkingen

Zoekstrategie

Embase

No.	Query	Results
#11	#4 AND (#7 OR #8) NOT #9 NOT #10 Overige OBS	986
#10	#4 AND #6 NOT #9 Clinical trials, RCTs	2512
#9	#4 AND #5 SR	242
#8	'case control study'/de OR 'comparative study'/exp OR 'control group'/de OR 'controlled study'/de OR 'controlled clinical trial'/de OR 'crossover procedure'/de OR 'double blind procedure'/de OR 'phase 2 clinical trial'/de OR 'phase 3 clinical trial'/de OR 'phase 4 clinical trial'/de OR 'pretest posttest design'/de OR 'pretest posttest control group design'/de OR 'quasi experimental study'/de OR 'single blind procedure'/de OR 'triple blind procedure'/de OR (((control OR controlled) NEAR/6 trial):ti,ab,kw) OR (((control OR controlled) NEAR/6 (study OR studies)):ti,ab,kw) OR (((control OR controlled) NEAR/1 active):ti,ab,kw) OR 'open label*':ti,ab,kw OR (((double OR two OR three OR multi OR trial) NEAR/1 (arm OR arms)):ti,ab,kw) OR ((allocat* NEAR/10 (arm OR arms)):ti,ab,kw) OR placebo*:ti,ab,kw OR 'sham-control*':ti,ab,kw OR (((single OR double OR triple OR assessor) NEAR/1 (blind* OR masked)):ti,ab,kw) OR nonrandom*:ti,ab,kw OR 'non-random*':ti,ab,kw OR 'quasi-experiment*':ti,ab,kw OR crossover:ti,ab,kw OR 'cross over':ti,ab,kw OR 'parallel group*':ti,ab,kw OR 'factorial trial':ti,ab,kw OR ((phase NEAR/5 (study OR trial)):ti,ab,kw) OR ((case* NEAR/6 (matched OR control*)):ti,ab,kw) OR ((match* NEAR/6 (pair OR pairs OR cohort* OR control* OR group* OR healthy OR age OR sex OR gender OR patient* OR subject* OR participant*)):ti,ab,kw) OR ((propensity NEAR/6 (scor* OR match*)):ti,ab,kw) OR versus:ti OR vs:ti OR compar*:ti OR ((compar* NEAR/1 study):ti,ab,kw) OR (('major clinical study'/de OR 'clinical study'/de OR 'cohort analysis'/de OR 'observational study'/de OR 'cross-sectional study'/de OR 'multicenter study'/de OR 'correlational study'/de OR 'follow up'/de OR cohort*:ti,ab,kw OR 'follow up':ti,ab,kw OR followup:ti,ab,kw OR longitudinal*:ti,ab,kw OR prospective*:ti,ab,kw OR retrospective*:ti,ab,kw OR observational*:ti,ab,kw OR 'cross	14311088

	sectional*:ti,ab,kw OR cross?ectional*:ti,ab,kw OR multicent*:ti,ab,kw OR 'multi-cent*':ti,ab,kw OR consecutive*:ti,ab,kw) AND (group:ti,ab,kw OR groups:ti,ab,kw OR subgroup*:ti,ab,kw OR versus:ti,ab,kw OR vs:ti,ab,kw OR compar*:ti,ab,kw OR 'odds ratio*':ab OR 'relative odds':ab OR 'risk ratio*':ab OR 'relative risk*':ab OR 'rate ratio':ab OR aor:ab OR arr:ab OR rrr:ab OR (((('or' OR 'rr') NEAR/6 ci):ab)))	
#7	'major clinical study'/de OR 'clinical study'/de OR 'case control study'/de OR 'family study'/de OR 'longitudinal study'/de OR 'retrospective study'/de OR 'prospective study'/de OR 'comparative study'/de OR 'cohort analysis'/de OR ((cohort NEAR/1 (study OR studies)):ab,ti) OR (('case control' NEAR/1 (study OR studies)):ab,ti) OR (('follow up' NEAR/1 (study OR studies)):ab,ti) OR (observational NEAR/1 (study OR studies)) OR ((epidemiologic NEAR/1 (study OR studies)):ab,ti) OR (('cross sectional' NEAR/1 (study OR studies)):ab,ti)	6767914
#6	'clinical trial'/exp OR 'randomization'/exp OR 'single blind procedure'/exp OR 'double blind procedure'/exp OR 'crossover procedure'/exp OR 'placebo'/exp OR 'prospective study'/exp OR rct:ab,ti OR random*:ab,ti OR 'single blind':ab,ti OR 'randomised controlled trial':ab,ti OR 'randomized controlled trial'/exp OR placebo*:ab,ti	3302394
#5	'meta analysis'/exp OR 'meta analysis (topic)'/exp OR metaanaly*:ti,ab OR 'meta analy*':ti,ab OR metanaly*:ti,ab OR 'systematic review'/de OR 'cochrane database of systematic reviews'/jt OR prisma:ti,ab OR prospero:ti,ab OR (((systemati* OR scoping OR umbrella OR 'structured literature') NEAR/3 (review* OR overview*)):ti,ab) OR (((systemic* NEAR/1 review*):ti,ab) OR (((systemati* OR literature OR database* OR 'data base*') NEAR/10 search*):ti,ab) OR (((structured OR comprehensive* OR systemic*) NEAR/3 search*):ti,ab) OR (((literature NEAR/3 review*):ti,ab) AND (search*:ti,ab OR database*:ti,ab OR 'data base*':ti,ab)) OR (('data extraction':ti,ab OR 'data source*':ti,ab) AND 'study selection':ti,ab) OR ('search strategy':ti,ab AND 'selection criteria':ti,ab) OR ('data source*':ti,ab AND 'data synthesis':ti,ab) OR medline:ab OR pubmed:ab OR embase:ab OR cochrane:ab OR (((critical OR rapid) NEAR/2 (review* OR overview* OR synthes*)):ti) OR (((critical* OR rapid*) NEAR/3 (review* OR overview* OR synthes*)):ab) AND (search*:ab OR database*:ab OR 'data base*':ab)) OR metasyntes*:ti,ab OR 'meta synthes*':ti,ab	733409
#4	#3 NOT ('conference abstract'/it OR 'editorial'/it OR 'letter'/it OR 'note'/it) NOT (('animal'/exp OR 'animal experiment'/exp OR 'animal model'/exp OR 'nonhuman'/exp) NOT 'human'/exp)	4600
#3	#1 AND #2	5377
#2	'advance care planning'/exp OR 'advanced cancer'/exp OR 'aged hospital patient'/exp OR 'alzheimer disease'/exp OR 'amyotrophic lateral sclerosis'/exp OR 'elderly care'/exp OR 'degenerative disease'/exp/mj OR 'duchenne muscular dystrophy'/exp OR 'frail elderly'/exp OR 'frontotemporal dementia'/exp OR 'geriatrics'/exp OR 'geriatric patient'/exp OR 'hospice'/exp OR 'hospice care'/exp OR 'institutionalized elderly'/exp OR 'metastasis'/exp OR 'multiple sclerosis'/exp OR 'neurodegeneration with brain iron accumulation'/exp OR 'palliative therapy'/exp OR 'parkinson disease'/exp OR 'perry	2755965

