

## Appendix 5 Quality assessments for review articles

This appendix contains data extractions from the systematic reviews included in this review, organised as general systematic reviews (Section A5.1) and Cochrane systematic reviews (Section A5.2).

### A5.1 General systematic reviews

#### Paper 460

<b>Reference</b> Kelly SP, Thornton J, Edwards R, Sahu A and Harrison R (2005). Smoking and cataract: review of causal association. <i>Journal of Cataract &amp; Refractive Surgery</i> 31(12):2395–2404.	
<b>Affiliation/source of funds</b> Supported in part from endowment funds at Bolton Hospitals National Health Service Trust Dr Edwards is unpaid chairman of the charity Northwest Action on Smoking and Health	
<b>Number of included studies</b> 27	<b>Study design</b> 11 cross-sectional studies, 9 prospective cohorts, 7 case-control
<b>Location/setting</b> Studies originated mainly from North America (12), Europe (7) or Australia (2)	
<b>Population characteristics</b>	
<i>Study group(s)</i>	<i>Comparator group(s)</i>
Current smokers	Never smokers or nonsmokers
The majority of studies recruited patients aged over 30 years, mostly between 60 and 70. Most studies recruited both men and women, except for some occupational studies.	
<b>Outcome(s) measured</b>	
<i>Outcome/description</i>	<i>Scale/measure used</i>
Positive association between smoking and one or more types of cataract	Risk estimates for developing cataract in current smokers compared with never smokers or nonsmokers were 1.08 to 3.31
Stronger association between smoking and nuclear cataract than for cortical or posterior subcapsular cataract	
<b>Was a meta-analysis done?</b>	No

<b>INTERNAL VALIDITY</b>		
<p><b>The study addresses an appropriate and clearly focused question</b>                      Yes  <b>Notes:</b>                      Is tobacco smoking a risk factor for cataract formation?</p>	<p><b>Well covered</b>                      Adequately addressed                      Poorly addressed</p>	<p>Not addressed                      Not reported                      Not applicable</p>
<p><b>A description of the methodology used is included</b>                      Yes  <b>Notes:</b></p>	<p><b>Well covered</b>                      Adequately addressed                      Poorly addressed</p>	<p>Not addressed                      Not reported                      Not applicable</p>
<p><b>The literature search is sufficiently rigorous to identify all the relevant studies</b>                      Yes  <b>Notes:</b> MEDLINE and EMBASE were searched using key words. Bibliographies of original research and review papers were checked for further relevant studies.</p>	<p><b>Well covered</b>                      Adequately addressed                      Poorly addressed</p>	<p>Not addressed                      Not reported                      Not applicable</p>
<p><b>Study quality is assessed and taken into account</b>                      Yes  <b>Notes:</b> Studies were excluded if they did not report a measure of association. No other quality measures are mentioned.</p>	<p>Well covered  <b>Adequately addressed</b>                      Poorly addressed</p>	<p>Not addressed                      Not reported                      Not applicable</p>
<p><b>There are enough similarities between the studies selected to make combining them reasonable</b>                      No  <b>Notes:</b></p>	<p>Well covered                      Adequately addressed                      Poorly addressed</p>	<p>Not addressed                      Not reported  <b>Not applicable</b></p>
<b>OVERALL ASSESSMENT OF THE STUDY</b>		
<b>Overall quality</b>	<b>Good/Adequate/Poor</b>	
<b>EXTERNAL VALIDITY</b>		
<b>Generalisability</b>	Appropriate to the Australian context	
<b>Applicability</b>	Demonstrates that cessation of smoking reduces the risk of cataract, although it may take some time	

## Paper 507

<b>Reference</b> McCarty CA (2002). Cataract in the 21 <sup>st</sup> century: lessons from previous epidemiological research. <i>Clinical and Experimental Optometry</i> 85(2):91–96.		
<b>Affiliation/source of funds</b> No funds mentioned		
<b>Number of included studies</b> 2	<b>Study design</b> 2 prospective cohorts	
<b>Location/setting</b> Australia (Victoria and Blue Mountains)		
<b>Population characteristics</b>		
<i>Study group(s)</i>	<i>Comparator group(s)</i>	
General population age 40+ in Victoria and 49+ in Blue Mountains.	NA	
<b>Outcome(s) measured</b>		
<i>Outcome/description</i>	<i>Scale/measure used</i>	
Incidence of cataract (three types)	The studies used ophthalmological examination	
<b>Was a meta-analysis done?</b>	No, results given for each individual study	
<b>INTERNAL VALIDITY</b>		
<b>The study addresses an appropriate and clearly focused question</b> Yes. <b>Notes:</b> Is there an association between smoking and cataract?	<b>Well covered</b> Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>A description of the methodology used is included</b> Yes <b>Notes:</b> Searched MEDLINE (1996–July 2003) and EMBASE (1980–July 2003). Included studies that gave an estimate of the degree of association (by odds ratio or relative risk).	<b>Well covered</b> Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>The literature search is sufficiently rigorous to identify all the relevant studies</b> Yes <b>Notes:</b> Details given of limits, data extraction methods, definitions used and framework for assessing causality.	<b>Well covered</b> Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>Study quality is assessed and taken into account</b> No <b>Notes:</b> 32 studies examined, 5 excluded, but have only given study types, not an indication of quality	Well covered Adequately addressed Poorly addressed	<b>Not addressed</b> Not reported Not applicable

<b>There are enough similarities between the studies selected to make combining them reasonable</b> No <b>Notes:</b> Not a meta-analysis, but did use data to do a causal attribution analysis; found association fulfilled 5 of 6 criteria for attribution of causality	Well covered	Not addressed
	Adequately addressed	Not reported
	Poorly addressed	<b>Not applicable</b>
<b>OVERALL ASSESSMENT OF THE STUDY</b>		
<b>Overall quality?</b>	Good/ <b>Adequate</b> /Poor	
<b>EXTERNAL VALIDITY</b>		
<b>Generalisability</b>	Generalisable to Australia	
<b>Applicability</b>	Study applicable to the Australian population	

## Paper 695

<b>Reference</b> Bonovas S, Filioussi K, Tsantes A and Peponis V (2004). Epidemiological association between cigarette smoking and primary open-angle glaucoma: a meta-analysis. <i>Public Health</i> 118(4):256–261.		
<b>Affiliation/source of funds</b> Department of General Practice, General Hospital of Athens Department of Ophthalmology, General Hospital of Piraeus		
<b>Number of included studies</b> 7	<b>Study design</b> 4 cross-sectional and 3 case-control	
<b>Location/setting</b> United States (4), Congo (2), France (1)		
<b>Population characteristics</b>		
<i>Study group(s)</i>	<i>Comparator group(s)</i>	
Current smokers	Never smokers	
Past smokers	Never smokers	
<b>Outcome(s) measured</b>		
<i>Outcome/description</i>	<i>Scale/measure used</i>	
Development of primary open-angle glaucoma (POAG)	Not stated	
<b>Was a meta-analysis done?</b>	Yes, two meta-analytic models were fitted; one for ‘current smokers’ vs ‘never smokers’ (from 7 reports) and one for ‘past smokers’ vs ‘never smokers’ (from 4 reports)	
<b>INTERNAL VALIDITY</b>		
<b>The study addresses an appropriate and clearly focused question</b> Yes <b>Notes:</b> Is there an association between cigarette smoking and primary open-angle glaucoma?	<b>Well covered</b> Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>A description of the methodology used is included</b> Yes <b>Notes:</b> Search terms, inclusion and exclusion criteria and data extraction procedures explained.	<b>Well covered</b> Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>The literature search is sufficiently rigorous to identify all the relevant studies</b> Yes <b>Notes:</b> Conducted a search in Medline (1966–2002), and used reference lists from relevant articles and reviews to identify further studies.	<b>Well covered</b> Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>Study quality is assessed and taken into account</b> No <b>Notes:</b> To avoid selection bias, the authors did not reject studies on the basis of methodological characteristics or subjective quality criteria. This may have affected the results of the included studies.	Well covered Adequately addressed Poorly addressed	<b>Not addressed</b> Not reported Not applicable

<p><b>There are enough similarities between the studies selected to make combining them reasonable</b>                  Yes  <b>Notes:</b> Studies were rejected if the common definition of exposure to cigarette smoking was not followed or if risk estimates were not provided. No evidence of heterogeneity among the studies was found using Cochrane's Q test. However, the studies were done in very different locations and times.</p>	Well covered <b>Adequately addressed</b> Poorly addressed	Not addressed Not reported Not applicable
<p><b>OVERALL ASSESSMENT OF THE STUDY</b></p>		
<p><b>Overall quality</b></p>	Good/ <b>Adequate</b> /Poor	
<p><b>EXTERNAL VALIDITY</b></p>		
<p><b>Generalisability</b></p>	Most of the populations studies were relevant to the Australian context	
<p><b>Applicability</b></p>	The findings support an association between cigarette smoking and POAG, although details of the mechanism are still unknown	

