Bijlagen bij de conceptrichtlijn beperking van progressie van myopie op de kinderleeftijd

Inhoud

5 # Module leefstijl

Risk of bias tables

Study reference (first author, publication year)	**Was the allocation sequence adequatelygenerated?** Definitely yes Probably yes Probably no Definitely no	**Was the allocation adequately conceaded?** Definitely yes Probably yes Probably no Definitely no	**Blinding: Wasknowledge of the allocated interventions adequately prevented?** **Were patients blinded?** **Were healthcare providers blinded?** **Were data collectors blinded?** **Were outcome assessors blinded?** **Were data analysts blinded?** Definitely yes Probably yes Probably no Definitely no	**Was loss to follow-up (missing outcome data)infrequent?** Definitely yes Probably yes Probably no Definitely no	**Are reports of the study free of selective outcomereporting?** Definitely yes Probably yes Probably no Definitely no	**Was the study apparently free of other problemsthat could put it at a risk of bias?** Definitely yes Probably yes Probably no Definitely no	**Overall risk of bias** **If applicable/necessary, per outcome measure** **LOW** **Some concerns** **HIGH**
He, 2015	Definitely yes; Reason: Central randomization with computer generated random numbers	Probably yes; Reason: allocation done by computer	Definitely no; Reason: due to study design, masking was not feasible	Definitely no; Reason: Loss to follow-up was frequent in intervention and control group. No adequate imputation methods (multiple imputation) were used	Definitely yes Reason: All relevant outcomes were reported;	Definitely yes; Reason: No other problems noted	**LOW**
Wu, 2013	Unknown; Reason: not reported	Unknown; Reason: not reported	Unknown; Reason: not reported	Definitely yes; Reason: Loss to follow-up was infrequent in intervention and control group.	Definitely yes Reason: All relevant outcomes were reported;	Definitely yes; Reason: No other problems noted	Some concerns Reason: The method by which randomization took place is unknown.
Wu, 2018	Definitely yes; Reason: The random allocation sequence was generated by a	Probably yes; Reason: allocation	Definitely yes; Reason: Measurements were performed by	Definitely no; Reason: Loss to follow-up was frequent in intervention	Definitely yes Reason: All relevant outcomes were reported;	Definitely yes; Reason: No other	Some concerns Reason: Frequent loss to follow-up

	computer-based random number-producing algorithm and completed by a researcher not involved in the project to ensure an equal chance of a school being allocated to each group.	done by computer	ophthalmologists and trained research assistants who were blinded to intervention conditions.	and control group. No adequate imputation methods (multiple imputation) were used		problems noted	
Jin, 2015	Probably yes Reason: The method of randomization was not stated.	Unknown; Reason: not reported	Unknown; Reason: not reported	Definitely no; Reason: Loss to follow-up was frequent in intervention and control group. No adequate imputation methods (multiple imputation) were used	Definitely yes Reason: All relevant outcomes were reported;	Definitely yes; Reason: No other problems noted	Some concerns Reason: Frequent loss to follow-up
Yi and Li, 2011	Unknown Reason: Article in Chinese	Unknown Reason: Article in Chinese	Unknown Reason: Article in Chinese	Unknown Reason: Article in Chinese	Unknown Reason: Article in Chinese	Unknown Reason: Article in Chinese	Unknown Reason: Article in Chinese

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5 Table of excluded studies

Reference	Reasonforexclusion
Dhakal R, Shah R, Huntjens B, Verkicharla PK, Lawrenson JG. Time spent outdoors as an intervention for myopia prevention and control in children: an overview of systematic reviews. Ophthalmic Physiol Opt. 2022 May;42(3):545-558. doi: 10.1111/opo.12945. Epub 2022 Jan 24. PMID: 35072278; PMCID: PMC9305934.	Included participants with and without myopia. No subgroup analysis.
Dutheil F, Oueslati T, Delamarre L, Castanon J, Maurin C, Chiambaretta F, Baker JS, Ugbolue UC, Zak M, Lakbar I, Pereira B, Navel V. Myopia and Near Work: A Systematic Review and Meta-Analysis. Int J Environ Res Public Health. 2023 Jan 3;20(1):875. doi: 10.3390/ijerph20010875. PMID: 36613196; PMCID: PMC9820324.	No comparative studies included in meta-analysis
Eppenberger LS, Sturm V. The Role of Time Exposed to Outdoor Light for Myopia Prevalence and Progression: A Literature Review. ClinOphthalmol. 2020 Jul 2;14:1875-1890. doi: 10.2147/OPTH.S245192. PMID: 32669834; PMCID: PMC7337435.	No subgroup analysis of children with basline myopia
Foreman J, Salim AT, Praveen A, Fonseka D, Ting DSW, Guang He M, Bourne RRA, Crowston J, Wong TY, Dirani M. Association between digital smart device use and myopia: a systematic review and meta-analysis. Lancet Digit Health. 2021 Dec;3(12):e806-e818. doi: 10.1016/S2589-7500(21)00135-7. Epub 2021 Oct 5. PMID: 34625399.	Included studies does not meet PICO criteria. No children with myopia were included
Gupta S, Joshi A, Saxena H, Chatterjee A. Outdoor activity and myopia progression in children: A follow-up study using mixed-effects model. Indian J Ophthalmol. 2021 Dec;69(12):3446-3450. doi: 10.4103/ijo.IJO_3602_20. PMID: 34826972; PMCID: PMC8837331.	Non-comparativestudy
He X, Sankaridurg P, Wang J, Chen J, Naduvilath T, He M, Zhu Z, Li W, Morgan IG, Xiong S, Zhu J, Zou H, Rose KA, Zhang B, Weng R, Resnikoff S, Xu X. Time Outdoors in Reducing Myopia: A School-Based Cluster Randomized Trial with Objective Monitoring of Outdoor Time and Light Intensity. Ophthalmology. 2022 Nov;129(11):1245-1254. doi: 10.1016/j.ophtha.2022.06.024. Epub 2022 Jun 30. PMID: 35779695.	Included in Deng (2019)
Jones-Jordan LA, Sinnott LT, Cotter SA, Kleinstein RN, Manny RE, Mutti DO, Twelker JD, Zadnik K; CLEERE Study Group. Time outdoors, visual activity, and myopia progression in juvenile-onset myopes. Invest Ophthalmol Vis Sci. 2012 Oct 1;53(11):7169-75. doi: 10.1167/iovs.11-8336. PMID: 22977132; PMCID: PMC3474591.	Non-comparativestudy
Jones-Jordan LA, Sinnott LT, Graham ND, Cotter SA, Kleinstein RN, Manny RE, Mutti DO, Twelker JD, Zadnik K; CLEERE Study Group. The contributions of near work and outdoor activity to the correlation between siblings in the Collaborative Longitudinal Evaluation of Ethnicity and Refractive Error (CLEERE) Study. Invest Ophthalmol Vis Sci. 2014 Sep 9;55(10):6333-9. doi: 10.1167/iovs.14-14640. PMID: 25205866; PMCID: PMC4193758.	Non-comparativestudy
Karthikeyan SK, Ashwini DL, Priyanka M, Nayak A, Biswas S. Physical activity, time spent outdoors, and near work in relation to myopia prevalence, incidence, and progression: An overview of systematic reviews and meta-analyses. Indian J Ophthalmol. 2022 Mar;70(3):728-739. doi: 10.4103/ijo.IJO_1564_21. PMID: 35225506; PMCID: PMC9114537.	Included participants with and without myopia. No subgroup analysis.
Lanca C, Saw SM. The association between digital screen time and myopia: A systematic review. OphthalmicPhysiolOpt. 2020 Mar;40(2):216-229. doi: 10.1111/opo.12657. Epub 2020 Jan 13. PMID: 31943280.	Included participants with and without myopia. No subgroup analysis.
Li D, Min S, Li X. Is Spending More Time Outdoors Able to Prevent and Control Myopia in Children and Adolescents? A Meta-Analysis. OphthalmicRes. 2024;67(1):393-404. doi: 10.1159/000539229. Epub 2024 May 6. PMID: 38710180.	No comparative studies included in meta-analysis
Öner V, Bulut A, Oruç Y, Özgür G. Influence of indoor and outdoor activities on progression of myopia during puberty. Int Ophthalmol. 2016 Feb;36(1):121-125. doi: 10.1007/s10792-015-0091-5. Epub 2015 Jun 2. PMID: 26031792.	Non-comparativestudy

Read SA, Collins MJ, Vincent SJ. Light exposure and physical activity in myopic and emmetropic children. Optom Vis Sci. 2014 Mar;91(3):330-41. doi: 10.1097/OPX.0000000000000160. PMID: 24413273.	Non-comparativestudy
Sherwin JC, Reacher MH, Keogh RH, Khawaja AP, Mackey DA, Foster PJ. The association between time spent outdoors and myopia in children and adolescents: a systematic review and meta-analysis. Ophthalmology. 2012 Oct;119(10):2141-51. doi: 10.1016/j.ophtha.2012.04.020. Epub 2012 Jul 17. PMID: 22809757.	No comparative studies included in meta-analysis
Singh, P., Choudhary, P., Lakhtakia, S., & Singh, B. (2022). Effect of Outdoor Activity in daylight over Myopia Progression in Young People: A Longitudinal Study. Journal of PharmaceuticalNegativeResults, 13.	Non-comparativestudy
Suhr Thykjaer A, Lundberg K, Grauslund J. Physical activity in relation to development and progression of myopia - a systematic review. Acta Ophthalmol. 2017 Nov;95(7):651-659. doi: 10.1111/aos.13316. Epub 2016 Dec 14. PMID: 27966836.	Included participants with and without myopia. No subgroup analysis.
Williams KM, Kraphol E, Yonova-Doing E, Hysi PG, Plomin R, Hammond CJ. Early life factors for myopia in the British Twins Early Development Study. Br J Ophthalmol. 2019 Aug;103(8):1078-1084. doi: 10.1136/bjophthalmol-2018-312439. Epub 2018 Nov 6. PMID: 30401676; PMCID: PMC6661230.	Non-comparativestudy
Wu PC, Chen CT, Lin KK, Sun CC, Kuo CN, Huang HM, Poon YC, Yang ML, Chen CY, Huang JC, Wu PC, Yang IH, Yu HJ, Fang PC, Tsai CL, Chiou ST, Yang YH. Myopia Prevention and Outdoor Light Intensity in a School-Based Cluster Randomized Trial. Ophthalmology. 2018 Aug;125(8):1239-1250. doi: 10.1016/j.ophtha.2017.12.011. Epub 2018 Jan 19. PMID: 29371008.	Included in Deng (2019)
Xiong S, Sankaridurg P, Naduvilath T, Zang J, Zou H, Zhu J, Lv M, He X, Xu X. Time spent in outdoor activities in relation to myopia prevention and control: a meta-analysis and systematic review. Acta Ophthalmol. 2017 Sep;95(6):551-566. doi: 10.1111/aos.13403. Epub 2017 Mar 2. PMID: 28251836; PMCID: PMC5599950.	Included participants with and without myopia. No subgroup analysis.
Yi JH, Li RR. [Influence of near-work and outdoor activities on myopia progression in school children]. ZhongguoDang Dai Er Ke Za Zhi. 2011 Jan;13(1):32-5. Chinese. PMID: 21251384.	Article in Chinese

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5 Literature search strategy

Algemene informatie

Cluster/richtlijn:NOG Behandeling van progressieve myopie op kinderleeftijd	
Uitgangsvraag/modules:Module 8 Welke leefstijladviezen kunnen gegeven worden ter preventie en vertraging van progressie van myopie op de kinderleeftijd?	
Database(s):Embase.com, Ovid/Medline	Datum: 7 augustus 2024
Periode: geenrestrictie	Talen: geenrestrictie
Literatuurspecialist: Alies Oost	
BMI-zoekblokken: voor verschillende opdrachten wordt (deels) gebruik gemaakt van de zoekblokken van BMI-Online https://blocks.bmi-online.nl/ Deduplication: voor het ontdubbelen is gebruik gemaakt van http://dedupendnote.nl/	
Toelichting: Voor deze vraag is gezocht op de elementen: - myopie - (factoren voor) leefstijladvies →De sleutelartikelen worden gevonden met deze search, m.u.v. onderstaande (deze komt niet door de filters voor studydesign): *Light Intensity in Nursery Schools: A Possible Factor in Refractive Development/ Cohen Y., et al. Asia-Pacific journal of ophthalmology (Philadelphia, Pa.) 2022 11:1 (66-71)* →In overleg met de adviseur is ervoor gekozen om geen limitering toe te passen voor studies m.b.t. kinderen. →Er zal worden gescreend met behulp van ASreview.	
Te gebruiken voor richtlijntekst: In de databases Embase.com en Ovid/Medline is op 7augustus 2024 systematisch gezocht naar systematische reviews, RCTs en observationele studies over leefstijladvies bij myopie.De literatuurzoekactie leverde 2353 unieke treffers op.	

Zoekopbrengst

	EMBASE	**OVID/MEDLINE**	**Ontdubbeld**
SR	133	103	
RCT	547	409	
Observationele studies	1205	983	
Totaal	1885	1495	**2353**

10 **Zoekstrategie**

Embase.com

No.	**Query**	**Results**
#1	'myopia'/exp OR 'high myopia'/exp OR myopia*:ti,ab,kw OR myopy:ti,ab,kw OR myopic:ti,ab,kw OR nearsight*:ti,ab,kw OR shortsight*:ti,ab,kw OR (((near OR short) NEAR/3 sight*):ti,ab,kw) OR 'refraction error'/de OR (((refraction OR refractive) NEAR/3 (error* OR disorder*)):ti,ab,kw)	6086 7
#2	'lifestyle'/exp OR 'lifestyle modification'/exp OR 'light exposure'/exp OR 'light intensity'/exp OR 'sunlight'/exp OR 'environmental factor'/exp OR 'personal computer'/exp OR 'computer'/de OR 'computer addiction'/exp OR 'personal digital assistant'/exp OR 'mobile phone'/exp OR 'cell phone use'/exp OR 'smart device'/exp OR 'screen time'/exp OR 'social media'/exp OR 'video game'/exp OR lifestyle:ti,ab,kw OR 'life style':ti,ab,kw OR (((outdoor* OR outside) NEAR/3 (light OR exposure OR activit* OR promot* OR time)):ti,ab,kw) OR (((light* OR sunlight OR daylight OR photon) NEAR/3 (exposure OR intensit*)):ti,ab,kw) OR computer*:ti,ab,kw OR laptop*:ti,ab,kw OR tablet*:ti,ab,kw OR ipad*:ti,ab,kw OR smartphone*:ti,ab,kw OR phone*:ti,ab,kw OR cellphone*:ti,ab,kw OR iphone*:ti,ab,kw OR (((mobile OR smart OR digital) NEAR/3 (device* OR telephone*)):ti,ab,kw) OR smartdevice*:ti,ab,kw OR (((screen OR reading) NEAR/3 (time OR distance)):ti,ab,kw) OR screentime:ti,ab,kw OR 'near work':ti,ab,kw OR 'social media':ti,ab,kw OR 'social network*':ti,ab,kw OR facebook:ti,ab,kw OR instagram:ti,ab,kw OR snapchat:ti,ab,kw OR	136057 3

	tiktok:ti,ab,kw OR twitter:ti,ab,kw OR whatsapp:ti,ab,kw OR youtub*:ti,ab,kw OR (((video OR computer OR tv OR television) NEAR/3 (game* OR gaming)):ti,ab,kw) OR videogam*:ti,ab,kw OR computergam*:ti,ab,kw OR (((game OR gaming OR internet) NEAR/3 (addict* OR compulsive OR pathological OR problematic OR excessive)):ti,ab,kw)	
#3	#1 AND #2 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)	2829
#4	'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	10513533
#5	'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	4082393966
#6	'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)	8349363
#7	'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 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)))	15295253
#8	#3 AND #4- SR	133
#9	#3 AND #5 NOT #8- RCT	547
#10	#3 AND (#6 OR #7) NOT (#8 OR #9) - observationeel	1205
#11	#8 OR #9 OR #10	1885

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Ovid/Medline

#	Searches	Results
1	exp Myopia/ or myopia*.ti,ab,kf. or myopy.ti,ab,kf. or myopic.ti,ab,kf. or nearsight*.ti,ab,kf. or shortsight*.ti,ab,kf. or ((near or short) adj3 sight*).ti,ab,kf. or Refractive Errors/ or ((refraction or refractive) adj3 (error* or disorder*)).ti,ab,kf.	44550
2	Life Style/ or Healthy Lifestyle/ or Light/ or Sunlight/ or Environmental Exposure/ or Computers/ or Minicomputers/ or exp Microcomputers/ or exp Cell Phone/ or exp Screen Time/ or exp Social Media/ or exp Video Games/ or lifestyle.ti,ab,kf. or 'life style'.ti,ab,kf. or ((outdoor* or outside) adj3 (light or exposure or activit* or promot* or time)).ti,ab,kf. or ((light* or sunlight or daylight or photon) adj3 (exposure or intensit*)).ti,ab,kf. or computer*.ti,ab,kf. or laptop*.ti,ab,kf. or tablet*.ti,ab,kf. or ipad*.ti,ab,kf. or smartphone*.ti,ab,kf. or phone*.ti,ab,kf. or cellphone*.ti,ab,kf. or iphone*.ti,ab,kf. or ((mobile or smart or digital) adj3 (device* or telephone*)).ti,ab,kf. or smartdevice*.ti,ab,kf. or ((screen or reading) adj3 (time or distance)).ti,ab,kf. or screentime.ti,ab,kf. or 'near work'.ti,ab,kf. or 'social media'.ti,ab,kf. or 'social network*'.ti,ab,kf. or (facebook or instagram or snapchat or tiktok or twitter or whatsapp or youtub*).ti,ab,kf. or ((video or computer or tv or television) adj3 (game* or gaming)).ti,ab,kf. or videogam*.ti,ab,kf. or computergam*.ti,ab,kf. or ((game or gaming or internet) adj3 (addict* or compulsive or pathological or problematic or excessive)).ti,ab,kf.	1058697
3	(1 and 2) not (comment/ or editorial/ or letter/) not ((exp animals/ or exp models, animal/) not humans/)	2587
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.	7660075
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$3)).tw. or Placebos/ or placebo*.tw.	2761352
6	Epidemiologic studies/ or case control studies/ or exp cohort studies/ or Controlled Before-After Studies/ or Case control.tw. or cohort.tw. or Cohort analy$.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 vallenooklongitudinale, prospectieveenretrospectieve studies]	4796226
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 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	5755547979

	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.))	
8	3 and 4- SR	103
9	(3 and 5) not 8- RCT	409
10	(3 and (6 or 7)) not (8 or 9) - observationeel	983
11	8 or 9 or 10	1495

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5 Module atropine

Risk of bias tables

The risk of bias table is included in the network meta-analysis of Ha (2022).

Table of excluded studies

Reference	Reason for exclusion
Long H, Shi MH, Li X. Efficacy and safety of atropine in myopic children: A meta-analysis of randomized controlled trials. J Fr Ophtalmol. 2023 Oct;46(8):929-940. doi: 10.1016/j.jfo.2023.01.030. Epub 2023 May 3. PMID: 37147148.	NMA by Ha (2022) was included
Yam JC, Zhang XJ, Zhang Y, Yip BHK, Tang F, Wong ES, Bui CHT, Kam KW, Ng MPH, Ko ST, Yip WWK, Young AL, Tham CC, Chen LJ, Pang CP. Effect of Low-Concentration Atropine Eyedrops vs Placebo on Myopia Incidence in Children: The LAMP2 Randomized Clinical Trial. JAMA. 2023 Feb 14;329(6):472-481. doi: 10.1001/jama.2022.24162. Erratum in: JAMA. 2023 Apr 4;329(13):1123. doi: 10.1001/jama.2023.3989. PMID: 36786791; PMCID: PMC9929700.	Yam (2019) included in Ha (2022). Already a direct comparison between the concentrations atropine in Ha (2022).
Brennan NA, Toubouti YM, Cheng X, Bullimore MA. Efficacy in myopia control. Prog Retin Eye Res. 2021 Jul;83:100923. doi: 10.1016/j.preteyeres.2020.100923. Epub 2020 Nov 27. PMID: 33253901.	Publiced before april 2021 (search date Ha (2022))
Repka MX, Weise KK, Chandler DL, Wu R, Melia BM, Manny RE, Kehler LAF, Jordan CO, Raghuram A, Summers AI, Lee KA, Petersen DB, Erzurum SA, Pang Y, Lenhart PD, Ticho BH, Beck RW, Kraker RT, Holmes JM, Cotter SA; Pediatric Eye Disease Investigator Group. Low-Dose 0.01% Atropine Eye Drops vs Placebo for Myopia Control: A Randomized Clinical Trial. JAMA Ophthalmol. 2023 Aug 1;141(8):756-765. doi: 10.1001/jamaophthalmol.2023.2855. PMID: 37440213; PMCID: PMC10346510.	Already a direct comparison between the concentrations atropine in Ha (2022).
Sánchez-Tena MÁ, Ballesteros-Sánchez A, Martinez-Perez C, Alvarez-Peregrina C, De-Hita-Cantalejo C, Sánchez-González MC, Sánchez-González JM. Assessing the rebound phenomenon in different myopia control treatments: A systematic review. OphthalmicPhysiolOpt. 2024 Mar;44(2):270-279. doi: 10.1111/opo.13277. Epub 2024 Jan 9. PMID: 38193312.	Does not meet PICO criteria
Moriche-Carretero M, Revilla-Amores R, Gutiérrez-Blanco A, Moreno-Morillo FJ, Martinez-Perez C, Sánchez-Tena MÁ, Alvarez-Peregrina C. Five-year results of atropine 0.01% efficacy in the myopia control in a European population. Br J Ophthalmol. 2024 May 21;108(5):715-719. doi: 10.1136/bjo-2022-322808. PMID: 37268328.	Already a direct comparison between the concentrations atropine in Ha (2022).
Li Y, Yip M, Ning Y, Chung J, Toh A, Leow C, Liu N, Ting D, Schmetterer L, Saw SM, Jonas JB, Chia A, Ang M. Topical Atropine for Childhood Myopia Control: The Atropine Treatment Long-Term Assessment Study. JAMA Ophthalmol. 2024 Jan 1;142(1):15-23. doi: 10.1001/jamaophthalmol.2023.5467. PMID: 38019503; PMCID: PMC10690578.	Already a direct comparison between the concentrations atropine in Ha (2022).
Shih YF, Chen CH, Chou AC, Ho TC, Lin LL, Hung PT. Effects of different concentrations of atropine on controlling myopia in myopic children. J OculPharmacolTher. 1999 Feb;15(1):85-90. doi: 10.1089/jop.1999.15.85. PMID: 10048351.	Included in NMA by Ha (2022)
Shaminah, S. B., Ashiff, S. M., Lyu, F. A meta analysis on atropine controlling myopia progression in children 2019	Publiced before april 2021 (search date Ha (2022))
Chen C, Yao J. Efficacy and Adverse Effects of Atropine for Myopia Control in Children: A Meta-Analysis of Randomised Controlled Trials. J Ophthalmol. 2021 Dec 10;2021:4274572. doi: 10.1155/2021/4274572. PMID: 34925913; PMCID: PMC8683246.	Does not meet PICO criteria

Gong Q, Janowski M, Luo M, Wei H, Chen B, Yang G, Liu L. Efficacy and Adverse Effects of Atropine in Childhood Myopia: A Meta-analysis. JAMA Ophthalmol. 2017 Jun 1;135(6):624-630. doi: 10.1001/jamaophthalmol.2017.1091. PMID: 28494063; PMCID: PMC5710262.	Does not meet PICO criteria
Pineles SL, Kraker RT, VanderVeen DK, Hutchinson AK, Galvin JA, Wilson LB, Lambert SR. Atropine for the Prevention of Myopia Progression in Children: A Report by the American Academy of Ophthalmology. Ophthalmology. 2017 Dec;124(12):1857-1866. doi: 10.1016/j.ophtha.2017.05.032. Epub 2017 Jun 29. PMID: 28669492.	Publiced before april 2021 (search date Ha (2022))
Zhao C, Cai C, Ding Q, Dai H. Efficacy and safety of atropine to control myopia progression: a systematic review and meta-analysis. BMC Ophthalmol. 2020 Dec 7;20(1):478. doi: 10.1186/s12886-020-01746-w. PMID: 33287746; PMCID: PMC7720573.	Does not meet PICO criteria
Gan J, Li SM, Wu S, Cao K, Ma D, He X, Hua Z, Kang MT, Wei S, Bai W, Wang N. Varying Dose of Atropine in Slowing Myopia Progression in Children Over Different Follow-Up Periods by Meta-Analysis. Front Med (Lausanne). 2022 Jan 13;8:756398. doi: 10.3389/fmed.2021.756398. PMID: 35096861; PMCID: PMC8792607.	NMA by Ha (2022) was included
Hou P, Wu D, Nie Y, Wei H, Liu L, Yang G. Comparison of the efficacy and safety of different doses of atropine for myopic control in children: a meta-analysis. Front Pharmacol. 2023 Sep 11;14:1227787. doi: 10.3389/fphar.2023.1227787. PMID: 37767401; PMCID: PMC10520549.	NMA by Ha (2022) was included
Wei XL, Wu T, Dang KR, Hu KK, Lu XT, Gong M, Du YR, Hui YN, Tian XM, Du HJ. Efficacy and safety of atropine at different concentrations in prevention of myopia progression in Asian children: a systematic review and Meta-analysis of randomized clinical trials. Int J Ophthalmol. 2023 Aug 18;16(8):1326-1336. doi: 10.18240/ijo.2023.08.20. PMID: 37602338; PMCID: PMC10398521.	NMA by Ha (2022) was included
Song YY, Wang H, Wang BS, Qi H, Rong ZX, Chen HZ. Atropine in ameliorating the progression of myopia in children with mild to moderate myopia: a meta-analysis of controlled clinical trials. J OculPharmacolTher. 2011 Aug;27(4):361-8. doi: 10.1089/jop.2011.0017. Epub 2011 Jun 7. PMID: 21649523.	Publiced before april 2021 (search date Ha (2022))
Wang XY, Deng HW, Yang J, Zhu XM, Xiang FL, Tu J, Huang MX, Wang Y, Gan JH, Yang WH. The optimal atropine concentration for myopia control in Chinese children: a systematic review and network Meta-analysis. Int J Ophthalmol. 2024 Jun 18;17(6):1128-1137. doi: 10.18240/ijo.2024.06.19. PMID: 38895669; PMCID: PMC11144781.	NMA by Ha (2022) was included
LI, S. Y., Yang, Y. X., Yang, C., Yang, Z. Y., Xue, Y. X., & Feng, J. H. (2023). Meta-analysis of different concentrations of atropine eye drops in controlling myopia progression in children and adolescents. International Eye Science, 23(1), 96-102.	NMA by Ha (2022) was included
Zhao Y, Feng K, Liu RB, Pan JH, Zhang LL, Xu ZP, Lu XJ. Atropine 0.01% eye drops slow myopia progression: a systematic review and Meta-analysis. Int J Ophthalmol. 2019 Aug 18;12(8):1337-1343. doi: 10.18240/ijo.2019.08.16. PMID: 31456926; PMCID: PMC6694061.	Publiced before april 2021 (search date Ha (2022))
Puspita, I., Rahmah, M. N., Maharani, R. N., Patong, R. Y., Kamaruddin, M. I., EFFICACY OF ATROPINE EYE DROPS AS THERAPY OF PROGRESSIVE MYOPIA IN CHILDREN : A SYSTEMATIC REVIEW, 2024	Does not meet PICO criteria
Li FF, Yam JC. Low-Concentration Atropine Eye Drops for Myopia Progression. Asia Pac J Ophthalmol (Phila). 2019 Sep-Oct;8(5):360-365. doi: 10.1097/APO.0000000000000256. PMID: 31478936; PMCID: PMC6784858.	Publiced before april 2021 (search date Ha (2022))
Chia A, Chua WH, Cheung YB, Wong WL, Lingham A, Fong A, Tan D. Atropine for the treatment of childhood myopia: safety and efficacy of 0.5%, 0.1%, and 0.01% doses (Atropine for the Treatment of Myopia 2). Ophthalmology. 2012 Feb;119(2):347-54. doi: 10.1016/j.ophtha.2011.07.031. Epub 2011 Oct 2. PMID: 21963266.	Included in NMA by Ha (2022)

Surachatkumtonekul, T., Jutasompakorn, P., Wiriyaudomchart, S., Hokierti, K., & Sri-in, J. (2023). Efficacy of Atropine Eye Drops for Suppressing Myopia Progression in Thai Children. SirirajMedical Journal, 75(11), 794-799.	Retrospective cohort study
Lee CY, Sun CC, Lin YF, Lin KK. Effects of topical atropine on intraocular pressure and myopia progression: a prospective comparative study. BMC Ophthalmol. 2016 Jul 19;16:114. doi: 10.1186/s12886-016-0297-y. PMID: 27435576; PMCID: PMC4950753.	Publiced before april 2021 (search date Ha (2022))
Medghalchi A, Behboudi H, Akbari M, Moghadam RS, Kazemnejad E, Sabnan S. The Preventive Role of Atropine Eye Drops on Myopia Progression: A Double-Blind Randomized Clinical Trial. Int J Prev Med. 2023 Apr 26;14:45. doi: 10.4103/ijpvm.ijpvm_175_22. PMID: 37351034; PMCID: PMC10284217.	Already a direct comparison between the concentrations atropine in Ha (2022).
GU, Z. M., Lan, C. J., Zhong, W. Q., LI, X. Y., Xiang, X. L., &Liao, X. (2022). Meta-analysis of the effect of different concentrations of atropine inhibiting spherical equivalent degree and axial length of myopia in children. International Eye Science, 1671-1677.	NMA by Ha (2022) was included
Chia A, Lu QS, Tan D. Five-Year Clinical Trial on Atropine for the Treatment of Myopia 2: Myopia Control with Atropine 0.01% Eyedrops. Ophthalmology. 2016 Feb;123(2):391-399. doi: 10.1016/j.ophtha.2015.07.004. Epub 2015 Aug 11. PMID: 26271839.	Already a direct comparison between the concentrations atropine in Ha (2022).
Li FF, Zhang Y, Zhang X, Yip BHK, Tang SM, Kam KW, Young AL, Chen LJ, Tham CC, Pang CP, Yam JC. Age Effect on Treatment Responses to 0.05%, 0.025%, and 0.01% Atropine: Low-Concentration Atropine for Myopia Progression Study. Ophthalmology. 2021 Aug;128(8):1180-1187. doi: 10.1016/j.ophtha.2020.12.036. Epub 2021 Jan 8. PMID: 33422558.	Already a direct comparison between the concentrations atropine in Ha (2022).
Yam JC, Li FF, Zhang X, Tang SM, Yip BHK, Kam KW, Ko ST, Young AL, Tham CC, Chen LJ, Pang CP. Two-Year Clinical Trial of the Low-Concentration Atropine for Myopia Progression (LAMP) Study: Phase 2 Report. Ophthalmology. 2020 Jul;127(7):910-919. doi: 10.1016/j.ophtha.2019.12.011. Epub 2019 Dec 21. PMID: 32019700.	Yam (2019) included in Ha (2022). Already a direct comparison between the concentrations atropine in Ha (2022).
Li FF, Kam KW, Zhang Y, Tang SM, Young AL, Chen LJ, Tham CC, Pang CP, Yam JC. Differential Effects on Ocular Biometrics by 0.05%, 0.025%, and 0.01% Atropine: Low-Concentration Atropine for Myopia Progression Study. Ophthalmology. 2020 Dec;127(12):1603-1611. doi: 10.1016/j.ophtha.2020.06.004. Epub 2020 Jun 7. PMID: 32525048.	Publiced before april 2021 (search date Ha (2022))
Joachimsen L, Farassat N, Bleul T, Böhringer D, Lagrèze WA, Reich M. Side effects of topical atropine 0.05% compared to 0.01% for myopia control in German school children: a pilot study. Int Ophthalmol. 2021 Jun;41(6):2001-2008. doi: 10.1007/s10792-021-01755-8. Epub 2021 Feb 25. PMID: 33634343; PMCID: PMC8172502.	Observational case series
Chia A, Ngo C, Choudry N, Yamakawa Y, Tan D. Atropine Ophthalmic Solution to Reduce Myopia Progression in Pediatric Subjects: The Randomized, Double-Blind Multicenter Phase II APPLE Study. Asia Pac J Ophthalmol (Phila). 2023 Jul-Aug 01;12(4):370-376. doi: 10.1097/APO.0000000000000609. Epub 2023 May 10. PMID: 37523428.	The study compared concentrations of atropine that were too low.
Tran HDM, Sankaridurg P, Naduvilath T, Ha TTX, Tran TD, Jong M, Coroneo M, Tran YH. A Meta-Analysis Assessing Change in Pupillary Diameter, Accommodative Amplitude, and Efficacy of Atropine for Myopia Control. AsiaPac J Ophthalmol (Phila). 2021 Aug 27;10(5):450-460. doi: 10.1097/APO.0000000000000414. PMID: 34456234.	NMA by Ha (2022) was included
Fu A, Stapleton F, Wei L, Wang W, Zhao B, Watt K, Ji N, Lyu Y. Effect of low-dose atropine on myopia progression, pupil diameter and accommodative amplitude: low-dose atropine and myopia progression. Br J Ophthalmol. 2020 Nov;104(11):1535-1541. doi: 10.1136/bjophthalmol-2019-315440. Epub 2020 Feb 21. PMID: 32086237.	Included in NMA by Ha (2022)
Cui C, Li X, Lyu Y, Wei L, Zhao B, Yu S, Rong J, Bai Y, Fu A. Safety and efficacy of 0.02% and 0.01% atropine on controlling myopia progression: a 2-year	Already a direct comparison between the concentrations atropine in Ha (2022).

