

**Table 2. Objectives, Participants, Interventions, Outcomes and Conclusions of the Reliable Systematic Reviews (N=50)
Published through March, 15 2016 and Mapped to the AAO's PPP Cataract Management Section (see Appendix A)**

Study ID	Objective(s)	Participants	Intervention Comparisons	Outcome	Number of Studies; Participants/Eyes	Conclusion(s) from the abstract
Alhassan, 2008	"The objective of this review was to assess the effects of peribulbar anaesthesia (PB) compared to retrobulbar anaesthesia (RB) on pain scores, ocular akinesia, patient acceptability and ocular and systemic complications."	Cataract (age-related cataract)	Anaesthesia (peribulbar block versus retrobulbar block)	Safety; Quality of Life; Pain, Ocular Akinesia; Acceptability of Block to patients; Need for Supplemental Injection	6; 1,438	"There is little to choose between peribulbar and retrobulbar block in terms of anaesthesia and akinesia during surgery measuring acceptability to patients, need for additional injections and development of severe complications. Severe local or systemic complications were rare for both types of block."
Alhassan, 2015	"The objective of this review was to assess the effects of peribulbar anaesthesia (PB) compared to retrobulbar anaesthesia (RB) on pain scores, ocular akinesia, patient acceptability and ocular and systemic complications."	Cataract (age-related cataract)	Peribulbar block; Retrobulbar block	Safety; Pain; Ocular akinesia; Need for supplemental anesthetic injection	6; 1,438	"There is little to choose between peribulbar and retrobulbar block in terms of anaesthesia and akinesia during surgery measuring acceptability to patients, need for additional injections and development of severe complications. Severe local or systemic complications were rare for both types of block."
Allen, 2011	"To answer the following clinical questions: What are the effects of surgery for age-related cataract without other ocular comorbidity? What are the effects of treatment for age-related cataract in people with glaucoma? What are the effects of surgical treatments for age-related cataract in people with diabetic retinopathy? What are the effects of surgical treatments for age-related cataract in people with chronic uveitis?"	Cataract (age-related cataract); Coexisting cataract and glaucoma; Cataract with diabetic retinopathy; Cataract with chronic uveitis	ICCE; ECCE; MSICS; Combined cataract and glaucoma surgery; Manual large incision extracapsular extraction; Adding diabetic retinopathy treatment to cataract surgery; Medical control of uveitis at the time of cataract surgery	Visual Acuity; Quality of Life; Safety; Intraocular Pressure; Speed and Stability of Visual Rehabilitation	20; Not reported	<p>“• There is contradictory evidence about the effect of cataract surgery on the development or progression of age-related macular degeneration (ARMD).</p> <ul style="list-style-type: none"> • Expedited phaco extracapsular extraction may be more effective at improving visual acuity compared with waiting list control in people with cataract without ocular comorbidities. • Manual large-incision extracapsular extraction has also been shown to be successful in treating cataracts. • Intracapsular extraction is likely to be better at improving vision compared with no extraction, although it is not as beneficial as manual (large or small) incision extracapsular extraction. The rate of complications is also higher with this technique compared with extracapsular extraction. • In people with glaucoma and cataract, concomitant cataract surgery (phaco or manual large-incision extracapsular extraction) and glaucoma surgery seems more beneficial than cataract surgery alone, in that they both improve vision to a similar extent, but the glaucoma surgery additionally improves intraocular pressure. Performing procedures in the order of cataract surgery first followed by pan retinal photocoagulation may be more effective than the opposite order at improving visual acuity and reducing the progression of diabetic macular oedema in people with cataract and diabetic retinopathy secondary to type 2 diabetes. However, these results come from one small RCT. • One of the possible harms of cataract surgery is cystoid macular oedema, which people with uveitis also frequently suffer from.”