	<p>syndrome'/exp OR 'pick presenile dementia'/exp OR 'prion disease'/exp OR 'senile dementia'/exp OR 'striatonigral degeneration'/exp OR 'subacute combined degeneration'/exp OR 'synucleinopathy'/exp OR 'tauopathy'/exp OR 'terminal care'/de OR 'terminally ill patient'/exp OR 'very elderly'/exp OR 'wilson disease'/exp OR 'palliat*':ti,ab,kw OR 'reduced life expectanc*':ti,ab,kw OR 'end of life':ti,ab,kw OR 'terminally ill':ti,ab,kw OR 'terminal care':ti,ab,kw OR 'terminally sick':ti,ab,kw OR 'hospice*':ti,ab,kw OR 'terminal stage':ti,ab,kw OR 'advance* care*':ti,ab,kw OR 'advanced disease':ti,ab,kw OR 'advanced illness':ti,ab,kw OR 'life-limiting':ti,ab,kw OR 'metasta*':ti,kw OR (('end stage' OR advanced) NEAR/5 (kidney OR renal OR ckd OR 'respiratory disease' OR 'chronic obstructive pulmonary disease' OR 'heart failure' OR 'cancer' OR neoplasm* OR carcinoma OR liver)):ti,ab,kw) OR frail*:de,ab,ti OR geriatri*:de,ab,ti OR ((oldest NEXT/1 old*):de,ab,ti) OR senium:de,ab,ti OR ((very NEXT/1 old*):de,ab,ti) OR septuagenarian*:de,ab,ti OR octagenarian*:de,ab,ti OR octogenarian*:de,ab,ti OR nonagenarian*:de,ab,ti OR centarian*:de,ab,ti OR centenarian*:de,ab,ti OR supercentenarian*:de,ab,ti OR 'degenerative disease':ti,kw OR 'neurodegenerative disease':ti,kw OR 'pick complex':ti,kw OR 'pick`s complex':ti,kw OR 'hallervorden spatz disease':ti,kw OR 'hallervorden spatz syndrome':ti,kw OR 'nbia disorder':ti,kw OR 'neurodegeneration with brain iron accumulation':ti,kw OR 'pantothenate kinase associated neurodegeneration':ti,kw OR 'perry syndrome':ti,kw OR parkinson:ti,kw OR 'senile confusion':ti,kw OR 'senile psychosis':ti,kw OR 'nigroneostriatal degeneration':ti,kw OR 'nigrostriatal degeneration':ti,kw OR 'striatonigral degeneration':ti,kw OR 'strionigral degeneration':ti,kw OR 'synucleinopathy':ti,kw OR 'tauopathy':ti,kw OR 'wilson disease':ti,kw OR 'degeneratio hepato lenticularis':ti,kw OR 'hepatocerebral degeneration':ti,kw OR 'hepatolenticular degeneration':ti,kw OR 'hepatolenticular syndrome':ti,kw OR 'morbus wilson':ti,kw OR 'progressive lenticular degeneration':ti,kw OR 'wilson degeneration':ti,kw OR 'wilson syndrome':ti,kw OR 'chariot disease':ti,kw OR 'disseminated sclerosis':ti,kw OR 'insular sclerosis':ti,kw OR 'multiple sclerosis':ti,kw OR 'sclerosis multiplex':ti,kw OR 'lou gehrig disease':ti,kw OR 'lou gehrig`s disease':ti,kw OR 'amyotrophic lateral sclerosis':ti,kw OR duchenne:ti,kw</p>	
#1	<p>'taste disorder'/exp OR ageus*:ti,ab,kw OR dysgeus*:ti,ab,kw OR hypergeus*:ti,ab,kw OR hypogeus*:ti,ab,kw OR (((metallic OR hallucinat* OR abnormal* OR alter* OR disorder* OR distort* OR disturb* OR anomal) NEAR/3 (taste OR gustator*)):ti,ab,kw) OR 'taste alteration'/exp</p>	27099

Ovid/Medline

#	Searches	Results
13	10 or 11 or 12	557
12	(9 and (7 or 8)) not 10 not 11 Overige OBS	326
11	(9 and 6) not 10 Clinical trials, RCTs	200
10	9 and 5 SR	31

9	4 not ((exp animals/ or exp models, animal/) not humans/) not (letter/ or comment/ or editorial/)	859
8	Case-control Studies/ or clinical trial, phase ii/ or clinical trial, phase iii/ or clinical trial, phase iv/ or comparative study/ or control groups/ or controlled before-after studies/ or controlled clinical trial/ or double-blind method/ or historically controlled study/ or matched-pair analysis/ or single-blind method/ or (((control or controlled) adj6 (study or studies or trial)) or (compar* adj (study or studies)) or ((control or controlled) adj1 active) or "open label*" or ((double or two or three or multi or trial) adj (arm or arms)) or (allocat* adj10 (arm or arms)) or placebo* or "sham-control*" or ((single or double or triple or assessor) adj1 (blind* or masked)) or nonrandom* or "non-random*" or "quasi-experiment*" or "parallel group*" or "factorial trial" or "pretest posttest" or (phase adj5 (study or trial)) or (case* adj6 (matched or control*)) or (match* adj6 (pair or pairs or cohort* or control* or group* or healthy or age or sex or gender or patient* or subject* or participant*)) or (propensity adj6 (scor* or match*))).ti,ab,kf. or (confounding adj6 adjust*).ti,ab. or (versus or vs or compar*).ti. or ((exp cohort studies/ or epidemiologic studies/ or multicenter study/ or observational study/ or seroepidemiologic studies/ or (cohort* or 'follow up' or followup or longitudinal* or prospective* or retrospective* or observational* or multicent* or 'multi-cent*' or consecutive*).ti,ab,kf.) and ((group or groups or subgroup* or versus or vs or compar*).ti,ab,kf. or ('odds ratio*' or 'relative odds' or 'risk ratio*' or 'relative risk*' or aor or arr or rrr).ab. or ("OR" or "RR") adj6 CI).ab.))	5481138
7	Epidemiologic studies/ or case control studies/ or exp cohort studies/ or Controlled Before-After Studies/ or Case control.tw. or cohort.tw. or Cohort analy\$.tw. or (Follow up adj (study or studies)).tw. or (observational adj (study or studies)).tw. or Longitudinal.tw. or Retrospective*.tw. or prospective*.tw. or consecutive*.tw. or Cross sectional.tw. or Cross-sectional studies/ or historically controlled study/ or interrupted time series analysis/ [Onder exp cohort studies vallen ook longitudinale, prospectieve en retrospectieve studies]	4500287
6	exp clinical trial/ or randomized controlled trial/ or exp clinical trials as topic/ or randomized controlled trials as topic/ or Random Allocation/ or Double-Blind Method/ or Single-Blind Method/ or (clinical trial, phase i or clinical trial, phase ii or clinical trial, phase iii or clinical trial, phase iv or controlled clinical trial or randomized controlled trial or multicenter study or clinical trial).pt. or random*.ti,ab. or (clinic* adj trial*).tw. or ((singl* or doubl* or treb* or tripl*) adj (blind\$3 or mask\$3)).tw. or Placebos/ or placebo*.tw.	2617431
5	meta-analysis/ or meta-analysis as topic/ or (metaanaly* or meta-analy* or metanaly*).ti,ab,kf. or systematic review/ or cochrane.jw. or (prisma or prospero).ti,ab,kf. or ((systemati* or scoping or umbrella or "structured literature") adj3 (review* or overview*).ti,ab,kf. or (systemic* adj1 review*).ti,ab,kf. or ((systemati* or literature or database* or data-base*) adj10 search*).ti,ab,kf. or ((structured or comprehensive* or systemic*) adj3 search*).ti,ab,kf. or ((literature adj3 review*) and (search* or database* or data-base*).ti,ab,kf. or ("data extraction" or "data source*") and "study selection").ti,ab,kf. or ("search strategy" and "selection criteria").ti,ab,kf. or ("data source*" and "data synthesis").ti,ab,kf. or (medline or pubmed or embase or cochrane).ab. or ((critical or rapid) adj2 (review* or overview* or synthes*).ti. or (((critical* or rapid*) adj3 (review* or overview* or synthes*)) and (search* or database* or data-base*).ab. or (metasynthes* or meta-synthes*).ti,ab,kf. or exp Guideline/ or guideline.ti,ab,kf. or guidance.ti,ab,kf.	928494
4	3 not ((exp animals/ or exp models, animal/) not humans/) not (letter/ or comment/ or editorial/)	859
3	1 and 2	888
2	Terminal Care/ or Hospice Care/ or "Hospice and Palliative Care Nursing"/ or Terminally Ill/ or exp Neoplasm Metastasis/ or exp Advance Care Planning/ or exp Palliative Care/ or exp "Aged, 80 and over"/ or exp Frail Elderly/ or Alzheimer Disease/ or Amyotrophic Lateral Sclerosis/ or exp Neurodegenerative Diseases/ or Muscular Dystrophy, Duchenne/ or exp Dementia/ or exp Geriatrics/ or exp Multiple Sclerosis/ or Palliative Medicine/ or exp Parkinsonian Disorders/ or exp Prion Diseases/ or Striatonigral Degeneration/ or Synucleinopathies/ or palliat*.ti,ab,kf. or reduced life expectanc*.ti,ab,kf. or end of life.ti,ab,kf. or terminally ill.ti,ab,kf. or	2257181