## Paper 1067

<b>Reference</b> Gartlehner G, Hansen RA, Carson SS and Lohr KN (2006). Efficacy and safety of inhaled corticosteroids in patients with COPD: A systematic review and meta-analysis of health outcomes. <i>Annals of Family Medicine</i> 4(3):253–262.		
<b>Affiliation/source of funds</b> University of North Carolina No conflicts of interest reported		
<b>Number of included studies</b> 13 (double-blinded randomised control trials on efficacy of inhaled corticosteroids) 11 (additional studies including case–control, prospective cohort, nested case–control and cross-sectional) <b>Notes:</b> 4 studies addressed cataracts: 2 case–control studies, a retrospective cohort study with a nested case–control study, and a cross-sectional study. 2 studies addressed glaucoma: 1 case–control and 1 cross-sectional.	<b>Study design</b> Systematic review with meta-analysis	
<b>Location/setting</b> Not specified		
<b>Population characteristics</b>		
<i>Study group(s)</i>	<i>Comparator group(s)</i>	
Nonspecific inhaled corticosteroid use	No inhaled corticosteroid use	
Most cataract studies unspecified, but there was one British case–control study Glaucoma patients from Canada (aged 66 years and over) and Australia (aged 49–97 years)		
<b>Outcome(s) measured</b>		
<i>Outcome/description</i>	<i>Scale/measure used</i>	
Adult patients developing cataracts	Not specified	
Adult patients developing open-angle glaucoma	Not specified	
<b>Was a meta-analysis done?</b>	Yes (but not for cataracts or glaucoma )	
<b>INTERNAL VALIDITY</b>		
<b>The study addresses an appropriate and clearly focused question</b> Yes <b>Notes:</b> Are inhaled corticosteroids efficacious, effective and safe to use for patients with chronic obstructive pulmonary disease?	<b>Well covered</b>	Not addressed
	Adequately addressed	Not reported
	Poorly addressed	Not applicable
<b>A description of the methodology used is included</b> Yes <b>Notes:</b> Inclusion and exclusion criteria clearly stated.	<b>Well covered</b>	Not addressed
	Adequately addressed	Not reported
	Poorly addressed	Not applicable

<p><b>The literature search is sufficiently rigorous to identify all the relevant studies</b>                  Yes  <b>Notes:</b> Searched MEDLINE, EMBASE, The Cochrane Library and the International Pharmaceutical Abstracts to identify relevant articles.</p>	<p><b>Well covered</b>                  Adequately addressed                  Poorly addressed</p>	<p>Not addressed                  Not reported                  Not applicable</p>
<p><b>Study quality is assessed and taken into account</b>                  Yes  <b>Notes:</b> The internal validity of trials was assessed, trials rated as being poor in quality were excluded.</p>	<p><b>Well covered</b>                  Adequately addressed                  Poorly addressed</p>	<p>Not addressed                  Not reported                  Not applicable</p>
<p><b>There are enough similarities between the studies selected to make combining them reasonable</b>                  Yes  <b>Notes:</b> Observed heterogeneity was low.</p>	<p><b>Well covered</b>                  Adequately addressed                  Poorly addressed</p>	<p>Not addressed                  Not reported                  Not applicable</p>
<p><b>OVERALL ASSESSMENT OF THE STUDY</b></p>		
<p><b>Overall quality</b></p>	<p>Good/<b>Adequate</b>/Poor                  A thorough study, but the information relating to cataracts and glaucoma is limited</p>	
<p><b>EXTERNAL VALIDITY</b></p>		
<p><b>Generalisability</b></p>	<p>Generalisable to Australia</p>	
<p><b>Applicability</b></p>	<p>Applicable to Australia</p>	

NOTE: The four articles relevant to cataracts in this review are the same as those considered in paper no. 1123

## Paper 1123

<b>Reference</b> Uboweja A, Malhotra S and Pandhi P (2006). Effect of inhaled corticosteroids on risk of development of cataract: a meta-analysis. <i>Fundamental &amp; Clinical Pharmacology</i> 20:305–309.		
<b>Affiliation/source of funds</b> Department of Pharmacology, Postgraduate Institute of Medical Education and Research, India No other sources of funding or bias stated		
<b>Number of included studies</b> 4 (2 case–control, 1 cross-sectional and 1 retrospective cohort with nested case–control analysis)	<b>Study design</b> Systematic review with meta-analysis (RCT not appropriate)	
<b>Location/setting</b> Unspecified		
<b>Population characteristics</b>		
<i>Study group(s)</i>	<i>Comparator group(s)</i>	
Current or past exposure to inhaled corticosteroids	Controls: never exposed to corticosteroids (oral, topical or inhaled)	
Inclusion criteria state that the studies must evaluate an adult population, with no other definable cause for cataract		
<b>Outcome(s) measured</b>		
<i>Outcome/description</i>	<i>Scale/measure used</i>	
Development of cataract	Unspecified	
<b>Was a meta-analysis done?</b>	Yes	
<b>INTERNAL VALIDITY</b>		
<b>The study addresses an appropriate and clearly focused question</b> Yes <b>Notes:</b> What is the risk of cataract among users of inhaled corticosteroids?	<b>Well covered</b> Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>A description of the methodology used is included</b> Yes <b>Notes:</b> Clearly stated inclusion and exclusion criteria.	<b>Well covered</b> Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>The literature search is sufficiently rigorous to identify all the relevant studies</b> Yes <b>Notes:</b> Searched MEDLINE and EMBASE, conducted a manual search using Index Medicus and checked cross-references to cover all published articles.	<b>Well covered</b> Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>Study quality is assessed and taken into account</b> Yes <b>Notes:</b> Inclusion criteria required studies to include only patients with no other definable cause for cataract and to include controls. However, no case–control studies were available.	<b>Well covered</b> Adequately addressed Poorly addressed	Not addressed Not reported Not applicable

<p><b>There are enough similarities between the studies selected to make combining them reasonable</b>                  Yes  <b>Notes:</b> Statistical tests for heterogeneity were done to confirm that the tests could be combined for analysis.</p>	<table border="0"> <tr> <td><b>Well covered</b></td> <td>Not addressed</td> </tr> <tr> <td>Adequately addressed</td> <td>Not reported</td> </tr> <tr> <td>Poorly addressed</td> <td>Not applicable</td> </tr> </table>	<b>Well covered</b>	Not addressed	Adequately addressed	Not reported	Poorly addressed	Not applicable
<b>Well covered</b>	Not addressed						
Adequately addressed	Not reported						
Poorly addressed	Not applicable						
<p><b>OVERALL ASSESSMENT OF THE STUDY</b></p>							
<p><b>Overall quality</b></p>	<p>Good/<b>Adequate</b>/Poor                  A thorough study, but the information relating to cataracts and glaucoma is limited</p>						
<p><b>EXTERNAL VALIDITY</b></p>							
<p><b>Generalisability</b></p>	<p>Generalisable to Australia</p>						
<p><b>Applicability</b></p>	<p>Authors caution that risk of increased cataract needs to be weighted against the benefit of inhaled corticosteroids for managing symptoms of asthma and chronic obstructive airway disease</p>						

NOTE: The four articles included in this review are the same as those considered in paper no. 1067

## Paper 1515

<b>Reference</b> Seddon JM (2007). Multivitamin-multimineral supplements and eye disease: age-related macular degeneration and cataract. <i>American Journal of Clinical Nutrition</i> . 85(1):S304S–S307.		
<b>Affiliation/source of funds</b> Supported in part by the Epidemiology Unit Research Fund, Massachusetts Eye and Ear Infirmary; Foundation Fighting Blindness; and the Massachusetts Lions Eye Research Fund The author had no financial interests to declare		
<b>Number of included studies</b> 17	<b>Study design</b> 6 randomised control trials, 8 prospective cohorts, 3 case–control	
<b>Location/setting</b> China and United States		
<b>Population characteristics</b>		
<i>Study group(s)</i>	<i>Comparator group(s)</i>	
General public given supplements	General public given placebo/no supplements	
Patients with cataract given supplements	Patients with cataract given supplements	
<b>Outcome(s) measured</b>		
<i>Outcome/description</i>	<i>Scale/measure used</i>	
Cataract formation (various types/stages)	Ophthalmic examination	
<b>Was a meta-analysis done?</b>	No	
<b>INTERNAL VALIDITY</b>		
<b>The study addresses an appropriate and clearly focused question</b> Yes Notes:	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>A description of the methodology used is included</b> No Notes:	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>The literature search is sufficiently rigorous to identify all the relevant studies</b> No Notes:	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>Study quality is assessed and taken into account</b> No Notes:	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>There are enough similarities between the studies selected to make combining them reasonable</b> No	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>OVERALL ASSESSMENT OF THE STUDY</b>		
<b>Overall quality</b>	Good/Adequate/Poor	
<b>EXTERNAL VALIDITY</b>		
<b>Generalisability</b>	Generalisable to Australia	
<b>Applicability</b>	Study applicable to Australian population	