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Ang, 2012	"To compare two different techniques of lens removal in cataract surgery: manual small incision surgery (MSICS) and extracapsular cataract extraction (ECCE)."	Cataract (age-related cataract)	ECCE; MSICS	Visual Acuity; Quality of Life; Safety; Cost	3; 953	"There are no other studies from other countries other than India and Nepal and there are insufficient data on cost-effectiveness of each procedure. Better evidence is needed before any change may be implemented"
Ang, 2014	"To compare two different techniques of lens removal in cataract surgery: manual small incision surgery (MSICS) and extracapsular cataract extraction (ECCE)."	Cataract (age-related cataract)	ECCE; MSICS	Visual Acuity; Quality of Life; Safety; Cost	3; 953	"There are no other studies from other countries other than India and Nepal and there are insufficient data on cost-effectiveness of each procedure. Better evidence is needed before any change may be implemented."
Buehl, 2008	"To summarize the effects of intraocular lens (IOL) geometry, including modifications of the IOL optic (especially optic edge design) and haptics, on the development of PCO."	Cataract (age-related cataract)	IOL implantation	Visual acuity; Safety	26; 4,292	"Because of the significant difference in the PCO score, sharp-edged IOL optics should be preferred to round-edged IOL optics."
Calladine, 2012	"The objective of this review was to assess the effects of multifocal IOLs, including effects on visual acuity, subjective visual satisfaction, spectacle dependence, glare and contrast sensitivity, compared to standard monofocal lenses in people undergoing cataract surgery."	Cataract (age-related cataract)	IOL implantation	Visual Acuity; Quality of Life; Contrast Sensitivity; Visual Function; Patient Satisfaction	16; 1,608	"Multifocal IOLs are effective at improving near vision relative to monofocal IOLs. Whether that improvement outweighs the adverse effects of multifocal IOLs will vary between patients. Motivation to achieve spectacle independence is likely to be the deciding factor."
Casparis, 2012	"To evaluate the effectiveness and safety of cataract surgery in eyes with age-related macular degeneration (AMD)."	Coexisting cataract and AMD	Cataract surgery	Visual acuity; Quality of life; Safety; Progression of AMD in the Operated Eye	1; 60	"At this time, it is not possible to draw reliable conclusions from the available data to determine whether cataract surgery is beneficial or harmful in people with AMD. Physicians will have to make practice decisions based on best clinical judgment until controlled trials are conducted and their findings published."

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Conner-Spady, 2007	"To define (a) the extent to which accommodative IOLs improve unaided near visual function, in comparison with monofocal IOLs; (b) the extent of compromise to unaided distance visual acuity; c) whether a higher rate of additional complications is associated the use of accommodative IOLs."	Cataract (age-related cataract)	Any type of cataract surgery	Visual Acuity; Safety; Quality of Life; Cost	17; Not reported	"In conclusion, although the evidence does not indicate a precise benchmark for cataract surgery, it does provide a measure of guidance. As visual impairment is one of many risk factors for falls, fractures, and MVCs in the elderly, and as VA is shown to deteriorate over time, the results support timely access to surgery for individuals with visual impairment due to cataract."
Davison, 2007	"To compare the effectiveness of topical anaesthesia (with or without the addition of intracameral local anaesthetic) and sub-Tenon's anaesthesia in providing pain relief during cataract surgery." "The aim of this review is to examine the effects of two types of cataract surgery for age-related cataract: phacoemulsification and extracapsular cataract extraction (ECCE)."	Cataract (age-related cataract)	Anaesthesia (sub-Tenon anaesthesia and topical anaesthesia (eye drops or gel)	Safety; Pain; Patient Satisfaction	7; 617	"Sub-Tenon anaesthesia provides better pain relief than topical anaesthesia for cataract surgery."
de Silva, 2014	"To evaluate the effectiveness and safety of surgery for post-vitrectomy cataract with respect to visual acuity, quality of life, and other outcomes."	Cataract (age-related cataract)	ECCE; Phacoemulsification	Visual Acuity; Quality of Life; Safety; Cost	11; 1,228	"Removing cataract by phacoemulsification may result in a better visual acuity compared to ECCE, with a lower complication rate."
Do Diana, 2008	"To evaluate the effectiveness and safety of surgery for post-vitrectomy cataract with respect to visual acuity, quality of life, and other outcomes."	Adults with cataract post vitrectomy	Any type of cataract surgery	Visual acuity; Quality of Life; Contrast Sensitivity; Safety; Progression of the Condition that was the Original Indication for Vitrectomy in Patients with Diabetic Retinopathy and Age-Related Macular Degeneration; Cost	0; 0	"There is no evidence from randomized or quasi-randomized controlled trials on which to base clinical recommendations for surgery for post-vitrectomy cataract."