clinical trial. Sci Rep. 2021 Nov 15;11(1):22267. doi: 10.1038/s41598-021-01708-2. PMID: 34782708; PMCID: PMC8592985.	
Zhong, M., Lyu, Y., FU, A., Zhang, J., Wei, L., Zhao, B., & Wang, W. (2019). Effects of 0.01% and 0.02% atropine eye drops on pupil diameter and accommodation amplitude in myopic children: one-year randomized, double blind, controlled trail. Chinese Journal of Experimental Ophthalmology, 540-545.	Publiced before april 2021 (search date Ha (2022))
Tran HDM, Ha TTX, Tran YH, Coroneo M, Tran TD, Truong TU, Sankaridurg P. Impact of Various Concentrations of Low-Dose Atropine on Pupillary Diameter and Accommodative Amplitude in Children with Myopia. J OculPharmacolTher. 2024 May;40(4):232-239. doi: 10.1089/jop.2023.0173. Epub 2024 Apr 15. PMID: 38621178.	Atropine concentrations differ from Ha (2022)
Fu A, Stapleton F, Wei L, Wang W, Zhao B, Watt K, Yu S, Cui C, Lyu Y. Risk factors for rapid axial length elongation with low concentration atropine for myopia control. Sci Rep. 2021 Jun 3;11(1):11729. doi: 10.1038/s41598-021-88719-1. PMID: 34083576; PMCID: PMC8175344.	Reason?
Hu, B., Xiao, T., Liao, M., Chen, X., Zeng, X., Yi, S., Effects of atropine eye drops of different concentrations and administration frequencies on pupil diameter, accommodative amplitude, and tear film function in myopic children, 2024	Fulltextnotavailable
Wang M, Cui C, Sui Y, Yu SA, Ma JX, Fu AC. Effect of 0.02% and 0.01% atropine on astigmatism: a two-year clinical trial. BMC Ophthalmol. 2022 Apr 7;22(1):161. doi: 10.1186/s12886-022-02385-z. PMID: 35392841; PMCID: PMC8991778.	Did not meet PICO criteria
Zhang XJ, Zhang Y, Yip BHK, Kam KW, Tang F, Ling X, Ng MPH, Young AL, Wu PC, Tham CC, Chen LJ, Pang CP, Yam JC. Five-Year Clinical Trial of the Low-Concentration Atropine for Myopia Progression (LAMP) Study: Phase 4 Report. Ophthalmology. 2024 Sep;131(9):1011-1020. doi: 10.1016/j.ophtha.2024.03.013. Epub 2024 Mar 16. PMID: 38494130.	Yam (2019) included in Ha (2022). Already a direct comparison between the concentrations atropine in Ha (2022).
Yam JC, Jiang Y, Tang SM, Law AKP, Chan JJ, Wong E, Ko ST, Young AL, Tham CC, Chen LJ, Pang CP. Low-Concentration Atropine for Myopia Progression (LAMP) Study: A Randomized, Double-Blinded, Placebo-Controlled Trial of 0.05%, 0.025%, and 0.01% Atropine Eye Drops in Myopia Control. Ophthalmology. 2019 Jan;126(1):113-124. doi: 10.1016/j.ophtha.2018.05.029. Epub 2018 Jul 6. PMID: 30514630.	Included in NMA by Ha (2022)
Yam JC, Zhang XJ, Zhang Y, Wang YM, Tang SM, Li FF, Kam KW, Ko ST, Yip BHK, Young AL, Tham CC, Chen LJ, Pang CP. Three-Year Clinical Trial of Low-Concentration Atropine for Myopia Progression (LAMP) Study: Continued Versus Washout: Phase 3 Report. Ophthalmology. 2022 Mar;129(3):308-321. doi: 10.1016/j.ophtha.2021.10.002. Epub 2021 Oct 7. PMID: 34627809.	Did not meet PICO criteria
Yam JC, Jiang Y, Lee J, Li S, Zhang Y, Sun W, Yuan N, Wang YM, Yip BHK, Kam KW, Chan HN, Zhang XJ, Young AL, Tham CC, Cheung CY, Chu WK, Pang CP, Chen LJ. The Association of Choroidal Thickening by Atropine With Treatment Effects for Myopia: Two-Year Clinical Trial of the Low-concentration Atropine for Myopia Progression (LAMP) Study. Am J Ophthalmol. 2022 May;237:130-138. doi: 10.1016/j.ajo.2021.12.014. Epub 2021 Dec 21. PMID: 34942105.	Yam (2019) included in Ha (2022). Already a direct comparison between the concentrations atropine in Ha (2022).

5

5 Literature search strategy

Algemene informatie

Cluster/richtlijn: NOG De behandeling van progressieve myopie op kinderleeftijd	
Uitgangsvraag/modules:Module 2 Wat is het effect van de verschillende atropine concentraties op de remming van progressieve myopie?	
Database(s):Embase.com, Ovid/Medline	Datum: 16 juli 2024
Periode: geen restrictie	Talen: geen restrictie
Literatuurspecialist: Alies Oost	
BMI-zoekblokken: voor verschillende opdrachten wordt (deels) gebruik gemaakt van de zoekblokken van BMI-Online https://blocks.bmi-online.nl/ Deduplication: voor het ontdubbelen is gebruik gemaakt van http://dedupendnote.nl/	
Toelichting: Voor deze vraag is gezocht op de elementen: - myopie - atropine àDe sleutelartikelen worden gevonden met deze search. àIn overleg met de adviseur is ervoor gekozen om geen limitering voor kinderen toe te passen. àEr zal worden gescreend met behulp van ASreview.	
Te gebruiken voor richtlijntekst: In de databases Embase.com en Ovid/Medline is op 16juli 2024 systematisch gezocht naar systematische reviews, RCTs en observationele studies over atropine bij myopie.De literatuurzoekactie leverde 1696 unieke treffers op.	

Zoekopbrengst

	EMBASE	OVID/MEDLINE	Ontdubbeld
SR	120	71	
RCT	571	268	
Observationele studies	818	370	
Totaal	1509	709	**1696***

10 Zoekstrategie

Embase.com

No.	Query	Results
#1	'myopia'/exp OR 'high myopia'/exp OR myopia*:ti,ab,kw OR myopy:ti,ab,kw OR myopic:ti,ab,kw OR nearsight*:ti,ab,kw OR shortsight*:ti,ab,kw OR (((near OR short) NEAR/3 sight*):ti,ab,kw) OR 'refraction error'/de OR (((refraction OR refractive) NEAR/3 (error* OR disorder*)):ti,ab,kw)	60637
#2	'atropine'/exp OR 'atropin*':ti,ab,kw OR 'mydriatic agent'/exp OR mydriatic*:ti,ab,kw OR 'muscarinic receptor blocking agent'/exp OR ((muscarin* NEAR/3 (agent* OR antagonist* OR anti OR block* OR inhibit*)):ti,ab,kw) OR antimuscarin*:ti,ab,kw OR 'cholinergic receptor blocking agent'/exp OR (((cholinergic OR cholinolytic* OR parasympathetic OR acetylcholin*) NEAR/3 (agent* OR antagonist* OR anti OR block* OR inhibit*)):ti,ab,kw) OR parasympathicolytic*:ti,ab,kw OR parasympatholytic*:ti,ab,kw OR anticholinerg*:ti,ab,kw	451011
#3	#1 AND #2 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)	2190
#4	'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	1045576

	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	
#5	'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	4069542
#6	'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)	8318599
#7	'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 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)))	15242050
#8	#3 AND #4- SR	120
#9	#3 AND #5 NOT #8- RCT	571
#10	#3 AND (#6 OR #7) NOT (#8 OR #9) - observationeel	818
#11	#8 OR #9 OR #10	1509

5

Ovid/Medline

#	Searches	Results
1	exp Myopia/ or myopia*.ti,ab,kf. or myopy.ti,ab,kf. or myopic.ti,ab,kf. or nearsight*.ti,ab,kf. or shortsight*.ti,ab,kf. or ((near or short) adj3 sight*).ti,ab,kf. or Refractive Errors/ or ((refraction or refractive) adj3 (error* or disorder*)).ti,ab,kf.	44394

2	exp Atropine/ or 'atropin*'.ti,ab,kf. or exp Mydriatics/ or mydriatic*.ti,ab,kf. or exp Muscarinic Antagonists/ or (muscarin* adj3 (agent* or antagonist* or anti or block* or inhibit*)).ti,ab,kf. or antimuscarin*.ti,ab,kf. or Cholinergic Antagonists/ or ((cholinergic or cholinolytic* or parasympathetic or acetylcholin*) adj3 (agent* or antagonist* or anti or block* or inhibit*)).ti,ab,kf. or parasympathicolytic*.ti,ab,kf. or parasympatholytic*.ti,ab,kf. or anticholinerg*.ti,ab,kf.	183600
3	(1 and 2) not (comment/ or editorial/ or letter/) not ((exp animals/ or exp models, animal/) not humans/)	1142
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.	760293
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$3)).tw. or Placebos/ or placebo*.tw.	2752155
6	Epidemiologic studies/ or case control studies/ or exp cohort studies/ or Controlled Before-After Studies/ or Case control.tw. or cohort.tw. or Cohort analy$.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 vallenooklongitudinale, prospectieveenretrospectieve studies]	4778227
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 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.))	5738806
8	3 and 4- SR	71
9	(3 and 5) not 8- RCT	268
10	(3 and (6 or 7)) not (8 or 9) - observationeel	370
11	8 or 9 or 10	709

5

Module orthokeratologie

Risk of bias tabel

Study reference (first author, publication year)	**Was the allocation sequence adequately generated?** Definitely yes Probably yes Probably no Definitely no	**Was the allocation adequately concealed?** Definitely yes Probably yes Probably no Definitely no	**Blinding: Was knowledge of the allocated interventions adequately prevented?** **Were patients/healthcare providers/data collectors/outcome assessors/data analysts blinded?** Definitely yes Probably yes Probably no Definitely no	**Was loss to follow-up (missing outcome data) infrequent?** Definitely yes Probably yes Probably no Definitely no	**Are reports of the study free of selective outcome reporting?** Definitely yes Probably yes Probably no Definitely no	**Was the study apparently free of other problems that could put it at a risk of bias?** Definitely yes Probably yes Probably no Definitely no	**Overall risk of bias** **If applicable/necessary, per outcome measure** **LOW** **Some concerns** **HIGH**
Choi, 2023	Definitely yes Reason: The randomization was performed using a computer-generated random sequence.	**Probably no** Reason: No information.	**Definitely no** Reason: Only experimenters performing efficacy and safety assessments during follow-up visits were masked.	**Definitely no** Reason: Loss-to-follow-up was more than 10% in both groups.	Definitely yes Reason: All relevant outcomes were reported.	**Definitely no** Reason: Subject allocation ratio.	**HIGH**
Fang, 2022	Definitely yes Reason: An online resource was used to generate the random group	**Probably no** Reason: No information.	**Definitely no** Reason: Participants were not masked, one investigator was unmasked for enrolling the	**Definitely no** Reason: Loss-to-follow-up was more than 10% in the intervention group, and less	Probably yes Reason: No information in Methods section about reported	**Definitely no** Reason: Difference in baseline genders, the study is associated with inability to measure the	**HIGH**

	allocation sequence.		patients, generating the random allocation sequence, grouping, lens fitting, clinical aftercare, evaluating lens condition and recording data. The investigating optometrists were masked.	than 10% in the control group.	outcome measures.	refraction of the Ortho-K group, relatively short research cycle of 1 year, relatively small sample size.	
Zhu, 2023	**No information**	**Probably no** Reason: No information.	**Definitely no** Reason: The study was not double blinded.	**Definitely no** Reason: Loss-to-follow-up was less than 10% in the intervention group, and more than 10% in the control group.	Definitely yes Reason: All relevant outcomes were reported.	**Definitely no** Reason: Duration of 12 months, no long-term withdrawal period, further investigation needed to confirm rebound effect, anxiety among Chinese parents/unwillingness to join the investigation.	**HIGH**

Exclusietabel

Reference	Reason for exclusion
BIAN, S., LIU, H., & LIN, J. (2020). A randomized-controlled clinical study of one-year outcome between orthokeratology contact lens wear and glasses wear in myopic children. *Chinese Journal of Experimental Ophthalmology*, 121-127.	Included in SR
Bullimore MA, Liu M. Efficacy of the Euclid orthokeratology lens in slowing axial elongation. Cont Lens Anterior Eye. 2023 Oct;46(5):101875. doi: 10.1016/j.clae.2023.101875. Epub 2023 Jun 24. PMID: 37365049.	Not conform PICO: untreated control group
Cho P, Cheung SW. Retardation of myopia in Orthokeratology (ROMIO) study: a 2-year randomized clinical trial. Invest Ophthalmol Vis Sci. 2012 Oct 11;53(11):7077-85. doi: 10.1167/iovs.12-10565. PMID: 22969068.	Included in SR
Cui Y, Li L, Wu Q, Zhao J, Chu H, Yu G, Wei W. Myopia correction in children: a meta-analysis. Clin Invest Med. 2017 Jun 26;40(3):E117-E126. doi: 10.25011/cim.v40i3.28391. PMID: 28653613.	Not conform PICO: wrong outcome measures
Guan M, Zhao W, Geng Y, Zhang Y, Ma J, Chen Z, Peng M, Li Y. Changes in axial length after orthokeratology lens treatment for myopia: a meta-analysis. Int Ophthalmol. 2020 Jan;40(1):255-265. doi: 10.1007/s10792-019-01167-9. Epub 2020 Jan 8. PMID: 31916062.	Observational studies included in SR
Huang J, Wen D, Wang Q, McAlinden C, Flitcroft I, Chen H, Saw SM, Chen H, Bao F, Zhao Y, Hu L, Li X, Gao R, Lu W, Du Y, Jinag Z, Yu A, Lian H, Jiang Q, Yu Y, Qu J. Efficacy Comparison of 16 Interventions for Myopia Control in Children: A Network Meta-analysis. Ophthalmology. 2016 Apr;123(4):697-708. doi: 10.1016/j.ophtha.2015.11.010. Epub 2016 Jan 27. PMID: 26826749.	More recent SR available
Jakobsen TM, Møller F. Control of myopia using orthokeratology lenses in Scandinavian children aged 6 to 12 years. Eighteen-month data from the Danish Randomized Study: Clinical study Of Near-sightedness; TReatment with Orthokeratology Lenses (CONTROL study). Acta Ophthalmol. 2022 Mar;100(2):175-182. doi: 10.1111/aos.14911. Epub 2021 Jul 7. PMID: 34233094; PMCID: PMC9292027.	CONTROL Study included in SR.
Jakobsen TM, Søndergaard AP, Møller F. Peripheral refraction, relative peripheral refraction, and axial growth: 18-month data from the randomised study-Clinical study Of Near-sightedness; TReatment with Orthokeratology Lenses (CONTROL study). Acta Ophthalmol. 2023 Feb;101(1):e69-e80. doi: 10.1111/aos.15217. Epub 2022 Aug 8. PMID: 35941831; PMCID: PMC10087546.	CONTROL Study included in SR, wrong outcome measures.
Koffler BH, Sears JJ. Myopia control in children through refractive therapy gas permeable contact lenses: is it for real? Am J Ophthalmol. 2013 Dec;156(6):1076-1081.e1. doi: 10.1016/j.ajo.2013.04.039. PMID: 24238200.	Wrong study design: literature review
Lau JK, Wan K, Cho P. Orthokeratology lenses with increased compression factor (OKIC): A 2-year longitudinal clinical trial for myopia control. Cont Lens Anterior Eye. 2023 Feb;46(1):101745. doi: 10.1016/j.clae.2022.101745. Epub 2022 Aug 19. PMID: 35995721.	Not conform PICO: no control group
Lawrenson JG, Shah R, Huntjens B, Downie LE, Virgili G, Dhakal R, Verkicharla PK, Li D, Mavi S, Kernohan A, Li T, Walline JJ. Interventions for myopia control in children: a living systematic review and network meta-analysis. Cochrane Database Syst Rev. 2023 Feb 16;2(2):CD014758. doi: 10.1002/14651858.CD014758.pub2. PMID: 36809645; PMCID: PMC9933422.	Methodological limitations: no individual study data reported
Li H, Xu Y, Li L. Efficacy and Safety of Orthokeratology Lenses for the Management of Adolescent Myopia: A Meta-Analysis. Altern Ther Health Med. 2023 Oct;29(7):172-177. PMID: 37471657.	SR which included observational studies, no RCTs

