

## Appendix 5    Quality assessments for review articles

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This appendix contains data extractions from the systematic reviews included in this review, organised as general systematic reviews (Appendix 5a) and Cochrane systematic reviews (Appendix 5b).

### Appendix 5a    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 non-smokers
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 as 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 C A (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.	N/A	
<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 OR or RR).	<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

<p><b>There are enough similarities between the studies selected to make combining them reasonable.</b></p> <p>No</p> <p><b>Notes:</b></p> <p>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</p>	<p>Well covered</p> <p>Adequately addressed</p> <p>Poorly addressed</p>	<p>Not addressed</p> <p>Not reported</p> <p><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>Generalisable to Australia</p>	
<p><b>Applicability</b></p>	<p>Study applicable to the Australian population</p>	

**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
<b>OVERALL ASSESSMENT OF THE STUDY</b>		
<b>Overall quality</b>	Good/ <b>Adequate</b> /Poor	
<b>EXTERNAL VALIDITY</b>		
<b>Generalisability</b>	Most of the populations studies were relevant to the Australian context	
<b>Applicability</b>	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> Adequately addressed Poorly addressed	Not addressed Not reported 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> 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, 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 randomised controlled trial 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						
<b>OVERALL ASSESSMENT OF THE STUDY</b>							
<b>Overall quality</b>	Good/ <b>Adequate</b> /Poor A thorough study, but the information relating to cataracts and glaucoma is limited						
<b>EXTERNAL VALIDITY</b>							
<b>Generalisability</b>	Generalisable to Australia						
<b>Applicability</b>	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						

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>	<b>Study design</b>	
17	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>	Well covered	Not addressed
Yes	Adequately addressed	Not reported
Notes:	Poorly addressed	Not applicable
<b>A description of the methodology used is included.</b>	Well covered	Not addressed
No	Adequately addressed	Not reported
Notes:	Poorly addressed	Not applicable
<b>The literature search is sufficiently rigorous to identify all the relevant studies.</b>	Well covered	Not addressed
No	Adequately addressed	Not reported
Notes:	Poorly addressed	Not applicable
<b>Study quality is assessed and taken into account.</b>	Well covered	Not addressed
No	Adequately addressed	Not reported
Notes:	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
	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 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>	<b>Study design</b>	
35	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>	Well covered	Not addressed
Yes	Adequately addressed	Not reported
Notes:	Poorly addressed	Not applicable
<b>A description of the methodology used is included.</b>	Well covered	Not addressed
No	Adequately addressed	Not reported
Notes: Poorly covered	Poorly addressed	Not applicable
<b>The literature search is sufficiently rigorous to identify all the relevant studies.</b>	Well covered	Not addressed
No	Adequately addressed	Not reported
Notes:	Poorly addressed	Not applicable
<b>Study quality is assessed and taken into account.</b>	Well covered	Not addressed
No	Adequately addressed	Not reported
Notes:	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
Notes:	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 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 intraocular pressure	N/A	
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	N/A	
<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>	<b>Study design</b>	
34 studies reviewed and 9 used	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 intraocular pressure	N/A	
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>	<b>Well covered</b>	Not addressed
Yes	Adequately addressed	Not reported
Notes:	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
Notes:	Poorly addressed	Not applicable
<b>The literature search is sufficiently rigorous to identify all the relevant studies.</b>	Well covered	Not addressed
Yes	<b>Adequately addressed</b>	Not reported
Notes:	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
Notes:	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
Notes:	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 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>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	<b>Well covered</b> Adequately addressed Poorly addressed	Not addressed Not reported Not applicable