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Ezra, 2007	"The primary objective of this systematic review was to assess pain during surgery and patient satisfaction with topical anaesthesia alone compared to topical anaesthesia with intracameral anaesthesia for phacoemulsification. The secondary objectives were to assess adverse effects and complications attributable to choice of anaesthesia and the need for additional anaesthesia during surgery."	Cataract (age-related cataract)	Phacoemulsification; Anaesthesia	Quality of Life; Safety; Patient Satisfaction	8; 1,281	"The use of intracameral unpreserved 1% lidocaine is an effective and safe adjunct to topical anaesthesia for phacoemulsification cataract surgery."
Ezra, 2008	"The primary objective of this systematic review was to assess pain during surgery and patient satisfaction in topical anesthesia alone versus topical anesthesia with intracameral anesthesia for phacoemulsification. The secondary objectives were to assess adverse effects and complications attributable to choice of anesthesia and need for additional anesthesia during surgery"	Cataract (age-related cataract)	Anaesthesia (topical anesthesia alone versus topical anesthesia with intracameral anesthesia for phacoemulsification)	Quality of Life; Safety; Patient Satisfaction	8; 1,281	"Intraoperative pain during cataract surgery under topical anaesthetic is reduced by intracameral lidocaine. Possible adverse effects of intracameral lidocaine cannot be excluded due to significant heterogeneity in outcome measures between different RCTs"
Fedorowic, 2011	"To provide reliable evidence for the safety, feasibility, effectiveness and cost-effectiveness of cataract extraction performed as day care versus in-patient procedure."	Cataract (age-related cataract)	Cataract extraction and IOL implantation done as day cases; Cataract extraction and IOL implantation done as in-patient cases	Visual Acuity; Quality of Life; Safety; Cost	2; 1,294	"This review provides some evidence that there is a cost saving but no significant difference in outcome or risk of postoperative complications between day care and in-patient cataract surgery. This is based on one detailed and methodologically sound trial conducted in the developed world. The success, safety and cost-effectiveness of cataract surgery as a day care procedure appear to be acceptable."

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Findl, 2010	"To summarise the effects of different interventions to inhibit PCO."	Cataract (age-related cataract)	ECCE; IOL implantation (modifications in surgical technique to inhibit posterior capsule opacification (PCO), modifications in IOL design (material and geometry), implantation of additional devices and pharmacological therapy compared to each other, placebo or standard treatment)	Visual Acuity; Safety	66; 8,039	"Due to the highly significant difference between round and sharp edged IOL optics, IOLs with sharp (posterior) optic edges should be preferred. There is no clear difference between optic materials. The choice of postoperative anti-inflammatory treatment does not seem to influence PCO development."
Friedman, 2001	"To synthesize the findings of the randomized trials of regional anesthesia management strategies for cataract surgery."	Cataract (age-related cataract)	Anaesthesia (topical)	Safety; Pain Experienced during the Block; Pain Experienced during Cataract Surgery	82 ; 11,160	"This synthesis of the literature demonstrates that currently used approaches to anesthesia management provide adequate pain control for successful cataract surgery, but there is some variation in the effectiveness of the most commonly used techniques. "
Friedman, 2002	"To assess short- and long-term control of intraocular pressure (IOP) with different surgical treatment strategies for coexisting cataract and glaucoma."	Coexisting cataract and glaucoma	ECCE; Phacoemulsification	Intraocular Pressure Control	39; Can't tell	"There is strong evidence for better long-term control of IOP with combined glaucoma and cataract operations compared with cataract surgery alone. For other issues regarding surgical treatment strategies for cataract and glaucoma, the available evidence is limited or conflicting."
Gower, 2013	"The objective of this review was to evaluate the effects of perioperative antibiotic prophylaxis for endophthalmitis following cataract surgery."	Cataract (age-related cataract)	Prophylactic intervention (preoperative antibiotics, intraoperative (intracameral, subconjunctival or systemic) or postoperative antibiotic prophylaxis for acute endophthalmitis)	Visual Acuity; Quality of Life; Safety; Cost	4; 100,876	"Multiple measures for preventing endophthalmitis following cataract surgery have been studied. One of the included studies, the ESCRS (European Society of Cataract and Refractive Surgeons) study, was performed using contemporary surgical technique and employed cefuroxime, an antibiotic commonly used in many parts of the world. Clinical trials with rare outcomes require very large sample sizes and are quite costly to conduct; thus, it is unlikely that additional clinical trials will be conducted to evaluate currently available prophylaxis. Practitioners should rely on current evidence to make informed decisions regarding prophylaxis choices."