## Paper 1518

<b>Reference</b> Trumbo PT, Ellwood KC (2006). Lutein and zeaxanthin intakes and risk of age-related macular degeneration and cataracts: an evaluation using the Food and Drug Administration's evidence-based review system for health claims. <i>American Journal of Clinical Nutrition</i> 84(5):971–974.		
<b>Affiliation/source of funds</b> PT conducted the scientific review and wrote the manuscript. KE oversaw the scientific review and edited the manuscript. Neither of the authors had a personal or financial conflict of interest.		
<b>Number of included studies</b> 35	<b>Study design</b> 12 randomised controlled trials, 23 prospective cohorts	
<b>Location/setting</b> United States		
<b>Population characteristics</b>		
<i>Study group(s)</i>	<i>Comparator group(s)</i>	
General public given supplements	General public not given supplements	
Patients with cataract given supplements	Patients with cataract given supplements	
<b>Outcome(s) measured</b>		
<i>Outcome/description</i>	<i>Scale/measure used</i>	
Cataract formation	Ophthalmic examination	
<b>Was a meta-analysis done?</b>	No	
<b>INTERNAL VALIDITY</b>		
<b>The study addresses an appropriate and clearly focused question</b> Yes Notes:	Well covered <b>Adequately addressed</b> Poorly addressed	Not addressed Not reported Not applicable
<b>A description of the methodology used is included</b> No Notes: Poorly covered	Well covered Adequately addressed <b>Poorly addressed</b>	Not addressed Not reported Not applicable
<b>The literature search is sufficiently rigorous to identify all the relevant studies</b> No Notes:	Well covered Adequately addressed Poorly addressed	<b>Not addressed</b> Not reported Not applicable
<b>Study quality is assessed and taken into account</b> No Notes:	Well covered Adequately addressed Poorly addressed	Not addressed <b>Not reported</b> Not applicable
<b>There are enough similarities between the studies selected to make combining them reasonable</b> No Notes:	Well covered Adequately addressed Poorly addressed	Not addressed Not reported <b>Not applicable</b>
<b>OVERALL ASSESSMENT OF THE STUDY</b>		
<b>Overall quality</b>	Good/Adequate/ <b>Poor</b>	
<b>EXTERNAL VALIDITY</b>		
<b>Generalisability</b>	Generalisable to Australia	
<b>Applicability</b>	Study applicable to Australian population	

## Paper 1569

<b>Reference</b> Lipscomb HJ (2000). Effectiveness of interventions to prevent work-related eye injuries. <i>American Journal of Preventative Medicine</i> 18(4S):27–32.		
<b>Affiliation/source of funds</b> Not mentioned		
<b>Number of included studies</b> 7	<b>Study design</b> 1 case-control, 5 longitudinal, 1 prospective cohort	
<b>Location/setting</b> United States		
<b>Population characteristics</b>		
<i>Study group(s)</i>	<i>Comparator group(s)</i>	
Workers in various industries (chemical plant, shipfitters, aerospace, shipyard, light engineering, grinding, electrical components) who received safety intervention with respect to eye protection	Workers who did not receive safety intervention	
<b>Outcome(s) measured</b>		
<i>Outcome/description</i>	<i>Scale/measure used</i>	
Change in rate of eye injuries	Number of cases reported	
Change in use of eye protection	Number of cases observed	
<b>Was a meta-analysis done?</b>	No, results given for each individual study	
<b>INTERNAL VALIDITY</b>		
<b>The study addresses an appropriate and clearly focused question</b> Yes <b>Notes:</b>	<b>Well covered</b> Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>A description of the methodology used is included</b> Yes <b>Notes:</b>	<b>Well covered</b> Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>The literature search is sufficiently rigorous to identify all the relevant studies</b> Yes <b>Notes:</b>	<b>Well covered</b> Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>Study quality is assessed and taken into account</b> Yes <b>Notes:</b>	Well covered <b>Adequately addressed</b> Poorly addressed	Not addressed Not reported Not applicable
<b>There are enough similarities between the studies selected to make combining them reasonable</b> No	Well covered Adequately addressed Poorly addressed	Not addressed Not reported <b>Not applicable</b>
<b>OVERALL ASSESSMENT OF THE STUDY</b>		
<b>Overall quality</b>	Good/ <b>Adequate</b> /Poor	
<b>EXTERNAL VALIDITY</b>		
<b>Generalisability</b>	Generalisable to Australia	
<b>Applicability</b>	Study applicable to Australian population	

## Paper 1613

<b>Reference</b> Ontoso IA, Grima FG, Ontoso EA and Fernandez LRF (1997). Does medical treatment of mild intraocular hypertension prevent glaucoma? <i>European Journal of Epidemiology</i> 13:19–23.		
<b>Affiliation/source of funds</b> No funds mentioned		
<b>Number of included studies</b> 17 studies	<b>Study design</b> Not clear, but text suggests five of the 17 studies were randomised control trials or prospective cohorts.	
<b>Location/setting</b> Not specified		
<b>Population characteristics</b>		
<i>Study group(s)</i>	<i>Comparator group(s)</i>	
Patients with ocular hypertension	NA	
Patients treated with drugs/surgery	Patients not treated with drugs/surgery	
<b>Outcome(s) measured</b>		
<i>Outcome/description</i>	<i>Scale/measure used</i>	
Effect of treatments on occurrence of glaucoma	Ophthalmological examination	
<b>Was a meta-analysis done?</b>	Yes	
<b>INTERNAL VALIDITY</b>		
<b>The study addresses an appropriate and clearly focused question</b> Yes <b>Notes:</b>	Well covered <b>Adequately addressed</b> Poorly addressed	Not addressed Not reported Not applicable
<b>A description of the methodology used is included</b> No <b>Notes:</b>	Well covered Adequately addressed <b>Poorly addressed</b>	Not addressed Not reported Not applicable
<b>The literature search is sufficiently rigorous to identify all the relevant studies</b> Yes <b>Notes:</b>	Well covered <b>Adequately addressed</b> Poorly addressed	Not addressed Not reported Not applicable
<b>Study quality is assessed and taken into account</b> No <b>Notes:</b> Poorly addressed	Well covered Adequately addressed <b>Poorly addressed</b>	Not addressed Not reported Not applicable
<b>There are enough similarities between the studies selected to make combining them reasonable</b> Yes <b>Notes:</b> Used 2 methods to combine results	Well covered <b>Adequately addressed</b> Poorly addressed	Not addressed Not reported Not applicable
<b>OVERALL ASSESSMENT OF THE STUDY</b>		
<b>Overall quality</b>	Good/ <b>Adequate</b> /Poor	
<b>EXTERNAL VALIDITY</b>		
<b>Generalisability</b>	Generalisable to Australia	
<b>Applicability</b>	Study applicable to Australian population	

## Paper 2227

<b>Reference</b> Bonovas S, Peponis V and Filioussi K (2004). Diabetes mellitus as a risk factor for primary open angle glaucoma: a meta-analysis. <i>Diabetic Medicine</i> 21:609–614.		
<b>Affiliation/source of funds</b> No funds mentioned		
<b>Number of included studies</b> 12 studies	<b>Study design</b> 5 case-control, 7 cross-sectional	
<b>Location/setting</b> 5 United States, 2 Congo and the rest from the United Kingdom, Australia, Netherlands, France and Korea.		
<b>Population characteristics</b>		
<i>Study group(s)</i>	<i>Comparator group(s)</i>	
Patients with diabetes	General population	
<b>Outcome(s) measured</b>		
<i>Outcome/description</i>	<i>Scale/measure used</i>	
Incidence of glaucoma	Ophthalmological examination	
<b>Was a meta-analysis done?</b>	Yes	
<b>INTERNAL VALIDITY</b>		
<b>The study addresses an appropriate and clearly focused question</b> Yes Notes:	<b>Well covered</b> Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>A description of the methodology used is included</b> Yes Notes:	<b>Well covered</b> Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>The literature search is sufficiently rigorous to identify all the relevant studies</b> Yes Notes:	<b>Well covered</b> Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>Study quality is assessed and taken into account</b> Yes Notes:	Well covered <b>Adequately addressed</b> Poorly addressed	Not addressed Not reported Not applicable
<b>There are enough similarities between the studies selected to make combining them reasonable</b> Yes Notes:	Well covered <b>Adequately addressed</b> Poorly addressed	Not addressed Not reported Not applicable
<b>OVERALL ASSESSMENT OF THE STUDY</b>		
<b>Overall quality</b>	Good/ <b>Adequate</b> /Poor	
<b>EXTERNAL VALIDITY</b>		
<b>Generalisability</b>	Generalisable to Australia	
<b>Applicability</b>	Study applicable to Australian population	

