

Health of the older person: Cataract

In North America, the amount of blindness due to cataract, as compared with all eye diseases, is about 5%.¹ But cataract is a condition of age and several epidemiological studies have demonstrated the increased incidence of cataract with increasing age.

The National Health and Nutritional Examination Survey (NHANES) studied both genders and all races, sampled from a broad range of communities.² The Watermen Eye Study included men only from a selected region.³ The Framingham Eye Study included both genders in a small community.⁴ The Beaver Dam Eye Study (Wisconsin, USA) included both genders in a rural community.⁵ And, the Blue Mountains Eye Study⁶ (Australia) age specific rates for 5 year incident cataract surgery in an older community were relatively similar to those reported by the Beaver Dam Eye Study.

Estimated Incidence Cataracts: Watermen Eye Study

Age	Cortical Cataract	Nuclear Cataract
30-39	1%	1%
40-49	3%	2%
50-59	8%	12%
60-69	17%	32%
70-79	32%	51%
80+	32%	55%

RISK FACTORS

Many risk factors have been postulated for cataract but the evidence has tended to be observational. The following factors

have been found to be associated with increased risk:

Cataract Type	Associated Risk Factor	Finding
Cortical	Abdominal obesity ⁷	Increased risk
	UVb light exposure ⁸	Increased risk
Nuclear	Smoking ^{9,10}	Increased risk
Posterior subcapsular	Systemic corticosteroid use ¹¹	Increased risk
	Inhaled corticosteroid use ¹²	Increased risk in patients 49 and older
	Alcohol use ¹³	Increased risk

PRIORITY FOR SURGERY

In New Zealand, cataract operations may be done as elective surgery based on level of priority determined by a combination of clinical need and ability to benefit from treatment. The CPAC criteria currently in use are copied over the page together with some indications of priority weighting. The commitment threshold for treatment can range from around 20 points up to 50 points depending on which DHB area you are in. These thresholds can also change over time.

Patients who wait more than 6 months for cataract surgery could experience more negative outcomes during the waiting period than those whose waiting period was less than 6 months. Negative outcomes during the waiting period could include vision loss, an increased rate of falls, and reduced quality of life.¹⁴

Community optometrists are able to assess all suspected cataracts using the CPAC tool and can provide a report to the GP if asked.

REFERENCES:

1. Resnikoff S, Pascolini D, Etya'ale D, et al. Global data on visual impairment in the year 2002. *Bull World Health Organ.* 2004;82:844-851.
2. Leske MC, Sperduto RD. The epidemiology of senile cataracts: a review. *Am J Epidemiol* 1983; 118(2):152-65.
3. Taylor HR, West SK, Rosenthal FS, et al. Effect of UV radiation on cataract formation. *N Engl J Med* 1988; 319(22): 1429-33.
4. Kahn HA, Leibowitz HM, Ganley JP, et al. The Framingham Eye Study. I. Outline & major prevalence findings. *Am J Epidemiol* 1977; 106(1):17-32.
5. Klein BEK, Klein RK, Linton KLP. Prevalence of age-related lens opacities in a population. The Beaver Dam Eye Study. *Ophthalmology* 1992; 99:546-52.
6. Mitchell P., Cumming R.G., Attebo K., Panchapakesan J. Prevalence of cataract in Australia: the Blue Mountains eye study. *Ophthalmology* 104,4, 581-588.
7. Leske MC, Wu SY, Hennis A, et al. Diabetes, hypertension, and central obesity as cataract risk factors in a black population. The Barbados Eye Study. *Ophthalmology* 1999;106:35-41.
8. McCarty CA, Mukesh BN, Fu CL, Taylor HR. The epidemiology of cataract in Australia. *Am J Ophthalmol* 1999; 128:446-65.
9. Christen WG, Glynn RJ, Ajani UA, et al. Smoking cessation and risk of age-related cataract in men. *JAMA* 2000; 284:713-16.
10. Risk factors associated with age-related nuclear and cortical cataract : a case-control study in the Age-Related Eye Disease Study, AREDS Report No. 5. *Ophthalmology* 2001; 108:1400-8.
11. Urban RC Jr, Collier E. Corticosteroid-induced cataracts. *Surv Ophthalmol* 1986; 31:102-10.

Cataract surgery can improve both vision and quality of life for older people ...



ROAD SAFETY

Cataract surgery not only improves vision and quality of life for older people, but is also apparently a way to reduce the number of car crashes. Australian researcher, Dr. Jonathan Ng studied 27,827 patients who had a cataract removed from one eye between 1997 and 2006. He found cataract surgery reduced the frequency of all crashes by 12.6% after accounting for other potential confounders. While people often have to wait weeks or months to receive surgery after cataract is diagnosed, this study argues that delay significantly impacts not only patients' quality of life, but public safety and property costs.

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References continued

12. Cumming RG, Mitchell P, Leeder SR. Use of inhaled corticosteroids and the risk of cataracts. *N Engl J Med* 1997; 337:8-14.
13. Muñoz B, Tajchman U, Bochow T, West S. Alcohol use and risk of posterior subcapsular opacities. *Arch Ophthalmol* 1993; 111:110-12.
14. Hodge W, Horsley T, Albani D, et al. The consequences of waiting for cataract surgery: a systematic review. *CMAJ*. 2007;176:1285-1290.

Cataract National Clinical Priority Assessment Criteria CPAC

Best Corrected Distance Visual acuity in operative eye (Measured on standard illuminated 6m or 4m chart)		Points
	weighting starts from 6/18	
Best Corrected Binocular Distance Visual Acuity		
	weighting starts from 6/12	
Risk of Intra-operative Complications (where delay to surgery may increase risk to optimal outcome)		
	High Risk adds to priority	
Presence of Axial Posterior sub-capsular lens opacity		
	Present – axial --- has a weighting	
Potential Visual Acuity in the operative eye after surgery		
	weighting for 6/12 and better VA post surgery	
Level of risk to safety of others resulting from cataract related poor vision is considered		
	High risk; Has had an incident where an injury to others has occurred or might have occurred (near miss or driving when unsafe or illegal).	
Impact on Life (including effect of difficulty with driving) – considers the following		
	Little or no difficulty with any important activities in all aspects of life	
	Some important activities of Personal care & Social interaction are quite difficult but not impossible	
	Some important activities in ALL aspects of life are quite difficult but not impossible	
	Some important activities of personal safety, responsibility for others, interacting with the world & leisure are impossible	
	Some important activities are impossible in all aspects of life	
		Total score: