



**INFORME DE BÚSQUEDA SISTEMÁTICA DE EVIDENCIA DE LOS EFECTOS
DESEABLES E INDESEABLES**

Guía de Práctica Clínica Vicios de refracción en personas de
65 años y más 2017

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TABLA RESUMEN

Problema de salud	Vicios de refracción en personas de 65 años y más
ICD10	H52
Fecha de entrega	29/11/2017
Investigador responsable	Gabriel Rada Giacaman
Número de revisiones sistemáticas	133
Número de preguntas	61
L-OVE	Refractive errors
L-OVE URL	https://love.epistemonikos.org/#/diseases/refractive_errors/about

ESTRATEGIA DE BÚSQUEDA

Se realizaron búsquedas en Epistemonikos, una base de datos exhaustiva de revisiones sistemáticas relevantes para la toma de decisiones en salud. No se aplican restricciones en base al idioma o estado de publicación. La búsqueda de evidencia fue realizada en las siguientes bases de datos¹ con las estrategias descritas en el Anexo 1.

1. Cochrane database of systematic reviews (CDSR)
2. Database of Abstracts of Reviews of Effectiveness (DARE)
3. HTA Database
4. PubMed
5. LILACS
6. CINAHL.
7. PsychINFO.
8. EMBASE.
9. EPPI-Centre Evidence Library
10. 3ie Systematic Reviews and Policy Briefs Campbell Library
11. Clinical Evidence.
12. SUPPORT Summaries
13. WHO Institutional Repository for Information Sharing
14. NICE public health guidelines and systematic reviews
15. ACP Journal Club.
16. Evidencias en Pediatría
17. The JBI Database of Systematic Reviews and Implementation Reports

CRITERIOS DE INCLUSIÓN

Consideramos todas las revisiones sistemáticas que están sintetizando estudios primarios (tanto experimentales como observacionales) de acuerdo a la definición empleada por la Colaboración Cochrane y la declaración PRISMA².

Una revisión elegible debe cumplir con los siguientes criterios operacionales:

1. Reporta una búsqueda en al menos una base de datos electrónica.
2. Reporta al menos uno de los siguientes criterios inclusión de los estudios:
 - **Tipo de participantes:** Se incluyen todas las revisiones sistemáticas que resuman estudios que respondan la pregunta acerca de intervenciones para el alivio del dolor por cáncer avanzado y cuidados paliativos en humanos.

¹ La actualización se realiza de manera semanal. Se encuentra disponible en la plataforma digital un sistema de alerta que permite informar a través de correo electrónico la publicación de nuevos estudios que dan respuesta a las preguntas definidas, de manera de mantener continuamente actualizada la evidencia.

² “Una revisión sistemática intenta recopilar toda la evidencia empírica para responder a una pregunta de investigación específica, que cumple con criterios previamente definidos. Utiliza métodos explícitos y sistemáticos, que se eligen con miras a minimizar el sesgo, de manera de entregar hallazgos confiables que permitan sacar conclusiones y tomar decisiones”.

- **Tipo de desenlaces:** Se incluyen revisiones que presentan una síntesis (cuantitativa o cualitativa) de al menos un desenlace importante para el paciente u otra información relevante para tomar decisiones poblacionales o individuales acerca de intervenciones para el alivio del dolor por cáncer avanzado y cuidados paliativos en humanos.

RECOLECCIÓN, ANÁLISIS Y SÍNTESIS DE DATOS

SELECCIÓN DE LAS REVISIONES

Al menos dos revisores, de manera independiente, realizaron el cribado de los títulos y resúmenes para identificar los artículos relevantes. El texto completo de las revisiones potencialmente elegibles fue recuperado y evaluado, de manera independiente, para su inclusión final. Un tercer investigador resolvió cualquier discrepancia que pudiera haberse provocado entre los distintos revisores.

MAPEO DE LA EVIDENCIA

Con el objetivo de generar un listado exhaustivo de todas las posibles preguntas relacionadas con el tópico del L-OVE Refractive errors³ se realiza la agrupación de las revisiones resultantes en formato PICO, es decir: población, intervención, comparación y desenlace [*outcome*]) utilizamos las siguientes fuentes:

1. Guías y documentos
2. Criterios de inclusión de las revisiones sistemáticas identificadas
3. Consulta con expertos
4. Retroalimentación de los usuarios

Como resultado final la plataforma incluye toda la evidencia disponible en revisiones sistemáticas y sus estudios primarios incluidos, segregada por nodos de evidencia que representan cada una de las preguntas priorizadas para actualización de la guía (Ver “Diagrama de flujo PRISMA” en Anexo 2 y “Referencia Seleccionada” en Anexo 3).

ACTUALIZACIÓN – “LIVING”

Todas las búsquedas a través de esta plataforma se mantienen continuamente actualizada gracias a la tecnología implementada en el buscador de Epistemonikos y sus distintos colaboradores. Por lo cual, tanto la cantidad de revisiones, preguntas, entre otros datos cambian continuamente. Los datos presentados en este informe son los correspondientes a la fecha de entrega.

³Ver resultados de la búsqueda en: https://love.epistemonikos.org/#/diseases/refractive_errors/about

ANEXO 1. ESTRATEGIAS DE BÚSQUEDA

Cochrane Library - Cochrane database of systematic reviews (CDSR)

<http://www.thecochranelibrary.com>

myopia OR astigmat* OR hyperopia OR presbyopia OR ametropia OR (refract* AND (error OR errors OR disord* OR surgery)), in Title, Abstract, Keywords: Cochrane Reviews (Reviews NOT protocols)

Medline/PubMed - US National Library of Medicine

<http://www.ncbi.nlm.nih.gov/pubmed/>

myopia OR astigmat* OR hyperopia OR presbyopia OR ametropia OR (refract* AND (error OR errors OR disord* OR surgery)) AND (MEDLINE[Title/Abstract] OR (systematic[Title/Abstract] AND review[Title/Abstract]) OR meta analysis[Publication Type])