## Paper 2233

<b>Reference</b> Krueger RR and Ramos-Esteban JC (2007). How might corneal elasticity help us understand diabetes and intraocular pressure? <i>Journal of Refractive Surgery</i> 23:85–88.		
<b>Affiliation/source of funds</b> No funds mentioned		
<b>Number of included studies</b> 38	<b>Study design</b> No mention of design	
<b>Location/setting</b> Various, mostly United States		
<b>Population characteristics</b>		
<i>Study group(s)</i>	<i>Comparator group(s)</i>	
Patients with diabetes	NA	
<b>Outcome(s) measured</b>		
<i>Outcome/description</i>	<i>Scale/measure used</i>	
Incidence of glaucoma	Not detailed	
<b>Was a meta-analysis done?</b>	No, results given for each individual study	
<b>INTERNAL VALIDITY</b>		
<b>The study addresses an appropriate and clearly focused question</b> No <b>Notes:</b>	Well covered Adequately addressed <b>Poorly addressed</b>	Not addressed Not reported Not applicable
<b>A description of the methodology used is included</b> No <b>Notes:</b>	Well covered Adequately addressed Poorly addressed	Not addressed <b>Not reported</b> Not applicable
<b>The literature search is sufficiently rigorous to identify all the relevant studies.</b> Yes <b>Notes:</b>	Well covered Adequately addressed <b>Poorly addressed</b>	Not addressed Not reported Not applicable
<b>Study quality is assessed and taken into account</b> No <b>Notes:</b>	Well covered Adequately addressed Poorly addressed	<b>Not addressed</b> Not reported Not applicable
<b>There are enough similarities between the studies selected to make combining them reasonable</b> No <b>Notes:</b>	Well covered Adequately addressed Poorly addressed	Not addressed Not reported <b>Not applicable</b>
<b>OVERALL ASSESSMENT OF THE STUDY</b>		
<b>Overall quality</b>	Good/ <b>Adequate</b> /Poor	
<b>EXTERNAL VALIDITY</b>		
<b>Generalisability</b>	Generalisable to Australia	
<b>Applicability</b>	Study applicable to Australian population	

## Paper 2593

<b>Reference</b> Friedman DS, Wilson R, Liebmann J, Fechtner RD and Weinreb RN (2004). An evidence-based assessment of risk factors for the progression of ocular hypertension and glaucoma. <i>American Journal of Ophthalmology</i> 138:S19–S31.		
<b>Affiliation/source of funds</b> Medical Intervention Systems, New Jersey USA and Pharmacia Corporation (part of the Pfizer group)		
<b>Number of included studies</b> 34 studies reviewed and 9 used	<b>Study design</b> 6 randomised clinical trials, 3 prospective cohorts	
<b>Location/setting</b> United States		
<b>Population characteristics</b>		
<i>Study group(s)</i>	<i>Comparator group(s)</i>	
Patients with ocular hypertension	NA	
Patients treated with drugs/surgery	Patients not treated with drugs/surgery	
<b>Outcome(s) measured</b>		
<i>Outcome/description</i>	<i>Scale/measure used</i>	
Effect of treatments on occurrence of glaucoma	Ophthalmological examination	
<b>Was a meta-analysis done?</b>	No	
<b>INTERNAL VALIDITY</b>		
<b>The study addresses an appropriate and clearly focused question</b> Yes Notes:	<b>Well covered</b> Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>A description of the methodology used is included</b> Yes Notes:	<b>Well covered</b> Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>The literature search is sufficiently rigorous to identify all the relevant studies</b> Yes Notes:	Well covered <b>Adequately addressed</b> Poorly addressed	Not addressed Not reported Not applicable
<b>Study quality is assessed and taken into account</b> Yes Notes:	Well covered <b>Adequately addressed</b> Poorly addressed	Not addressed Not reported Not applicable
<b>There are enough similarities between the studies selected to make combining them reasonable</b> No Notes:	Well covered Adequately addressed Poorly addressed	Not addressed Not reported <b>Not applicable</b>
<b>OVERALL ASSESSMENT OF THE STUDY</b>		
<b>Overall quality</b>	Good/ <b>Adequate</b> /Poor	
<b>EXTERNAL VALIDITY</b>		
<b>Generalisability</b>	Generalisable to Australia	
<b>Applicability</b>	Study applicable to Australian population	

**Paper 2610**

<b>Reference</b> Maier PC, Funk J, Schwarzer G, Antes G and Falck-Ytter YT (2005). Treatment of ocular hypertension and open angle glaucoma: meta-analysis of randomised controlled trials. <i>British Medical Journal</i> 331(7509):134–139.		
<b>Affiliation/source of funds</b> None (and no conflicts of interest declared)		
<b>Number of included studies</b> 5 (meta-analysis on ocular hypertension); 3 (meta-analysis on open angle glaucoma [both primary open angle glaucoma and normal tension glaucoma])	<b>Study design</b> All randomised controlled trials (one double-blinded). Only trials with a concurrent untreated control group and information on time-to-glaucomatous changes to visual field and optic disc were selected.	
<b>Location/setting</b> Does not specify		
<b>Population characteristics</b>		
<i>Study group(s)</i>	<i>Comparator group(s)</i>	
Patients with ocular hypertension $\geq 24$ mm Hg being treated to lower ocular hypertension (via medication or surgery)	Patients with ocular hypertension receiving no treatment	
<b>Outcome(s) measured</b>		
<i>Outcome/description</i>	<i>Scale/measure used</i>	
Risk of developing or worsening glaucoma during treatment compared with control group (no treatment)	Definition of glaucoma and ocular hypertension	
<b>Was a meta-analysis done?</b>	Yes: separate meta-analyses for ocular hypertension and for open-angle glaucoma, using the DerSimonian and Laird random effects model in R,15 as well as predefined subgroup analysis of normal tension glaucoma compared increased pressure glaucoma.	
<b>INTERNAL VALIDITY</b>		
<b>The study addresses an appropriate and clearly focused question.</b> Yes <b>Notes:</b> Using meta-analysis of randomised controlled trials to determine the effectiveness of lowering ocular pressure on delaying glaucoma development, and stopping the development of open-angle glaucoma.	<b>Well covered</b> Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>A description of the methodology used is included</b> Yes <b>Notes:</b> Searched MEDLINE (1966–2004); EMBASE (1974–2004); Cochrane (2004); other databases for guidelines and health technology assessment reports covering glaucoma; reference lists of relevant articles for additional trials; Science Citation Index to search for articles that cited included studies; contacted relevant investigators and experts for ongoing trials. Search was not limited by language or publication year.	<b>Well covered</b> Adequately addressed Poorly addressed	Not addressed Not reported Not applicable

<p><b>The literature search is sufficiently rigorous to identify all the relevant studies</b> Yes <b>Notes:</b> Details given of search strategy, MeSH terms used, number of papers excluded at each step, reasons for exclusion.</p>	<p><b>Well covered</b> Adequately addressed Poorly addressed</p>	<p>Not addressed Not reported Not applicable</p>
<p><b>Study quality is assessed and taken into account</b> Yes <b>Notes:</b> Only included studies that met criteria (see above); gives description of each included study, as well as comments on shortcomings.</p>	<p><b>Well covered</b> Adequately addressed Poorly addressed</p>	<p>Not addressed Not reported Not applicable</p>
<p><b>There are enough similarities between the studies selected to make combining them reasonable</b> Yes <b>Notes:</b> Meta-analysis of the two sets of studies (ocular hypertension, open angle glaucoma).</p>	<p><b>Well covered</b> Adequately addressed Poorly addressed</p>	<p>Not addressed Not reported Not applicable</p>
<b>OVERALL ASSESSMENT OF THE STUDY</b>		
<p><b>Overall quality</b> <b>Notes:</b> Could not exclude publication bias completely, but did minimise it as much as possible (did not exclude papers on the basis of language/pub year, and hand-searched journals for relevant papers). Some studies had high drop-out rates, which might have biased the magnitude of effect.</p>	<p><b>Good/Adequate/Poor</b></p>	
<b>EXTERNAL VALIDITY</b>		
<b>Generalisability</b>	Generalisable to Australia	
<b>Applicability</b>	Applicable to Australian populations	