Li SM, Kang MT, Wu SS, Liu LR, Li H, Chen Z, Wang N. Efficacy, Safety and Acceptability of Orthokeratology on Slowing Axial Elongation in Myopic Children by Meta-Analysis. Curr Eye Res. 2016 May;41(5):600-8. doi: 10.3109/02713683.2015.1050743. Epub 2015 Aug 3. PMID: 26237276.	More recent SR available
Lin W, Li N, Liu J, Zhang B, Wei R. Relative corneal refractive power shift and inter-eye differential axial growth in children with myopic anisometropia treated with bilateral orthokeratology. Graefes Arch Clin Exp Ophthalmol. 2024 Apr;262(4):1203-1213. doi: 10.1007/s00417-023-06301-z. Epub 2023 Nov 6. PMID: 37930444; PMCID: PMC10994874.	Not conform PICO: wrong population (anisometropia)
Logan NS, Bullimore MA. Optical interventions for myopia control. Eye (Lond). 2024 Feb;38(3):455-463. doi: 10.1038/s41433-023-02723-5. Epub 2023 Sep 22. PMID: 37740053; PMCID: PMC10858277.	Book
Lu W, Ji R, Jiang D, Shi L, Ding W, Tian Y, Zhao C, Leng L. Different efficacy in myopia control: Comparison between orthokeratology and defocus-incorporated multiple segment lenses. Cont Lens Anterior Eye. 2024 Apr;47(2):102122. doi: 10.1016/j.clae.2024.102122. Epub 2024 Jan 13. PMID: 38220497.	Wrong study design: no randomization
Lyu T, Wang L, Zhou L, Qin J, Ma H, Shi M. Regimen Study of High Myopia-Partial Reduction Orthokeratology. Eye Contact Lens. 2020 May;46(3):141-146. doi: 10.1097/ICL.0000000000000629. PMID: 31361656.	Not conform PICO: two intervention groups
Meng Z, Shuo G, Guohu D, Wei Z, Jingyi L, Yuanchao C, Zhaodong L, Changhong Y. Difference in the effect of orthokeratology on slowing teen myopia with different years of follow-up. J Fr Ophtalmol. 2022 Sep;45(7):718-727. doi: 10.1016/j.jfo.2022.02.003. Epub 2022 May 13. PMID: 35577700.	Full text not available. More recent SR available.
Sarkar S, Khuu S, Kang P. A systematic review and meta-analysis of the efficacy of different optical interventions on the control of myopia in children. Acta Ophthalmol. 2024 May;102(3):e229-e244. doi: 10.1111/aos.15746. Epub 2023 Aug 14. PMID: 37578349.	Included studies comparable to SR
Shi JH, Zhao YP, Liu G, Huang XY, Lang LL, Jia WC, Chen JL. Changes of retinal vessel density in low to moderate myopic eyes with orthokeratology evaluated by optical coherence tomography angiography. Int J Ophthalmol. 2023 Sep 18;16(9):1512-1520. doi: 10.18240/ijo.2023.09.19. PMID: 37724280; PMCID: PMC10475625.	Wrong study design: observational study
Si JK, Tang K, Bi HS, Guo DD, Guo JG, Wang XR. Orthokeratology for myopia control: a meta-analysis. Optom Vis Sci. 2015 Mar;92(3):252-7. doi: 10.1097/OPX.0000000000000505. PMID: 25599338.	More recent SR available
Sun Y, Xu F, Zhang T, Liu M, Wang D, Chen Y, Liu Q. Orthokeratology to control myopia progression: a meta-analysis. PLoS One. 2015 Apr 9;10(4):e0124535. doi: 10.1371/journal.pone.0124535. Erratum in: PLoS One. 2015 Jun 11;10(6):e0130646. doi: 10.1371/journal.pone.0130646. PMID: 25855979; PMCID: PMC4391793.	More recent SR available
Swarbrick HA, Alharbi A, Watt K, Lum E, Kang P. Myopia control during orthokeratology lens wear in children using a novel study design. Ophthalmology. 2015 Mar;122(3):620-30. doi: 10.1016/j.ophtha.2014.09.028. Epub 2014 Nov 6. PMID: 25439432.	Included in SR
TIAN, Q., LIU, X. D., & WAN, J. M. (2023). Comparison of the effect between night-wearing orthokeratology lens and frame glasses on the treatment of juvenile myopia. *International Eye Science*, 660-664.	Wrong study design: no randomization
VanderVeen DK, Kraker RT, Pineles SL, Hutchinson AK, Wilson LB, Galvin JA, Lambert SR. Use of Orthokeratology for the Prevention of Myopic Progression in Children: A Report by the American Academy of Ophthalmology. Ophthalmology. 2019 Apr;126(4):623-636. doi: 10.1016/j.ophtha.2018.11.026. Epub 2018 Nov 23. PMID: 30476518.	Wrong study design: report

Walline JJ, Lindsley K, Vedula SS, Cotter SA, Mutti DO, Twelker JD. Interventions to slow progression of myopia in children. Cochrane Database Syst Rev. 2011 Dec 7;(12):CD004916. doi: 10.1002/14651858.CD004916.pub3. Update in: Cochrane Database Syst Rev. 2020 Jan 13;1:CD004916. doi: 10.1002/14651858.CD004916.pub4. PMID: 22161388; PMCID: PMC4270373.	More recent SR available
Walline JJ, Lindsley KB, Vedula SS, Cotter SA, Mutti DO, Ng SM, Twelker JD. Interventions to slow progression of myopia in children. Cochrane Database Syst Rev. 2020 Jan 13;1(1):CD004916. doi: 10.1002/14651858.CD004916.pub4. PMID: 31930781; PMCID: PMC6984636.	More recent SR available
Wei, S., LI, S., Sun, Y., Kang, M., Meng, B., Ran, A., ... & Wang, N. (2017). A randomized controlled clinical trial on the effects of wearing orthokeratology and spectacles on ocular peripheral refraction in myopic children. *Chinese Journal of Experimental Ophthalmology*, 930-935.	Included in SR
Wen D, Huang J, Chen H, Bao F, Savini G, Calossi A, Chen H, Li X, Wang Q. Efficacy and Acceptability of Orthokeratology for Slowing Myopic Progression in Children: A Systematic Review and Meta-Analysis. J Ophthalmol. 2015;2015:360806. doi: 10.1155/2015/360806. Epub 2015 Jun 11. PMID: 26221539; PMCID: PMC4475749.	More recent SR available
Xiao J, Pan X, Hou C, Wang Q. Changes in Subfoveal Choroidal Thickness after Orthokeratology in Myopic Children: A Systematic Review and Meta-Analysis. Curr Eye Res. 2024 Jul;49(7):683-690. doi: 10.1080/02713683.2024.2310618. Epub 2024 Feb 2. PMID: 38305231.	Observational studies included in SR
Yang G, Tang S, Li Q, Xu L, Liu S. The Effect of Orthokeratology Lens on the Axial Length of Globe in Children with Myopia in Asia. J Coll Physicians Surg Pak. 2022 Nov;32(11):1459-1464. doi: 10.29271/jcpsp.2022.11.1459. PMID: 36377015.	Observational studies included in SR
Zhang G, Jiang J, Qu C. Myopia prevention and control in children: a systematic review and network meta-analysis. Eye (Lond). 2023 Nov;37(16):3461-3469. doi: 10.1038/s41433-023-02534-8. Epub 2023 Apr 27. PMID: 37106147; PMCID: PMC10630522.	Not conform PICO: Control not specified
Zhang Y, Sun X, Chen Y. Controlling anisomyopia in children by orthokeratology: A one-year randomised clinical trial. Cont Lens Anterior Eye. 2023 Feb;46(1):101537. doi: 10.1016/j.clae.2021.101537. Epub 2021 Nov 14. PMID: 34785153.	More recent SR available
Zhang, Z. J., HU, Q. Z., Shu, M., Zhang, L. L., & Lan, K. (2018). Efficacy and safety of orthokeratology to control myopia in Asia children: A Meta-analysis. *International Eye Science*, 248-251.	Article in Chinese

Zoekverantwoording

Algemene informatie

Cluster/richtlijn: NOG De behandeling van progressieve myopie op kinderleeftijd	
Uitgangsvraag/modules: Module 5 Wat is het effect van de myopie progressie remmende orthokeratologie ten opzichte van reguliere lenzen of brillenglazen op de remming van progressieve myopie	
Database(s): Embase.com, Ovid/Medline	Datum: 16 juli 2024
Periode: geen restrictie	Talen: geen restrictie
Literatuurspecialist: Alies Oost	
BMI-zoekblokken: voor verschillende opdrachten wordt (deels) gebruik gemaakt van de zoekblokken van BMI-Online https://blocks.bmi-online.nl/ Deduplication: voor het ontdubbelen is gebruik gemaakt van http://dedupendnote.nl/	
Toelichting: Voor deze vraag is gezocht op de elementen: - myopie - orthokeratologie De sleutelartikelen worden gevonden met deze search, m.u.v. de artikelen van Bullimore *(Eye and Contact Lens 2021 47:7 (420-425), Pediatric Microbial Keratitis with Overnight Orthokeratology in Russia)* en Stapleton *(Ophthalmology 2008 115:10 (1655-1662), The Incidence of Contact Lens-Related Microbial Keratitis in Australia)*. In overleg met de adviseur is besloten dat deze mogen worden gemist omdat ze niet aan de PICO voldoen. In overleg met de adviseur is ervoor gekozen om geen limitering voor kinderen toe te passen. Er zal worden gescreend met behulp van ASreview.	
Te gebruiken voor richtlijntekst: In de databases Embase.com en Ovid/Medline is op 16 juli 2024 systematisch gezocht naar systematische reviews, RCTs en observationele studies over orthokeratologie bij myopie. De literatuurzoekactie leverde 945 unieke treffers op.	

Zoekopbrengst

	EMBASE	OVID/MEDLINE	Ontdubbeld
SR	88	65	
RCT	313	180	
Observationele studies	438	393	
Totaal	839	638	**945**

Zoekstrategie

Embase.com

No.	Query	Results
#1	'myopia'/exp OR 'high myopia'/exp OR myopia*:ti,ab,kw OR myopy:ti,ab,kw OR myopic:ti,ab,kw OR nearsight*:ti,ab,kw OR shortsight*:ti,ab,kw OR (((near OR short) NEAR/3 sight*):ti,ab,kw) OR 'refraction error'/de OR (((refraction OR refractive) NEAR/3 (error* OR disorder*)):ti,ab,kw)	60637
#2	'orthokeratology lens'/exp OR 'reverse geometry contact lens'/exp OR 'corneal reshaping contact lens'/exp OR orthokeratolog*:ti,ab,kw OR 'ortho k':ti,ab,kw OR orthok:ti,ab,kw OR 'ok lens*':ti,ab,kw OR (((overnight* OR night*) NEAR/4 (lens* OR contactlens* OR softlens* OR cl OR cls OR scl OR scls OR 'corneal reshap*')):ti,ab,kw) OR (('corneal refractive' NEAR/3 (therap* OR lens*)):ti,ab,kw) OR ((corneal NEAR/3 (reshap* OR 're shap*')):ti,ab,kw) OR (('reverse geometr*' NEAR/3 (lens* OR contactlens* OR softlens* OR cl OR cls OR scl OR scls)):ti,ab,kw)	2106

#3	#1 AND #2 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)	1154
#4	'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	1045576
#5	'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	4069542
#6	'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)	8318599
#7	'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 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)))	15242050
#8	#3 AND #4 - SR	88
#9	#3 AND #5 NOT #8 - RCT	313
#10	#3 AND (#6 OR #7) NOT (#8 OR #9) - observationeel	438
#11	#8 OR #9 OR #10	839

Ovid/Medline

#	Searches	Results
1	exp Myopia/ or myopia*.ti,ab,kf. or myopy.ti,ab,kf. or myopic.ti,ab,kf. or nearsight*.ti,ab,kf. or shortsight*.ti,ab,kf. or ((near or short) adj3 sight*).ti,ab,kf. or Refractive Errors/ or ((refraction or refractive) adj3 (error* or disorder*)).ti,ab,kf.	44394
2	exp Orthokeratologic Procedures/ or orthokeratolog*.ti,ab,kf. or 'ortho k'.ti,ab,kf. or orthok.ti,ab,kf. or 'ok lens*'.ti,ab,kf. or ((overnight* or night*) adj4 (lens* or contactlens* or softlens* or cl or cls or scl or scls or 'corneal reshap*')).ti,ab,kf. or ('corneal refractive' adj3 (therap* or lens*)).ti,ab,kf. or (corneal adj3 (reshap* or 're shap*')).ti,ab,kf. or ('reverse geometr*' adj3 (lens* or contactlens* or softlens* or cl or cls or scl or scls)).ti,ab,kf.	1489
3	(1 and 2) not (comment/ or editorial/ or letter/) not ((exp animals/ or exp models, animal/) not humans/)	957
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.	760293
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$3)).tw. or Placebos/ or placebo*.tw.	2752155
6	Epidemiologic studies/ or case control studies/ or exp cohort studies/ or Controlled Before-After Studies/ or Case control.tw. or cohort.tw. or Cohort analy$.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]	4778227
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 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.))	5738806
8	3 and 4 - SR	65

9	(3 and 5) not 8 - RCT	180
10	(3 and (6 or 7)) not (8 or 9) - observationeel	393
11	8 or 9 or 10	638

Module myopie remmende zachte contactlenzen

Risk of bias tabel

Study reference (first author, publication year)	**Was the allocation sequence adequately generated?** Definitely yes Probably yes Probably no Definitely no	**Was the allocation adequately concealed?** Definitely yes Probably yes Probably no Definitely no	**Blinding: Was knowledge of the allocated interventions adequately prevented?** **Were patients/healthcare providers/data collectors/outcome assessors/data analysts blinded?** Definitely yes Probably yes Probably no Definitely no	**Was loss to follow-up (missing outcome data) infrequent?** Definitely yes Probably yes Probably no Definitely no	**Are reports of the study free of selective outcome reporting?** Definitely yes Probably yes Probably no Definitely no	**Was the study apparently free of other problems that could put it at a risk of bias?** Definitely yes Probably yes Probably no Definitely no	**Overall risk of bias** **If applicable/necessary, per outcome measure** **LOW** **Some concerns** **HIGH**
Liu, 2023	Definitely yes Reason: Software was used to produce randomization code lists at each study site by an independent code programmer.	Definitely yes Reason: The randomized data remained inaccessible to all study personnel. The corresponding study group for each participant was securely documented within sealed envelopes.	Probably yes Reason: Double-blind study, study personnel was blinded.	**Definitely no** Reason: Loss to follow-up was more than 10% in the intervention group and control group.	Definitely yes Reason: All relevant outcomes were reported.	**Definitely no** Reason: Short study duration, pre- and postintervention accommodation lag, corrected peripheral refraction and contrast sensitivity were not assessed, primary population consisted of East Asian children.	Some concerns

Manoharan, 2024	Definitely yes Reason: The sequence of allocation was generated through Microsoft Excel 2016.	**Probably no** Reason: No information.	**Definitely no** Reason: Neither the participants nor the investigator was masked during the study duration.	**Definitely no** Reason: Loss to follow-up was more than 10% in the intervention group and control group.	Definitely yes Reason: All relevant outcomes were reported.	**Definitely no** Reason: Lack of masking, high loss to follow-up, pupil size was not measured, findings are limited to low myopes.	HIGH
Mutti, 2022	**No information** Reason: Not reported.	**Probably no** Reason: No information.	Probably yes Reason: Double-masked study.	**No information** Reason: Not reported.	Definitely yes Reason: All relevant outcomes were reported.	**Probably no** Reason: elongation should be evaluated at locations more peripheral than 30 degrees.	HIGH

Exclusie tabel

Reference	Reason for exclusion
Aller TA, Liu M, Wildsoet CF. Myopia Control with Bifocal Contact Lenses: A Randomized Clinical Trial. Optom Vis Sci. 2016 Apr;93(4):344-52. doi: 10.1097/OPX.0000000000000808. PMID: 26784710.	Included in SR Fan (2024)
Anstice NS, Phillips JR. Effect of dual-focus soft contact lens wear on axial myopia progression in children. Ophthalmology. 2011 Jun;118(6):1152-61. doi: 10.1016/j.ophtha.2010.10.035. Epub 2011 Jan 26. PMID: 21276616.	Included in SR Fan (2024)
Berntsen DA, Ticak A, Sinnott LT, Chandler MA, Jones JH, Morrison A, Jones-Jordan LA, Walline JJ, Mutti DO; BLINK Study Group. Peripheral Defocus, Pupil Size, and Axial Eye Growth in Children Wearing Soft Multifocal Contact Lenses in the BLINK Study. Invest Ophthalmol Vis Sci. 2023 Nov 1;64(14):3. doi: 10.1167/iovs.64.14.3. PMID: 37910092; PMCID: PMC10627291.	?
Cabanes-Martí E, García-Ayuso D. Myopia control with dual-focus soft contact lenses during the first year of measures to contain the COVID-19 pandemic. Ophthalmic Physiol Opt. 2022 Nov;42(6):1227-1231. doi: 10.1111/opo.13031. Epub 2022 Jul 27. PMID: 35894156; PMCID: PMC9796312.	Wrong study design: observational study
Chamberlain P, Bradley A, Arumugam B, Hammond D, McNally J, Logan NS, Jones D, Ngo C, Peixoto-de-Matos SC, Hunt C, Young G. Long-term Effect of Dual-focus Contact Lenses on Myopia Progression in Children: A 6-year Multicenter Clinical Trial. Optom Vis Sci. 2022 Mar 1;99(3):204-212. doi: 10.1097/OPX.0000000000001873. PMID: 35086120.	Included in SR Lanca (2023)
Chamberlain P, Hammond DS, Arumugam B, Bradley A. Six-year cumulative treatment effect and treatment efficacy of a dual focus myopia control contact lens. Ophthalmic Physiol Opt. 2024 Jan;44(1):199-205. doi: 10.1111/opo.13240. Epub 2023 Oct 27. PMID: 37897105.	Wrong study design: observational study
Chamberlain P, Peixoto-de-Matos SC, Logan NS, Ngo C, Jones D, Young G. A 3-year Randomized Clinical Trial of MiSight Lenses for Myopia Control. Optom Vis Sci. 2019 Aug;96(8):556-567. doi: 10.1097/OPX.0000000000001410. PMID: 31343513.	Included in SR Fan (2024)
Cheng X, Xu J, Brennan NA. Accommodation and its role in myopia progression and control with soft contact lenses. Ophthalmic Physiol Opt. 2019 May;39(3):162-171. doi: 10.1111/opo.12614. PMID: 30994197.	Included in SR Fan (2024)
Chiu YC, Tsai PC, Lee SH, Wang JH, Chiu CJ. Systematic Review of Myopia Progression after Cessation of Optical Interventions for Myopia Control. J Clin Med. 2023 Dec 21;13(1):53. doi: 10.3390/jcm13010053. PMID: 38202060; PMCID: PMC10779574.	All included studies are included in SR Fan (2024), SR Fan is more recent
Corpus G, Molina-Martin A, Piñero DP. Efficacy of Soft Contact Lenses for Myopia Control: A Systematic Review. Semin Ophthalmol. 2024 Apr;39(3):185-192. doi: 10.1080/08820538.2023.2271063. Epub 2023 Oct 18. PMID: 37853677.	All included studies are included in SR Fan (2024) or SR Walline (2020)
Díaz-Gómez S, Burgos-Martínez M, Sankaridurg P, Urkia-Solorzano A, Carballo-Álvarez J. Two-Year Myopia Management Efficacy of Extended Depth of Focus Soft Contact Lenses (MYLO) in Caucasian Children. Am J Ophthalmol. 2024 Apr;260:122-131. doi: 10.1016/j.ajo.2023.11.025. Epub 2023 Dec 5. PMID: 38056608.	Wrong study design: observational study
Eppenberger LS, Grzybowski A, Schmetterer L, Ang M. Myopia Control: Are We Ready for an Evidence Based Approach? Ophthalmol Ther. 2024 Jun;13(6):1453-1477. doi:	Wrong study design: narrative review