	terminal care.ti,ab,kf. or terminally sick.ti,ab,kf. or hospice*.ti,ab,kf. or terminal stage.ti,ab,kf. or advance* care*.ti,ab,kf. or advanced disease.ti,ab,kf. or advanced illness.ti,ab,kf. or life-limiting.ti,ab,kf. or metasta*.ti,kf. or ((end stage or advanced) adj5 (kidney or renal or ckd or respiratory disease or chronic obstructive pulmonary disease or heart failure or cancer or neoplasm* or carcinoma or liver)).ti,ab,kf. or frail*.ti,ab,kf. or geriatri*.ti,ab,kf. or (oldest adj1 old*).ti,ab,kf. or senium.ti,ab,kf. or (very adj1 old*).ti,ab,kf. or septuagenarian*.ti,ab,kf. or octagenarian*.ti,ab,kf. or octogenarian*.ti,ab,kf. or nonagenarian*.ti,ab,kf. or centarian*.ti,ab,kf. or centenarian*.ti,ab,kf. or supercentenarian*.ti,ab,kf. or degenerative disease.ti,kf. or neurodegenerative disease.ti,kf. or pick complex.ti,kf. or hallervorden spatz disease.ti,kf. or hallervorden spatz syndrome.ti,kf. or nbia disorder.ti,kf. or neurodegeneration with brain iron accumulation.ti,kf. or pantothenate kinase associated neurodegeneration.ti,kf. or perry syndrome.ti,kf. or parkinson.ti,kf. or senile confusion.ti,kf. or senile psychosis.ti,kf. or nigroneostriatal degeneration.ti,kf. or nigrostriatal degeneration.ti,kf. or striatonigral degeneration.ti,kf. or strionigral degeneration.ti,kf. or synucleinopathy.ti,kf. or tauopathy.ti,kf. or wilson disease.ti,kf. or degeneratio hepato lenticularis.ti,kf. or hepatocerebral degeneration.ti,kf. or hepatolenticular degeneration.ti,kf. or hepatolenticular syndrome.ti,kf. or morbus wilson.ti,kf. or progressive lenticular degeneration.ti,kf. or wilson degeneration.ti,kf. or wilson syndrome.ti,kf. or chariot disease.ti,kf. or disseminated sclerosis.ti,kf. or insular sclerosis.ti,kf. or multiple sclerosis.ti,kf. or sclerosis multiplex.ti,kf. or lou gehrig disease.ti,kf. or amyotrophic lateral sclerosis.ti,kf. or duchenne.ti,kf.	
1	exp Taste Disorders/ or ageus*.ti,ab,kf. or dysgeus*.ti,ab,kf. or hypergeus*.ti,ab,kf. or hypogeus*.ti,ab,kf. or ((metallic or hallucinat* or abnormal* or alter* or disorder* or distort* or disturb* or anomal) adj3 (taste or gustator*)).ti,ab,kf.	6914

Tabel 1. Resultaten van zoekactie van onderzoeksvraag UV5

Database	Aantal
Embase	3740
Ovid/Medline	557
Totaal aantal resultaten	4297
Aantal geëxcludeerd (dubbelen)	270
Totaal aantal unieke resultaten	4027

Tabel 2. Overzicht van geëxcludeerde studies gebaseerd op beoordeling van de volledige tekst van onderzoeksvraag UV5

Referentie	Reden voor exclusie
Doty RL. Treatments for smell and taste disorders: A critical review. <i>Handb Clin Neurol.</i> 2019;164:455-479. doi: 10.1016/B978-0-444-63855-7.00025-3. PMID: 31604562.	Verkeerde design
Gamper EM, Zabernigg A, Wintner LM, Giesinger JM, Oberguggenberger A, Kemmler G, Sperner-Unterweger B, Holzner B. Coming to your senses: detecting taste and smell alterations in chemotherapy patients. A systematic review. <i>J Pain Symptom Manage.</i> 2012 Dec;44(6):880-95. doi: 10.1016/j.jpainsymman.2011.11.011. Epub 2012 Aug 24. PMID: 22921177.	Verkeerde populatie
Heckel M, Stiel S, Ostgathe C. Smell and taste in palliative care: a systematic analysis of literature. <i>Eur Arch Otorhinolaryngol.</i> 2015 Feb;272(2):279-88. doi: 10.1007/s00405-014-3016-4. Epub 2014 Apr 5. PMID: 24705604.	Overlap geïnccludeerde studie
Hoppe C, Kutschan S, Dörfler J, Büntzel J, Büntzel J, Huebner J. Zinc as a complementary treatment for cancer patients: a systematic review. <i>Clin Exp Med.</i> 2021 May;21(2):297-313. doi: 10.1007/s10238-020-00677-6. Epub 2021 Jan 26. PMID: 33496846; PMCID: PMC8053661.	Verkeerde populatie

Hovan AJ, Williams PM, Stevenson-Moore P, Wahlin YB, Ohrn KE, Elting LS, Spijkervet FK, Brennan MT; Dysgeusia Section, Oral Care Study Group, Multinational Association of Supportive Care in Cancer (MASCC)/International Society of Oral Oncology (ISOO). A systematic review of dysgeusia induced by cancer therapies. Support Care Cancer. 2010 Aug;18(8):1081-7. doi: 10.1007/s00520-010-0902-1. Epub 2010 May 22. PMID: 20495984.	Verkeerde populatie
Jones JA, Chavarri-Guerra Y, Corrêa LBC, Dean DR, Epstein JB, Fregnani ER, Lee J, Matsuda Y, Mercadante V, Monsen RE, Rajimakers NJH, Saunders D, Soto-Perez-de-Celis E, Sousa MS, Tonkaboni A, Vissink A, Yeoh KS, Davies AN. MASCC/ISOO expert opinion on the management of oral problems in patients with advanced cancer. Support Care Cancer. 2022 Nov;30(11):8761-8773. doi: 10.1007/s00520-022-07211-2. Epub 2022 Jun 18. PMID: 35717462; PMCID: PMC9633484.	Verkeerde design
Sevryugin O, Kasvis P, Vigano M, Vigano A. Taste and smell disturbances in cancer patients: a scoping review of available treatments. Support Care Cancer. 2021 Jan;29(1):49-66. doi: 10.1007/s00520-020-05609-4. Epub 2020 Jul 30. PMID: 32734392.	Overlap geïnccludeerde studie
Silva ARP, Bodanezi AV, Chrun ES, Lisboa ML, de Camargo AR, Munhoz EA. Palliative oral care in terminal cancer patients: Integrated review. World J Clin Cases. 2023 May 6;11(13):2966-2980. doi: 10.12998/wjcc.v11.i13.2966. PMID: 37215429; PMCID: PMC10198072.	Geen inclusie van interventiestudies voor smaakstoornissen

Bijlage Onderzoekskarakteristieken UV5 Smaakstoornissen (5.2)