EMBASE (Excerpta Medica dataBASE)

<http://www.embase.com>

Frequency of search: weekly

myopia OR astigmat* OR hyperopia OR presbyopia OR ametropia OR (refract* AND (error OR errors OR disord* OR surgery)) AND meta-analysis.tw. OR systematic review.tw

CINAHL (Cumulative Index to Nursing and Allied Health Literature)

<https://www.ebscohost.com/nursing/products/cinahl-databases/the-cinahl-database>

myopia OR astigmat* OR hyperopia OR presbyopia OR ametropia OR (refract* AND (error OR errors OR disord* OR surgery)) AND ((TI meta analys* or AB meta analys*) or (TI systematic review or AB systematic review))

PsycINFO

<http://www.apa.org/pubs/databases/psycinfo>

myopia OR astigmat* OR hyperopia OR presbyopia OR ametropia OR (refract* AND (error OR errors OR disord* OR surgery)) AND (meta-analysis OR search*)

LILACS (Literatura Latinoamericana y del Caribe en Ciencias de la Salud)

<http://lilacs.bvsalud.org/en/>

myopia OR astigmat* OR hyperopia OR presbyopia OR ametropia OR (refract* AND (error OR errors OR disord* OR surgery)) AND (tw:"revision sistematica" or tw:"revisao sistematica" or tw:"systematic review") or ((MH:"Literatura de Revision como asunto" OR MH:"Metanalisis como asunto" OR PT:Revision OR PT:Metanalisis) and (TW:Metaanal\$ OR TW:"Meta-analysis" OR TW:"Meta-analise" OR TW:"Meta-analisis" OR TI:overview\$ or TW:"estudio sistematico" OR TW:"systematic study" OR TW:"estudo sistematico" OR TI:review OR TI:revisao OR TI:revision))

DARE (Database of Abstracts of Reviews of Effectiveness) - Centre for Reviews and Dissemination, University of York

<http://www.crd.york.ac.uk/CRDWeb/>

myopia OR astigmat* OR hyperopia OR presbyopia OR ametropia OR (refract* AND (error OR errors OR disord* OR surgery)), in Any field: CRD assessed review (bibliographic)/ CRD assessed review (full abstract)

HTA Database

<http://www.crd.york.ac.uk/CRDWeb/>

myopia OR astigmat* OR hyperopia OR presbyopia OR ametropia OR (refract* AND (error OR errors OR disord* OR surgery)), in Any field

The Campbell Collaboration Online Library

<https://www.campbellcollaboration.org/library.html>

myopia OR astigmat* OR hyperopia OR presbyopia OR ametropia OR (refract* AND (error OR errors OR disord* OR surgery)), in Title: Review

JBI Database of Systematic Reviews and Implementation Reports

<http://journals.lww.com/jbisrir/pages>

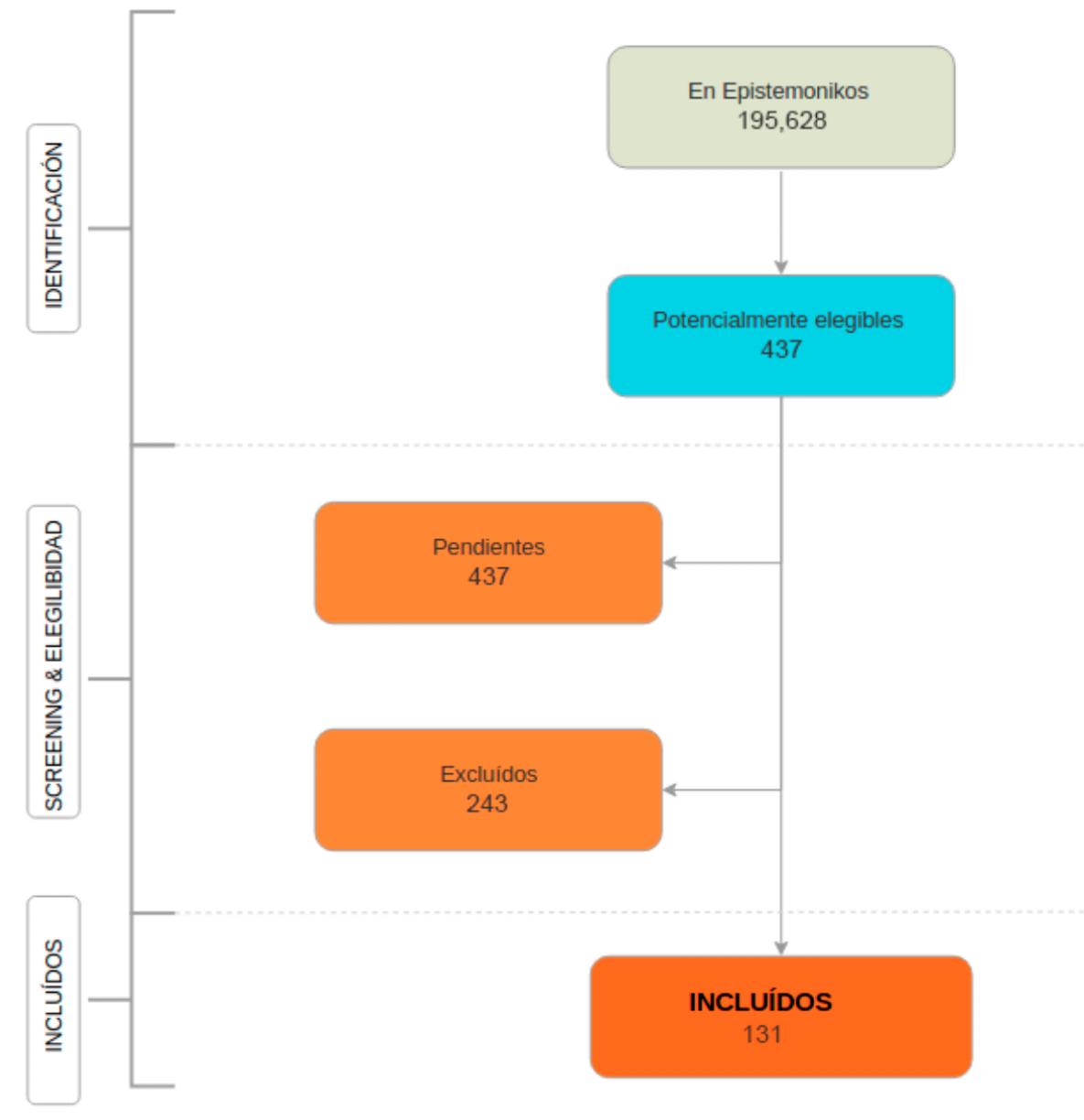
myopia OR astigmat* OR hyperopia OR presbyopia OR ametropia OR (refract* AND (error OR errors OR disord* OR surgery)) AND (review OR meta*), in All fields