10.1007/s40123-024-00951-w. Epub 2024 May 7. PMID: 38710983; PMCID: PMC11109072.	
Erdinest N, Atar-Vardi M, London N, Landau D, Smadja D, Pras E, Lavy I, Morad Y. Treatment of Rapid Progression of Myopia: Topical Atropine 0.05% and MF60 Contact Lenses. Vision (Basel). 2024 Jan 19;8(1):3. doi: 10.3390/vision8010003. PMID: 38391084; PMCID: PMC10885127.	Not conform PICO: wrong comparison
Fan H, Zhang X, Wei Q, Zhong Q, Liu M, Li B, Li S, Zhang R, Xie A. Myopia control efficacy of peripheral defocus soft contact lenses in children and adolescents: A meta-analysis. Eur J Ophthalmol. 2024 Sep;34(5):1408-1423. doi: 10.1177/11206721241229474. Epub 2024 Jan 31. PMID: 38298013.	All included studies are included in SR Fan (2024) or SR Walline (2020)
Fang J, Huang Z, Long Y, Zhu M, Wu Q, Chen X, Xv W, Du C. Retardation of Myopia by Multifocal Soft Contact Lens and Orthokeratology: A 1-Year Randomized Clinical Trial. Eye Contact Lens. 2022 Aug 1;48(8):328-334. doi: 10.1097/ICL.0000000000000911. Epub 2022 Jun 3. PMID: 35877183; PMCID: PMC9298149.	Included in SR Song (2024)
Fujikado T, Ninomiya S, Kobayashi T, Suzaki A, Nakada M, Nishida K. Effect of low-addition soft contact lenses with decentered optical design on myopia progression in children: a pilot study. Clin Ophthalmol. 2014 Sep 23;8:1947-56. doi: 10.2147/OPTH.S66884. PMID: 25284981; PMCID: PMC4181743.	Included in SR Fan (2024)
Garcia-Del Valle AM, Blázquez V, Gros-Otero J, Infante M, Culebras A, Verdejo A, Sebastián J, García M, Bueno S, Piñero DP. Efficacy and safety of a soft contact lens to control myopia progression. Clin Exp Optom. 2021 Jan;104(1):14-21. doi: 10.1111/cxo.13077. PMID: 32342559.	Included in SR Fan (2024)
Gong CR, Troilo D, Richdale K. Accommodation and Phoria in Children Wearing Multifocal Contact Lenses. Optom Vis Sci. 2017 Mar;94(3):353-360. doi: 10.1097/OPX.0000000000001044. PMID: 28027276; PMCID: PMC5402339.	Results were not suitable for this analysis
Han D, Zhang Z, Du B, Liu L, He M, Liu Z, Wei R. A comparison of vision-related quality of life between Defocus Incorporated Soft Contact (DISC) lenses and single-vision spectacles in Chinese children. Cont Lens Anterior Eye. 2023 Feb;46(1):101748. doi: 10.1016/j.clae.2022.101748. Epub 2022 Aug 19. PMID: 35989141.	Wrong study design: observational study
Hongge, W. A. N. G., Xia, W. A. N., Yaling, W. A. N. G., Xuehua, S. U. N., Xiaoyan, L. A. N., & Jie, Z. H. A. N. G. (2015). A randomized controlled clinical trial of the effectiveness and safety between aspherical and NUV soft hydrophilic contact lenses for myopia patients. *Chinese Journal of Experimental Ophthalmology*, 537-540.	Study in Chinese
Huang J, Wen D, Wang Q, McAlinden C, Flitcroft I, Chen H, Saw SM, Chen H, Bao F, Zhao Y, Hu L, Li X, Gao R, Lu W, Du Y, Jinag Z, Yu A, Lian H, Jiang Q, Yu Y, Qu J. Efficacy Comparison of 16 Interventions for Myopia Control in Children: A Network Meta-analysis. Ophthalmology. 2016 Apr;123(4):697-708. doi: 10.1016/j.ophtha.2015.11.010. Epub 2016 Jan 27. PMID: 26826749.	Wrong study design: network meta-analysis
Kanpolat, A., & Oral, D. (2000). Types of contact lenses applied in astigmatic cases. *Contactologia*, *22*(1), 42-45.	Wrong study design: observational study
Lanca C, Pang CP, Grzybowski A. Effectiveness of myopia control interventions: A systematic review of 12 randomized control trials published between 2019 and 2021. Front Public Health. 2023 Mar 23;11:1125000. doi: 10.3389/fpubh.2023.1125000. Erratum in: Front Public Health. 2024 Sep 25;12:1460156. doi:	All included studies are included in SR Fan (2024) or SR Walline (2020)

10.3389/fpubh.2024.1460156. PMID: 37033047; PMCID: PMC10076805.	
Lawrenson JG, Shah R, Huntjens B, Downie LE, Virgili G, Dhakal R, Verkicharla PK, Li D, Mavi S, Kernohan A, Li T, Walline JJ. Interventions for myopia control in children: a living systematic review and network meta-analysis. Cochrane Database Syst Rev. 2023 Feb 16;2(2):CD014758. doi: 10.1002/14651858.CD014758.pub2. PMID: 36809645; PMCID: PMC9933422.	Network meta-analysis: cannot be used to answer the question
Lopes-Ferreira D, Ruiz-Pomeda A, Peréz-Sanchéz B, Queirós A, Villa-Collar C. Ocular and corneal aberrations changes in controlled randomized clinical trial MiSight® Assessment Study Spain (MASS). BMC Ophthalmol. 2021 Mar 1;21(1):112. doi: 10.1186/s12886-021-01865-y. PMID: 33648464; PMCID: PMC7919067.	Included in SR Corpus (2024)
Lu W, Ji R, Jiang D, Shi L, Ding W, Tian Y, Zhao C, Leng L. Different efficacy in myopia control: Comparison between orthokeratology and defocus-incorporated multiple segment lenses. Cont Lens Anterior Eye. 2024 Apr;47(2):102122. doi: 10.1016/j.clae.2024.102122. Epub 2024 Jan 13. PMID: 38220497.	Wrong study design: observational study
Lumb E, Sulley A, Logan NS, Jones D, Chamberlain P. Six years of wearer experience in children participating in a myopia control study of MiSight® 1 day. Cont Lens Anterior Eye. 2023 Aug;46(4):101849. doi: 10.1016/j.clae.2023.101849. Epub 2023 May 6. PMID: 37156658.	Not conform PICO: wrong outcome measures
Malinowski A, Mrugacz M, Stopa M, Filipek E, Moniuszko-Malinowska A, Czupryna P. A Clinical Study of the Impact of Soft Contact Lenses on the Progression of Myopia in Young Patients. Clin Ophthalmol. 2022 Jan 11;16:51-62. doi: 10.2147/OPTH.S338199. PMID: 35058685; PMCID: PMC8765077.	Wrong study design: observational study
Pauné J, Morales H, Armengol J, Quevedo L, Faria-Ribeiro M, González-Méijome JM. Myopia Control with a Novel Peripheral Gradient Soft Lens and Orthokeratology: A 2-Year Clinical Trial. Biomed Res Int. 2015;2015:507572. doi: 10.1155/2015/507572. Epub 2015 Oct 28. PMID: 26605331; PMCID: PMC4641166.	Wrong study design: non-randomized trial
Prousali E, Haidich AB, Fontalis A, Ziakas N, Brazitikos P, Mataftsi A. Efficacy and safety of interventions to control myopia progression in children: an overview of systematic reviews and meta-analyses. BMC Ophthalmol. 2019 May 9;19(1):106. doi: 10.1186/s12886-019-1112-3. PMID: 31072389; PMCID: PMC6506938.	Wrong study design
Queirós A, Lopes-Ferreira D, González-Méijome JM. Astigmatic Peripheral Defocus with Different Contact Lenses: Review and Meta-Analysis. Curr Eye Res. 2016 Aug;41(8):1005-1015. doi: 10.3109/02713683.2015.1116585. Epub 2016 Feb 2. PMID: 26835871.	Not conform PICO: wrong outcome measures
Raffa LH, Allinjawi K, Sharanjeet-Kaur, Akhir SM, Mutalib HA. Myopia control with soft multifocal contact lenses: 18-month follow-up. Saudi J Ophthalmol. 2022 Jun 13;35(4):325-331. doi: 10.4103/1319-4534.347305. PMID: 35814985; PMCID: PMC9266467.	Included in SR Song (2024)
Ruiz-Pomeda A, Pérez-Sánchez B, Cañadas P, Prieto-Garrido FL, Gutiérrez-Ortega R, Villa-Collar C. Binocular and accommodative function in the controlled randomized clinical trial MiSight® Assessment Study Spain (MASS). Graefes Arch Clin Exp Ophthalmol. 2019 Jan;257(1):207-215. doi: 10.1007/s00417-018-4115-5. Epub 2018 Sep 8. PMID: 30196481.	Secondary analysis of study included in SR
Ruiz-Pomeda A, Pérez-Sánchez B, Prieto-Garrido FL, Gutiérrez-Ortega R, Villa-Collar C. MiSight Assessment Study Spain: Adverse	Secondary analysis of study included in SR

Events, Tear Film Osmolarity, and Discontinuations. Eye Contact Lens. 2018 Nov;44 Suppl 2:S180-S186. doi: 10.1097/ICL.0000000000000484. PMID: 29438120.	
Ruiz-Pomeda A, Pérez-Sánchez B, Valls I, Prieto-Garrido FL, Gutiérrez-Ortega R, Villa-Collar C. MiSight Assessment Study Spain (MASS). A 2-year randomized clinical trial. Graefes Arch Clin Exp Ophthalmol. 2018 May;256(5):1011-1021. doi: 10.1007/s00417-018-3906-z. Epub 2018 Feb 3. PMID: 29396662.	Included in SR Fan (2024)
Ruiz-Pomeda A, Prieto-Garrido FL, Hernández Verdejo JL, Villa-Collar C. Rebound Effect in the Misight Assessment Study Spain (Mass). Curr Eye Res. 2021 Aug;46(8):1223-1226. doi: 10.1080/02713683.2021.1878227. Epub 2021 Jan 24. PMID: 33460537.	Not conform PICO
Sánchez-Tena MÁ, Ballesteros-Sánchez A, Martinez-Perez C, Alvarez-Peregrina C, De-Hita-Cantalejo C, Sánchez-González MC, Sánchez-González JM. Assessing the rebound phenomenon in different myopia control treatments: A systematic review. Ophthalmic Physiol Opt. 2024 Mar;44(2):270-279. doi: 10.1111/opo.13277. Epub 2024 Jan 9. PMID: 38193312.	Included in SR Fan (2024)
Sankaridurg P, Bakaraju RC, Naduvilath T, Chen X, Weng R, Tilia D, Xu P, Li W, Conrad F, Smith EL 3rd, Ehrmann K. Myopia control with novel central and peripheral plus contact lenses and extended depth of focus contact lenses: 2 year results from a randomised clinical trial. Ophthalmic Physiol Opt. 2019 Jul;39(4):294-307. doi: 10.1111/opo.12621. Epub 2019 Jun 10. PMID: 31180155; PMCID: PMC6851825.	Included in SR Fan (2024)
Sarkar S, Khuu S, Kang P. A systematic review and meta-analysis of the efficacy of different optical interventions on the control of myopia in children. Acta Ophthalmol. 2024 May;102(3):e229-e244. doi: 10.1111/aos.15746. Epub 2023 Aug 14. PMID: 37578349.	Not conform PICO: wrong comparison
Shen EP, Chu HS, Cheng HC, Tsai TH. Center-for-Near Extended-Depth-of-Focus Soft Contact Lens for Myopia Control in Children: 1-Year Results of a Randomized Controlled Trial. Ophthalmol Ther. 2022 Aug;11(4):1577-1588. doi: 10.1007/s40123-022-00536-5. Epub 2022 Jun 23. PMID: 35737291; PMCID: PMC9253228.	Included in SR Corpus (2024)
Song D, Qiu W, Jiang T, Chen Z, Chen J. Efficacy and adverse reactions of peripheral add multifocal soft contact lenses in childhood myopia: a meta-analysis. BMC Ophthalmol. 2024 Apr 16;24(1):173. doi: 10.1186/s12886-024-03408-7. PMID: 38627653; PMCID: PMC11020872.	All included studies are included in SR Fan (2024) or SR Walline (2020)
Tilia D, Sha J, Thomas V, Bakaraju RC. Vision Performance and Accommodative/Binocular Function in Children Wearing Prototype Extended Depth-of-Focus Contact Lenses. Eye Contact Lens. 2019 Jul;45(4):260-270. doi: 10.1097/ICL.0000000000000570. PMID: 30601291.	Wrong study design: one patient group using three interventions. Patients are compared with themselves.
Walline JJ, Greiner KL, McVey ME, Jones-Jordan LA. Multifocal contact lens myopia control. Optom Vis Sci. 2013 Nov;90(11):1207-14. doi: 10.1097/OPX.0000000000000036. PMID: 24061152.	Wrong study design: observational study
Walline JJ, Lindsley K, Vedula SS, Cotter SA, Mutti DO, Twelker JD. Interventions to slow progression of myopia in children. Cochrane Database Syst Rev. 2011 Dec 7;(12):CD004916. doi: 10.1002/14651858.CD004916.pub3. Update in: Cochrane Database Syst Rev. 2020 Jan 13;1:CD004916. doi: 10.1002/14651858.CD004916.pub4. PMID: 22161388; PMCID: PMC4270373.	New version of this SR is included

Walline JJ, Walker MK, Mutti DO, Jones-Jordan LA, Sinnott LT, Giannoni AG, Bickle KM, Schulle KL, Nixon A, Pierce GE, Berntsen DA; BLINK Study Group. Effect of High Add Power, Medium Add Power, or Single-Vision Contact Lenses on Myopia Progression in Children: The BLINK Randomized Clinical Trial. JAMA. 2020 Aug 11;324(6):571-580. doi: 10.1001/jama.2020.10834. PMID: 32780139; PMCID: PMC7420158.	Included in SR Fan (2024)
Weng R, Lan W, Bakaraju R, Conrad F, Naduvilath T, Yang ZK, Sankaridurg P. Efficacy of contact lenses for myopia control: Insights from a randomised, contralateral study design. Ophthalmic Physiol Opt. 2022 Nov;42(6):1253-1263. doi: 10.1111/opo.13042. Epub 2022 Aug 25. PMID: 36006761; PMCID: PMC9805073.	Included in SR Fan (2024)
Weng R, Naduvilath T, Philip K, Chen X, Sankaridurg P. Exploring non-adherence to contact lens wear schedule: Subjective assessments and patient related factors in children wearing single vision and myopia control contact lenses. Cont Lens Anterior Eye. 2021 Feb;44(1):94-101. doi: 10.1016/j.clae.2020.11.015. Epub 2020 Dec 4. PMID: 33288408.	Not conform PICO: wrong outcome measures
Yu Z, Zhong A, Zhao X, Li D, Duan J. Efficacy and Safety of Different Add Power Soft Contact Lenses on Myopia Progression in Children: A Systematic Review and Meta-Analysis. Ophthalmic Res. 2022;65(4):398-416. doi: 10.1159/000523675. Epub 2022 Feb 28. PMID: 35226916.	All included studies are included in SR Fan (2024), SR Fan is more recent
Zhang G, Jiang J, Qu C. Myopia prevention and control in children: a systematic review and network meta-analysis. Eye (Lond). 2023 Nov;37(16):3461-3469. doi: 10.1038/s41433-023-02534-8. Epub 2023 Apr 27. PMID: 37106147; PMCID: PMC10630522.	Wrong study design: network meta-analysis

Zoekverantwoording

Algemene informatie

Cluster/richtlijn: NOG De behandeling van progressieve myopie op kinderleeftijd	
Uitgangsvraag/modules: Module 6 Wat is het effect van de myopie progressie remmende zachte contactlenzen ten opzichte van reguliere lenzen of brillenglazen op de remming van progressieve myopie	
Database(s): Embase.com, Ovid/Medline	Datum: 16 juli 2024
Periode: geen restrictie	Talen: geen restrictie
Literatuurspecialist: Alies Oost	
BMI-zoekblokken: voor verschillende opdrachten wordt (deels) gebruik gemaakt van de zoekblokken van BMI-Online https://blocks.bmi-online.nl/ Deduplication: voor het ontdubbelen is gebruik gemaakt van http://dedupendnote.nl/	
Toelichting: Voor deze vraag is gezocht op de elementen: - myopie - contactlenzen àDe sleutelartikelen worden gevonden met deze search. àIn overleg met de adviseur is ervoor gekozen om geen limitering toe te passen voor studies m.b.t. kinderen. àEr zal worden gescreend met behulp van ASreview.	
Te gebruiken voor richtlijntekst: In de databases Embase.com en Ovid/Medline is op 16 juli 2024 systematisch gezocht naar systematische reviews, RCTs en observationele studies over contactlenzen bij myopie. De literatuurzoekactie leverde 2635 unieke treffers op.	