**Paper 2741**

<b>Reference</b> Hoffman DR and Birch DG (1998). Omega 3 fatty acid status in patients with retinitis pigmentosa. <i>World Review of Nutrition &amp; Dietetics</i> 83:52–60.		
<b>Affiliation/source of funds</b> Support has been provided, in part, by the Foundation Fighting Blindness, National Eye Institute grant EY 05235 and Food and Drug Administration grant FD-R-001232		
<b>Number of included studies</b> Not specified	<b>Study design</b> Not specified	
<b>Location/setting</b> Not specified		
<b>Population characteristics</b>		
<i>Study group(s)</i>	<i>Comparator group(s)</i>	
Patients with retinitis pigmentosa	Control subjects	
<b>Outcome(s) measured</b>		
<i>Outcome/description</i>	<i>Scale/measure used</i>	
Visual acuity	Ophthalmic examination	
Fatty acid levels in blood	Blood tests	
<b>Was a meta-analysis done?</b>	No	
<b>INTERNAL VALIDITY</b>		
<b>The study addresses an appropriate and clearly focused question</b> No Notes:	Well covered	Not addressed
	Adequately addressed	Not reported
	Poorly addressed	Not applicable
<b>A description of the methodology used is included</b> No Notes:	Well covered	Not addressed
	Adequately addressed	Not reported
	Poorly addressed	Not applicable
<b>The literature search is sufficiently rigorous to identify all the relevant studies</b> No Notes:	Well covered	Not addressed
	Adequately addressed	Not reported
	Poorly addressed	Not applicable
<b>Study quality is assessed and taken into account</b> No Notes:	Well covered	Not addressed
	Adequately addressed	Not reported
	Poorly addressed	Not applicable
<b>There are enough similarities between the studies selected to make combining them reasonable</b> No Notes:	Well covered	Not addressed
	Adequately addressed	Not reported
	Poorly addressed	Not applicable
<b>OVERALL ASSESSMENT OF THE STUDY</b>		
<b>Overall quality</b>	Good/Adequate/Poor	
<b>EXTERNAL VALIDITY</b>		
<b>Generalisability</b>	Generalisable to Australia	
<b>Applicability</b>	Study applicable to Australian population	

**Paper 2745**

<b>Reference</b> Anon (2006). National Institutes of Health State-of-the-Science Conference statement: multivitamin/mineral supplements and chronic disease prevention. <i>Annals of Internal Medicine</i> 145:364–371.	
<b>Affiliation/source of funds</b> No potential financial conflicts of interest: none disclosed	
<b>Number of included studies</b>	<b>Study design</b>
<b>Location/setting</b> NOTE: this paper is a further description of the systematic review by Huang et al (2006) : see paper 2757	

**Paper 2749**

<b>Reference</b> Bartlett H and, Eperjesi F (2004). An ideal ocular nutritional supplement? <i>Ophthalmic &amp; Physiological Optics</i> . 24(4):339–491.		
<b>Affiliation/source of funds</b> Hannah Bartlett is funded by the College of Optometrists		
<b>Number of included studies</b> Not specified	<b>Study design</b> Not specified	
<b>Location/setting</b> Varied		
<b>Population characteristics</b>		
<i>Study group(s)</i>	<i>Comparator group(s)</i>	
Patients with cataract taking supplements	Patients with cataracts not taking supplements	
General public taking supplements	Placebo/general public not taking supplements	
<b>Outcome(s) measured</b>		
<i>Outcome/description</i>	<i>Scale/measure used</i>	
Cataract formation	Ophthalmic examination	
<b>Was a meta-analysis done?</b>	No	
<b>INTERNAL VALIDITY</b>		
<b>The study addresses an appropriate and clearly focused question</b> Yes Notes:	Well covered <b>Adequately addressed</b> Poorly addressed	Not addressed Not reported Not applicable
<b>A description of the methodology used is included</b> Yes Notes:	Well covered <b>Adequately addressed</b> Poorly addressed	Not addressed Not reported Not applicable
<b>The literature search is sufficiently rigorous to identify all the relevant studies</b> Yes Notes:	Well covered <b>Adequately addressed</b> Poorly addressed	Not addressed Not reported Not applicable
<b>Study quality is assessed and taken into account</b> No Notes:	Well covered Adequately addressed Poorly addressed	Not addressed <b>Not reported</b> Not applicable
<b>There are enough similarities between the studies selected to make combining them reasonable</b> No Notes:	Well covered Adequately addressed Poorly addressed	Not addressed Not reported <b>Not applicable</b>
<b>OVERALL ASSESSMENT OF THE STUDY</b>		
<b>Overall quality</b>	Good/Adequate/ <b>Poor</b>	
<b>EXTERNAL VALIDITY</b>		
<b>Generalisability</b>	Generalisable to Australia	
<b>Applicability</b>	Study applicable to Australian population	

## Paper 2757

<b>Reference</b> Huang HY, Caballero B, Chang S, Alberg AJ, Semba RD, Schneyer CR, Wilson RF, Cheng TY, Vassy J, Prokopowicz G, Barnes GJ and Bass EB (2006). The efficacy and safety of multivitamin and mineral supplement use to prevent cancer and chronic disease in adults: a systematic review for a National Institutes of Health state-of-the-science conference. <i>Annals of Internal Medicine</i> 145(5):372–85.		
<b>Affiliation/source of funds</b> The study was requested and funded by the National Institutes of Health and conducted by the Johns Hopkins Evidence based Practice Center, under contract no. 290-02-0018 to the Agency for Healthcare Research and Quality		
<b>Number of included studies</b> 23	<b>Study design</b> 20 randomised controlled trials, 3 case studies [Of these, 4 randomised controlled trials measured cataract development and 1 randomised controlled trial measured age-related macular degeneration]	
<b>Location/setting</b> United States, China, France and the United Kingdom		
<b>Population characteristics</b> General community-based adult population with no eye disease and no special nutritional needs Cataract: $N =$ approximately 4000 per group (in 2 large and 2 small randomised controlled trials) Age-related macular degeneration: $N =$ 2300 per group (in one large randomised controlled trial)		
<i>Study group(s)</i>	<i>Comparator group(s)</i>	
Multivitamin and mineral supplements (various combinations of at least three components without herbs, hormones or drugs)	Placebo	
<b>Outcome(s) measured</b>		
<i>Outcome/description</i>	<i>Scale/measure used</i>	
4 randomised controlled trials: cataract formation (nuclear, cortical, postero-subcapsular, visual acuity, opaque lens, cataract surgery, severe lens events)	Ophthalmic examination	
Age-related macular degeneration (progression to advanced age-related macular degeneration, loss of visual acuity)	Ophthalmic examination	
<b>Was a meta-analysis done?</b>	No	
<b>INTERNAL VALIDITY</b>		
<b>The study addresses an appropriate and clearly focused question</b> Yes Notes:	<b>Well covered</b>	Not addressed
	Adequately addressed	Not reported
	Poorly addressed	Not applicable
<b>A description of the methodology used is included</b> Yes Notes:	<b>Well covered</b>	Not addressed
	Adequately addressed	Not reported
	Poorly addressed	Not applicable
<b>The literature search is sufficiently rigorous to identify all the relevant studies</b> Yes Notes:	<b>Well covered</b>	Not addressed
	Adequately addressed	Not reported
	Poorly addressed	Not applicable

<b>Study quality is assessed and taken into account</b> Yes <b>Notes:</b>	Well covered	Not addressed
	Adequately addressed	Not reported
	Poorly addressed	Not applicable
<b>There are enough similarities between the studies selected to make combining them reasonable</b> No <b>Notes:</b>	Well covered	Not addressed
	Adequately addressed	Not reported
	Poorly addressed	Not applicable
<b>OVERALL ASSESSMENT OF THE STUDY</b>		
<b>Overall quality</b>	Good/Adequate/Poor	
<b>EXTERNAL VALIDITY</b>	Generalisable to Australia	
<b>Applicability</b>	Study applicable to Australian population	

## Paper 2773

<b>Reference</b> Williams DL (2006). Oxidation, antioxidants and cataract formation: a literature review. <i>Veterinary Ophthalmology</i> 9(5):292–298.		
<b>Affiliation/source of funds</b> Not mentioned		
<b>Number of included studies</b> Not reported.	<b>Study design</b> Not reported	
<b>Location/setting</b> Varied		
<b>Population characteristics</b>		
<i>Study group(s)</i>	<i>Comparator group(s)</i>	
General public taking supplements		
Lab rodents given supplements	Lab rodents not given supplements	
<b>Outcome(s) measured</b>		
<i>Outcome/description</i>	<i>Scale/measure used</i>	
Cataract formation	Ophthalmic examination	
<b>Was a meta-analysis done?</b>	No	
<b>INTERNAL VALIDITY</b>		
<b>The study addresses an appropriate and clearly focused question</b> No Notes:	Well covered	Not addressed
	Adequately addressed	Not reported
	Poorly addressed	Not applicable
<b>A description of the methodology used is included</b> No Notes:	Well covered	Not addressed
	Adequately addressed	Not reported
	Poorly addressed	Not applicable
<b>The literature search is sufficiently rigorous to identify all the relevant studies</b> No Notes:	Well covered	Not addressed
	Adequately addressed	Not reported
	Poorly addressed	Not applicable
<b>Study quality is assessed and taken into account</b> No Notes:	Well covered	Not addressed
	Adequately addressed	Not reported
	Poorly addressed	Not applicable
<b>There are enough similarities between the studies selected to make combining them reasonable</b> No Notes:	Well covered	Not addressed
	Adequately addressed	Not reported
	Poorly addressed	Not applicable
<b>OVERALL ASSESSMENT OF THE STUDY</b>		
Overall quality	Good/Adequate/Poor	
<b>EXTERNAL VALIDITY</b>		
Generalisability	Generalisable to Australia	
Applicability	Study applicable in parts to Australian population	