EPPi-Centre Evidence Library

<http://eppi.ioe.ac.uk/cms/Default.aspx?tabid=56>

myopia OR astigmat* OR hyperopia OR presbyopia OR ametropia OR (refract* AND (error OR errors OR disord* OR surgery)) All records in chronological list
(<http://eppi.ioe.ac.uk/cms/Default.aspx?tabid=62>)

ANEXO 2. DIAGRAMA DE FLUJO PRISMA



ANEXO 3. REFERENCIAS SELECCIONADAS

1. Ong E, Ciuffreda KJ. Nearwork-induced transient myopia: a critical review. *Documenta ophthalmologica. Advances in ophthalmology.* 1995;91(1):57-85.
2. Zhao LQ, Zhu H, Li LM. Laser-Assisted Subepithelial Keratectomy versus Laser In Situ Keratomileusis in Myopia: A Systematic Review and Meta-Analysis. *ISRN ophthalmology.* 2014;2014:672146.
3. Wong TY, Zheng Y, Jonas JB, Flaxman SR, Keeffe J, Leasher J, Naidoo K, Pesudovs K, Price H, White RA, Resnikoff S, Taylor HR, Bourne RR, Vision Loss Expert Group of the Global Burden of Disease Study. Prevalence and causes of vision loss in East Asia: 1990-2010. *The British journal of ophthalmology.* 2014;98(5):599-604.
4. Zhang Y, Shen Q, Jia Y, Zhou D, Zhou J. Clinical Outcomes of SMILE and FS-LASIK Used to Treat Myopia: A Meta-analysis. *Journal of refractive surgery (Thorofare, N.J. : 1995).* 2016;32(4):256-65.
5. Lisa Jones-Jordan, Xue Wang, Roberta W Scherer, Donald O Mutti. Spectacle correction versus no spectacles for prevention of strabismus in hyperopic children. *Cochrane Database of Systematic Reviews.* 2014;8(8):CD007738.
6. Barsam A, Allan BD. Meta-analysis of randomized controlled trials comparing excimer laser and phakic intraocular lenses for myopia between 6.0 and 20.0 diopters. *Cornea.* 2012;31(4):454-61.
7. Jeffrey J Walline, Kristina Lindsley, Satyanarayana S Vedula, Susan A Cotter, Donald O Mutti, J. Daniel Twelker. Interventions to slow progression of myopia in children. *Cochrane database of systematic reviews (Online).* 2011;12(12):CD004916.
8. Wang J, Kang Z. Summary of prognostic factors for choroidal neovascularization due to pathological myopia treated by intravitreal bevacizumab injection. *Graefe's archive for clinical and experimental ophthalmology = Albrecht von Graefes Archiv für klinische und experimentelle Ophthalmologie.* 2012;250(12):1717-23.
9. Kuryan, Jocelyn, Cheema, Anjum, Chuck, Roy S. Laser-assisted subepithelial keratectomy (LASEK) versus laser-assisted in-situ keratomileusis (LASIK) for correcting myopia. *Cochrane Database of Systematic Reviews.* 2017;2(2):CD011080.
10. 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;119(10):2141-51.
11. Leasher JL, Lanssing V, Flaxman SR, Jonas JB, Keeffe J, Naidoo K, Pesudovs K, Price H, Silva JC, White RA, Wong TY, Resnikoff S, Taylor HR, Bourne RR, on behalf of the Vision Loss Expert Group of the Global Burden of Disease Study. Prevalence and causes of vision loss in Latin America and the Caribbean: 1990-2010. *The British journal of ophthalmology.* 2014;98(5):619-28.
12. 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. *Journal of ocular pharmacology and therapeutics : the official journal of the Association for Ocular Pharmacology and Therapeutics.* 2011;27(4):361-8.
13. Stuart A, Ford JA, Duckworth S, Jones C, Pereira A. Anti-VEGF therapies in the treatment of choroidal neovascularisation secondary to non-age-related macular degeneration: a systematic review. *BMJ open.* 2015;5(4):e007746.