Tabel 3. Studiekarakteristieken

Author, publication year: Braud 2020							
Include d studies in the review	Study characteristics	Patient characteristics	Intervention (I)	Comparison / control (C)	Follow-up	Outcome measures and effect size	Comments
A. Brisbois 2011	<p><u>Type of study:</u> RCT</p> <p><u>Search date:</u> June 25, 2019</p> <p><u>Number of included studies (see comments):</u> N= 28</p> <p><u>Country</u> A. Canada</p> <p><u>Source of funding:</u> Not reported.</p> <p><u>Inclusion criteria:</u> - Human adults with a mean age of 18 years or higher - Pharmacologic</p>	<p><u>N total at baseline (total analysed):</u> A. 46 (21)</p> <p><u>Age, mean (SD):</u> A. 67.1 (10.9) years in intervention group, 65.6 (8.0) years in control group</p> <p>Disease profile: A. Advanced cancer of any site except brain</p>	A. THC (marino, dronabinol 2.5mg, capsules) once daily for 3 days, after which twice daily with the option to increase to 20mg daily.	A. Placebo	<p><u>Length of follow-up:</u> A. 19 days</p> <p><u>Loss-to-follow-up:</u> A. 25 (13 withdrew consent, 12 serious adverse event)</p>	<p>Decrease of total chemosensory complaints did not differ between groups (p=0.23).</p> <p>Chemosensory enhancement was increased from baseline with THC treatment compared with placebo (p=0.02).</p> <p>The frequency of perceived chemosensory improvement was significantly</p>	This systematic review assessed the effect of palliative and curative interventions on taste recovery. Of the 28 included studies, only one took place among palliative care patients. This study is reported in this table.

	<p>al and non-pharmacological agents</p> <ul style="list-style-type: none"> - Reports on taste complaints (dysgeusia), taste abilities (detection, identification, recognition) and/or perceived taste intensity <p><u>Exclusion criteria:</u></p> <ul style="list-style-type: none"> - Not English language - Lacking baseline data or a direct comparison - Trials on animals and in vitro studies, retrospective studies, case reports, SRs 					<p>increased in patients receiving THC (36%) compared to placebo (15%, p=0.03).</p> <p>Side effects quality of sleep and relaxation more frequently reported in the THC group (p=0.04 and p=0.05).</p> <p>Number of adverse events similar in both groups.</p>	
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Tabel 4. Risico op bias

Author, publication year: Braud 2020		
Item	Yes, partial yes or no	Explanation
1. Did the research questions and inclusion criteria for the review include the components of PICO?	Yes	
2. Did the report of the review contain an explicit statement that the review methods were established prior to the conduct of the review and did the report justify any significant deviations from the protocol?	Yes	
3. Did the review authors explain their selection of the study designs for inclusion in the review?	No	They don't justify their study design selection
4. Did the review authors use a comprehensive literature search strategy?	Yes	
5. Did the review authors perform study selection in duplicate?	Yes	
6. Did the review authors perform data extraction in duplicate?	Yes	
7. Did the review authors provide a list of excluded studies and justify the exclusions?	No	
8. Did the review authors describe the included studies in adequate detail?	Partial yes	Most data available but exact outcome data and loss to follow-up not reported
9. Did the review authors use a satisfactory technique for assessing the risk of bias (RoB) in individual studies that were included in the review?	Yes	
10. Did the review authors report on the sources of funding for the studies included in the review?	No	
11. If meta-analysis was performed did the review authors use appropriate methods for statistical combination of results?	N.A.	

12. If meta-analysis was performed, did the review authors assess the potential impact of RoB in individual studies on the results of the meta-analysis or other evidence synthesis?	N.A.	
13. Did the review authors account for RoB in individual studies when interpreting/ discussing the results of the review?	Partial yes	It is mentioned in the discussion section, but not for each interpretation.
14. Did the review authors provide a satisfactory explanation for, and discussion of, any heterogeneity observed in the results of the review?	N.A.	
15. If they performed quantitative synthesis did the review authors carry out an adequate investigation of publication bias (small study bias) and discuss its likely impact on the results of the review?	N.A.	
16. Did the review authors report any potential sources of conflict of interest, including any funding they received for conducting the review?	No	Indicated to have no conflicts of interest.

Tabel 5. GRADE beoordeling

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	THC	Placebo	Relative (95%CI)	Absolute	
Chemosensory complaints (Taste and Smell Survey)											
1	RCT	Serious ¹	Not serious	Not serious	Serious ²	None	11	10	-	5.7 (THC) vs. 6.4 (placebo)	VERY LOW
(Serious) adverse effects											
1	RCT	Serious ¹	Not serious	Not serious	Serious ²	None	11	10	-	6 events in both groups	VERY LOW

¹ High loss to follow-up

² Imprecision due to small sample size

Onderzoeksvraag & onderzoekskarakteristieken Slechte adem

Onderzoeksvraag

Wat is het effect van begeleiding en behandeling op slechte adem bij patiënten in de palliatieve fase?

Patients/Patiënten	Patiënten in de palliatieve fase met slechte adem
Intervention/Interventie	Niet-medicamenteus: Mondverzorging, water drinken, reinigen van de tong, kauwgom Medicamenteus: Chloorhexidine, halita
Comparison/Vergelijking	Placebo, gebruikelijke zorg of andere interventie
Outcome(s)/Uitkomst(en)	Cruciaal: Slechte adem Belangrijk: Bijwerkingen

Zoekstrategie

Embase

No.	Query	Results
#21	#1 AND #18 sleutelartikelen gevonden in set halitosis	5

#20	#18 AND #19 sleutelartikelen niet gevonden	0
#19	#9 OR #10 OR #11 OR #12	120
#18	#13 OR #14 OR #15 OR #16 OR #17 Sleutelartikelen	5
#17	'clinical effects of a new mouthrinse containing chlorhexidine, cetylpyridinium chloride and zinc-lactate on oral halitosis'	1
#16	'a combined therapeutic approach to manage oral halitosis'	1
#15	'the relation between foetor ex ore, oral hygiene and periodontal disease'	1
#14	'impact of mouthrinses on morning bad breath in healthy subjects'	1
#13	'a review of the current literature on management of halitosis'	1
#12	#3 NOT #9 NOT #10 NOT #11 Overige	164
#11	#4 AND (#7 OR #8) NOT #9 NOT #10 OBS	59
#10	#4 AND #6 NOT #9 Clinical trials	42
#9	#4 AND #5 SR	19
#8	'case control study'/de OR 'comparative study'/exp OR 'control group'/de OR 'controlled study'/de OR 'controlled clinical trial'/de OR 'crossover procedure'/de OR 'double blind procedure'/de OR 'phase 2 clinical trial'/de OR 'phase 3 clinical trial'/de OR 'phase 4 clinical trial'/de OR 'pretest posttest design'/de OR 'pretest posttest control group design'/de OR 'quasi experimental study'/de OR 'single blind procedure'/de OR 'triple blind procedure'/de OR (((control OR controlled) NEAR/6 trial):ti,ab,kw) OR (((control OR controlled) NEAR/6 (study OR studies)):ti,ab,kw) OR (((control OR controlled) NEAR/1 active):ti,ab,kw) OR 'open label*':ti,ab,kw OR (((double OR two OR three OR multi OR trial) NEAR/1 (arm OR arms)):ti,ab,kw) OR ((allocat* NEAR/10 (arm OR arms)):ti,ab,kw) OR placebo*:ti,ab,kw OR 'sham-control*':ti,ab,kw OR (((single OR double OR triple OR assessor) NEAR/1 (blind* OR masked)):ti,ab,kw) OR nonrandom*:ti,ab,kw OR 'non-random*':ti,ab,kw OR 'quasi-experiment*':ti,ab,kw OR crossover:ti,ab,kw OR 'cross over':ti,ab,kw OR 'parallel group*':ti,ab,kw OR 'factorial trial':ti,ab,kw OR ((phase NEAR/5 (study OR trial)):ti,ab,kw) OR ((case* NEAR/6 (matched OR control*)):ti,ab,kw) OR ((match* NEAR/6 (pair OR pairs OR cohort* OR control* OR group* OR healthy OR age OR sex OR gender OR patient* OR subject* OR participant*)):ti,ab,kw) OR ((propensity NEAR/6 (scor* OR match*)):ti,ab,kw) OR versus:ti OR vs:ti OR compar*:ti OR ((compar* NEAR/1 study):ti,ab,kw) OR (('major clinical study'/de OR 'clinical study'/de OR 'cohort analysis'/de OR 'observational study'/de OR 'cross-sectional study'/de OR 'multicenter study'/de OR 'correlational study'/de OR 'follow up'/de OR cohort*:ti,ab,kw OR 'follow up':ti,ab,kw OR followup:ti,ab,kw OR longitudinal*:ti,ab,kw OR prospective*:ti,ab,kw OR retrospective*:ti,ab,kw OR observational*:ti,ab,kw OR 'cross sectional*':ti,ab,kw OR cross?ectional*:ti,ab,kw OR multigent*:ti,ab,kw OR 'multi-cent*':ti,ab,kw OR consecutive*:ti,ab,kw) AND (group:ti,ab,kw OR groups:ti,ab,kw OR subgroup*:ti,ab,kw OR versus:ti,ab,kw OR vs:ti,ab,kw OR compar*:ti,ab,kw OR 'odds ratio*':ab OR 'relative odds':ab OR 'risk ratio*':ab OR 'relative risk*':ab OR 'rate ratio':ab OR aor:ab OR arr:ab OR rrr:ab OR (((or' OR 'rr') NEAR/6 ci):ab)))	14402649