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Guay, 2015	"Our objectives were to compare the effectiveness of topical anaesthesia (with or without intracameral local anaesthetic) versus sub-Tenon's anaesthesia in providing pain relief during cataract surgery. We reviewed pain during administration of anaesthesia, post operative pain, surgical satisfaction with operating conditions and patient satisfaction with pain relief provided, and we looked at associated complications."	Cataract (age-related cataract)	Sub-Tenon's anesthesia; Topical anesthesia (eye drops or gel)	Safety; Pain; Patient Satisfaction	8; 920	"Both topical anaesthesia and sub-Tenon's anaesthesia are accepted and safe methods of providing anaesthesia for cataract surgery. An acceptable degree of intraoperative discomfort has to be expected with either of these techniques. Randomized controlled trials on the effects of various strategies to prevent intraoperative pain during cataract surgery could prove useful."
Hodge, 2005	"The purpose of this study was to conduct a systematic review of the scientific medical literature to identify, appraise and synthesize the evidence for the effects of omega-3 fatty acids on eye health."	Cataract (age-related cataract)	Nutritional supplement(omega-3 fatty acids)	Need for Cataract Surgery; Progression; Cataract Prevalence and Incidence	16; Can't tell	" It is therefore our view that much more research will need to be conducted before anything conclusive can be asserted with respect to the effects of omega-3 fatty acids on eye health. It is also our understanding that sorting out the possible benefits of the intake of omega-3 fatty acids in eye health might profit from taking into consideration the impact of the concurrent intake of omega-6 fatty acids and, by definition, the omega-6/omega-3 fatty acid intake ratio."
Hodge, 2007	"We conducted a systematic review to understand the relation between wait time for cataract surgery and patient outcomes and the variables that modify this relation."	Cataract (age-related cataract)	Wait time for cataract surgery	Visual Acuity; Quality of Life; Safety	27; Can't tell	"Patients who wait more than 6 months for cataract surgery may experience negative outcomes during the wait period, including vision loss, a reduced quality of life and an increased rate of falls."
Jampel, 2002	"To analyze the literature pertaining to the techniques used in combined cataract and glaucoma surgery, including the technique of cataract extraction, the timing of the surgery (staged procedure versus combined procedure), the anatomic location of the operation, and the use of antifibrosis agents."	Coexisting cataract and glaucoma	MMC; 5-FU; Single- vs. two-site; Nuclear expression vs. phacoemulsification; Staged vs. simultaneous surgery; Other glaucoma operations	Change in IOP; Number of Medications Used; Proportion of Eyes Requiring further Glaucoma Surgery	33, Can't tell	"In the literature on surgical techniques and adjuvants used in the management of coexisting cataract and glaucoma, the strongest evidence of efficacy exists for using MMC, separating the incisions for cataract and glaucoma surgery, and removing the nucleus by phacoemulsification."

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Keay, 2012	"(1) To investigate the evidence for reductions in adverse events through preoperative medical testing, and (2) to estimate the average cost of performing routine medical testing."	Cataract (age-related cataract)	Preoperative testing (routine pre-surgical, medical testing compared with no routine preoperative or selective preoperative testing prior to cataract surgery)	Quality of life; Safety; Cost; Postponed/Cancelled Surgery on the Basis of the Medical Screening; Change in the Clinical Management	3; 21,531 surgeries	"This review has shown that routine pre-operative testing does not increase the safety of cataract surgery. Alternatives to routine preoperative medical testing have been proposed, including self-administered health questionnaires, which could substitute for health provider histories and physical examinations. Such avenues may lead to cost-effective means of identifying those at increased risk of medical adverse events due to cataract surgery. However, despite the rare occurrence, adverse medical events precipitated by cataract surgery remain a concern because of the large number of elderly patients with multiple medical comorbidities who have cataract surgery in various settings."
Lawrence, 2015	"To provide authoritative, reliable evidence regarding the safety, feasibility, effectiveness and cost-effectiveness of day case cataract extraction by comparing clinical outcomes, cost-effectiveness, patient satisfaction or a combination of these in cataract operations performed in day care versus in-patient units."	Cataract (age-related cataract)	Day care cataract extraction and IOL implantation; Inpatient cataract extraction and IOL implantation	Visual Acuity; Quality of Life; Safety; Cost	2; 1,307	"This review provides evidence that there is cost saving with day care cataract surgery compared to in-patient cataract surgery. Although effects on visual acuity and quality of life appeared similar, the evidence with respect to postoperative complications was inconclusive because the effect estimates were imprecise. Given the wide-spread adoption of day care cataract surgery, future research in cataract clinical pathways should focus on evidence provided by high quality clinical databases (registers), which would enable clinicians and healthcare planners to agree clinical and social indications for in-patient care and so make better use of resources."
Leung, 2014	"To summarize the effects of different IOLs on visual acuity, other visual outcomes, and quality of life in people with uveitis."	Participants with uveitis for any indication	IOL (hydrophobic or hydrophilic acrylic, silicone, or PMMA IOLs with or without heparin-surface modification)	Visual Acuity; Quality of Life; Safety	4, 216	"Based on the trials identified in this review, there is uncertainty as to which type of IOL provides the best visual and clinical outcomes in people with uveitis undergoing cataract surgery. The studies were small, not all lens materials were compared in all studies, and not all lens materials were available in all study sites. Evidence of a superior effect of hydrophobic acrylic lenses over silicone lenses, specifically for posterior synechiae outcomes comes from a single study at a high risk of performance and detection bias. However, due to small sample sizes and heterogeneity in outcome reporting, we found insufficient information to assess these and other types of IOL materials for cataract surgery for eyes with uveitis."
Lesin, 2015	"We therefore conducted a systematic review of the literature assessing factors associated with postoperative pain and analgesic consumption in ophthalmic surgery."	Patients undergoing ophthalmic surgery	Factors associated with postoperative pain; Factors associated with analgesic consumption	Factors Associated with Postoperative Pain	3 cataract studies and 2 with potential cataract patients; Between 427 and 1088	"Multiple factors may be associated with increased postoperative pain and analgesic consumption and warrant further research."

