

Supplementary tables

Supplementary table 1: Study characteristics

	Number of studies	Percentage
Date conducted (year recruitment ended)*		
Before 1995	4	20%
1995 to 1999	4	20%
2000 to 2004	2	10%
2005 to 2009	7	35%
2010 to 2014	3	15%
2015 to present	0	0%
Location (WHO regions)		
Eastern Mediterranean	1	5%
European	14	70%
South-east Asia	1	5%
The Americas	1	5%
Western Pacific	3	15%
PPI involvement in choice of outcomes		
Yes	0	0%
No	20	100%
Type of surgery		
Unilateral	8	40%
Bilateral	10	50%
Unilateral and bilateral	2	10%

* For 10 studies that did not report when they were conducted this was estimated as date of publication minus 3 years (based on analysis of 10 studies that did report recruitment dates).

Supplementary table 2: Follow-up time

Study name	At what follow-up times were outcomes reported			
	Less than 3 months	3 to less than 6 months	6 to less than 12 months	12 months or more
Cillino 2008				12 months
El-Maghraby 1992	2-4 weeks	2-4 months,		
Haaskjold 1998		5 to 6 months		
Harman 2008		3 months		18 months.
Javitt 2000		Clinical data: 3 months after surgery in the second eye QoL: 3 to 6 months after second eye surgery		
Ji 2013	7, 30 and 90 days			
Jusufovic 2011	6 weeks			
Kamlesh 2001		3 months		
Labiris 2015			6 months	
Leyland 2002	12 weeks	16-88 weeks	34-140 weeks	34-140 weeks
Nijkamp 2004		3 months after first eye surgery and 3 months after second eye surgery		
Palmer 2008	Outcomes measured at 1 and 3 months, unclear which time point reported outcomes are from	Outcomes measured at 1 and 3 months, unclear which time point reported outcomes are from		

Peng 2012			6 months	
Percival 1993	operative/post op complications,	four to six months		
Rasp 2012	1 month		6 months	12 months
Rossetti 1994				12 months
Sen 2004	1 month			
Steinert 1992		Follow-up between 3 to 6 months, average 125 days i.e. approximately 4 months		
Wilkins 2013		4 months		
Zhao 2010	complications, 1 week, 1 month,		6 months	

Supplementary table 3: Metric and method of aggregation for visual acuity and contrast sensitivity

Number of studies reporting	Distance (n=20)	Intermediate (n=4)	Near (n=20)	Contrast sensitivity (n=14)
Metric				
Final value only	19	4	20	14
Change from baseline only	0	0	0	0
Both final value and change from baseline	1	0	0	0
Type of variable				
Continuous only	10	3	10	12
Categorical only	4	1	7	0
Both continuous and categorical	6	0	3	2
Method of aggregation for continuous variable				
Mean only	15	3	12	14
Median only	0	0	0	0
Both mean and median	1	0	1	0
Categorical cut-points				
	20/20-25, 20/30-40, worse than 20/40	20/20 or better, 20/30, 20/40, 20/60, 20/80 or worse		% achieving 0.9, 1.05, 1.20, 1.35, 1.50, 1.65, 1.80 logunits
	0.5 or better, 1.0 or better, plus categories (0.10-0.25, 0.30-0.40, 0.50-0.60, 0.65-0.80, 1.00, 1.30- 1.60)		J1, J2, J3, J4-7, worse than J7	Percentage reading at higher than 1.35, 1.80 and 2.1
	20/40 or better		J3 or better, J1 or better, 20/40 or better and J3 or better, 20/20 or better and J1	

>=0.5	J4 or worse, J3 J2 J1
0.5; 0.6; 0.7; 0.8; 0.9; 1.0	?=0.3
> 6/9	J2 or better, J3, J5, J7 or worse
20/20 or better, 20/30, 20/40, 20/60, 20/80 or worse	More than or equal to N9
20/15. 20/20, 20/25, 20/30, 20/40, 20/50, 20/60, 20/80, 20/100, 20/200 and 20/30 or better, 20/40 or worse.	J1; J2; J3; J4; J5
20/20 or better, 20/25 or better, Improved by 1 lines or more, declined 1 line or more.	J1-2; J3-4; J5 or worse
20/12.5 to >20/71 (9 groups)	J6 or better, J2 or better