14. Rudnicka AR, Kapetanakis VV, Wathern AK, Logan NS, Gilmartin B, Whincup PH, Cook DG, Owen CG. Global variations and time trends in the prevalence of childhood myopia, a systematic review and quantitative meta-analysis: implications for aetiology and early prevention. *The British journal of ophthalmology*. 2016;100(7):882-890.
15. Sankar, Mari Jeeva, Sankar, Jhuma, Mehta, Manisha, Bhat, Vishnu, Srinivasan, Renuka. Anti-vascular endothelial growth factor (VEGF) drugs for treatment of retinopathy of prematurity. *Cochrane Database of Systematic Reviews*. 2016;2:CD009734.
16. Wen D, McAlinden C, Flitcroft I, Tu R, Wang Q, Alió J, Marshall J, Huang Y, Song B, Hu L, Zhao Y, Zhu S, Gao R, Bao F, Yu A, Yu Y, Lian H, Huang J. Post-operative efficacy, predictability, safety and visual quality of laser corneal refractive surgery: a network meta-analysis. *American journal of ophthalmology*. 2017;178:65-78.
17. Zhao LQ, Wei RL, Cheng JW, Li Y, Cai JP, Ma XY. Meta-analysis: clinical outcomes of laser-assisted subepithelial keratectomy and photorefractive keratectomy in myopia. *Ophthalmology*. 2010;117(10):1912-22.
18. Wu W, Wang Y, Xu L. Epipolis-laser in situ keratomileusis versus photorefractive keratectomy for the correction of myopia: a meta-analysis. *International ophthalmology*. 2015;35(5):757-63.
19. Hickenbotham A, Roorda A, Steinmaus C, Glasser A. Meta-analysis of sex differences in presbyopia. *Investigative ophthalmology & visual science*. 2012;53(6):3215-20.
20. Farah SG, Azar DT, Gurdal C, Wong J. Laser in situ keratomileusis: literature review of a developing technique. *Journal of cataract and refractive surgery*. 1998;24(7):989-1006.
21. Saw SM, Shih-Yen EC, Koh A, Tan D. Interventions to retard myopia progression in children: an evidence-based update. *Ophthalmology*. 2002;109(3):415-21; discussion 422-4; quiz 425-6, 443.
22. Wang X, Tang L, Gao L, Yang Y, Cao D, Li Y. Myopia and diabetic retinopathy: A systematic review and meta-analysis. *Diabetes research and clinical practice*. 2015;111:1-9.
23. Wang S, Wang Y, Gao X, Qian N, Zhuo Y. Choroidal thickness and high myopia: a cross-sectional study and meta-analysis. *BMC ophthalmology*. 2015;15:70.
24. Alex J Shortt, Bruce DS Allan, Jennifer R Evans. Laser-assisted in-situ keratomileusis (LASIK) versus photorefractive keratectomy (PRK) for myopia. *Cochrane Database of Systematic Reviews*. 2013;1(1):CD005135.
25. Thiagarajan CA, Clarke M. A systematic review of technical evaluation in telemedicine systems. *Conference proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Annual Conference*. 2006;1:6320-3.
26. Labiris G, Toli A, Perente A, Ntonti P, Kozobolis VP. A systematic review of pseudophakic monovision for presbyopia correction. *International journal of ophthalmology*. 2017;10(6):992-1000.
27. Pearce MG. Clinical outcomes following the dispensing of ready-made and recycled spectacles: a systematic literature review. *Clinical & experimental optometry : journal of the Australian Optometrical Association*. 2014;97(3):225-33.
28. Queiros A., Lopes-Ferreira D., Gonzalez-Mejome J.M.. Astigmatic Peripheral Defocus with Different Contact Lenses: Review and Meta-Analysis. *Current Eye Research*. 2016;41(8):1005-1015.

29. 李仕明, 武珊珊, 詹思延, 王波, 李偲圆, 张丰菊, 王宁利. Meta-analysis of bifocal lenses for retarding myopia progression in school-aged myopic children. 中华实验眼科杂志 (Chinese Journal of Experimental Ophthalmology). 2011;29(6):549-554.
30. Health Quality Ontario. Phakic intraocular lenses for the treatment of refractive errors: an evidence-based analysis. Ontario health technology assessment series. 2009;9(14):1-120.
31. Chen H., Liu Y., Niu G., Jingxue M.. Excimer Laser Versus Phakic Intraocular Lenses for Myopia and Astigmatism: A Meta-Analysis of Randomized Controlled Trials. Eye and Contact Lens. 2016;
32. Li SM, Kang MT, Wu SS, Meng B, Sun YY, Wei SF, Liu L, Peng X, Chen Z, Zhang F, Wang N. Studies using concentric ring bifocal and peripheral add multifocal contact lenses to slow myopia progression in school-aged children: a meta-analysis. Ophthalmic & physiological optics : the journal of the British College of Ophthalmic Opticians (Optometrists). 2016;37(1):51-59.
33. Fan Q, Wojciechowski R, Kamran Ikram M, Cheng CY, Chen P, Zhou X, Pan CW, Khor CC, Tai ES, Aung T, Wong TY, Teo YY, Saw SM. Education influences the association between genetic variants and refractive error: a meta-analysis of five Singapore studies. Human molecular genetics. 2014;23(2):546-54.
34. Chen L, Ye T, Yang X. Evaluation of the long-term effects of photorefractive keratectomy correction for myopia in China. European journal of ophthalmology. 2011;21(4):355-62.
35. Xiong Q., Zeng X.-T., Cai X.-J., Li Z.-L., Li Z.-H., Li S.. Association between Myopia and Open-angle Glaucoma: A Meta-Analysis. 中国循证医学杂志 (Chinese Journal of Evidence-Based Medicine). 2014;05(2014):618-624.
36. Kandel H, Khadka J, Goggin M, Pesudovs K. Patient-reported Outcomes for Assessment of Quality of Life in Refractive Error: A Systematic Review. Optometry and vision science : official publication of the American Academy of Optometry. 2017;94(12):1102-1119.
37. Qian Z.-G., Ke M., Huang G., Zou J.. Laser in situ keratomileusis (LASIK) versus laser epithelial keratomileusis (LASEK) for correction of myopia: A systematic review. Chinese Journal of Evidence-Based Medicine. 2011;11(5):565-569.
38. Shen Z., Zhu Y., Song X., Yan J., Yao K.. Dry eye after small incision lenticule extraction (SMILE) versus femtosecond laser-assisted in situ keratomileusis (FS-LASIK) for myopia: A meta-analysis. PLoS ONE. 2016;11(12):e0168081.
39. Li Y, Wang J, Zhong X, Tian Z, Wu P, Zhao W, Jin C. Refractive error and risk of early or late age-related macular degeneration: a systematic review and meta-analysis. PloS one. 2014;9(3):e90897.
40. Castagno VD, Fassa AG, Carret ML, Vilela MA, Meucci RD. Hyperopia: a meta-analysis of prevalence and a review of associated factors among school-aged children. BMC ophthalmology. 2014;14(1):163.
41. Chou R, Dana T, Bougatsos C. Screening for Visual Impairment in Children Ages 1-5 Years: Systematic Review to Update the 2004 U.S. Preventive Services Task Force Recommendation. U.S. Preventive Services Task Force Evidence Syntheses, formerly Systematic Evidence Reviews. 2011;
42. Donovan L, Sankaridurg P, Ho A, Naduvilath T, Smith EL, Holden BA. Myopia progression rates in urban children wearing single-vision spectacles. Optometry and vision science : official publication of the American Academy of Optometry. 2012;89(1):27-32.