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Li, 2008	"To investigate the effect of AcrySof intraocular lenses (IOLs) on the development of posterior capsule opacification (PCO) compared with silicone or polymethyl methacrylate (PMMA) IOLs for patients with senile cataracts." "To investigate the effect of AcrySof intraocular lenses (IOLs) on the development of posterior capsule opacification (PCO) compared with silicone or polymethyl methacrylate (PMMA) IOLs for patients with senile cataracts."	Cataract (age-related cataract)	IOL implantation (AcrySof IOLs vs. PMMA IOLs)	Visual Acuity; PCO score; Nd:YAG Capsulotomy Rate	10; 1,202	"AcrySof and sharp-edged silicone IOLs are similarly effective in inhibition of PCO after cataract surgery. In patients implanted with the AcrySof lens, significantly less PCO developed than in those who had round-edged silicone or PMMA IOLs. The results of this meta-analysis support the theory that a major factor in preventing PCO development is a sharp-edged IOL design."
Linertova, 2014	"We performed a systematic literature review on the effectiveness and efficiency of intracameral cefuroxime and moxifloxacin for the prophylaxis of postoperative endophthalmitis after cataract surgery."	Cataract (age-related cataract)	Intracameral cefuroxime; Other antibiotic prophylaxis or no prophylaxis	Onset of Presumed or Confirmed Endophthalmitis; Cost	9; 140,619	"This review confirmed that cefuroxime can prevent endophthalmitis after cataract surgery. Further randomized controlled trials, with large sample sizes, are required to compare different antibiotic prophylaxis regimens."
Long, 2006	"To assess the effects of surgical treatments for bilateral symmetrical congenital cataracts."	Children with bilateral congenital cataract	Any type of cataract surgery	Visual Acuity; Safety	4; 255 eyes	"Evidence exists for the care of children with congenital or developmental bilateral cataracts to reduce the occurrence of visual axis opacification."
Mathew Milan, 2012	"To assess the effectiveness of antioxidant vitamin supplementation in preventing and slowing the progression of age-related cataract."	Cataract (age-related cataract)	Nutritional supplement (antioxidant vitamins, specifically beta-carotene, vitamin C and vitamin E in any form, dosage or combination)	Safety; Cataract; Visual Function	9; 117,272	"There is no evidence from RCTs that supplementation with antioxidant vitamins (beta-carotene, vitamin C or vitamin E) prevents or slows the progression of age-related cataract. We do not recommend any further studies to examine the role of antioxidant vitamins beta-carotene, vitamin C and vitamin E in preventing or slowing the progression of age-related cataract. Costs and adverse effects should be weighed carefully with unproven benefits before recommending their intake above recommended daily allowances."

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Medical Advisory Secretariat, Ontario Ministry of Health, 2009	"To examine the comparative effectiveness and cost-effectiveness of various intraocular lenses (IOLs) for the treatment of age-related cataracts."	Cataract (age-related cataract)	IOL implantation	Visual Acuity; Quality of Life; Safety; Visual Function	12; Not reported	<p>"1. Multifocal vs. monofocal: Objective outcomes: Significant improvement in Best distance corrected unaided near visual acuity (BCUNVA) (moderate GRADE quality); No significant difference in best corrected distance visual acuity (BCDVA) (moderate GRADE quality); Inconclusive evidence for contrast sensitivity (low GRADE quality); Inconclusive evidence for glare (very low GRADE quality); Subjective outcomes: Inconclusive evidence for visual satisfaction (low GRADE quality); Significant increase in glare/halos (low/moderate GRADE quality); Significant increase in freedom from spectacles (low GRADE quality);</p> <p>2. Accommodative vs. multifocal/monofocal: Inconclusive due to Insufficient limited evidence for any effectiveness outcome (very low GRADE quality);</p> <p>3. Hydrophilic acrylic vs. other materials (hydrophobic acrylic, silicone): Significant increase in PCO score (low GRADE quality);</p> <p>4. Sharp edged compared to round edged: Significant reduction in PCO score (low GRADE quality);</p> <p>5. One piece compared to three piece: No significant difference in PCO score (low GRADE quality);</p> <p>6. Hydrophobic acrylic compared to silicone: No significant difference in PCO score (moderate GRADE quality);</p> <p>7. Aspherical modified prolate anterior surface compared to spherical: No significant difference in visual acuity (very low GRADE quality); Significant reduction in contrast sensitivity (very low GRADE quality);</p> <p>8. Blue light filtering compared to non blue-light filtering: No significant difference in BCDVA (low GRADE quality); No significant difference in contrast sensitivity (low GRADE quality); No significant difference in Health related quality of life (high/moderate GRADE quality)"</p>
Mousavi, 2015	"To provide a comprehensive review regarding the efficacy and safety of heparin and its derivatives as anti-inflammatory agents."	Cataract (age-related cataract)	Cataract surgery with heparin; Other cataract surgery	Anti-inflammatory Response	5 cataract studies; 727	"Heparin seems to be a safe and effective anti-inflammatory agent; although it is shown that heparin can decrease the level of inflammatory biomarkers and improves patient conditions, still more data from larger rigorously designed studies are needed to support use of heparin as an anti-inflammatory agent in clinical setting."