#7	'major clinical study'/de OR 'clinical study'/de OR 'case control study'/de OR 'family study'/de OR 'longitudinal study'/de OR 'retrospective study'/de OR 'prospective study'/de OR 'comparative study'/de OR 'cohort analysis'/de OR ((cohort NEAR/1 (study OR studies)):ab,ti) OR (('case control' NEAR/1 (study OR studies)):ab,ti) OR (('follow up' NEAR/1 (study OR studies)):ab,ti) OR (observational NEAR/1 (study OR studies)) OR ((epidemiologic NEAR/1 (study OR studies)):ab,ti) OR (('cross sectional' NEAR/1 (study OR studies)):ab,ti)	6767914
#6	'clinical trial'/exp OR 'randomization'/exp OR 'single blind procedure'/exp OR 'double blind procedure'/exp OR 'crossover procedure'/exp OR 'placebo'/exp OR 'prospective study'/exp OR rct:ab,ti OR random*:ab,ti OR 'single blind':ab,ti OR 'randomised controlled trial':ab,ti OR 'randomized controlled trial'/exp OR placebo*:ab,ti	3302394
#5	'meta analysis'/exp OR 'meta analysis (topic)'/exp OR metaanaly*:ti,ab OR 'meta analy*':ti,ab OR metanaly*:ti,ab OR 'systematic review'/de OR 'cochrane database of systematic reviews'/jt OR prisma:ti,ab OR prospero:ti,ab OR (((systemati* OR scoping OR umbrella OR 'structured literature') NEAR/3 (review* OR overview*)):ti,ab) OR ((systemic* NEAR/1 review*):ti,ab) OR (((systemati* OR literature OR database* OR 'data base*') NEAR/10 search*):ti,ab) OR (((structured OR comprehensive* OR systemic*) NEAR/3 search*):ti,ab) OR (((literature NEAR/3 review*):ti,ab) AND (search*:ti,ab OR database*:ti,ab OR 'data base*':ti,ab)) OR (('data extraction':ti,ab OR 'data source*':ti,ab) AND 'study selection':ti,ab) OR ('search strategy':ti,ab AND 'selection criteria':ti,ab) OR ('data source*':ti,ab AND 'data synthesis*':ti,ab) OR medline:ab OR pubmed:ab OR embase:ab OR cochrane:ab OR (((critical OR rapid) NEAR/2 (review* OR overview* OR synthes*)):ti) OR (((critical* OR rapid*) NEAR/3 (review* OR overview* OR synthes*)):ab) AND (search*:ab OR database*:ab OR 'data base*':ab)) OR metasyntes*:ti,ab OR 'meta syntes*':ti,ab	733409
#4	#3 NOT ('conference abstract'/it OR 'editorial'/it OR 'letter'/it OR 'note'/it) NOT (('animal'/exp OR 'animal experiment'/exp OR 'animal model'/exp OR 'nonhuman'/exp) NOT 'human'/exp)	232
#3	#1 AND #2	284
#2	'advance care planning'/exp OR 'advanced cancer'/exp OR 'aged hospital patient'/exp OR 'alzheimer disease'/exp OR 'amyotrophic lateral sclerosis'/exp OR 'elderly care'/exp OR 'degenerative disease'/exp/mj OR 'duchenne muscular dystrophy'/exp OR 'frail elderly'/exp OR 'frontotemporal dementia'/exp OR 'geriatrics'/exp OR 'geriatric patient'/exp OR 'hospice'/exp OR 'hospice care'/exp OR 'institutionalized elderly'/exp OR 'metastasis'/exp OR 'multiple sclerosis'/exp OR 'neurodegeneration with brain iron accumulation'/exp OR 'palliative therapy'/exp OR 'parkinson disease'/exp OR 'perry syndrome'/exp OR 'pick presenile dementia'/exp OR 'prion disease'/exp OR 'senile dementia'/exp OR 'striatonigral degeneration'/exp OR 'subacute combined degeneration'/exp OR 'synucleinopathy'/exp OR 'tauopathy'/exp OR	2779535

	'terminal care'/de OR 'terminally ill patient'/exp OR 'very elderly'/exp OR 'wilson disease'/exp OR 'palliat*':ti,ab,kw OR 'reduced life expectanc*':ti,ab,kw OR 'end of life':ti,ab,kw OR 'terminally ill':ti,ab,kw OR 'terminal care':ti,ab,kw OR 'terminally sick':ti,ab,kw OR 'hospice*':ti,ab,kw OR 'terminal stage':ti,ab,kw OR 'advance* care*':ti,ab,kw OR 'advanced disease':ti,ab,kw OR 'advanced illness':ti,ab,kw OR 'life-limiting':ti,ab,kw OR 'metasta*':ti,kw OR (('end stage' OR advanced) NEAR/5 (kidney OR renal OR ckd OR 'respiratory disease' OR 'chronic obstructive pulmonary disease' OR 'heart failure' OR 'cancer' OR neoplasm* OR carcinoma OR liver)):ti,ab,kw) OR frail*:de,ab,ti OR geriatri*:de,ab,ti OR ((oldest NEXT/1 old*):de,ab,ti) OR senium:de,ab,ti OR ((very NEXT/1 old*):de,ab,ti) OR septuagenarian*:de,ab,ti OR octagenarian*:de,ab,ti OR octogenarian*:de,ab,ti OR nonagenarian*:de,ab,ti OR centarian*:de,ab,ti OR centenarian*:de,ab,ti OR supercentenarian*:de,ab,ti OR 'degenerative disease':ti,kw OR 'neurodegenerative disease':ti,kw OR 'pick complex':ti,kw OR 'pick`s complex':ti,kw OR 'hallervorden spatz disease':ti,kw OR 'hallervorden spatz syndrome':ti,kw OR 'nbia disorder':ti,kw OR 'neurodegeneration with brain iron accumulation':ti,kw OR 'pantothenate kinase associated neurodegeneration':ti,kw OR 'perry syndrome':ti,kw OR parkinson:ti,kw OR 'senile confusion':ti,kw OR 'senile psychosis':ti,kw OR 'nigroneostriatal degeneration':ti,kw OR 'nigrostriatal degeneration':ti,kw OR 'striatonigral degeneration':ti,kw OR 'strionigral degeneration':ti,kw OR 'synucleinopathy':ti,kw OR 'tauopathy':ti,kw OR 'wilson disease':ti,kw OR 'degeneratio hepato lenticularis':ti,kw OR 'hepatocerebral degeneration':ti,kw OR 'hepatolenticular degeneration':ti,kw OR 'hepatolenticular syndrome':ti,kw OR 'morbus wilson':ti,kw OR 'progressive lenticular degeneration':ti,kw OR 'wilson degeneration':ti,kw OR 'wilson syndrome':ti,kw OR 'chariot disease':ti,kw OR 'disseminated sclerosis':ti,kw OR 'insular sclerosis':ti,kw OR 'multiple sclerosis':ti,kw OR 'sclerosis multiplex':ti,kw OR 'lou gehrig disease':ti,kw OR 'lou gehrig`s disease':ti,kw OR 'amyotrophic lateral sclerosis':ti,kw OR duchenne:ti,kw	
#1	'halitosis'/exp OR 'bad breath':ti,ab,kw OR 'breath odor':ti,ab,kw OR 'breath odour':ti,ab,kw OR 'fedor oris':ti,ab,kw OR 'foetor ex ore':ti,ab,kw OR 'halitosis':ti,ab,kw OR 'oral odor':ti,ab,kw OR 'oral odour':ti,ab,kw	4391