43. Si JK, Tang K, Bi HS, Guo DD, Guo JG, Wang XR. Orthokeratology for myopia control: a meta-analysis. *Optometry and vision science : official publication of the American Academy of Optometry*. 2015;92(3):252-7.
44. Wilson, Daniel J, Schutte, Scott M, Abel, Steven R. Comparing the Efficacy of Ophthalmic NSAIDs in Common Indications: A Literature Review to Support Cost-effective Prescribing. *Annals of Pharmacotherapy*. 2015;49(6):727-734.
45. Wei, Mao Ling, Liu, Jian Ping, Li, Ni, Liu, Ming. Acupuncture for slowing the progression of myopia in children and adolescents. *Cochrane database of systematic reviews (Online)*. 2011;9(9):CD007842.
46. Shi J.-L., Feng Y.-F., Chen S.-H., Wang Q.-M.. Comparison of Q-value guide LASIK and standardized LASIK for the treatment of myopia: a meta-analysis. *Zhonghua Shiyan Yanke Zazhi/Chinese Journal of Experimental Ophthalmology*. 2011;29(5):437-443.
47. Chen SH, Feng YF, Stojanovic A, Wang QM. Meta-analysis of clinical outcomes comparing surface ablation for correction of myopia with and without 0.02% mitomycin C. *Journal of refractive surgery (Thorofare, N.J. : 1995)*. 2011;27(7):530-41.
48. Suhr Thykjaer A, Lundberg K, Grauslund J. Physical activity in relation to development and progression of myopia - a systematic review. *Acta ophthalmologica*. 2016;95(7):651-659.
49. Xu X, Zhu MM, Zou HD. Refractive versus diffractive multifocal intraocular lenses in cataract surgery: a meta-analysis of randomized controlled trials. *Journal of refractive surgery (Thorofare, N.J. : 1995)*. 2014;30(9):634-44.
50. Jonas DE, Amick HR, Wallace IF, Feltner C, Vander Schaaf EB, Brown CL, Baker C. Vision Screening in Children Aged 6 Months to 5 Years: Evidence Report and Systematic Review for the US Preventive Services Task Force. *JAMA*. 2017;318(9):845-858.
51. Kam KW, Yung W, Li GKH, Chen LJ, Young AL. Infectious keratitis and orthokeratology lens use: a systematic review. *Infection*. 2017;45(6):1-9.
52. Wen D, Huang J, Li X, Savini G, Feng Y, Lin Q, Wang Q. Laser-assisted subepithelial keratectomy versus epipolis laser in situ keratomileusis for myopia: a meta-analysis of clinical outcomes. *Clinical & experimental ophthalmology*. 2013;42(4):323-33.
53. Wu Y.-Y.. Effect of orthokeratology to high myopia: a Meta-analysis. *International Eye Science*. 2016;16(4):647-650.
54. Chou R, Dana T, Bougatsos C. Screening for Visual Impairment in Older Adults: Systematic Review to Update the 1996 U.S. Preventive Services Task Force Recommendation. *U.S. Preventive Services Task Force Evidence Syntheses, formerly Systematic Evidence Reviews*. 2009;
55. He M, Huang W, Zhong X. Central corneal sensitivity after small incision lenticule extraction versus femtosecond laser-assisted LASIK for myopia: a meta-analysis of comparative studies. *BMC ophthalmology*. 2015;15:141.
56. Zhu, Ying, Zhang, Ting, Xu, Gezhi, Peng, Lijun. Anti-vascular endothelial growth factor for choroidal neovascularisation in people with pathological myopia. *Cochrane Database of Systematic Reviews*. 2016;12:CD011160.
57. Jonas JB, George R, Asokan R, Flaxman SR, Keeffe J, Leasher J, Naidoo K, Pesudovs K, Price H, Vijaya L, White RA, Wong TY, Resnikoff S, Taylor HR, Bourne RR, Vision Loss Expert Group of the Global Burden of Disease Study. Prevalence and causes of vision loss in Central and South Asia: 1990-2010. *The British journal of ophthalmology*. 2014;98(5):592-8.