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Ong, 2014	"To define (a) the extent to which accommodative IOLs improve unaided near visual function, in comparison with monofocal IOLs; (b) the extent of compromise to unaided distance visual acuity; c) whether a higher rate of additional complications is associated the use of accommodative IOLs."	Cataract (age-related cataract)	IOL implantation (accommodative IOLs vs monofocal IOLs)	Visual Acuity; Contrast Sensitivity; Safety; Visual Function	4, 229	"There is moderate-quality evidence that study participants who received accommodative IOLs had a small gain in near visual acuity after six months. There is some evidence that distance visual acuity with accommodative lenses may be worse after 12 months but due to low quality of evidence and heterogeneity of effect, the evidence for this is not clear-cut. People receiving accommodative lenses had more PCO which may be associated with poorer distance vision. However, the effect of the lenses on PCO was uncertain."
Quinones, 2013	"To examine the effectiveness and safety of femtosecond laser assisted cataract surgery (FLACS) relative to conventional cataract surgery."	Cataract (age-related cataract)	Femtosecond laser surgery	Visual Acuity; Quality of Life; Safety; Cost; Effective Phacoemulsification on Time	15; Not reported	"This systematic review found visual outcomes (CDVA) and EPT to be similar in FLACS and conventional surgery, while quality of life and cost-effectiveness outcomes were not reported. The evidence for the relative benefit of FLACS was limited by reliance on small to moderately sized prospective cohort studies, nearly all of which had stated financial conflicts of interest. Adverse events unique to FLACS involved difficulties in laser docking or patient suitability for the procedure. Many patients were excluded from the FSL treatment groups for orbital, corneal, cataract density, or medical co-morbidities. Comparative adverse events in FLACS and conventional surgery were found to be similar for IOL positioning, corneal thickness, macular edema and residual refractive error. A few studies reported mixed results of the effect of surgical experience on the incidence of FLACS adverse events."
Riaz, 2006	"To compare the effects of different surgical interventions for age-related cataract."	Cataract (age-related cataract)	ICCE; ECCE; Phacoemulsification; MSICS; IOL implantation	Visual Acuity; Quality of Life; Safety; Cost; Visual Function	17; 9,927	"This review provides evidence from seven RCTs that phacoemulsification gives a better outcome than ECCE with sutures. We also found evidence that ECCE with a posterior chamber lens implant provides better visual outcome than ICCE with aphakic glasses. The long term effect of posterior capsular opacification (PCO) needs to be assessed in larger populations. The data also suggests that ICCE with an anterior chamber lens implant is an effective alternative to ICCE with aphakic glasses, with similar safety. Phacoemulsification provides the best visual outcomes but will only be accessible to the poorer countries if the cost of phacoemulsification and foldable IOLs decrease. Manual small incision cataract surgery provides early visual rehabilitation and comparable visual outcome to PHACO. It has better visual outcomes than ECCE and can be used in any clinic that is currently carrying out ECCE with IOL."