J1 or
better, j2
or better,
also
categories
J1+, J1, j2,
J3, J5

Supplementary table 4: Analysis approach to eyes / people

Number of studies reporting	Distance (n=20)	Intermediate (n=4)	Near (n=20)	Contrast sensitivity (n=14)
Bilateral surgery (n=12 studies)*				
Reported by person				
Binocular acuity	6	2	6	5
Average of both eyes	1			
Reported by eye				
Data for both eyes reported, adjusted for within person correlation				
Data for both eyes reported, not adjusted for within person correlation	3	1	3	2
Right and left eye reported separately	1			1
Unclear how eyes / people managed in the analysis	2		3	
Unilateral surgery (n=8 studies)				
Clearly stated	5		5	3
Not clearly stated, inferred from report	3	1	3	3

2 studies had mixture of bilateral and unilateral surgery

Supplementary table 5: Measurement of glare and halos

Study name	Methods	Results
Cillino 2008	Quote: ".. the remaining 2 questions related to difficulty with night and daylight vision (presence or absence of halos and glare)."	Reported as proportion with glare and proportion with halos separately
Haaskjold 1998	Quote: "... and to indicate whether they had experienced ghost or double images, halos, glare, colour disturbances, distortion, blurring, or other visual complications at near or distance".	Quote: "Nine monofocal patients reported 14 phenomena (5 glare). In the bifocal group, 21 patients observed 40 phenomena (15 halos, 8 glare)." Unclear what the rest of the phenomena were.
Harman 2008	Quote: "Visual acuity and contrast sensitivity were measured with the BAT [Brightness Acuity Tester] at its brightest setting, and glare was calculated as the difference between the 2 scores." Quote: "Also at 18 months, patients were questioned about spectacle independence and presence or absence of glare symptoms using a validated questionnaire"	Results reported with and without BAT (Pelli-Robson Contrast Sensitivity). Subjective symptoms of glare reported as : none/some/severe.
Javitt 2000	Quote: "Patients were asked to rate glare disability on a scale of 0 to 4, where 0 was equated with "no" limitation resulting from glare" and 4 was equated with "extreme limitation resulting from glare," for the following activities: general daily activities, reading shiny paper, driving toward the sun, driving toward oncoming headlights, walking outside on sunny days, and reading signs in supermarkets"	
Kamlesh 2001	Quote: "Quality of vision was evaluated by patient questionnaire".	Quote "Do you have problems seeing in the dark?" No/Yes/Glare/Haloes
Labiris 2015	Quote: "Two direct 4-scale Likert-type questions (always, most of the times, sometimes, never) that pertained to the subjective perception of glare and unwanted shadows were included."	Glare and shadows reported as a mean score

Leyland 2002	Glare disability assessed as part of the TyPE questionnaire. Also used Brightness Acuity Tester.	Glare/halo related task difficulty (0-4) reported as median and range. Glare/halo degree of "bother" (0-4) reported as median and range.
Nijkamp 2004	Glare included as part of the Cataract Symptom Score	Not presented separately
Peng 2012	Glare and halos assessed by patient questionnaire, rated on scale of 0 to 7, with 0=no difficulty and 7=severe difficulty. .	Mean score presented
Percival 1993	Quote: "Patients were asked also asked [...] whether they were content with the optical quality"	Reported number of patients experiencing "ghosting from a second image" and "glare from oncoming headlights at night".
Rossetti 1994	Postoperative questionnaire on visual phenomena (glare, halos, blurred vision).	Reported proportion with glare and halos separately.
Sen 2004	Quote: "Severity of visual symptoms such as glare, halos, and cataract symptoms (CS-5). "	Glare and Halos reported as proportion in four categories: None/Very little/Moderate/Severe
Steinert 1992		Reported visual acuity with varied contrast and glare. Rated degree of difficulty with glare/flare, reported as mean score, but unclear what scale was used.
Wilkins 2013	Quote: "In addition to the standard VF-14 questions, patients answered 3 additional dysphotopsia questions: "Since your surgery have you noticed any (1) glare or dazzle, (2) unwanted images, or (3) unusual shadows?"	Reported as frequency: none/barely/annoying/debilitating
Zhao 2010	Not mentioned in methods.	Reported proportion with glare and halos separately.