Ovid/Medline

#	Searches	Results
11	3 not 8 not 9 not 10 Overige	50
10	(3 and (6 or 7)) not 8 not 9 OBS	54
9	(3 and 5) not 8 Clinical trials	25
8	3 and 4 SR	13
7	Case-control Studies/ or clinical trial, phase ii/ or clinical trial, phase iii/ or clinical trial, phase iv/ or comparative study/ or control groups/ or controlled before-after studies/ or controlled clinical trial/ or double-blind method/ or historically controlled study/ or matched-pair analysis/ or single-blind method/ or (((control or controlled) adj6 (study	5505636

	or studies or trial)) or (compar* adj (study or studies)) or ((control or controlled) adj1 active) or "open label*" or ((double or two or three or multi or trial) adj (arm or arms)) or (allocat* adj10 (arm or arms)) or placebo* or "sham-control*" or ((single or double or triple or assessor) adj1 (blind* or masked)) or nonrandom* or "non-random*" or "quasi-experiment*" or "parallel group*" or "factorial trial" or "pretest posttest" or (phase adj5 (study or trial)) or (case* adj6 (matched or control*)) or (match* adj6 (pair or pairs or cohort* or control* or group* or healthy or age or sex or gender or patient* or subject* or participant*)) or (propensity adj6 (scor* or match*))) .ti,ab,kf. or (confounding adj6 adjust*).ti,ab. or (versus or vs or compar*).ti. or ((exp cohort studies/ or epidemiologic studies/ or multicenter study/ or observational study/ or seroepidemiologic studies/ or (cohort* or 'follow up' or followup or longitudinal* or prospective* or retrospective* or observational* or multicent* or 'multi-cent*' or consecutive*).ti,ab,kf.) and ((group or groups or subgroup* or versus or vs or compar*).ti,ab,kf. or ('odds ratio*' or 'relative odds' or 'risk ratio*' or 'relative risk*' or aor or arr or rrr).ab. or ("OR" or "RR") adj6 CI).ab.))	
6	Epidemiologic studies/ or case control studies/ or exp cohort studies/ or Controlled Before-After Studies/ or Case control.tw. or cohort.tw. or Cohort analy\$.tw. or (Follow up adj (study or studies)).tw. or (observational adj (study or studies)).tw. or Longitudinal.tw. or Retrospective*.tw. or prospective*.tw. or consecutive*.tw. or Cross sectional.tw. or Cross-sectional studies/ or historically controlled study/ or interrupted time series analysis/ [Onder exp cohort studies vallen ook longitudinale, prospectieve en retrospectieve studies]	4526651
5	exp clinical trial/ or randomized controlled trial/ or exp clinical trials as topic/ or randomized controlled trials as topic/ or Random Allocation/ or Double-Blind Method/ or Single-Blind Method/ or (clinical trial, phase i or clinical trial, phase ii or clinical trial, phase iii or clinical trial, phase iv or controlled clinical trial or randomized controlled trial or multicenter study or clinical trial).pt. or random*.ti,ab. or (clinic* adj trial*).tw. or ((singl* or doubl* or treb* or tripl*) adj (blind\$3 or mask\$3)).tw. or Placebos/ or placebo*.tw.	2630266
4	meta-analysis/ or meta-analysis as topic/ or (metaanaly* or meta-analy* or metanaly*).ti,ab,kf. or systematic review/ or cochrane.jw. or (prisma or prospero).ti,ab,kf. or ((systemati* or scoping or umbrella or "structured literature") adj3 (review* or overview*).ti,ab,kf. or (systemic* adj1 review*).ti,ab,kf. or ((systemati* or literature or database* or data-base*) adj10 search*).ti,ab,kf. or ((structured or comprehensive* or systemic*) adj3 search*).ti,ab,kf. or ((literature adj3 review*) and (search* or database* or data-base*).ti,ab,kf. or ("data extraction" or "data source*") and "study selection").ti,ab,kf. or ("search strategy" and "selection criteria").ti,ab,kf. or ("data source*" and "data synthesis").ti,ab,kf. or (medline or pubmed or embase or cochrane).ab. or ((critical or rapid) adj2 (review* or overview* or synthes*).ti. or (((critical* or rapid*) adj3 (review* or overview* or synthes*)) and (search* or database* or data-base*).ab. or (metasynthes* or meta-synthes*).ti,ab,kf. or exp Guideline/ or review/ or guideline*.ti,ab,kf. or guidance.ti,ab,kf. or review.ti,kf.	4170939
3	(1 and 2) not ((exp animals/ or exp models, animal/) not humans/) not (letter/ or comment/ or editorial/)	142
2	Terminal Care/ or Hospice Care/ or "Hospice and Palliative Care Nursing"/ or Terminally Ill/ or exp Neoplasm Metastasis/ or exp Advance Care Planning/ or exp Palliative Care/ or exp "Aged, 80 and over"/ or exp Frail Elderly/ or Alzheimer Disease/ or Amyotrophic Lateral Sclerosis/ or exp Neurodegenerative Diseases/ or Muscular Dystrophy, Duchenne/ or exp Dementia/ or exp Geriatrics/ or exp Multiple Sclerosis/ or Palliative Medicine/ or exp Parkinsonian Disorders/ or exp Prion Diseases/ or Striatonigral Degeneration/ or Synucleinopathies/ or palliat*.ti,ab,kf. or reduced life expectanc*.ti,ab,kf. or end of life.ti,ab,kf. or terminally ill.ti,ab,kf. or terminal care.ti,ab,kf. or terminally sick.ti,ab,kf. or hospice*.ti,ab,kf. or terminal stage.ti,ab,kf. or advance* care*.ti,ab,kf. or advanced disease.ti,ab,kf. or advanced illness.ti,ab,kf. or life-limiting.ti,ab,kf. or metasta*.ti,kf. or ((end stage or advanced) adj5 (kidney or renal or ckd or respiratory disease or chronic obstructive pulmonary disease or heart failure or cancer or neoplasm* or carcinoma or liver)).ti,ab,kf. or frail*.ti,ab,kf. or geriatric*.ti,ab,kf. or (oldest adj1 old*).ti,ab,kf. or senium.ti,ab,kf. or (very adj1 old*).ti,ab,kf. or septuagenarian*.ti,ab,kf. or octagenarian*.ti,ab,kf. or	2264409

	octogenarian*.ti,ab,kf. or nonagenarian*.ti,ab,kf. or centarian*.ti,ab,kf. or centenarian*.ti,ab,kf. or supercentenarian*.ti,ab,kf. or degenerative disease.ti,kf. or neurodegenerative disease.ti,kf. or pick complex.ti,kf. or hallervorden spatx disease.ti,kf. or hallervorden spatx syndrome.ti,kf. or nbia disorder.ti,kf. or neurodegeneration with brain iron accumulation.ti,kf. or pantothenate kinase associated neurodegeneration.ti,kf. or perry syndrome.ti,kf. or parkinson.ti,kf. or senile confusion.ti,kf. or senile psychosis.ti,kf. or nigroneostriatal degeneration.ti,kf. or nigrostriatal degeneration.ti,kf. or striatonigral degeneration.ti,kf. or strionigral degeneration.ti,kf. or synucleinopathy.ti,kf. or tauopathy.ti,kf. or wilson disease.ti,kf. or degeneratio hepato lenticularis.ti,kf. or hepatocerebral degeneration.ti,kf. or hepatolenticular degeneration.ti,kf. or hepatolenticular syndrome.ti,kf. or morbus wilson.ti,kf. or progressive lenticular degeneration.ti,kf. or wilson degeneration.ti,kf. or wilson syndrome.ti,kf. or chariot disease.ti,kf. or disseminated sclerosis.ti,kf. or insular sclerosis.ti,kf. or multiple sclerosis.ti,kf. or sclerosis multiplex.ti,kf. or lou gehrig disease.ti,kf. or amyotrophic lateral sclerosis.ti,kf. or duchenne.ti,kf.	
1	Halitosis/ or bad breath.ti,ab,kf. or fetor oris.ti,ab,kf. or foetor ex ore.ti,ab,kf. or halitosis.ti,ab,kf. or ((breath or oral) adj3 (odor or odour or malodor or malodour)).ti,ab,kf.	2696