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Riaz, 2013	"To compare manual small incision cataract surgery (MSICS) and phacoemulsification techniques."	Cataract (age-related cataract)	Phacoemulsification; MSICS	Visual Acuity; Quality of Life; Safety; Cost	8; 1,708	"On the basis of this review, removing cataract by phacoemulsification may result in better UCVA in the short term (up to three months after surgery) compared to MSICS, but similar BCVA."
Rossetti, 1998	"The study aimed to determine the effectiveness of prophylactic medical intervention in reducing the incidence of cystoid macular edema (CME) and the effectiveness of medical treatment for chronic CME after cataract surgery."	Patients with chronic aphakic and pseudophakic CME	Medical prophylactic intervention	Visual Acuity; Safety	36 RCTs; 2898 eyes in 16 RCTs for prophylactic treatment, 187 eyes in 4 RCTs of treatment of chronic CME	"A combination of the results from RCTs indicates that medical prophylaxis for aphakic and pseudophakic CME and medical treatment for chronic CME are beneficial. Because most of the RCTs performed to date have problems related to quality, a well-designed RCT is needed to confirm this result, using clinical CME and vision as outcomes."
Schuster, 2013	"To provide a summary of the impact on vision of an aspheric intraocular lens (IOL) compared with a spherical IOL in cataract surgery."	Cataract (age-related cataract)	IOL implantation (aspheric monofocal vs. spheric monofocal IOLs)	Visual Acuity; Contrast Sensitivity; Visual Function	43; 2,076 eyes	"Overall, a patient may achieve better contrast sensitivity with an aspheric IOL than with a spherical IOL, especially under dim light. There was no clinically relevant difference in BCVA between aspheric and spherical IOL implantation. The findings on the subjective perception of visual quality were heterogeneous with no clear result favoring either option."
Sivaprasad, 2012	"To examine the effectiveness of NSAIDs in the treatment of CMO following cataract surgery."	Adults who developed CMO following cataract surgery in an eye with no history of ocular inflammatory disease, trauma or previous intraocular surgery.	Anti-inflammatory agents	Visual acuity; Quality of Life; Contrast Sensitivity; Improvement in Leakage on Fundus Fluorescein Angiography (FFA)	7; 299	"This review found two trials which showed that topical NSAID (0.5% ketorolac tromethamine ophthalmic solution) has a positive effect on chronic CMO and two trials which revealed no significant difference between comparative groups. As such, the effects of NSAIDs in acute and chronic CMO remain unclear and needs further investigation."
Song, 2014	"Changes in lens may reflect the status of systemic health of human beings but the supporting evidences are not well summarized yet. We aimed to determine the relationship of age-related cataract, cataract surgery and long-term mortality by pooling the results of published population-based studies."	Cataract (age-related cataract)	Nuclear cataract or cortical cataract or posterior subcapsular cataract or cataract surgery; No cataract	Mortality	10; 39,659	"All subtypes of age-related cataract were associated with an increased mortality with nuclear cataract having the strongest association among the 3 cataract subtypes. However, cataract surgery was not significantly related to mortality. These findings indicated that changes in lens may serve as markers for ageing and systemic health in general population"

Table 2. Objectives, Participants, Interventions, Outcomes and Conclusions of the Reliable Systematic Reviews (N=50) Published through March, 15 2016 and Mapped to the AAO's PPP Cataract Management Section (see Appendix A)

Study ID	Objective(s)	Participants	Intervention Comparisons	Outcome	Number of Studies; Participants/Eyes	Conclusion(s) from the abstract
Takakura, 2010	"To compare accommodating intraocular lens (IOLs) and monofocal IOLs in restoring accommodation in cataract surgery."	Cataract (age-related cataract)	IOL (accommodating IOLs and standard monofocal IOLs)	Visual Acuity; Contrast sensitivity; Safety; Pilocarpine-induced Anterior Chamber Displacements; Reading Speed; Glare; Spectacle Independence	12; 727 eyes	"There was no clear evidence of near acuity improvement despite statistically significant pilocarpine-induced anterior lens displacement. Further randomized controlled studies with standardized methods evaluating adverse effects (eg, PCO) are needed to clarify the tradeoffs."
Thomas, 2014	"To assess the effects of antimetabolites with cataract surgery on functioning of a previous trabeculectomy."	Coexisting cataract and glaucoma	Antimetabolites (5-fluorouracil or mitomycin C); No antimetabolites	Quality of life; Safety; Failed Trabeculectomy; Intraocular Pressure; Cost	0; 0	"There are no RCTs of antimetabolites with cataract surgery in people with a functioning trabeculectomy. Appropriately powered RCTs are needed of antimetabolites during cataract surgery in patients with a functioning trabeculectomy."
Wielders, 2015	"To evaluate the optimum medical strategy to prevent cystoid macular edema (CME) after cataract surgery."	Cataract (age-related cataract)	Interventions for prevention of CME	Visual Acuity; Developing CME	30 in qualitative analysis and 22 in quantitative synthesis; 3,658	"Topical NSAIDs significantly reduced the odds of developing CME, as compared to topical corticosteroids, in nondiabetic and mixed populations. A combination of topical NSAIDs and corticosteroids reduced the odds of developing CME in nondiabetic and diabetic patients, as compared to topical corticosteroids"
Xu, 2014	"To compare the effectiveness of refractive multifocal intraocular lenses (MIOLs [refractive MIOL group]) versus diffractive MIOLs (diffractive MIOL group) in bilateral cataract surgery."	Cataract (age-related cataract)	Refractive multifocal IOL; Diffractive multifocal IOL	Visual acuity; Reading ability; Spectacle Independence; Occurrence of Photoc Phenomena	8; 621	"Refractive MIOLs can provide better distance vision, whereas diffractive MIOLs provide better near vision, reading ability, and equivalent intermediate vision, reduce unwanted photic phenomena, and allow greater spectacle independence."
Yilmaz, 2012	"To assess the effectiveness of ketorolac vs control for prevention of acute pseudophakic cystoid macular edema (CME)."	Cataract (age-related cataract)	Anti-inflammatory agents (Ketorolac therapy)	Safety	4; 890 eyes	"In this systematic review of four RCTs, two of which compared ketorolac with no treatment and two of which evaluated ketorolac vs placebo drops, treatment with ketorolac significantly reduced the risk of developing CME at the end of ~4 weeks of treatment compared with controls."