Supplementary table 6: Spectacle independence

Study name	Question	Response categories	Spectacle use for distance or near vision
Cillino 2008	Quote "Postoperative spectacle independence was also evaluated." Question was not specified. In table, proportion with "Complete spectacle independence" reported.	Yes/No	Not reported
Haaskjold 1998	Quote: "At the 5 month vision, patients were asked if they used spectacles at any time and to estimate percentage of waking time that spectacles were needed for both distance and near tasks"	Yes/No and % time reported as a continuous measure	Distance and near vision separately
Harman 2008	Quote: "Also at 18 months, patients were questioned about spectacle independence and presence or absence of glare symptoms using a validated questionnaire". In text, reported proportion of patients who were "completely spectacle independent". In figure, reported "Spectacle use".	Yes/No	Not reported
Javitt 2000	Quote: "The primary endpoint of the study was spectacle dependence for daily tasks. "	Data not reported	Not reported
	Quote: "Patients were asked how often they wore glasses"	Always/Occasionally/Never	Probably either distance or near vision
	Quote: "Patients were asked how often they wore glasses for distance and near vision"	Never/Some of the time/Half of the time/Most of the time/All of the time.	Distance and near vision separately
Kamlesh 2001	Reported in results tables "Do you need additional glasses for near work? "	Yes/No	Not applicable
Labiris 2015	Quote: "The need for spectacles (ie, spectacle dependence) was evaluated for distance vision and near vision by 2 direct 4-scale Likert-type	Always/Most of the time/Sometimes/Never	Distance and near vision separately

	questions (always, most of the times, sometimes, never)."		
Leyland 2002	Quote: "Complete freedom from glasses..."	Yes/No	Not applicable
Nijkamp 2004	Quote: "Spectacle dependence was expressed by a frequency score varying from 1 (always) to 5 (never) for distance and near vision separately."	1 (always) to 5 (never) analysed as a continuous score	Distance and near vision separately
Palmer 2008	Quote: "At 3-month follow-up, patients were given a questionnaire regarding the presence of visual symptoms and their dependence on near correction." In the results, reported the "percentage of patients totally [spectacle] independent".	Yes/No	Probably near vision only
Peng 2012	Quote: "Overall spectacle independence, and spectacle independence for distance and near tasks were assessed."	Yes/No	Overall, distance and near
Percival 1993	Quote: "Patients were also asked whether they could manage their daily activities without glasses, whether reading glasses were used and why.."	Responses "sufficiently good to manage daily activities without glasses" and use of glasses "Sometimes/Always"	Distance and near vision separately
Rossetti 1994	"Spectacle use" but unclear how ascertained.	Yes/No	Distance or near vision
Steinert 1992	Quote (methods): "Patients also were asked to describe if and why they used spectacles for any task". Quote (results table): "What visual aid do you use to improve vision"	None/Spectacles for fellow eye/Spectacles used out of habit/Spectacles used for operative eye/Spectacles used for both eyes/Spectacles used-reason not provided.	Not reported
Wilkins 2013	Quote: "The primary outcome was spectacle independence" also described as "spectacle free" Quote (results): "When asked the question "How often do you wear glasses?"	Always/Sometimes/Never	Not reported
Zhao 2010	"Spectacle independent" unclear how assessed.	Yes/No	Not reported

Supplementary table 7: Other outcomes

Aberrations
Accommodation or accommodative amplitude
Astigmatism
Average near addition required for near vision N6
Binocular vision with Bagolini striped glasses
Complications (operative, post-operative)
Critical print size
Cylinder
Defocusing curves
Depth of focus (dioptries)
Deviation from target
Headache
IOL decentration
Keratometric cylinder
Light scatter
Light scatter analysis (glare),
Maximum reading speed Pupil size
Modulation transfer function
Posterior capsule opacification Refraction
Pseudoaccommodation
Pupil size
Range of distance vision
Range of near vision
Reading speed
Reading ability or fluency
Reading distance
Refractive cylinder
Refractive errors
Smallest print size
Sphere
Spherical equivalent
Spherical equivalent within 1.0 dioptries (%)
Spherical equivalent within target

Spherical error
Stereo vision
Straylight
Wavefront analysis