5 **Zoekopbrengst**

	EMBASE	**OVID/MEDLINE**	**Ontdubbeld**
SR	101	77	
RCT	729	553	
Observationele studies	1256	976	
Totaal	2086	1606	**2635**

Zoekstrategie

Embase.com

No.	Query	Results
#1	'myopia'/exp OR 'high myopia'/exp OR myopia*:ti,ab,kw OR myopy:ti,ab,kw OR myopic:ti,ab,kw OR nearsight*:ti,ab,kw OR shortsight*:ti,ab,kw OR (((near OR short) NEAR/3 sight*):ti,ab,kw) OR 'refraction error'/de OR (((refraction OR refractive) NEAR/3 (error* OR disorder*)):ti,ab,kw)	60637
#2	'soft contact lens'/exp OR 'multifocal contact lens'/exp OR 'bifocal contact lens'/exp OR 'hydrophilic contact lens'/exp OR 'contact lens'/de OR (((multifocal OR bifocal OR 'dual focus' OR dualfocus OR defocus OR correct* OR hydrophil* OR 'ring focus*') NEAR/4 ('contact lens*' OR contactlens* OR cl OR cls OR scl OR scls OR softlens* OR 'soft contact*')):ti,ab,kw) OR misight:ti,ab,kw OR (((myopia OR myopy OR myopic*) NEAR/3 (lens* OR contactlens* OR cl OR cls OR scl OR scls OR softlens* OR 'soft contact*')):ti,ab,kw) OR mfscl*:ti,ab,kw	29146
#3	#1 AND #2 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)	3694
#4	'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	1045576

	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	
#5	'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	4069542
#6	'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)	8318599
#7	'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 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)))	15242050
#8	#3 AND #4 - SR	101
#9	#3 AND #5 NOT #8 - RCT	729
#10	#3 AND (#6 OR #7) NOT (#8 OR #9) - observationeel	1256
#11	#8 OR #9 OR #10	2086

Ovid/Medline

#	Searches	Results
1	exp Myopia/ or myopia*.ti,ab,kf. or myopy.ti,ab,kf. or myopic.ti,ab,kf. or nearsight*.ti,ab,kf. or shortsight*.ti,ab,kf. or ((near or short) adj3 sight*).ti,ab,kf. or Refractive Errors/ or ((refraction or refractive) adj3 (error* or disorder*)).ti,ab,kf.	44394
2	exp Contact Lenses/ or ((multifocal or bifocal or 'dual focus' or dualfocus or defocus or correct* or hydrophil* or 'Ring Focus*') adj4 ('contact lens*' or contactlens* or cl or cls or scl or scls or softlens* or 'soft contact*')).ti,ab,kf. or misight.ti,ab,kf. or ((myopia or myopy or myopic*) adj3 (lens* or contactlens* or cl or cls or scl or scls or softlens* or 'soft contact*')).ti,ab,kf. or mfscl*.ti,ab,kf.	15823
3	(1 and 2) not (comment/ or editorial/ or letter/) not ((exp animals/ or exp models, animal/) not humans/)	2915
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.	760293

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$3)).tw. or Placebos/ or placebo*.tw.	2752155
6	Epidemiologic studies/ or case control studies/ or exp cohort studies/ or Controlled Before-After Studies/ or Case control.tw. or cohort.tw. or Cohort analy$.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]	4778227
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 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.))	5738806
8	3 and 4 - SR	77
9	(3 and 5) not 8 - RCT	553
10	(3 and (6 or 7)) not (8 or 9) - observationeel	976
11	8 or 9 or 10	1606

Module myopie remmende brillenglazen

Risk of bias tabel

Study reference (first author, publication year)	**Was the allocation sequence adequately generated?** Definitely yes Probably yes Probably no Definitely no	**Was the allocation adequately concealed?** Definitely yes Probably yes Probably no Definitely no	**Blinding: Was knowledge of the allocated interventions adequately prevented?** **Were patients/healthcare providers/data collectors/outcome assessors/data analysts blinded?** Definitely yes Probably yes Probably no Definitely no	**Was loss to follow-up (missing outcome data) infrequent?** Definitely yes Probably yes Probably no Definitely no	**Are reports of the study free of selective outcome reporting?** Definitely yes Probably yes Probably no Definitely no	**Was the study apparently free of other problems that could put it at a risk of bias?** Definitely yes Probably yes Probably no Definitely no	**Overall risk of bias** **If applicable/necessary, per outcome measure** **LOW** **Some concerns** **HIGH**
Rappon, 2023	Definitely yes; Reason: The random allocation sequence was generated using Microsoft Excel.	Definitely yes; Reason: Randomisation was concealed and interventions were assigned by Electronic Data Capture.	Probably yes; Reason: subject- and observer-masked (blinding of data collectors and analysts not reported)	Probably yes; Reason: Loss to follow-up was infrequent in intervention and control group.	Definitely yes; Reason: All relevant outcomes were reported	Probably no; Reason: the role of the funding body	**LOW**

Sankaridurg, 2022	Definitely yes; Reason: uses the Wichman-Hill Random Number Generator that incorporates balanced permutations of treatments whereby each subject receives both lens types in random order. Block randomization of block size 6 was used to generate the plan.	Definitely yes; Reason: The randomization plan was applied through the Clinic Data Management system, and the system sequentially allocated each enrolled participant according to the plan.	Probably yes; Reason: Both the participant and the clinician were blinded to the assigned lens type throughout the study period. (blinding of data collectors and analysts not reported)	Probably yes Reason: Loss to follow-up was infrequent in intervention and control group. Adequate imputation methods (multiple imputation) were used	Definitely yes Reason: All relevant outcomes were reported;	Probably no; Reason: the role of the funding body	**LOW**
Bao, 2022	Definitely yes; Reason: using adap- tive randomisation with online software (www.rando.la) to balance treatment groups	Probably no; Reason: not reported	Probably yes; Reason: Both the participant and the clinician were blinded to the assigned lens type throughout the study period. (blinding of data collectors and analysts not reported)	Probably yes Reason: Loss to follow-up was infrequent in intervention and control group.	Definitely yes Reason: All relevant outcomes were reported;	Probably no; Reason: the role of the funding body	Some concern
Liu X, 2023	Probably yes;	Probably no;	Probably yes;	Probably no;	Definitely yes	Probably yes;	Some concern

	Reason: Eligible subjects enrolled in the study were randomly assigned	Reason: not reported	Reason: Masked examiners performed cycloplegic autorefraction and AL measurements.	Reason: only 81.4% of participants were included in the analyses	Reason: All relevant outcomes were reported;	Reason: No other problems noted	
Lam, 2020	Probably yes; Reason: Simple randomisation was implemented by the unmasked investigator (UI) by putting subject file numbers (1–200) in a spreadsheet of Excel (Microsoft Office) and creating a column of random numbers for the group allocation. Eligible subjects were then assigned to either group by following a random software sequence generated from Excel.	Probably no; Reason: not reported	Probably yes; Reason: Both the children and their parents were masked to group Allocation. Clinician was masked. Analyst not masked	Probably yes Reason: Loss to follow-up was infrequent in intervention and control group.	Definitely yes Reason: All relevant outcomes were reported;	Probably no; Reason: the role of the funding body	Some concern
Sánchez-Tena, 2024	Probably yes;	Probably yes;	Probably yes;	Probably yes;	Definitely yes	Probably no;	**LOW**

	Reason: Not specified	Reason: Not specified	Reason: Both the participant and the clinician were blinded. (blinding of data collectors and analysts not reported)	Reason: Loss to follow-up was infrequent in intervention and control group.	Reason: All relevant outcomes were reported;	Reason: the role of the funding body	
Yuval, 2024	Probably yes; Reason: Random allo- cation assigned half of the participants to the SMC group and the other half to the control group.	Probably yes; Reason: Not specified	Probably yes; Reason: Both the participant and the clinician were blinded. (blinding of data collectors and analysts not reported)	Probably no; Reason: both groups had different reasons to drop-out. Could influence the results.	Definitely yes Reason: All relevant outcomes were reported;	Probably no; Reason: the role of the funding body	Some concern
Su, 2024	Definitely yes; Reason: assigned randomly using a spreadsheet generator (Excel; Microsoft) to the SV group, PLARI group, or NLARI group in a ratio of 1:1:1	Probably yes; Reason: Participants and parents were masked to the group allocation. Not further specified	Probably yes; Reason: Both the participant and the clinician were blinded. (blinding of data collectors and analysts not reported)	Probably yes; Reason: Loss to follow-up was infrequent in intervention and control group.	Definitely yes Reason: All relevant outcomes were reported;	Probably yes; Reason: No other problems noted	**LOW**

Exclusietabel

Reference	Reason for exclusion
Lanca C, Pang CP, Grzybowski A. Effectiveness of myopia control interventions: A systematic review of 12 randomized control trials published between 2019 and 2021. Front Public Health. 2023 Mar 23;11:1125000. doi: 10.3389/fpubh.2023.1125000. Erratum in: Front Public Health. 2024 Sep 25;12:1460156. doi: 10.3389/fpubh.2024.1460156. PMID: 37033047; PMCID: PMC10076805.	Included individual studies
Lupon M, Nolla C, Cardona G. New Designs of Spectacle Lenses for the Control of Myopia Progression: A Scoping Review. J Clin Med. 2024 Feb 19;13(4):1157. doi: 10.3390/jcm13041157. PMID: 38398469; PMCID: PMC10888677.	Included individual studies
Sánchez-Tena MÁ, Ballesteros-Sánchez A, Martinez-Perez C, Alvarez-Peregrina C, De-Hita-Cantalejo C, Sánchez-González MC, Sánchez-González JM. Assessing the rebound phenomenon in different myopia control treatments: A systematic review. Ophthalmic Physiol Opt. 2024 Mar;44(2):270-279. doi: 10.1111/opo.13277. Epub 2024 Jan 9. PMID: 38193312.	Not conform PICO
Sankaridurg P, Donovan L, Varnas S, Ho A, Chen X, Martinez A, Fisher S, Lin Z, Smith EL 3rd, Ge J, Holden B. Spectacle lenses designed to reduce progression of myopia: 12-month results. Optom Vis Sci. 2010 Sep;87(9):631-41. doi: 10.1097/OPX.0b013e3181ea19c7. Erratum in: Optom Vis Sci. 2010 Oct;87(10):802. PMID: 20622703; PMCID: PMC4696394.	The literature analysis is based on the scoping review by Lupon (2024)
Lam CS, Tang WC, Lee PH, Zhang HY, Qi H, Hasegawa K, To CH. Myopia control effect of defocus incorporated multiple segments (DIMS) spectacle lens in Chinese children: results of a 3-year follow-up study. Br J Ophthalmol. 2022 Aug;106(8):1110-1114. doi: 10.1136/bjophthalmol-2020-317664. Epub 2021 Mar 17. PMID: 33731364; PMCID: PMC9340033.	Included the most recent study by Lam (Lam, 2023)
Lam CSY, Tang WC, Qi H, Radhakrishnan H, Hasegawa K, To CH, Charman WN. Effect of Defocus Incorporated Multiple Segments Spectacle Lens Wear on Visual Function in Myopic Chinese Children. Transl Vis Sci Technol. 2020 Aug 5;9(9):11. doi: 10.1167/tvst.9.9.11. PMID: 32879767; PMCID: PMC7442864.	Included the most recent study by Lam (Lam, 2023)
Lam CSY, Tang WC, Tse DY, Lee RPK, Chun RKM, Hasegawa K, Qi H, Hatanaka T, To CH. Defocus Incorporated Multiple Segments (DIMS) spectacle lenses slow myopia progression: a 2-year randomised clinical trial. Br J Ophthalmol. 2020 Mar;104(3):363-368. doi: 10.1136/bjophthalmol-2018-313739. Epub 2019 May 29. PMID: 31142465; PMCID: PMC7041503.	Included the most recent study by Lam (Lam, 2023)
Cheng D, Woo GC, Drobe B, Schmid KL. Effect of bifocal and prismatic bifocal spectacles on myopia progression in children: three-year results of a randomized clinical trial. JAMA Ophthalmol. 2014 Mar;132(3):258-64. doi: 10.1001/jamaophthalmol.2013.7623. PMID: 24435660.	Not conform PICO: different intervention (bifocal and prismatic)
Kanda H, Oshika T, Hiraoka T, Hasebe S, Ohno-Matsui K, Ishiko S, Hieda O, Torii H, Varnas SR, Fujikado T. Effect of spectacle lenses designed to reduce relative peripheral hyperopia on myopia progression in Japanese children: a 2-year multicenter randomized controlled trial. Jpn J Ophthalmol. 2018 Sep;62(5):537-543. doi: 10.1007/s10384-018-0616-3. Epub 2018 Aug 6. PMID: 30083910.	The literature analysis is based on the scoping review by Lupon (2024)
Control effect of defocus incorporated multiple segments spectacle lenses in children and adolescents' myopia, Li, X 2023	Full text not available.
Lam CSY, Tang WC, Qi H, Radhakrishnan H, Hasegawa K, To CH, Charman WN. Effect of Defocus Incorporated Multiple Segments Spectacle Lens Wear on Visual Function in Myopic Chinese Children. Transl Vis Sci Technol. 2020 Aug 5;9(9):11. doi: 10.1167/tvst.9.9.11. PMID: 32879767; PMCID: PMC7442864.	Double, Included the most recent study by Lam (Lam, 2023)
Lai W, Diao C, Li H, Zhang Y, Jia Y, Wu X. Three optical intervention methods for low myopia control in children: a one-year follow-up study. BMC	Wrong study design: cohort

Ophthalmol. 2024 Jul 31;24(1):319. doi: 10.1186/s12886-024-03598-0. Erratum in: BMC Ophthalmol. 2024 Aug 27;24(1):377. doi: 10.1186/s12886-024-03638-9. PMID: 39085810; PMCID: PMC11293150.	
Huang Y, Li X, Wang C, Zhou F, Yang A, Chen H, Bao J. Visual acuity, near phoria and accommodation in myopic children using spectacle lenses with aspherical lenslets: results from a randomized clinical trial. Eye Vis (Lond). 2022 Sep 1;9(1):33. doi: 10.1186/s40662-022-00304-3. PMID: 36045391; PMCID: PMC9434851.	Not conform PICO: wrong outcome measures
Chen J, Zhuo R, Chen J, Yang A, Lim EW, Bao J, Drobe B, Spiegel DP, Chen H, Hou L. Spectacle lenses with slightly aspherical lenslets for myopia control: clinical trial design and baseline data. BMC Ophthalmol. 2022 Aug 16;22(1):345. doi: 10.1186/s12886-022-02562-0. PMID: 35974312; PMCID: PMC9382742.	Clinical trial design and baseline data
Liu J, Lu Y, Huang D, Yang J, Fan C, Chen C, Li J, Wang Q, Li S, Jiang B, Jiang H, Li X, Yang Z, Lan W. The Efficacy of Defocus Incorporated Multiple Segments Lenses in Slowing Myopia Progression: Results from Diverse Clinical Circumstances. Ophthalmology. 2023 May;130(5):542-550. doi: 10.1016/j.ophtha.2023.01.007. Epub 2023 Jan 13. PMID: 36642334.	Wrong study design: retrospective study
Lu Y, Lin Z, Wen L, Gao W, Pan L, Li X, Yang Z, Lan W. The Adaptation and Acceptance of Defocus Incorporated Multiple Segment Lens for Chinese Children. Am J Ophthalmol. 2020 Mar;211:207-216. doi: 10.1016/j.ajo.2019.12.002. Epub 2019 Dec 13. PMID: 31837317.	Wrong study design: prospective, cross-over study
Zhang HY, Lam CSY, Tang WC, Leung M, To CH. Defocus Incorporated Multiple Segments Spectacle Lenses Changed the Relative Peripheral Refraction: A 2-Year Randomized Clinical Trial. Invest Ophthalmol Vis Sci. 2020 May 11;61(5):53. doi: 10.1167/iovs.61.5.53. PMID: 32460315; PMCID: PMC7405698.	The literature analysis is based on the scoping review by Lupon (2024)
Ma JX, Tian SW, Liu QP. Effectiveness of peripheral defocus spectacle lenses in myopia control: a Meta-analysis and systematic review. Int J Ophthalmol. 2022 Oct 18;15(10):1699-1706. doi: 10.18240/ijo.2022.10.20. PMID: 36262865; PMCID: PMC9522561.	The literature analysis is based on the scoping review by Lupon (2024)
Wu J, Li X, Huang Y, Luo Y, Zhang S, Cui Z, Hou F, Bao J, Chen H. Effect of myopia-control lenses on central and peripheral visual performance in myopic children. Ophthalmic Physiol Opt. 2024 Mar;44(2):249-257. doi: 10.1111/opo.13257. Epub 2023 Dec 10. PMID: 38071500.	Not conform PICO
Huang Y, Li X, Wu J, Huo J, Zhou F, Zhang J, Yang A, Spiegel DP, Chen H, Bao J. Effect of spectacle lenses with aspherical lenslets on choroidal thickness in myopic children: a 2-year randomised clinical trial. Br J Ophthalmol. 2023 Nov 22;107(12):1806-1811. doi: 10.1136/bjo-2022-321815. PMID: 36167484; PMCID: PMC10715521.	Not conform PICO: wrong outcome measures
Berntsen DA, Barr CD, Mutti DO, Zadnik K. Peripheral defocus and myopia progression in myopic children randomly assigned to wear single vision and progressive addition lenses. Invest Ophthalmol Vis Sci. 2013 Aug 27;54(8):5761-70. doi: 10.1167/iovs.13-11904. PMID: 23838771; PMCID: PMC3755539.	The literature analysis is based on the scoping review by Lupon (2024)
Berntsen DA, Mutti DO, Zadnik K. Study of Theories about Myopia Progression (STAMP) design and baseline data. Optom Vis Sci. 2010 Nov;87(11):823-32. doi: 10.1097/OPX.0b013e3181f6f776. PMID: 20935586; PMCID: PMC3075061.	Clinical trial design and baseline data
Gwiazda J, Norton TT, Hou W, Hyman L, Manny R; COMET group. Longitudinal Changes in Lens Thickness in Myopic Children Enrolled in the Correction of Myopia Evaluation Trial (COMET). Curr Eye Res. 2016 Apr;41(4):492-500. doi: 10.3109/02713683.2015.1034372. Epub 2015 Jun 16. PMID: 26079108; PMCID: PMC4788575.	Not conform PICO
Hasebe S, Jun J, Varnas SR. Myopia control with positively aspherized progressive addition lenses: a 2-year, multicenter, randomized, controlled trial. Invest Ophthalmol Vis Sci. 2014 Sep 30;55(11):7177-88. doi: 10.1167/iovs.12-11462. PMID: 25270192.	The literature analysis is based on the scoping review by Lupon (2024)