Tabel 1. Resultaten van zoekactie van onderzoeksvraag UV6

Database	Aantal
Embase	284
Ovid/Medline	142
Totaal aantal resultaten	426
Aantal geëxcludeerd (dubbelen)	58
Totaal aantal unieke resultaten	368

Tabel 2. Overzicht van geëxcludeerde studies gebaseerd op beoordeling van de volledige tekst van onderzoeksvraag UV6

Referentie	Reden voor exclusie
Jones JA, Chavarri-Guerra Y, Corrêa LBC, Dean DR, Epstein JB, Fregnani ER, Lee J, Matsuda Y, Mercadante V, Monsen RE, Rajmakers NJH, Saunders D, Soto-Perez-de-Celis E, Sousa MS, Tonkaboni A, Vissink A, Yeoh KS, Davies AN. MASCC/ISOO expert opinion on the management of oral problems in patients with advanced cancer. Support Care Cancer. 2022 Nov;30(11):8761-8773. doi: 10.1007/s00520-022-07211-2. Epub 2022 Jun 18. PMID: 35717462; PMCID: PMC9633484.	Verkeerde design
Gonçalves MLL, Kalil Bussadori S, Dadalti Fragoso Y, da Silva VVB, Melo Deana A, da Mota ACC, Horácio Pinto E, Horliana ACR, Miranda França C. Effect of photodynamic therapy in the reduction of halitosis in patients with multiple sclerosis: clinical trial. J Breath Res. 2017 Oct 27;11(4):046006. doi: 10.1088/1752-7163/aa8209. PMID: 28742057.	Verkeerde design
Kim JO, Kim NC. [Effects of 4% hypertonic saline solution mouthwash on oral health of elders in long term care facilities]. J Korean Acad Nurs. 2014 Feb;44(1):13-20. Korean. doi: 10.4040/jkan.2014.44.1.13. PMID: 24637282.	Alleen beschikbaar in Koreaans
de Oliveira VM, de Lucena SC, Garcia RC, Del Bel Cury AA. Effect of a denture cleanser on the concentration of volatile sulphur compounds and denture biofilm in institutionalised elderly. Gerodontology. 2011 Jun;28(2):134-9. doi: 10.1111/j.1741-2358.2009.00341.x. Epub 2009 Sep 22. PMID: 19780843.	Verkeerde design

Bijlage Onderzoekskarakteristieken UV6 Slechte adem (6.2)

Author, publication year: Yonezawa 2003						
Study characteristics	Patient characteristics	Intervention (I)	Comparison / control (C)	Follow-up	Outcome measures and effect size	Comments
Type of study: RCT Setting: Nursing home Country: Japan Source of funding: Not reported	<u>Inclusion criteria:</u> - 65+ years with care needs - Can't take food orally - Stable systemic conditions without fever <u>Exclusion criteria:</u> - Use of antibacterial, antifungal drugs, steroids or any drugs which affects saliva secretion, for one month before study <u>N total at baseline:</u> 100 Baseline characteristics only available on subjects that completed follow-up: I1: 28 I2: 13 I3: 15 C: 28 <u>Important prognostic factors:</u> <u>Age 85+ years (%)</u> : I1: 50.0% I2: 69.2% I3: 60.0% C: 67.9% <u>Sex, male (%)</u> : I1: 28.6% I2: 23.1% I3: 26.7% C: 10.7% According to the study baseline differences were not significant	I1: Daily oral care using sponge brushes for two weeks I2: Oral care using sponge brushes every other day for two weeks I3: Continuous oral care using brushes for oral mucosa for two weeks	Care as usual	<u>Length of follow-up:</u> 2 weeks <u>Loss-to-follow-up:</u> 16 (16%) Reasons: being hospitalized (n=3), stayed home or were out (n=4), refused to be included after entry (n=3), and samples insufficient (n=6)	<u>Volatile sulphur compounds concentration before care:</u> I1: 85.0 (SD 162.0) I2: 18.7 (SD 35.9) I3: 31.9 (SD 74.6) C: 93.7 (154.4) <u>Volatile sulphur compounds concentration after two weeks:</u> I1: 36.6 (SD 102.0) I2: 30.2 (SD 60.5) I3: 23.6 (SD 47.8) C: 103.11 (SD 157.4) The differences in groups were not statistically significant.	Other outcomes are reported in the article but not relevant to this chapter.

Author, publication year: Chen 2019

Study characteristics	Patient characteristics	Intervention (I)	Comparison / control (C)	Follow-up	Outcome measures and effect size	Comments
Type of study: Non-RCT Setting: Hospital Country: Taiwan Source of funding: Chang Gung Memorial Hospital	<u>Inclusion criteria:</u> - 65 years or older - Unable to cleanse the oral cavity <u>Exclusion criteria:</u> - Having a removable denture - Had an operation or treatment for oral cancer within 1 year <u>N total at baseline:</u> I1: 40 I2: 40 C: 40 <u>Important prognostic factors:</u> <i>Age, mean (SD):</i> I1: 81.4 (5.9) I2: 79.5 (7.2) C: 80.0 (5.5) <i>Sex, male (%):</i> I1: 14 (35.0) I2: 21 (52.5) C: 17 (42.5) <i>Nasogastric tube (%):</i> I1: 26 (65) I2: 27 (67.5) C: 29 (72.5)	I1: Boiled water mouth rinse during tooth brushing I2: Normal saline mouth rinse during tooth brushing	Chlorhexidine mouth rinse during tooth brushing	<u>Length of follow-up:</u> 10 days <u>Loss-to-follow-up:</u> None.	<i>Odor evaluation scale at baseline, mean (SD):</i> I1: 4.0 (0.6) I2: 3.6 (1.1) C: 3.9 (0.7) <i>Odor evaluation scale after 7 days, mean (SD):</i> I1: 1.6 (0.6) I2: 1.8 (0.4) C: 2.0 (0.6) <i>Odor evaluation scale after 10 days, mean (SD):</i> I1: 1.13 (0.3) I2: 1.2 (0.4) C: 1.2 (0.4) There was a significant difference for Time x Solutions (F=3.97, p=0.002).	Other outcomes are reported in the article but not relevant to this chapter.