**Paper 2781**

<b>Reference</b>		
West AL, Oren GA and Moroi SE (2006). Evidence for the use of nutritional supplements and herbal medicines in common eye diseases. <i>American Journal of Ophthalmology</i> 141(1):157–166.		
<b>Affiliation/source of funds</b>		
From the Department of Ophthalmology and Visual Sciences, W.K. Kellogg Eye Center, University of Michigan, Ann Arbor, Michigan. Supported in part by a departmental unrestricted grant from Research to Prevent Blindness.		
<b>Number of included studies</b>	<b>Study design</b>	
20	5 randomised controlled trials, 2 case–controls, 13 prospective cohorts	
<b>Location/setting</b>		
United States, China, Australia, Caribbean		
<b>Population characteristics</b>		
<i>Study group(s)</i>	<i>Comparator group(s)</i>	
General population taking supplements	General population not taking supplements	
<b>Outcome(s) measured</b>		
<i>Outcome/description</i>	<i>Scale/measure used</i>	
Visual acuity and ocular pressure	Ophthalmic examination	
<b>Was a meta-analysis done?</b>	No	
<b>INTERNAL VALIDITY</b>		
<b>The study addresses an appropriate and clearly focused question</b>	<b>Well covered</b>	Not addressed
Yes	Adequately addressed	Not reported
<b>Notes:</b>	Poorly addressed	Not applicable
<b>A description of the methodology used is included</b>	<b>Well covered</b>	Not addressed
Yes	Adequately addressed	Not reported
<b>Notes:</b>	Poorly addressed	Not applicable
<b>The literature search is sufficiently rigorous to identify all the relevant studies</b>	<b>Well covered</b>	Not addressed
Yes	Adequately addressed	Not reported
<b>Notes:</b>	Poorly addressed	Not applicable
<b>Study quality is assessed and taken into account</b>	Well covered	Not addressed
Yes	<b>Adequately addressed</b>	Not reported
<b>Notes:</b>	Poorly addressed	Not applicable
<b>There are enough similarities between the studies selected to make combining them reasonable</b>	Well covered	Not addressed
No	Adequately addressed	Not reported
<b>Notes</b>	Poorly addressed	<b>Not applicable</b>
<b>OVERALL ASSESSMENT OF THE STUDY</b>		
<b>Overall quality</b>	Good/ <b>Adequate</b> /Poor	
<b>EXTERNAL VALIDITY</b>		
<b>Generalisability</b>	Generalisable to Australia	
<b>Applicability</b>	Study applicable to Australian population	

## Paper 2788

<b>Reference</b> Bartlett H and Eperjesi F (2003). Age-related macular degeneration and nutritional supplementation: a review of randomised controlled trials [see comment]. <i>Ophthalmic &amp; Physiological Optics</i> . 23(5):383–399.		
<b>Affiliation/source of funds</b> Study from Neurosciences Research Institute, Aston University Hannah Bartlett is funded by the College of Optometrists		
<b>Number of included studies</b> 77	<b>Study design</b> Randomised controlled trials	
<b>Location/setting</b> United States, Switzerland, Austria, Finland, Australia		
<b>Population characteristics</b>		
<i>Study group(s)</i>	<i>Comparator group(s)</i>	
Patients with age-related macular degeneration receiving supplements	Patients with age-related macular degeneration not receiving supplements	
<b>Outcome(s) measured</b>		
<i>Outcome/description</i>	<i>Scale/measure used</i>	
Visual acuity	Ophthalmic examination	
<b>Was a meta-analysis done?</b>	No	
<b>INTERNAL VALIDITY</b>		
<b>The study addresses an appropriate and clearly focused question</b> Yes Notes:	<b>Well covered</b>	Not addressed
	Adequately addressed	Not reported
	Poorly addressed	Not applicable
<b>A description of the methodology used is included</b> Yes Notes:	<b>Well covered</b>	Not addressed
	Adequately addressed	Not reported
	Poorly addressed	Not applicable
<b>The literature search is sufficiently rigorous to identify all the relevant studies</b> Yes Notes:	Well covered	Not addressed
	<b>Adequately addressed</b>	Not reported
	Poorly addressed	Not applicable
<b>Study quality is assessed and taken into account</b> Yes Notes:	Well covered	Not addressed
	<b>Adequately addressed</b>	Not reported
	Poorly addressed	Not applicable
<b>There are enough similarities between the studies selected to make combining them reasonable</b> No Notes:	Well covered	Not addressed
	Adequately addressed	Not reported
	Poorly addressed	<b>Not applicable</b>
<b>OVERALL ASSESSMENT OF THE STUDY</b>		
<b>Overall quality</b>	Good/ <b>Adequate</b> /Poor	
<b>EXTERNAL VALIDITY</b>		
<b>Generalisability</b>	Generalisable to Australia	
<b>Applicability</b>	Study applicable to Australian population	

**Paper 3049**

<b>Reference</b> Bachmann M and Nelsen SJ (1998). Impact of diabetic retinopathy screening on a British district population: case detection and blindness prevention in an evidence-based model. <i>Journal of Epidemiology and Community Health</i> 52:45–52.		
<b>Affiliation/source of funds</b> None; no conflicts of interest declared		
<b>Number of included studies</b> Broke review down into separate subsections (see ‘Outcome’ below), but does not make it clear how many studies included in each subsection (data pooled for some, not all, sections).	<b>Study design</b> Literature review with quantitative modelling, sensitivity analyses and simulation modelling. Review used set criteria to appraise quality of studies. For treatment effectiveness studies, only randomised controlled trials were included. Only included prevalence/incidence studies if the population (and sampling methods, where relevant) was described and statistical tests were appropriate. Excluded hospital-based prevalence/incidence studies.	
<b>Location/setting</b> United Kingdom		
<b>Population characteristics</b>		
<i>Study group(s)</i>	<i>Comparator group(s)</i>	
Diabetic population of a ‘typical British district health authority or health board’ (general practice-based, rather than hospital-based)	None	
<b>Outcome(s) measured</b>		
<i>Outcome/description</i>	<i>Scale/measure used</i>	
Study included several subsections: (a) number of people with diabetes mellitus screened annually (b) prevalence and incidence of treatable retinopathy in people with diabetes (c) sensitivity and specificity of screening tests (d) effectiveness of treatment (e) incidence of blindness and mortality in people with diabetes who have treatable retinopathy	Different, standard screening tests for each outcome (notes that the screening tests varied widely in their sensitivity)	
<b>Was a meta-analysis done?</b>		
No — beyond the scope of the study (but a pooled estimate of screening test sensitivity, and quantitative modelling, including sensitivity analyses, were done)		
<b>INTERNAL VALIDITY</b>		
<b>The study addresses an appropriate and clearly focused question</b> No (was not one specific question) <b>Notes:</b> Used quantitative modelling to combine and analyse data from a range of questions; however, the topics were too wide. Also, the screening tests of the studies examined varied so much that comparisons were difficult.	Well covered Adequately addressed <b>Poorly addressed</b>	Not addressed Not reported Not applicable
<b>A description of the methodology used is included</b> Yes <b>Notes:</b> Described the methods used for quantitative and simulation modelling, and sensitivity analyses.	<b>Well covered</b> Adequately addressed Poorly addressed	Not addressed Not reported Not applicable

<p><b>The literature search is sufficiently rigorous to identify all the relevant studies</b>                  Yes  <b>Notes:</b>                  Searched MEDLINE, EMBASE, Science Citation Index (search terms given); searched references cited in identified papers; used set criteria to appraise quality; described the types of studies that were included/excluded. However, did not clearly specify the numbers/types of papers that were used for the analyses.</p>	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<p><b>Study quality is assessed and taken into account</b>                  Yes  <b>Notes:</b>                  Describes the types of studies that were included and excluded (see 'Study design', above)</p>	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<p><b>There are enough similarities between the studies selected to make combining them reasonable</b>                  No  <b>Notes:</b>                  Divided into separate subsections (see above)</p>	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<p><b>OVERALL ASSESSMENT OF THE STUDY</b></p>		
<p><b>Overall quality</b></p>	Good/Adequate/Poor	
<p><b>EXTERNAL VALIDITY</b></p>		
<p><b>Generalisability</b></p>	Generalisable to Australia	
<p><b>Applicability</b></p>	Applicable to Australian populations (also, states that although the results are applicable to general practice based-populations, they can also be applied to hospital-based populations by adjusting prevalence, incidence and mortality estimates).	