58. Riddell N, Crewther SG. Novel evidence for complement system activation in chick myopia and hyperopia models: a meta-analysis of transcriptome datasets. *Scientific reports*. 2017;7(1):9719.
59. Liang GL, Wu J, Shi JT, Liu J, He FY, Xu W. Implantable collamer lens versus iris-fixed phakic intraocular lens implantation to correct myopia: a meta-analysis. *PloS one*. 2014;9(8):e104649.
60. Pan CW, Cheng CY, Saw SM, Wang JJ, Wong TY. Myopia and age-related cataract: a systematic review and meta-analysis. *American journal of ophthalmology*. 2013;156(5):1021-1033.e1.
61. 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 ophthalmology*. 2017;135(6):624-630.
62. Yang XJ, Yan HT, Nakahori Y. Evaluation of the effectiveness of laser in situ keratomileusis and photorefractive keratectomy for myopia: a meta-analysis. *The journal of medical investigation : JMI*. 2003;50(3-4):180-6.
63. Agresta B, Knorz MC, Kohnen T, Donatti C, Jackson D. Distance and near visual acuity improvement after implantation of multifocal intraocular lenses in cataract patients with presbyopia: a systematic review. *Journal of refractive surgery (Thorofare, N.J. : 1995)*. 2012;28(6):426-35.
64. Feng YF, Chen SH, Stojanovic A, Wang QM. Comparison of clinical outcomes between 'on-flap' and 'off-flap' epi-LASIK for myopia: a meta-analysis. *Ophthalmologica. Journal international d'ophtalmologie. International journal of ophthalmology. Zeitschrift für Augenheilkunde*. 2012;227(1):45-54.
65. Khairallah M, Kahloun R, Flaxman SR, Jonas JB, Keeffe J, Leasher J, Naidoo K, Pesudovs K, Price H, White RA, Wong TY, Resnikoff S, Taylor HR, Bourne RR, on behalf of the Vision Loss Expert Group. Prevalence and causes of vision loss in North Africa and the Middle East: 1990-2010. *The British journal of ophthalmology*. 2014;98(5):605-11.
66. Williams K.M., Verhoeven V.J.M., Cumberland P., Bertelsen G., Wolfram C., Buitendijk G.H.S., Hofman A., van Duijn C.M., Vingerling J.R., Kuijpers R.W.A.M., Hohn R., Mirshahi A., Khawaja A.P., Luben R.N., Erke M.G., von Hanno T., Mahroo O., Hogg R., Gieger C., Cougnard-Gregoire A., Anastasopoulos E., Bron A., Dartigues J.-F., Korobelnik J.-F., Creuzot-Garcher C., Topouzis F., Delcourt C., Rahi J., Meitinger T., Fletcher A., Foster P.J., Pfeiffer N., Klaver C.C.W., Hammond C.J.. Prevalence of refractive error in Europe: the European Eye Epidemiology (E3) Consortium. *European Journal of Epidemiology*. 2015;30((Williams K.M.; Mahroo O.; Hammond C.J., chris.hammond@kcl.ac.uk) Department of Ophthalmology, Kingnulls College London, London, United Kingdom):305-15.
67. 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;123(4):697-708.
68. Naidoo K, Gichuhi S, Basáñez MG, Flaxman SR, Jonas JB, Keeffe J, Leasher JL, Pesudovs K, Price H, Smith JL, Turner HC, White RA, Wong TY, Resnikoff S, Taylor HR, Bourne RR, on behalf of the Vision Loss Expert Group of the Global Burden of Disease Study. Prevalence and causes of vision loss in sub-Saharan Africa: 1990-2010. *The British journal of ophthalmology*. 2014;98(5):612-8.
69. Liu YM, Xie P. The Safety of Orthokeratology-A Systematic Review. *Eye & contact lens*. 2016;42(1):35-42.

70. 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 ophthalmologica*. 2017;95(6):551-566.
71. Feng Y, Yu J, Wang Q. Meta-analysis of wavefront-guided vs. wavefront-optimized LASIK for myopia. *Optometry and vision science : official publication of the American Academy of Optometry*. 2011;88(12):1463-9.
72. Chen X, Yuan F, Wu L. Metaanalysis of intraocular lens power calculation after laser refractive surgery in myopic eyes. *Journal of cataract and refractive surgery*. 2016;42(1):163-70.
73. Li Y., Cheng S.-M., Zhou X., Xu L.. Iris-registration in wavefront-guided LASIK versus conventional LASIK for correction of myopia and myopic astigmatism: A meta-analysis. *Chinese Journal of Evidence-Based Medicine*. 2013;13(3):358-364.
74. Li SM, Ji YZ, Wu SS, Zhan SY, Wang B, Liu LR, Li SY, Wang NL, Wang JJ. Multifocal versus single vision lenses intervention to slow progression of myopia in school-age children: a meta-analysis. *Survey of ophthalmology*. 2011;56(5):451-60.
75. Criswell MH, Goss DA. Myopia development in nonhuman primates--a literature review. *American journal of optometry and physiological optics*. 1983;60(3):250-68.
76. Cui M, Chen XM, Lü P. Comparison of laser epithelial keratomileusis and photorefractive keratectomy for the correction of myopia: a meta-analysis. *Chinese medical journal*. 2008;121(22):2331-5.
77. Wang JS, Xie HT, Jia Y, Zhang MC. Small-incision lenticule extraction versus femtosecond lenticule extraction for myopic: a systematic review and Meta-analysis. *International journal of ophthalmology*. 2017;10(1):115-121.
78. Liu H., Chen Y., Wang P., Li B., Wang W., Su Y., Sheng M.. Efficacy and safety of deep anterior lamellar keratoplasty vs. penetrating keratoplasty for keratoconus: A meta-analysis. *PLoS ONE*. 2015;10(1):e0113332.
79. Flaxman SR, Bourne RRA, Resnikoff S, Ackland P, Braithwaite T, Cincinelli MV, Das A, Jonas JB, Keeffe J, Kempen JH, Leasher J, Limburg H, Naidoo K, Pesudovs K, Silvester A, Stevens GA, Tahhan N, Wong TY, Taylor HR, Vision Loss Expert Group of the Global Burden of Disease Study. Global causes of blindness and distance vision impairment 1990-2020: a systematic review and meta-analysis. *The Lancet. Global health*. 2017;5(12):e1221-e1234.
80. Lagrèze WA, Joachimsen L, Schaeffel F. [Current recommendations for deceleration of myopia progression]. *Der Ophthalmologe : Zeitschrift der Deutschen Ophthalmologischen Gesellschaft*. 2016;114(1):24-29.
81. Allon Barsam, Bruce DS Allan. Excimer laser refractive surgery versus phakic intraocular lenses for the correction of moderate to high myopia. *Cochrane Database of Systematic Reviews*. 2014;6(6):CD007679.
82. Chen T., Shan G., Ma J., Zhong Y.. Polymorphism in the RASGRF1 gene with high myopia: A meta-analysis. *Molecular Vision*. 2015;21:1272-1280.
83. Rapuano C.J.. Meta-analysis: Clinical outcomes of laser-assisted subepithelial keratectomy and photorefractive keratectomy in myopia. *Evidence-Based Ophthalmology*. 2011;12(2):72-73.
84. Agresta B, Knorz MC, Donatti C, Jackson D. Visual acuity improvements after implantation of toric intraocular lenses in cataract patients with astigmatism: a systematic review. *BMC ophthalmology*. 2012;12:41.