Author, publication year: Hur 2007						
Study characteristics	Patient characteristics	Intervention (I)	Comparison / control (C)	Follow-up	Outcome measures and effect size	Comments
Type of study: Non-RCT, cross-over Setting: Intensive Care Country: South-Korea Source of funding: Korean government	<u>Inclusion criteria:</u> - Intensive care patient - Could take part in two sessions over two days - Fasting for at least three days <u>Exclusion criteria:</u> - Impairment of cognitive ability	Essential oil solution (mixture of tea tree, peppermint and lemon) used during cleaning of the mouth.	Tantum (benzydamine hydrochloride) used during cleaning of the mouth	<u>Length of follow-up:</u> 1 hour <u>Loss-to-follow-up:</u> Not reported	<i>Visual analogue scale (VAS):</i> Essential oil: 1.5 (pre-treatment), 0.0 (after 1 hour), p<0.01 Tantum: 2.0 (pre-treatment), 1.0 (after 1 hour), not significant	

	<p><u>N total at baseline:</u> 32</p> <p><u>Important prognostic factors:</u> Age, mean (SD): 53 (19)</p>				<p>Odour level differed significantly between the two sessions after 1 hour (p<0.001).</p> <p><i>Volatile sulphur compounds:</i> Essential oil: 70.8 (pre-treatment), 48.5 (after 1 hour), p<0.01 Tantum: 71.0 (pre-treatment), 62.0 (after 1 hour), p<0.01</p> <p>VSC differed significantly after 1 hour between both groups (p<0.05).</p>	
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Author, publication year: Nam 2016

Study characteristics	Patient characteristics	Intervention (I)	Comparison / control (C)	Follow-up	Outcome measures and effect size	Comments
<p>Type of study: Non-RCT</p> <p>Setting: Nursing homes</p> <p>Country: South-Korea</p> <p>Source of funding: Daejeon Health Science College</p>	<p><u>Inclusion criteria:</u> - 65 years or older living in nursing home</p> <p><u>Exclusion criteria:</u> - Not able to communicate with words - Signs of temporomandibular disorder - Diagnosed with dementia, head and neck trauma, radiation therapy, mouth breathing - Individuals taking medicines, such as antidepressants, sleeping pills, sedatives, antihistamines and cardiovascular drugs</p> <p><u>N total at baseline:</u> Intervention: 25 Control: 21</p> <p><u>Important prognostic factors:</u> Age, mean (SD) I: 79.3 (6.4) C: 85.0 (6.1)</p> <p><u>Sex, male (%):</u></p>	<p>Oral gymnastics consisting of 25 minutes of moving and stretching the intra and extra circumoral muscles (including lips, tongue, gums, soft/hard palate, cheeks, etc.), six times per week for four weeks.</p>	<p>Daily life as usual</p>	<p><u>Length of follow-up:</u> 4 weeks</p> <p><u>Loss-to-follow-up:</u> N=5 (1 hospitalized, 4 withdrew)</p>	<p><i>Volatile sulphur compounds:</i> Oral gymnastics group: 70.2 (pre-intervention), 62.5 (after 4 weeks) Control: 67.8 (pre-intervention), 79.9 (after 4 weeks)</p> <p>The differences between both groups at 4 weeks was statistically significant (p<0.001)</p>	<p>Other outcomes are reported in the article but not relevant to this chapter.</p>

	I: 5 (23.8) C: 4 (20.0) <i>Dentures (%)</i> : I: 13 (61.9) C: 14 (70.0) <i>Experience bad breath (%)</i> : I: 7 (33.3) C: 9 (45.0)					
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Author, publication year: Tashiro 2011						
Study characteristics	Patient characteristics	Intervention (I)	Comparison / control (C)	Follow-up	Outcome measures and effect size	Comments
Type of study: Non-RCT, cross-over Setting: Nursing home Country: Japan Source of funding: Matsumoto Dental University	<u>Inclusion criteria</u> : - Totally dependent nursing home residents - Difficulty with self-brushing - 10 or more remaining teeth <u>Exclusion criteria</u> : - Dentures <u>N total at baseline</u> : N=12 <u>Important prognostic factors</u> : <i>Age, mean (SD)</i> : 80.2 (6.4) <i>Sex, male (%)</i> : 3 (25)	I1: Tongue coat removal using a sponge brush for 5 days I2: Wiping the oral mucosa with a gargling solution containing chlorhexidine gluconate for 5 days	Oral cleaning by toothbrush alone (5 mins) for 5 days	<u>Length of follow-up</u> : 6 days <u>Loss-to-follow-up</u> : Not reported <u>Incomplete outcome data</u> : Not reported	Malodour measured with the Organoleptic examination. Smell decreased significantly after all three interventions. I1: zero patients with no smell before intervention, 5 patients with no smell after intervention I2: three patients with no smell before intervention, 6 patients with no smell after intervention C: zero patients with no smell before intervention, 8 patients with no smell after intervention Group differences not tested	Other outcomes are reported in the article but not relevant to this chapter.

Risk of bias tabel

Author, publication year	Random sequence generation (selection bias)	Allocation concealment (selection bias)	Blinding of patient and personnel (performance bias)	Blinding of outcome assessor (detection bias)	Follow-up and ITT or per protocol analysis (attrition bias)	Selective reporting	Other bias

Yonezawa 2003	Unclear <i>Method of randomization not reported</i>	Unclear <i>Method of randomization not reported</i>	High risk <i>Blinding not possible.</i>	Unclear <i>Blinding not reported.</i>	High risk <i>Outcome seems selective</i>	Unclear <i>Trial not registered</i>	High risk <i>Likely underpowered</i>
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GRADE tabellen

Daily oral care using sponge brushes for two weeks vs oral care using sponge brushes every other day for two weeks vs continuous oral care using brushes for oral mucosa for two weeks vs usual care

Quality assessment							No of patients				Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Daily sponge brush	Sponge brush every other day	Mucosa brush	Usual care	Relative (95%CI)	Absolute	
Volatile sulphur compounds													
1	RCT	Very serious ¹	Not serious	Not serious	Serious ²	None	28	13	14	28		I1: 36.6 (SD 102.0) I2: 30.2 (SD 60.5) I3: 23.6 (SD 47.8) C: 103.11 (SD 157.4)	VERY LOW

¹ High risk of bias due to method of randomization, loss-to-follow-up and lack of blinding

² Imprecision due to small sample size

Tongue coat removal using a sponge brush vs wiping the oral mucosa with a gargling solution containing chlorhexidine gluconate vs oral care with a toothbrush

Quality assessment							No of patients			Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Sponge brush	Wiping	Toothbrush	Relative (95%CI)	Absolute	
Smell (organoleptic examination)												
1	NRCT, cross-over	Very serious ¹	Not serious	Not serious	Serious ²	None	12	12	12		Smell decreased significantly in all groups (see table)	VERY LOW

¹ High risk of bias due to lack of randomization, lack of blinding of outcome assessors, and lack of statistical analyses

² Imprecision due to small sample size

Boiled water mouth rinse during tooth brushing vs normal saline mouth rinse during tooth brushing vs chlorhexidine mouth rinse during brushing

Quality assessment	No of patients	Effect
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No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Boiled water	Normal saline	Chlorhexidine	Relative (95%CI)	Absolute	Quality
Odour evaluation scale												
1	NRCT	Very serious ¹	Not serious	Not serious	Not serious ²	None	40	40	40		There was a significant difference for Time x Solutions (F=3.97, p=0.002).	LOW

¹ High risk of bias due to lack of randomization, lack of using a validated outcome measure and lack of details on sample selection

Essential oil solution used during cleaning of the mouth vs Tantum

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Essential oil	Tantum	Relative (95%CI)	Absolute	
Visual Analogue Scale											
1	NRCT, cross-over	Very serious ¹	Not serious	Not serious	Serious ²	None	32	32		Odour level differed significantly between the two sessions after 1 hour (p<0.001).	VERY LOW

Volatile sulphur compounds											
1	NRCT, cross-over	Very serious ¹	Not serious	Not serious	Serious ²	None	32	32		VSC differed significantly after 1 hour between both groups (p<0.05).	

¹ High risk of bias due to lack of randomization, lack of blinding of outcome assessors, lack of details on sample selection and study population

² Large confidence intervals

Oral gymnastics vs care as usual

Quality assessment							No of patients		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Oral gymnastics	Care as usual	Relative	Absolute	

								usual (95%CI)			
Volatile sulphur compounds											
1	NRCT	Serious ¹	Not serious	Not serious	Serious ²	None	21	20		The differences between both groups at 4 weeks was statistically significant (p<0.001)	LOW

¹ High risk of bias due to lack of randomization and loss-to-follow-up

² Confidence intervals not reported