**Paper 08-12**

<b>Reference</b>		
Kiire CA and Dhillon B (2006). The aetiology and associations of conjunctival intraepithelial neoplasia. <i>British Journal of Ophthalmology</i> 90(1): 109–13.		
<b>Affiliation/ Source of funds</b>		
Kiire: Western General Hospital Edinburgh, UK Dhillon: Princess Alexandra Eye Pavilion, Edinburgh, UK		
<b>Number of included studies</b>	<b>Study design</b>	
Four studies investigating link between sun exposure and distance from equator	Population-based retrospective cohort study (n=2); case-control study (n=2)	
<b>Location/ setting</b>		
Uganda, Africa United States Thailand		
<b>Population characteristics</b>		
<i>Study group(s)</i>	<i>Comparator group(s)</i>	
Studies up to 20 September 2005 collected from OVID database (NHS Scotland); Google Scholar. Search terms: “conjunctival intraepithelial neoplasia” and “conjunctival tumours”		
<b>Outcome(s) measured</b>		
<i>Outcome/description</i>	<i>Scale/measure used</i>	
Exposure to solar UV light is an important cause of squamous cell carcinoma (SCC) of the eye. Strong link between SCC of the eyelid and UV-B exposure. Solar elastosis a risk factor for conjunctival squamous cell neoplasia. No increased risk of conjunctival intraepithelial neoplasia.		
<b>Was a meta-analysis done?</b>	No	
<b>A description of the methodology used is included.</b> Yes <b>Notes:</b> Described the methods used for quantitative and simulation modelling, and sensitivity analyses.	Well covered	Not addressed
	<b>Adequately addressed</b>	Not reported
	Poorly addressed	Not applicable
<b>The literature search is sufficiently rigorous to identify all the relevant studies.</b> Yes <b>Notes:</b> OVID database (NHS Scotland); Google Scholar.	Well covered	Not addressed
	<b>Adequately addressed</b>	Not reported
	Poorly addressed	Not applicable
<b>Study quality is assessed and taken into account.</b> No <b>Notes:</b>	Well covered	<b>Not addressed</b>
	Adequately addressed	Not reported
	Poorly addressed	Not applicable

<p><b>There are enough similarities between the studies selected to make combining them reasonable.</b> No <b>Notes:</b> Divided into separate subsections (see above)</p>	<p>Well covered Adequately addressed Poorly addressed</p>	<p>Not addressed Not reported <b>Not applicable</b></p>
<p><b>OVERALL ASSESSMENT OF THE STUDY</b></p>		
<p><b>Overall quality</b></p>	<p>Good/<b>Adequate</b>/Poor</p>	
<p><b>EXTERNAL VALIDITY</b></p>		
<p><b>Generalisability</b></p>	<p>Most studies are from overseas but Reviews include some Australian data; most studies from overseas</p>	
<p><b>Applicability</b></p>	<p>Applicable to Australian populations (especially northern Australia)</p>	

## A5.2 Cochrane systematic reviews

Abbreviations used for the tables below are:

- clinical controlled trial (CCT)
- Cochrane Database of Systematic Reviews (CDSR)
- open-angle glaucoma (OAG)
- randomised controlled trial (RCT).

### Paper 2796

Study identification (Evans JR (2006). Antioxidant vitamin and mineral supplements for slowing the progression of age-related macular degeneration [update of Cochrane Database Syst Rev. 2002;(2):CD000254; PMID: 12076389]. <i>Cochrane Database of Systematic Reviews</i> (2):CD000254).			
<b>Section 1: Internal validity</b>			
In a well-conducted systematic review		In this study, this criterion is:	
1.1	The study addresses an appropriate and clearly focused question.	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.2	A description of the methodology used is included.	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.3	The literature search is sufficiently rigorous to identify all the relevant studies.	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.4	Study quality is assessed and taken into account.	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.5	There are enough similarities between the studies selected to make combining them reasonable.	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>Section 2: Overall assessment of the study</b>			
2.1	How well was the study done to minimise bias? Code ++, +, or –	++	
2.2	If coded as +, or – what is the likely direction in which bias might affect the study results?	NA	
<b>Section 3: Description of the study (please print answers clearly)</b>			
3.1	What types of study are included in the review?	RCT/CCT/Cohort/Case-control/Other	
3.2	How does this review help to answer your key question?	This is a well-defined study that uses randomised controlled trials to test the effects of antioxidant and zinc supplementation.	

**Paper 3399**

Study identification (Hatt S, Wormald R, Burr J. Screening for prevention of optic nerve damage due to chronic open angle glaucoma. CDSR 2006, Issue 4).		
<b>Section 1: Internal validity</b>		
In a well-conducted systematic review		In this study, this criterion is:
1.1	The study addresses an appropriate and clearly focused question. [The authors assessed the impact of screening for open-angle glaucoma (OAG) compared with opportunistic case findings or referrals on the prevalence and degree of optic nerve damage due to OAG]	Well covered Adequately addressed Poorly addressed Not addressed Not reported Not applicable
1.2	A description of the methodology used is included.	Well covered Adequately addressed Poorly addressed Not addressed Not reported Not applicable
1.3	The literature search is sufficiently rigorous to identify all the relevant studies. [Authors searched CENTRAL, MEDLINE, EMBASE, National Research register and Zetoc for grey literature.]	Well covered Adequately addressed Poorly addressed Not addressed Not reported Not applicable
1.4	Study quality is assessed and taken into account. [Authors planned to use the Cochrane Eyes and Vision Group guidelines]	Well covered Adequately addressed Poorly addressed Not addressed Not reported Not applicable
1.5	There are enough similarities between the studies selected to make combining them reasonable. [No RCTs were identified so there was no analysis. Authors had planned to test heterogeneity using forest plots, the chi-squared test and the I-squared test]	Well covered Adequately addressed Poorly addressed Not addressed Not reported Not applicable
<b>Section 2: Overall assessment of the study</b>		
2.1	How well was the study done to minimise bias? Code ++, +, or –	NA
2.2	If coded as +, or – what is the likely direction in which bias might affect the study results?	NA
<b>Section 3: Description of the study (please print answers clearly)</b>		
3.1	What types of study are included in the review?	RCT/CCT/Cohort/Case-control/Other No studies
3.2	How does this review help to answer your key question?	This review was of high methodological quality. However, due to lack of RCTs, population-based screening for OAG cannot be recommended. High-quality randomised trials are needed to assess the effectiveness of screening for OAG.

**Paper 3400**

Study identification (Smeeth L, Iliffe S. Community screening for visual impairment in the elderly. CDSR 2006, Issue 3).			
<b>Section 1: Internal validity</b>			
In a well-conducted systematic review		In this study, this criterion is:	
1.1	The study addresses an appropriate and clearly focused question. [To assess the effects of mass eye screening of older people on visual impairment]	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.2	A description of the methodology used is included.	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.3	The literature search is sufficiently rigorous to identify all the relevant studies. [Authors searched CENTRAL, MEDLINE, EMBASE, PubMed, SciSearch and reference list of relevant reports and review articles. Investigators were contacted to identify additional trials.]	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.4	Study quality is assessed and taken into account.	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.5	There are enough similarities between the studies selected to make combining them reasonable. [The authors measured heterogeneity using statistical methods.]	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>Section 2: Overall assessment of the study</b>			
2.1	How well was the study done to minimise bias? Code ++, +, or -	++	
2.2	If coded as +, or - what is the likely direction in which bias might affect the study results?	NA	
<b>Section 3: Description of the study (please print answers clearly)</b>			
3.1	What types of study are included in the review?	RCT and cluster RCT/CCT/Cohort/Case-control/Other	
3.2	How does this review help to answer your key question?	Screening had no effect on visual impairment in the elderly, based on 6 trials of 5301 elderly people. This was a high-quality review and the authors' conclusions are justified. The reasons for the lack of effect are unclear but may be related to the type of screening and the subsequent interventions that were carried out to improve vision if impairment was detected.	

**Paper 3401**

Study identification (Powell C, Porooshani H, Bohorquez MC, Hatt S. Screening for amblyopia in childhood. CDSR 2005, Issue 3 ).			
Section 1: Internal validity			
In a well-conducted systematic review		In this study this criterion is:	
1.1	The study addresses an appropriate and clearly focused question. [The question was to evaluate the effectiveness of vision screening in reducing the prevalence of amblyopia.]	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.2	A description of the methodology used is included.	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.3	The literature search is sufficiently rigorous to identify all the relevant studies. [Reviewers searched CENTRAL, MEDLINE, EMBASE with no language or date restrictions.]	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.4	Study quality is assessed and taken into account.	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.5	There are enough similarities between the studies selected to make combining them reasonable. [There were no trials comparing the prevalence of amblyopia in screened versus unscreened populations. An analysis was not done.]	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
Section 2: Overall assessment of the study			
2.1	How well was the study done to minimise bias? Code ++, +, or -	NA	
2.2	If coded as +, or - what is the likely direction in which bias might affect the study results?	NA	
Section 3: Description of the study (please print answers clearly)			
3.1	What types of study are included in the review?	RCT/CCT/Cohort/Case-control/Other None	
3.2	How does this review help to answer your key question?	No trials assessing the effectiveness of vision screening on amblyopia were found. Well-planned RCTs are needed. A standard definition of amblyopia is needed, as well as an assessment of the effects of untreated amblyopia. This was a good-quality systematic review and the authors' conclusions are valid.	

