

Summary

This literature review has been prepared by Biotext Pty Ltd for the National Health and Medical Research Council. The aim is to identify risk factors for eye disease and injury, and the measures that the general public can take to prevent or reduce the risk of eye disease and injury.

The review covers the following questions relating to eye health:

- *Risk factors for eye disease and injury*
What is the relationship between the following risk factors and conditions?
 - risk factors — tobacco use, alcohol consumption, diet and diet-related issues, eye infections, ageing/age, heredity, ultraviolet (UV) damage, injuries and accidents, and medication side effects
 - conditions — macular degeneration, cataract, glaucoma, injury, diabetic retinopathy, retinitis pigmentosa, pterygium, ocular surface neoplasia, trachoma, amblyopia, refractive errors (myopia, hyperopia, presbyopia, astigmatism).
- *Eye infections*
Do infection control methods reduce the incidence of eye infections?
What impact does use of contact lenses have on incidence of eye infections?
Does education on use and misuse of contact lens affect incidence of eye infections?
- *Eye tests*
Do regular eye tests reduce the incidence of eye disease?
What is the optimal frequency of eye tests for each age group?
What are the risks and benefits of different frequencies of eye tests?

As far as possible, the review has used systematic review methods (recording search terms, searches, etc, with date, number of hits and reasons for inclusion or exclusion of articles). The initial intention was to focus mainly on systematic reviews; however, for many of the questions, these were not available and we therefore included primary research articles where appropriate.

The results are presented in Chapter 4, Tables 4.1 to 4.5. Chapter 5 provides a description of the results.

Overall, the results show many areas where health messages may be helpful to reduce the burden of eye disease and injury (such as reductions in smoking, alcohol consumption, UV light exposure, eye infections and eye injuries), or where advice can be provided (such as about the effects of ageing on eye health, or about the association of high myopia with cataract and glaucoma). However, for many questions, there were either very few or no primary research studies available to provide definitive answers for the relevant questions, or the results were inconclusive. In other areas, such as the effects of diet and dietary supplements, the literature is very extensive and complex and it was beyond the scope of this review to analyse all the studies in sufficient detail to provide definitive conclusions. Further focused literature research in these areas would therefore be helpful.