Yu X, Zhang B, Bao J, Zhang J, Wu G, Xu J, Zheng J, Drobe B, Chen H. Design, methodology, and baseline data of the Personalized Addition Lenses Clinical Trial (PACT). Medicine (Baltimore). 2017 Mar;96(11):e6069. doi: 10.1097/MD.0000000000006069. PMID: 28296722; PMCID: PMC5369877.	Clinical trial design and baseline data
Li X, Huang Y, Yin Z, Liu C, Zhang S, Yang A, Drobe B, Chen H, Bao J. Myopia Control Efficacy of Spectacle Lenses With Aspherical Lenslets: Results of a 3-Year Follow-Up Study. Am J Ophthalmol. 2023 Sep;253:160-168. doi: 10.1016/j.ajo.2023.03.030. Epub 2023 Apr 10. PMID: 37040846.	Same studypopulation as Bao (2022)
Bao J, Huang Y, Li X, Yang A, Zhou F, Wu J, Wang C, Li Y, Lim EW, Spiegel DP, Drobe B, Chen H. Spectacle Lenses With Aspherical Lenslets for Myopia Control vs Single-Vision Spectacle Lenses: A Randomized Clinical Trial. JAMA Ophthalmol. 2022 May 1;140(5):472-478. doi: 10.1001/jamaophthalmol.2022.0401. PMID: 35357402; PMCID: PMC8972151.	Same studypopulation as Bao (2022)

Zoekverantwoording

Algemene informatie

Cluster/richtlijn: NOG De behandeling van progressieve myopie op kinderleeftijd	
Uitgangsvraag/modules: Module 7 Wat is het effect van de myopie progressie remmende brillenglazen ten opzichte van reguliere brillenglazen op de remming van progressieve myopie?	
Database(s): Embase.com, Ovid/Medline	Datum: 20 augustus 2024
Periode: vanaf 2010	Talen: geen restrictie
Literatuurspecialist: Alies Oost	
BMI-zoekblokken: voor verschillende opdrachten wordt (deels) gebruik gemaakt van de zoekblokken van BMI-Online https://blocks.bmi-online.nl/ Deduplication: voor het ontdubbelen is gebruik gemaakt van http://dedupendnote.nl/	
Toelichting: Voor deze vraag is gezocht op de elementen: - Myopie - Myopie remmende brillenglazen àDe sleutelartikelen worden gevonden met deze search. àIn overleg met de adviseur is ervoor gekozen om geen limitering toe te passen voor studies m.b.t. kinderen. àEr zal worden gescreend met behulp van ASreview.	
Te gebruiken voor richtlijntekst: In de databases Embase.com en Ovid/Medline is op 20 augustus 2024 systematisch gezocht naar systematische reviews en RCTs vanaf 2010 over myopie remmende brillenglazen. De literatuurzoekactie leverde 1030 unieke treffers op.	

Zoekopbrengst

	EMBASE	**OVID/MEDLINE**	**Ontdubbeld**
SR	152	116	
RCT	758	512	
Totaal	910	628	**1030**

Zoekstrategie

Embase.com

No.	Query	Results
#1	'myopia'/exp OR 'high myopia'/exp OR myopia*:ti,ab,kw OR myopy:ti,ab,kw OR myopic:ti,ab,kw OR nearsight*:ti,ab,kw OR shortsight*:ti,ab,kw OR (((near OR short) NEAR/3 sight*):ti,ab,kw) OR 'refraction error'/de OR (((refraction OR refractive) NEAR/3 (error* OR disorder*)):ti,ab,kw)	61029
#2	'spectacles'/exp OR spectacle*:ti,ab,kw OR (((eye OR bifocal) NEAR/3 glass*):ti,ab,kw) OR eyeglass*:ti,ab,kw OR glasses:ti,ab,kw OR miyosmart:ti,ab,kw OR 'defocus incorporated multiple segment*':ti,ab,kw OR dims:ti,ab,kw OR stellest:ti,ab,kw OR hal:ti,ab,kw OR hals:ti,ab,kw OR 'highly aspherical lenslet*':ti,ab,kw OR 'cylindric* annular refractive element*':ti,ab,kw OR myocare:ti,ab,kw OR myovision:ti,ab,kw OR ((dot NEAR/3 lens*):ti,ab,kw) OR 'diffusion optics technolog*':ti,ab,kw OR sightglass*:ti,ab,kw OR shamir:ti,ab,kw OR pal:ti,ab,kw OR pals:ti,ab,kw OR 'progressive additionlens*':ti,ab,kw OR (('progressive addition' NEAR/3 lens*):ti,ab,kw)	50632
#3	#1 AND #2 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) AND [2010-2024]/py	2774
#4	'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	1054647
#5	'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	4091334
#6	#3 AND #4 - SR	152
#7	#3 AND #5 NOT #6 - RCT	758
#8	#6 OR #7	910

Ovid/Medline

#	Searches	Results
1	exp Myopia/ or myopia*.ti,ab,kf. or myopy.ti,ab,kf. or myopic.ti,ab,kf. or nearsight*.ti,ab,kf. or shortsight*.ti,ab,kf. or ((near or short) adj3 sight*).ti,ab,kf. or Refractive Errors/ or ((refraction or refractive) adj3 (error* or disorder*)).ti,ab,kf.	44651
2	exp Eyeglasses/ or spectacle*.ti,ab,kf. or ((eye or bifocal) adj3 glass*).ti,ab,kf. or eyeglass*.ti,ab,kf. or glasses.ti,ab,kf. or miyosmart.ti,ab,kf. or 'defocus incorporated multiple segment*'.ti,ab,kf. or dims.ti,ab,kf. or stellest.ti,ab,kf. or hal.ti,ab,kf. or hals.ti,ab,kf. or 'highly aspherical lenslet*'.ti,ab,kf. or 'cylindric* annular refractive element*'.ti,ab,kf. or myocare.ti,ab,kf. or myovision.ti,ab,kf. or (dot adj3 lens*).ti,ab,kf. or 'diffusion optics technolog*'.ti,ab,kf. or sightglass*.ti,ab,kf. or shamir.ti,ab,kf. or pal.ti,ab,kf. or pals.ti,ab,kf. or 'progressive additionlens*'.ti,ab,kf. or ('progressive addition' adj3 lens*).ti,ab,kf.	42329
3	(1 and 2) not (comment/ or editorial/ or letter/) not ((exp animals/ or exp models, animal/) not humans/)	4719
4	limit 3 to yr="2010 -Current"	2163
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	768680

	(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.	
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.	2766390
7	4 and 5 - SR	116
8	(4 and 6) not 7 - RCT	512
9	7 or 8	628

Module Multi-modale myopieremming

Risk of bias tables

Author, year	Selection of participants Was selection of exposed and non-exposed cohorts drawn from the same population? Definitely yes, probably yes, probably no, definitely no	Exposure Can we be confident in the assessment of exposure? Definitely yes, probably yes, probably no, definitely no	Outcome of interest Can we be confident that the outcome of interest was not present at start of study? Definitely yes, probably yes, probably no, definitely no	Confounding-assessment Can we be confident in the assessment of confounding factors? Definitely yes, probably yes, probably no, definitely no	Confounding-analysis Did the study match exposed and unexposed for all variables that are associated with the outcome of interest or did the statistical analysis adjust for these confounding variables? Definitely yes, probably yes, probably no, definitely no	Assessment of outcome Can we be confident in the assessment of outcome? Definitely yes, probably yes, probably no, definitely no	Follow up Was the follow up of cohorts adequate? In particular, was outcome data complete or imputed? Definitely yes, probably yes, probably no, definitely no	Co-interventions Were co-interventions similar between groups? Definitely yes, probably yes, probably no, definitely no	Overall Risk of bias Low, Some concerns, High
Wan, 2018	*Probably yes* Reason: Patients with regular examinations, who had complete clinical data during the study period (2 years, from 2014 to 2016) were included in this study.	*Probably yes* Reason: All patients had a visual acuity with near and distance correction of 0.01 logMAR (20/20) or better	*Definitely yes* Reason: It's not possible to have the outcomes of interest at the start.	*Probably no* Reason: Not reported	*Definitely no* Reason: no adjustments for confounding factors	*Definitely yes* Reason: No missing data	*Probably yes* Reason: follow-up time was adequate	*Probably yes* Reason: there were no co-interventions	**Some concerns**

Wen, 2024	*Probably yes* Reason: patients who were fitted with OK lenses at Changsha Aier Eye Hospital	*Definitely yes* Reason: All data were obtained from the patients' medical records.	*Definitely yes* Reason: It's not possible to have the outcomes of interest at the start.	*Probably no* Reason: Not reported	*Probably yes* Reason: None of the baseline parameters were associated with axial elongation	*Definitely yes* Reason: No missing data	*Probably yes* Reason: follow-up time was adequate	*Probably yes* Reason: there were no co-interventions	**Some concerns**
Erdinest, 2024	*Probably yes* Reason: participant had the same inclusion criteria	*Probably yes* Reason: each eye have a cycloplegic spherical equivalent refraction (SER) of−3.00 D or higher, along with a best-corrected visual acuity of 0.3 logMAR or better.	*Definitely yes* Reason: It's not possible to have the outcomes of interest at the start.	*Probably no* Reason: Not reported	*Definitely no* Reason: no adjustments for confounding factors	*Definitely yes* Reason: No missing data	*Probably yes* Reason: follow-up time was adequate	*Probably yes* Reason: there were no co-interventions	**Some concerns**

Table of excluded studies

Reference	Reason for exclusion
Tang T, Lu Y, Li X, Zhao H, Wang K, Li Y, Zhao M. Comparison of the long-term effects of atropine in combination with Orthokeratology and defocus incorporated multiple segment lenses for myopia control in Chinese children and adolescents. Eye (Lond). 2024 Jun;38(9):1660-1667. doi: 10.1038/s41433-024-02987-5. Epub 2024 Feb 28. PMID: 38418604; PMCID: PMC11156845.	This study evaluates 0.01% atropine, which is considered not relevant for the current research question.
Nucci P, Lembo A, Schiavetti I, Shah R, Edgar DF, Evans BJW. A comparison of myopia control in European children and adolescents with defocus incorporated multiple segments (DIMS) spectacles, atropine, and combined DIMS/atropine. PLoS One. 2023 Feb 16;18(2):e0281816. doi: 10.1371/journal.pone.0281816. PMID: 36795775; PMCID: PMC9934319.	This study evaluates 0.01% atropine, which is considered not relevant for the current research question.
Huang Z, Chen XF, He T, Tang Y, Du CX. Synergistic effects of defocus-incorporated multiple segments and atropine in slowing the progression of myopia. Sci Rep. 2022 Dec 24;12(1):22311. doi: 10.1038/s41598-022-25599-z. Erratum in: Sci Rep. 2023 Jun 14;13(1):9650. doi: 10.1038/s41598-023-36663-7. PMID: 36566245; PMCID: PMC9789944.	This study evaluates 0.01% atropine, which is considered not relevant for the current research question.
Xu S, Li Z, Zhao W, Zheng B, Jiang J, Ye G, Feng Z, Long W, He L, He M, Hu Y, Yang X. Effect of atropine, orthokeratology and combined treatments for myopia control: a 2-year stratified randomised clinical trial. Br J Ophthalmol. 2023 Nov 22;107(12):1812-1817. doi: 10.1136/bjo-2022-321272. PMID: 36229177.	This study evaluates 0.01% atropine, which is considered not relevant for the current research question.
Chen Z, Zhou J, Xue F, Qu X, Zhou X. Two-year add-on effect of using low concentration atropine in poor responders of orthokeratology in myopic children. Br J Ophthalmol. 2022 Aug;106(8):1069-1072. doi: 10.1136/bjophthalmol-2020-317980. Epub 2021 Mar 11. PMID: 33707188.	This study evaluates 0.01% atropine, which is considered not relevant for the current research question.
Kinoshita N, Konno Y, Hamada N, Kanda Y, Shimmura-Tomita M, Kaburaki T, Kakehashi A. Efficacy of combined orthokeratology and 0.01% atropine solution for slowing axial elongation in children with myopia: a 2-year randomised trial. Sci Rep. 2020 Jul 29;10(1):12750. doi: 10.1038/s41598-020-69710-8. PMID: 32728111; PMCID: PMC7391648.	This study evaluates 0.01% atropine, which is considered not relevant for the current research question.
Kinoshita N, Konno Y, Hamada N, Kanda Y, Shimmura-Tomita M, Kakehashi A. Additive effects of orthokeratology and atropine 0.01% ophthalmic solution in slowing axial elongation in children with myopia: first year results. Jpn J Ophthalmol. 2018 Sep;62(5):544-553. doi: 10.1007/s10384-018-0608-3. Epub 2018 Jul 4. PMID: 29974278.	This study evaluates 0.01% atropine, which is considered not relevant for the current research question.
Li B, Yu S, Gao S, Sun G, Pang X, Li X, Wang M, Zhang F, Fu A. Effect of 0.01% atropine combined with orthokeratology lens on axial elongation: a 2-year randomized, double-masked, placebo-controlled, cross-over trial. Front Med (Lausanne). 2024 Apr 23;11:1358046. doi: 10.3389/fmed.2024.1358046. PMID: 38716420; PMCID: PMC11074463.	This study evaluates 0.01% atropine, which is considered not relevant for the current research question.
Yu S, Du L, Ji N, Li B, Pang X, Li X, Ma N, Huang C, Fu A. Combination of orthokeratology lens with 0.01% atropine in slowing axial elongation in children with myopia: a randomized double-blinded clinical trial. BMC Ophthalmol. 2022 Nov 15;22(1):438. doi: 10.1186/s12886-022-02635-0. PMID: 36380280; PMCID: PMC9665032.	This study evaluates 0.01% atropine, which is considered not relevant for the current research question.
Du L, Chen J, Ding L, Wang J, Yang J, Xie H, Xu X, He X, Zhu M. Add-On Effect of 0.01% Atropine in Orthokeratology Wearers for Myopia Control in Children: A 2-Year Retrospective Study. Ophthalmol Ther. 2023 Oct;12(5):2557-2568. doi: 10.1007/s40123-023-00755-4. Epub 2023 Jul 5. PMID: 37405578; PMCID: PMC10442030.	This study evaluates 0.01% atropine, which is considered not relevant for the current research question.
Tan Q, Ng AL, Choy BN, Cheng GP, Woo VC, Cho P. One-year results of 0.01% atropine with orthokeratology (AOK) study: a randomised clinical trial. Ophthalmic Physiol Opt. 2020 Sep;40(5):557-566. doi: 10.1111/opo.12722. Epub 2020 Aug 10. PMID: 32776533.	This study evaluates 0.01% atropine, which is considered not relevant for the current research question.