**Paper 3402**

Study identification (Rabiu M, Alhassan MB, Ejere H. Environmental sanitary interventions for preventing active trachoma. CDSR 2005; Issue 2).			
<b>Section 1: Internal validity</b>			
In a well-conducted systematic review		In this study, this criterion is:	
1.1	The study addresses an appropriate and clearly focused question.	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.2	A description of the methodology used is included. [Very well described.]	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.3	The literature search is sufficiently rigorous to identify all the relevant studies. [The search strings used were well described. Electronic searches included CENTRAL, MEDLINE and EMBASE and LILACS with no restrictions on language or date. Manual searches included citations of existing reviews. Experts in the field were also consulted as well as the International Trachoma Initiative, International Agency for the Prevention of Blindness, International Centre of Eye Health, London School of Public Health.]	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.4	Study quality is assessed and taken into account. [Done according to <i>Cochrane Handbook of Systematic Reviews of Intervention</i> . The authors described the methodological quality of each trial in detail.]	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.5	There are enough similarities between the studies selected to make combining them reasonable. [Due to considerable heterogeneity between the three studies a meta-analysis was not done]	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>Section 2: Overall assessment of the study</b>			
2.1	How well was the study done to minimise bias? Code ++, +, or –	++	
2.2	If coded as +, or – what is the likely direction in which bias might affect the study results?	NA	
<b>Section 3: Description of the study (please print answers clearly)</b>			
3.1	What types of study are included in the review?	Cluster-randomised study (n=2) and cluster (quasi)-randomised trial (n=1)/CCT/Cohort/Case-control/Other	
3.2	How does this review help to answer your key question?	In two trials, insecticide reduced trachoma. Latrine provision was less effective as a fly control measure in one of these trials. In another trial, health education seemed to reduce trachoma. However, the methodological quality of these trials was not high.	

**Paper 3403**

Study identification (Ejere H, Alhassan MB, Rabiu M. Face washing promotion for preventing active trachoma. CDSR 2004; Issue 3).		
<b>Section 1: Internal validity</b>		
In a well-conducted systematic review		In this study, this criterion is:
1.1	The study addresses an appropriate and clearly focused question. [The authors were looking at face-washing promotion as an intervention for preventing active trachoma. One trial assessed community-based face washing promotion whereas the other trial assessed actual daily face washing by a teacher. They were not directly comparable interventions.]	Well covered Adequately addressed Poorly addressed  Not addressed Not reported Not applicable
1.2	A description of the methodology used is included. [Reviewers used the <i>Cochrane Handbook of Systematic Reviews of Intervention</i> as a guide for their review.]	Well covered Adequately addressed Poorly addressed  Not addressed Not reported Not applicable
1.3	The literature search is sufficiently rigorous to identify all the relevant studies. [The search strings used were well described. Electronic searches included CENTRAL, MEDLINE and EMBASE with no restrictions on language or date. Manual searches included citations of existing reviews. Experts in the field were also consulted.]	Well covered Adequately addressed Poorly addressed  Not addressed Not reported Not applicable
1.4	Study quality is assessed and taken into account. [The authors described the methodological quality of each trial in detail.]	Well covered Adequately addressed Poorly addressed  Not addressed Not reported Not applicable
1.5	There are enough similarities between the studies selected to make combining them reasonable. [The types of intervention and definition of outcome measures differed considerably between the two studies so no meta-analysis was done]	Well covered Adequately addressed Poorly addressed  Not addressed Not reported Not applicable
<b>Section 2: Overall assessment of the study</b>		
2.1	How well was the study done to minimise bias? Code ++, +, or –	++
2.2	If coded as +, or – what is the likely direction in which bias might affect the study results?	NA
<b>Section 3: Description of the study (please print answers clearly)</b>		
3.1	What types of study are included in the review?	RCT and quasi-randomised trial/CCT/Cohort/Case-control/Other
3.2	How does this review help to answer your key question?	The studies available do not support face washing alone or in combination with topical antibiotic for reducing active trachoma.

## Paper 3404

Study identification (Powell C, Wedner S, Hatt S. Vision screening for correctable visual acuity deficits in school-age children and adolescents. CDSR 2004, Issue 4 )		
<b>Section 1: Internal validity</b>		
In a well-conducted systematic review		In this study this criterion is:
1.1	The study addresses an appropriate and clearly focused question. [The question was how effective is school eye screening in identifying children with worsening vision caused by a need for glasses.]	Well covered Adequately addressed Poorly addressed Not addressed Not reported Not applicable
1.2	A description of the methodology used is included.	Well covered Adequately addressed Poorly addressed Not addressed Not reported Not applicable
1.3	The literature search is sufficiently rigorous to identify all the relevant studies. [Reviewers searched CENTRAL, MEDLINE, EMBASE with no language or date restrictions.]	Well covered Adequately addressed Poorly addressed Not addressed Not reported Not applicable
1.4	Study quality is assessed and taken into account. [Reviewers used the guidelines in the <i>Cochrane Handbook of Systematic Reviews of Interventions</i> and the <i>Cochrane Eyes and Vision Group Review Development Guidelines</i> .]	Well covered Adequately addressed Poorly addressed Not addressed Not reported Not applicable
1.5	There are enough similarities between the studies selected to make combining them reasonable. [Reviewers planned to include RCTs and randomised cluster-controlled trials but no trials were identified; a narrative of non-RCTs was given to explain current practice.]	Well covered Adequately addressed Poorly addressed Not addressed Not reported Not applicable
<b>Section 2: Overall assessment of the study</b>		
2.1	How well was the study done to minimise bias? Code ++, +, or –	++
2.2	If coded as +, or – what is the likely direction in which bias might affect the study results?	NA
<b>Section 3: Description of the study (please print answers clearly)</b>		
3.1	What types of study are included in the review?	RCT/CCT/Cohort/Case-control/Other None
3.2	How does this review help to answer your key question?	There were no good-quality trials to assess the benefits (and harms) of vision screening in schools. Well-planned RCTs are needed. This was a good-quality systematic review and the authors' conclusions are valid.

**Paper 3405**

Study identification (Evans JR, Henshaw K. Antioxidant vitamin and mineral supplements for preventing age-related macular degeneration. <i>Cochrane Database of Systematic Reviews</i> 1999, Issue 4).			
<b>Section 1: Internal validity</b>			
In a well-conducted systematic review		In this study, this criterion is:	
1.1	The study addresses an appropriate and clearly focused question.	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.2	A description of the methodology used is included. [Well described.]	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.3	The literature search is sufficiently rigorous to identify all the relevant studies. [The search strings used were well described. Electronic searches included CENTRAL, MEDLINE and EMBASE. Manual searches included citations of existing reviews. Experts in the field were also consulted.]	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.4	Study quality is assessed and taken into account. [The authors described the methodological quality of each trial in detail.]	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.5	There are enough similarities between the studies selected to make combining them reasonable. [Two of the three studies identified were sufficiently similar to be combined.]	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>Section 2: Overall assessment of the study</b>			
2.1	How well was the study done to minimise bias? Code ++, +, or –	++	
2.2	If coded as +, or – what is the likely direction in which bias might affect the study results?	NA	
<b>Section 3: Description of the study (please print answers clearly)</b>			
3.1	What types of study are included in the review?	RCT/CCT/Cohort/Case-control/Other	
3.2	How does this review help to answer your key question?	The number of people in the three studies was high, but as new cases of AMD age-related macular degeneration occur infrequently in the general population, the number of cases was small ( $n = 23$ ). Thus, the studies were underpowered to examine the question.	

**Paper 3407**

Study identification (Evans JR.. Ginkgo Biloba extract for age-related macular degeneration. <i>Cochrane Database of Systematic Reviews</i> 1999, Issue 3. Art.).			
<b>Section 1: Internal validity</b>			
In a well-conducted systematic review		In this study, this criterion is:	
1.1	The study addresses an appropriate and clearly focused question.	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.2	A description of the methodology used is included. [Well described.]	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.3	The literature search is sufficiently rigorous to identify all the relevant studies. [The search strings used were well described. Electronic searches included CENTRAL, MEDLINE and EMBASE. Manual searches included citations of existing reviews. Experts in the field were also consulted.]	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.4	Study quality is assessed and taken into account. [The author described the methodological quality of each trial in detail.]	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
1.5	There are enough similarities between the studies selected to make combining them reasonable. [Studies were too small to combine.]	Well covered Adequately addressed Poorly addressed	Not addressed Not reported Not applicable
<b>Section 2: Overall assessment of the study</b>			
2.1	How well was the study done to minimise bias? Code ++, +, or –	++	
2.2	If coded as +, or – what is the likely direction in which bias might affect the study results?	NA	
<b>Section 3: Description of the study (please print answers clearly)</b>			
3.1	What types of study are included in the review?	RCT/CCT/Cohort/Case-control/Other	
3.2	How does this review help to answer your key question?	Only two small published trials were identified, and the results could not be pooled because of differences in the control groups.	