Table 2. Objectives, Participants, Interventions, Outcomes and Conclusions of the Reliable Systematic Reviews (N=50) Published through March, 15 2016 and Mapped to the AAO's PPP Cataract Management Section (see Appendix A)

Study ID	Objective(s)	Participants	Intervention Comparisons	Outcome	Number of Studies; Participants/Eyes	Conclusion(s) from the abstract
Yu, 2012	"To identify relevant prospective randomized controlled trials (RCTs) comparing biaxial microincision cataract surgery (MICS) and conventional coaxial phacoemulsification."	Cataract (age-related cataract)	Coaxial phacoemulsification; biaxial microincision cataract surgery	Visual Acuity; Safety; Effective Phacoemulsification on Time; Phacoemulsification on Power; Surgically-induced Astigmatism; Laser Flare Photometry Value; Percentage of Endothelial Cell Loss; Change in Central Corneal Thickness	11; 866	"In conclusion, evidence suggests that biaxial MICS is as safe as coaxial phacoemulsification in visual outcomes, endothelial cell loss, and postoperative levels of flare and cells. Micro incision cataract surgery is superior to coaxial phacoemulsification in total phacoemulsification time and percentage of power used during surgery. With biaxial MICS, there is significantly less SIA. Additional investigations with a larger number of patients and longer follow-up periods are warranted."
Zhang, 2015	"To assess the relative effectiveness and safety of combined surgery versus cataract surgery (phacoemulsification) alone for co-existing cataract and glaucoma. The secondary objectives include cost analyses for different surgical techniques for co-existing cataract and glaucoma."	Coexisting cataract and glaucoma	Glaucoma surgery + phacoemulsification; Phacoemulsification alone	Visual Acuity; Visual Field; Safety; Intraocular Pressure; Visual Field; Additional Surgery to Control Intraocular Pressure	9; 655	"There is low quality evidence that combined cataract and glaucoma surgery may result in better IOP control at one year compared with cataract surgery alone. The evidence was uncertain in terms of complications from the surgeries. Furthermore, this Cochrane review has highlighted the lack of data regarding important measures of the patient experience, such as visual field tests, quality of life measurements, and economic outcomes after surgery, and long-term outcomes (five years or more). Additional high-quality RCTs measuring clinically meaningful and patient-important outcomes are required to provide evidence to support treatment recommendations."
Zhao, 2014	"To evaluate the effectiveness of multivitamin/mineral supplements for decreasing the risk of age-related cataracts by conducting a systematic review and meta-analysis."	Cataract (age-related cataract)	Nutritional supplement (multivitamin/mineral supplements)	Safety; Cataract	14; 189,250	"The two RCTs demonstrated that multivitamin/mineral supplements could decrease the risk of nuclear cataracts. There is sufficient evidence to support the role of dietary multivitamin/mineral supplements for the decreasing the risk of age-related cataracts."
Zhao, 2014	"To evaluate the effectiveness of multivitamin/mineral supplements for decreasing the risk of age-related cataracts by conducting a systematic review and meta-analysis."	Cataract (age-related cataract)	Nutritional supplement (multivitamin/mineral supplements)	Cataract	14; 189,250	"The two RCTs demonstrated that multivitamin/mineral supplements could decrease the risk of nuclear cataracts. There is sufficient evidence to support the role of dietary multivitamin/mineral supplements for the decreasing the risk of age-related cataracts."

**Table 2. Objectives, Participants, Interventions, Outcomes and Conclusions of the Reliable Systematic Reviews (N=50)
Published through March, 15 2016 and Mapped to the AAO's PPP Cataract Management Section (see Appendix A)**

Study ID	Objective(s)	Participants	Intervention Comparisons	Outcome	Number of Studies; Participants/Eyes	Conclusion(s) from the abstract
Zhu, 2012	"To compare the effectiveness of blue light-filtering IOLs versus UV light-filtering IOLs in cataract surgery."	Cataract (age-related cataract)	IOL (blue light-filtering IOL or UV light-filtering IOL)	Visual acuity; Contrast sensitivity; Safety; Color vision; Visual quality	15; 1,690	"This meta-analysis demonstrates that postoperative visual performance with blue light-filtering IOLs is approximately equal to that of UV light-filtering IOLs after cataract surgery, but color vision with blue light-filtering IOLs demonstrated some compromise in the blue light spectrum under mesopic light conditions."