Zhou H, Zhao G, Li Y. Adjunctive effects of orthokeratology and atropine 0.01% eye drops on slowing the progression of myopia. Clin Exp Optom. 2022 Jul;105(5):520-526. doi: 10.1080/08164622.2021.1943318. Epub 2021 Jul 6. PMID: 34228946.	This study evaluates 0.01% atropine, which is considered not relevant for the current research question.
Hao Q, Zhao Q. Changes in subfoveal choroidal thickness in myopic children with 0.01% atropine, orthokeratology, or their combination. Int Ophthalmol. 2021 Sep;41(9):2963-2971. doi: 10.1007/s10792-021-01855-5. Epub 2021 May 5. PMID: 33954859; PMCID: PMC8364521.	This study evaluates 0.01% atropine, which is considered not relevant for the current research question.
Tan Q, Ng AL, Cheng GP, Woo VC, Cho P. Combined 0.01% atropine with orthokeratology in childhood myopia control (AOK) study: A 2-year randomized clinical trial. Cont Lens Anterior Eye. 2023 Feb;46(1):101723. doi: 10.1016/j.clae.2022.101723. Epub 2022 May 31. PMID: 35654683.	This study evaluates 0.01% atropine, which is considered not relevant for the current research question.
Tan Q, Ng AL, Cheng GP, Woo VC, Cho P. Combined Atropine with Orthokeratology for Myopia Control: Study Design and Preliminary Results. Curr Eye Res. 2019 Jun;44(6):671-678. doi: 10.1080/02713683.2019.1568501. Epub 2019 Jan 24. PMID: 30632410.	This study evaluates 0.01% atropine, which is considered not relevant for the current research question.
Zhao W, Li Z, Hu Y, Jiang J, Long W, Cui D, Chen W, Yang X. Short-term effects of atropine combined with orthokeratology (ACO) on choroidal thickness. Cont Lens Anterior Eye. 2021 Jun;44(3):101348. doi: 10.1016/j.clae.2020.06.006. Epub 2020 Jun 30. PMID: 32620344.	This study evaluates 0.01% atropine, which is considered not relevant for the current research question.
Hiraoka T, Kiuchi G, Hiraoka R, Maruo K, Oshika T. Multifocal Contact Lenses and 0.01% Atropine Eye Drops for Myopia Control Study: Research Protocol for a 1-Year, Randomized, Four-Arm, Clinical Trial in Schoolchildren. Eye Contact Lens. 2023 Apr 1;49(4):172-177. doi: 10.1097/ICL.0000000000000977. Epub 2023 Feb 27. PMID: 36848188.	Protocol, wrong study design
Zhao Q, Hao Q. Clinical efficacy of 0.01% atropine in retarding the progression of myopia in children. Int Ophthalmol. 2021 Mar;41(3):1011-1017. doi: 10.1007/s10792-020-01658-0. Epub 2020 Nov 17. PMID: 33205372; PMCID: PMC7943497.	This study evaluates 0.01% atropine, which is considered not relevant for the current research question.
Wang Z, Wang P, Jiang B, Meng Y, Qie S, Yan Z. The efficacy and safety of 0.01% atropine alone or combined with orthokeratology for children with myopia: A meta-analysis. PLoS One. 2023 Jul 26;18(7):e0282286. doi: 10.1371/journal.pone.0282286. PMID: 37494360; PMCID: PMC10370708.	This study evaluates 0.01% atropine, which is considered not relevant for the current research question.
Jiang J, Long W, Hu Y, Zhao F, Zhao W, Zheng B, Feng Z, Li Z, Yang X. Accommodation and vergence function in children using atropine combined with orthokeratology. Cont Lens Anterior Eye. 2023 Feb;46(1):101704. doi: 10.1016/j.clae.2022.101704. Epub 2022 May 5. PMID: 35527114.	This study evaluates 0.01% atropine, which is considered not relevant for the current research question.
Zhao Q, Hao Q. Comparison of the Clinical Efficacies of 0.01% Atropine and Orthokeratology in Controlling the Progression of Myopia in Children. Ophthalmic Epidemiol. 2021 Oct;28(5):376-382. doi: 10.1080/09286586.2021.1875010. Epub 2021 Jan 20. PMID: 33472507.	This study evaluates 0.01% atropine, which is considered not relevant for the current research question.
Gao C, Wan S, Zhang Y, Han J. The Efficacy of Atropine Combined With Orthokeratology in Slowing Axial Elongation of Myopia Children: A Meta-Analysis. Eye Contact Lens. 2021 Feb 1;47(2):98-103. doi: 10.1097/ICL.0000000000000746. PMID: 33060414.	This study evaluates 0.01% atropine, which is considered not relevant for the current research question.
Yu Y, Liu J. The effect of 0.01% atropine and orthokeratology on ocular axial elongation for myopia children: A meta-analysis (a PRISMA-compliant article). Medicine (Baltimore). 2022 May 6;101(18):e29191. doi: 10.1097/MD.0000000000029191. PMID: 35550467; PMCID: PMC9276445.	Raw data are not reported in article
Gao Y, Yu Y. The effect of 0.01% atropine on ocular axial elongation for myopia children: A protocol for systematic review and meta-analysis. Medicine (Baltimore). 2022 Jun 3;101(22):e29409. doi: 10.1097/MD.0000000000029409. PMID: 35665735; PMCID: PMC9276353.	Protocol, wrong study design
Yang N, Bai J, Liu L. Low concentration atropine combined with orthokeratology in the treatment of axial elongation in children with myopia: A meta-analysis. Eur J Ophthalmol. 2022 Jan;32(1):221-228. doi: 10.1177/1120672121998903. Epub 2021 Mar 7. PMID: 33678055.	Raw data are not reported in article

Niu, Y. L. (2019). Effect of low grade atropine combined with keratoplasty on middle grade myopia in adolescents. International Eye Science, 1940-1944.	Article in Chinese
Zambrano Peralta P, Ortiz Quito M, Guerrero Ortiz F, Cervantes Anaya L. Orthokeratology vs. orthokeratology combined with atropine for the control of myopia in children: systematic review. Arch Soc Esp Oftalmol (Engl Ed). 2023 Oct;98(10):568-576. doi: 10.1016/j.oftale.2023.08.001. Epub 2023 Aug 22. PMID: 37619667.	Article in Spanish
Xiao L, Lv J, Zhu X, Sun X, Dong W, Fang C. Therapeutic effects of orthokeratology lens combined with 0.01% atropine eye drops on juvenile myopia. Arq Bras Oftalmol. 2023 Apr 3;87(5):e20220247. doi: 10.5935/0004-2749.2022-0247. PMID: 39298733; PMCID: PMC11626931.	This study evaluates 0.01% atropine, which is considered not relevant for the current research question.
Du LF, He F, Tan HX, Gao N, Song WQ, Luo YX. Comparisons of Three Methods for Myopia Control in Adolescents. J Ophthalmol. 2022 Sep 29;2022:9920002. doi: 10.1155/2022/9920002. PMID: 36211597; PMCID: PMC9536993.	This study evaluates 0.01% atropine, which is considered not relevant for the current research question.
Liu, Y., Guo, Y. F., Sun, H. S., Yin, D., Zhang, L., & LI, Y. F. (2023). Effect of orthokeratology combined with 0.01% atropine solution on adolescents with myopia. International Eye Science, 1279-1284.	Article in Chinese
Li, P. (2021). Effect of orthokeratology combined with 0.01% Atropine Sulfate Ophthalmic Gel on curative effect and analysis influencing factors on children's myopia. International Eye Science, 698-701.	Duplicate
Zhang G, Jiang J, Qu C. Myopia prevention and control in children: a systematic review and network meta-analysis. Eye (Lond). 2023 Nov;37(16):3461-3469. doi: 10.1038/s41433-023-02534-8. Epub 2023 Apr 27. PMID: 37106147; PMCID: PMC10630522.	Wrong study design
Zeng, G., Cui, J., & Peng, C. (2024). Feasibility and ethnic differences of 0.005% atropine eye drops combined with orthokeratology in controlling low myopia in adolescents. International Eye Science, 315-319.	Article in Chinese
Cui, C., FU, A., Wei, L., Zhao, B., YU, S., Zhang, J., ... & LI, X. (2023). Effects of 0.01% atropine on ocular biometrics in myopic adolescents. Chinese Journal of Experimental Ophthalmology, 330-337.	Article in Chinese

Literature search strategy

Algemene informatie

Cluster/richtlijn: NOG Behandeling van progressieve myopie op kinderleeftijd	
Uitgangsvraag/modules: Wat is de plaats van een multi-modale combinatie van middelen (optisch en medicatie) ten opzichte van een unimodale (optisch of medicatie) bij de beperking van progressieve myopie op de kinderleeftijd?	
Database(s): Embase.com, Ovid/Medline	Datum: 13 augustus 2024
Periode: geen restrictie	Talen: geen restrictie
Literatuurspecialist: Alies Oost	
BMI-zoekblokken: voor verschillende opdrachten wordt (deels) gebruik gemaakt van de zoekblokken van BMI-Online https://blocks.bmi-online.nl/ Deduplication: voor het ontdubbelen is gebruik gemaakt van http://dedupendnote.nl/	
Toelichting: Voor deze vraag is gezocht op de elementen: - Myopie - Combinatietherapie (optisch en pharmacotherapeutisch) àDe sleutelartikelen worden gevonden met deze search. àIn overleg met de adviseur is ervoor gekozen om geen limitering toe te passen voor studies m.b.t. kinderen. àEr zal worden gescreend met behulp van ASreview.	
Te gebruiken voor richtlijntekst: In de databases Embase.com en Ovid/Medline is op 13 augustus 2024 systematisch gezocht naar systematische reviews, RCTs en observationele studies over combinatietherapie (optisch en pharmacotherapeutisch) bij myopie. De literatuurzoekactie leverde 526 unieke treffers op.	

Zoekopbrengst

	EMBASE	**OVID/MEDLINE**	**Ontdubbeld**
SR	57	42	
RCT	192	89	
Observationele studies	226	106	
Totaal	475	237	**526**

Zoekstrategie

Embase.com

No.	**Query**	**Results**
#1	'myopia'/exp OR 'high myopia'/exp OR myopia*:ti,ab,kw OR myopy:ti,ab,kw OR myopic:ti,ab,kw OR nearsight*:ti,ab,kw OR shortsight*:ti,ab,kw OR (((near OR short) NEAR/3 sight*):ti,ab,kw) OR 'refraction error'/de OR (((refraction OR refractive) NEAR/3 (error* OR disorder*)):ti,ab,kw)	60967
#2	('atropine'/exp OR 'atropin*':ti,ab,kw OR 'mydriatic agent'/exp OR mydriatic*:ti,ab,kw OR 'muscarinic receptor blocking agent'/exp OR ((muscarin* NEAR/3 (agent* OR antagonist* OR anti OR block* OR inhibit*)):ti,ab,kw) OR antimuscarin*:ti,ab,kw OR 'cholinergic receptor blocking agent'/exp OR (((cholinergic OR cholinolytic* OR parasympathetic OR acetylcholin*) NEAR/3 (agent* OR antagonist* OR anti OR block* OR inhibit*)):ti,ab,kw) OR parasympathicolytic*:ti,ab,kw OR parasympatholytic*:ti,ab,kw OR anticholinerg*:ti,ab,kw) AND ('soft contact lens'/exp OR 'multifocal contact lens'/exp OR 'bifocal contact lens'/exp OR 'hydrophilic contact lens'/exp OR 'contact lens'/de OR (((multifocal OR bifocal OR 'dual focus' OR dualfocus OR defocus OR correct* OR hydrophil* OR 'ring focus*') NEAR/4 ('contact lens*' OR contactlens* OR cl OR cls OR scl OR scls OR softlens* OR 'soft contact*')):ti,ab,kw) OR misight:ti,ab,kw OR (((myopia OR myopy OR myopic*) NEAR/3 (lens* OR contactlens* OR cl OR cls OR scl OR scls OR softlens* OR 'soft contact*')):ti,ab,kw) OR mfscl*:ti,ab,kw OR 'spectacles'/exp OR spectacle*:ti,ab,kw OR (((eye OR bifocal) NEAR/3 glass*):ti,ab,kw) OR eyeglass*:ti,ab,kw OR glasses:ti,ab,kw OR miyosmart:ti,ab,kw OR 'defocus incorporated multiple segment*':ti,ab,kw OR dims:ti,ab,kw OR	102833

	stellest:ti,ab,kw OR hal:ti,ab,kw OR hals:ti,ab,kw OR 'highly aspherical lenslet*':ti,ab,kw OR 'cylindric* annular refractive element*':ti,ab,kw OR myocare:ti,ab,kw OR myovision:ti,ab,kw OR ((dot NEAR/3 lens*):ti,ab,kw) OR 'diffusion optics technolog*':ti,ab,kw OR sightglass*:ti,ab,kw OR shamir:ti,ab,kw OR pal:ti,ab,kw OR pals:ti,ab,kw OR 'progressive additionlens*':ti,ab,kw OR (('progressive addition' NEAR/3 lens*):ti,ab,kw) OR 'orthokeratology lens'/exp OR 'reverse geometry contact lens'/exp OR 'corneal reshaping contact lens'/exp OR orthokeratolog*:ti,ab,kw OR 'ortho k':ti,ab,kw OR orthok:ti,ab,kw OR 'ok lens*':ti,ab,kw OR (((overnight* OR night*) NEAR/4 (lens* OR contactlens* OR softlens* OR cl OR cls OR scl OR scls OR 'corneal reshap*')):ti,ab,kw) OR (('corneal refractive' NEAR/3 (therap* OR lens*)):ti,ab,kw) OR ((corneal NEAR/3 (reshap* OR 're shap*')):ti,ab,kw) OR (('reverse geometr*' NEAR/3 (lens* OR contactlens* OR softlens* OR cl OR cls OR scl OR scls)):ti,ab,kw) OR combination:ti OR combined:ti) OR ((combin* NEAR/3 (atropin* OR atp)):ti,ab,kw) OR ((fast NEAR/3 progress*):ti,ab,kw) OR ((non NEAR/3 respon*):ti,ab,kw)	
#3	#1 AND #2 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)	700
#4	'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	1053109
#5	'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	4087639
#6	'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)	8360113
#7	'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 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)))	15312125

#8	#3 AND #4 - SR	57
#9	#3 AND #5 NOT #8 - RCT	192
#10	#3 AND (#6 OR #7) NOT (#8 OR #9) - observationeel	226
#11	#8 OR #9 OR #10	475

Ovid/Medline

#	Searches	Results
1	exp Myopia/ or myopia*.ti,ab,kf. or myopy.ti,ab,kf. or myopic.ti,ab,kf. or nearsight*.ti,ab,kf. or shortsight*.ti,ab,kf. or ((near or short) adj3 sight*).ti,ab,kf. or Refractive Errors/ or ((refraction or refractive) adj3 (error* or disorder*)).ti,ab,kf.	44597
2	((exp Atropine/ or 'atropin*'.ti,ab,kf. or exp Mydriatics/ or mydriatic*.ti,ab,kf. or exp Muscarinic Antagonists/ or (muscarin* adj3 (agent* or antagonist* or anti or block* or inhibit*)).ti,ab,kf. or antimuscarin*.ti,ab,kf. or Cholinergic Antagonists/ or ((cholinergic or cholinolytic* or parasympathetic or acetylcholin*) adj3 (agent* or antagonist* or anti or block* or inhibit*)).ti,ab,kf. or parasympathicolytic*.ti,ab,kf. or parasympatholytic*.ti,ab,kf. or anticholinerg*.ti,ab,kf.) and (exp Contact Lenses/ or ((multifocal or bifocal or 'dual focus' or dualfocus or defocus or correct* or hydrophil* or 'Ring Focus*') adj4 ('contact lens*' or contactlens* or cl or cls or scl or scls or softlens* or 'soft contact*')).ti,ab,kf. or misight.ti,ab,kf. or ((myopia or myopy or myopic*) adj3 (lens* or contactlens* or cl or cls or scl or scls or softlens* or 'soft contact*')).ti,ab,kf. or mfscl*.ti,ab,kf. or exp Eyeglasses/ or spectacle*.ti,ab,kf. or ((eye or bifocal) adj3 glass*).ti,ab,kf. or eyeglass*.ti,ab,kf. or glasses.ti,ab,kf. or miyosmart.ti,ab,kf. or 'defocus incorporated multiple segment*'.ti,ab,kf. or dims.ti,ab,kf. or stellest.ti,ab,kf. or hal.ti,ab,kf. or hals.ti,ab,kf. or 'highly aspherical lenslet*'.ti,ab,kf. or 'cylindric* annular refractive element*'.ti,ab,kf. or myocare.ti,ab,kf. or myovision.ti,ab,kf. or (dot adj3 lens*).ti,ab,kf. or 'diffusion optics technolog*'.ti,ab,kf. or sightglass*.ti,ab,kf. or shamir.ti,ab,kf. or pal.ti,ab,kf. or pals.ti,ab,kf. or 'progressive additionlens*'.ti,ab,kf. or ('progressive addition' adj3 lens*).ti,ab,kf. or exp Orthokeratologic Procedures/ or orthokeratolog*.ti,ab,kf. or 'ortho k'.ti,ab,kf. or orthok.ti,ab,kf. or 'ok lens*'.ti,ab,kf. or ((overnight* or night*) adj4 (lens* or contactlens* or softlens* or cl or cls or scl or scls or 'corneal reshap*')).ti,ab,kf. or ('corneal refractive' adj3 (therap* or lens*)).ti,ab,kf. or (corneal adj3 (reshap* or 're shap*')).ti,ab,kf. or ('reverse geometr*' adj3 (lens* or contactlens* or softlens* or cl or cls or scl or scls)).ti,ab,kf. or combination.ti. or combined.ti.)) or (combin* adj3 (atropin* or atp)).ti,ab,kf. or (fast adj3 progress*).ti,ab,kf. or (non adj3 respon*).ti,ab,kf.	55691
3	(1 and 2) not (comment/ or editorial/ or letter/) not ((exp animals/ or exp models, animal/) not humans/)	395
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.	767408
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$3)).tw. or Placebos/ or placebo*.tw.	2763928
6	Epidemiologic studies/ or case control studies/ or exp cohort studies/ or Controlled Before-After Studies/ or Case control.tw. or cohort.tw. or Cohort analy$.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]	4801407

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 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.))	5760371
8	3 and 4 - SR	42
9	(3 and 5) not 8 - RCT	89
10	(3 and (6 or 7)) not (8 or 9) - observationeel	106
11	8 or 9 or 10	237