85. Pan CW, Ikram MK, Cheung CY, Choi HW, Cheung CM, Jonas JB, Saw SM, Wong TY. Refractive errors and age-related macular degeneration: a systematic review and meta-analysis. *Ophthalmology*. 2013;120(10):2058-65.
86. Zhang X, Qu X, Zhou X. Association between parental myopia and the risk of myopia in a child. *Experimental and therapeutic medicine*. 2015;9(6):2420-2428.
87. Chen S, Feng Y, Stojanovic A, Jankov MR, Wang Q. IntraLase femtosecond laser vs mechanical microkeratomes in LASIK for myopia: a systematic review and meta-analysis. *Journal of refractive surgery (Thorofare, N.J. : 1995)*. 2012;28(1):15-24.
88. 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. *Current eye research*. 2015;41(5):1-9.
89. Xu X.-Q., Li S.-P., Xu Y.-J., Wei J.. Prevalence of myopia among primary school students in mainland China: A Meta-analysis. *International Eye Science*. 2016;16(7):1221-1227.
90. Tang SM, Chan RY, Bin Lin S, Rong SS, Lau HH, Lau WW, Yip WW, Chen LJ, Ko ST, Yam JC. Refractive Errors and Concomitant Strabismus: A Systematic Review and Meta-analysis. *Scientific reports*. 2016;6:35177.
91. Kobashi H, Kamiya K, Hoshi K, Igarashi A, Shimizu K. Wavefront-guided versus non-wavefront-guided photorefractive keratectomy for myopia: meta-analysis of randomized controlled trials. *PloS one*. 2014;9(7):e103605.
92. Gianni Virgili, Francesca Menchini. Laser photocoagulation for choroidal neovascularisation in pathologic myopia. *Cochrane Database of Systematic Reviews*. 2009;(4):CD004765.
93. Kelava L, Barić H, Bušić M, Čima I, Trkulja V. Monovision Versus Multifocality for Presbyopia: Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Advances in therapy*. 2017;34(8):1815-1839.
94. Miriam Keane, Douglas Coster, Mohammed Ziae, Keryn Williams. Deep anterior lamellar keratoplasty versus penetrating keratoplasty for treating keratoconus. *Cochrane Database of Systematic Reviews*. 2014;7(7):CD009700.
95. Pruett RC. Progressive myopia and intraocular pressure: what is the linkage? A literature review. *Acta ophthalmologica. Supplement*. 1988;185:117-27.
96. Tian C, Peng X, Fan Z, Yin Z. Corneal refractive surgery and phakic intraocular lens for treatment of amblyopia caused by high myopia or anisometropia in children. *Chinese medical journal*. 2014;127(11):2167-72.
97. Pan CW, Dirani M, Cheng CY, Wong TY, Saw SM. The age-specific prevalence of myopia in Asia: a meta-analysis. *Optometry and vision science : official publication of the American Academy of Optometry*. 2015;92(3):258-66.
98. 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;10(4):e0124535.
99. Chou R, Dana T, Bougatsos C, Grusing S, Blazina I. Screening for Impaired Visual Acuity in Older Adults: A Systematic Review to Update the 2009 U.S. Preventive Services Task Force Recommendation. *U.S. Preventive Services Task Force Evidence Syntheses, formerly Systematic Evidence Reviews*. 2016;
100. Cui Y, Li L, Wu Q, Zhao J, Chu H, Yu G, Wei W. Myopia correction in children: a meta-analysis. *Clinical and investigative medicine. Medecine clinique et experimentale*. 2017;40(3):E117-E126.

101. Liu S., Yi X.-L.. SMILE and femtosecond LASIK treatment of myopia effect: a Meta-analysis. International Eye Science. 2017;17(1):54-58.
102. Cochener B., Lafuma A., Khoshnood B., Courouvre L., Berdeaux G.. Comparison of outcomes with multifocal intraocular lenses: a meta-analysis. Clinical Ophthalmology. 2011;5(1):45-56.
103. Siddiqui M.K., Mann K., Vonmaltzahn R., Ternouth A.M., Verboven Y., Berdeaux G.. Risks and benefits of acrysof cachetTM implantation in high myopia (<-6 dioptre): A systematic literature review. Value in Health. 2011;:A261.
104. Marcus MW, de Vries MM, Junoy Montolio FG, Jansonius NM. Myopia as a risk factor for open-angle glaucoma: a systematic review and meta-analysis. Ophthalmology. 2011;118(10):1989-1994.e2.
105. Mosquera SA, Alió JL. Presbyopic correction on the cornea. Eye and vision (London, England). 2014;1:5.
106. George Settas, Clare Settas, Evangelos Minos, Ian YL Yeung. Photorefractive keratectomy (PRK) versus laser assisted in situ keratomileusis (LASIK) for hyperopia correction. Cochrane Database of Systematic Reviews. 2012;6(6):CD007112.
107. Goss DA, Wickham MG. Retinal-image mediated ocular growth as a mechanism for juvenile onset myopia and for emmetropization. A literature review. Documenta ophthalmologica. Advances in ophthalmology. 1995;90(4):341-75.
108. Feng, Yi-Fan, Chen, Shi-Hao, Yang, Xin-Jun, Wang, Qin-Mei. Meta-analysis of clinical effectiveness of on-flap and off-flap epi-LASIK for myopia. 中华实验眼科杂志 (Chinese Journal of Experimental Ophthalmology). 2011;29(3):269-275.
109. Hashemi H., Fotouhi A., Yekta A., Pakzad R., Ostadi moghaddam H., Khabazkhoob M.. Global and regional estimates of prevalence of refractive errors: Systematic review and meta-analysis. Journal of Current Ophthalmology. 2017;
110. Chou R, Dana T, Bougatsos C, Grusing S, Blazina I. Screening for Impaired Visual Acuity in Older Adults: Updated Evidence Report and Systematic Review for the US Preventive Services Task Force. JAMA. 2016;315(9):915-33.
111. Sorkin N, Varssano D. Corneal collagen crosslinking: a systematic review. Ophthalmologica. Journal international d'ophtalmologie. International journal of ophthalmology. Zeitschrift für Augenheilkunde. 2014;232(1):10-27.
112. Rosen E, Alió JL, Dick HB, Dell S, Slade S. Efficacy and safety of multifocal intraocular lenses following cataract and refractive lens exchange: Metaanalysis of peer-reviewed publications. Journal of cataract and refractive surgery. 2016;42(2):310-28.
113. Huang HM, Chang DS, Wu PC. The Association between Near Work Activities and Myopia in Children-A Systematic Review and Meta-Analysis. PloS one. 2015;10(10):e0140419.
114. Naidoo KS, Leasher J, Bourne RR, Flaxman SR, Jonas JB, Keeffe J, Limburg H, Pesudovs K, Price H, White RA, Wong TY, Taylor HR, Resnikoff S, Vision Loss Expert Group of the Global Burden of Disease Studya. Global Vision Impairment and Blindness Due to Uncorrected Refractive Error, 1990-2010. Optometry and vision science : official publication of the American Academy of Optometry. 2016;93(3):227-34.
115. Wang E, Chen Y. Intravitreal anti-vascular endothelial growth factor for choroidal neovascularization secondary to pathologic myopia: systematic review and meta-analysis. Retina (Philadelphia, Pa.). 2013;33(7):1375-92.
116. Li SM, Wu SS, Kang MT, Liu Y, Jia SM, Li SY, Zhan SY, Liu LR, Li H, Chen W, Yang Z, Sun YY, Wang N, Millodot M. Atropine slows myopia progression more in Asian than white children by meta-

- analysis. Optometry and vision science : official publication of the American Academy of Optometry. 2014;91(3):342-50.
117. Fu Y., Geng D., Liu H., Che H.. Myopia and/or longer axial length are protective against diabetic retinopathy: A meta-analysis. *Acta Ophthalmologica*. 2016;94(4):346-352.
 118. Kessel L, Andresen J, Tendal B, Erngaard D, Flesner P, Hjortdal J. Toric Intraocular Lenses in the Correction of Astigmatism During Cataract Surgery: A Systematic Review and Meta-analysis. *Ophthalmology*. 2015;123(2):275-86.
 119. Li, Shi-Ming, Zhan, Siyan, Li, Si-Yuan, Peng, Xiao-Xia, Hu, Jing, Law, Hua Andrew, Wang, Ning-Li. Laser-assisted subepithelial keratectomy (LASEK) versus photorefractive keratectomy (PRK) for correction of myopia. *Cochrane Database of Systematic Reviews*. 2016;2(2):CD009799.
 120. Morgan I., Xiang F.. A meta-analysis of heritability studies on myopia. *Clinical and Experimental Ophthalmology*. 2011;:85-86.
 121. Simpson RG, Moshirfar M, Edmonds JN, Christiansen SM. Laser in-situ keratomileusis in patients with diabetes mellitus: a review of the literature. *Clinical ophthalmology (Auckland, N.Z.)*. 2012;6:1665-74.
 122. Chou R, Dana T, Bougatsos C. Screening for visual impairment in children ages 1-5 years: update for the USPSTF. *Pediatrics*. 2011;127(2):e442-79.
 123. Wong TY, Ferreira A, Hughes R, Carter G, Mitchell P. Epidemiology and disease burden of pathologic myopia and myopic choroidal neovascularization: an evidence-based systematic review. *American journal of ophthalmology*. 2014;157(1):9-25.e12.
 124. Shi JL, Feng YF, Chen SH, Wang QM. Comparison of Q-value guide LASIK and standardized LASIK for the treatment of myopia: a meta-analysis. *中华实验眼科杂志 (Chinese Journal of Experimental Ophthalmology)*. 2011;29(5):437-443.
 125. Christine Powell, Susanne Wedner, Sarah R Hatt. Vision screening for correctable visual acuity deficits in school-age children and adolescents. *Cochrane Database of Systematic Reviews*. 2009;(4):CD005023.
 126. Health Quality Ontario. Routine eye examinations for persons 20-64 years of age: an evidence-based analysis. *Ontario health technology assessment series*. 2006;6(15):1-81.
 127. Yanhui Cui, Li Li, Qian Wu, Junyang Zhao, Huihui Chu, Gang Yu, Wenbin Wei. Myopia correction in children: a meta-analysis. *Clinical & Investigative Medicine*. 2017;40(3):117-126.
 128. Shen Z, Shi K, Yu Y, Yu X, Lin Y, Yao K. Small Incision Lenticule Extraction (SMILE) versus Femtosecond Laser-Assisted In Situ Keratomileusis (FS-LASIK) for Myopia: A Systematic Review and Meta-Analysis. *PloS one*. 2016;11(7):e0158176.
 129. Fledelius HC, Goldschmidt E, Haargaard B, Jensen H. Human parallels to experimental myopia? A literature review on visual deprivation. *Acta ophthalmologica*. 2014;92(8):724-9.
 130. Zhang ZH, Jin HY, Suo Y, Patel SV, Montés-Micó R, Manche EE, Xu X. Femtosecond laser versus mechanical microkeratome laser in situ keratomileusis for myopia: Metaanalysis of randomized controlled trials. *Journal of cataract and refractive surgery*. 2011;37(12):2151-9.
 131. Li L, Qi Y, Shi W, Wang Y, Liu W, Hu M. A Meta-Analysis for Association of Maternal Smoking with Childhood Refractive Error and Amblyopia. *Journal of ophthalmology*. 2016;2016:8263832.