



Establishing the evidence-base for the prevention and management of ocular injuries



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The International Cochrane Collaboration is organised into collaborative review groups that focus on clinical topic areas varying from the broad (such as skin disease or eyes and vision), to the specific (such as schizophrenia or multiple sclerosis). There are also groups focusing on areas of clinical activity that cross specialities such as infectious diseases, which deals with many tropical diseases, and the Cochrane Injuries Group, which tackles the prevention and management of acute injury. The latter group is based with us at the London School of Hygiene and Tropical Medicine and we are fortunate to share expertise with them through our Trials Search Coordinator, an experienced information scientist. The important question of how to prevent and manage ocular injuries has not so far been addressed by either group. On being invited to write on this topic for the *Community Eye Health Journal*, we have been provoked into exploring a collaborative effort between our two groups to fill this gap.

The first step is to think about the most important questions and how to divide up this large topic area. A single review on the prevention and management of ocular injuries would be unmanageable. In terms of establishing the evidence-base for prevention, we need to decide on the focus. Ocular injuries occur in the work place (both industry and agriculture), home and in sport. Should we do separate reviews for separate environments, or focus on the intervention – protective goggles, seat belts in motor vehicles, warnings and information? This is an interesting stage in the development of a Cochrane review.

We need to think carefully about the question that we are trying to answer in terms of its relevance and we need to pose the question in a way that it can be answered meaningfully. The acronym, *Pico*, serves to remind us of the key components of the question:

- Population (who are the targets of the intervention)
- Intervention (e.g. seat belts or goggles)
- Comparison (e.g. goggles vs nothing or information)
- Outcome (how will the impact of the intervention be measured (incidence of severe injury or just compliance).

The next stage of the process is to register the title. This is done by email – the forms are available on the internet at



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www.cochraneeyes.org. The purpose of title registration is to prevent unnecessary duplication. Doing a Cochrane review is a substantial effort and it is a great shame if such an effort is wasted. Registering the title indicates a commitment to complete the review in a reasonable time frame. The reviewer is asked for an estimated date for completion of the draft, and while this is not rigidly enforced, failure to meet deadlines will lead to the title being withdrawn and made available for others.

Following registration of the title, the next step is completion of the protocol setting out how the Review will be done. This goes through peer review for context and methodology and is then published on the Cochrane Library. This is so that the review is explicitly protocol-driven and can, and

should, be available for comment and suggestions through the online comments and criticism process. This is an interactive feature of the Cochrane Library which can be accessed via our website. The review is then conducted per protocol, peer reviewed again and finally published. It is then possible to publish alternative versions of the review in other journals. But the critical quality of the electronically published Cochrane review is the commitment to update it at least every two years and whenever any important new and relevant trial is published.

Cochrane reviews include only the best quality evidence. There is no point in summarising and disseminating evidence that is unreliable or likely to be biased. For most health care interventions, this means including only well conducted randomised controlled trials that are evaluated according to clear criteria for the control of bias and confounding. But for studies on prevention of injuries, it is often difficult to design prospective trials, and reviews done by the Cochrane Injuries Group will sometimes include observational studies. For example, the effect of cycle helmets in reducing the risk of severe head injury cannot easily be studied in a prospective randomised trial. We shall have to consider these issues in a review on the effectiveness of preventing eye injury.

Reviews on ocular injuries currently underway

Some reviews on the management of ocular injuries are already underway (Table 1). Some of these are nearing completion. The review on patching for corneal abrasion is interesting. It appears that there is no evidence that this traditional treatment for abrasion helps.

Anyone wishing to contribute to review activity should contact the Review Group Coordinator at cevg@Lshmt.ac.uk

Table 1. Management of ocular injury reviews currently underway

Topic	Stage in the review process
Interventions for recurrent corneal erosions	Protocol
Medical interventions for traumatic hyphaema	Protocol
Patching for corneal abrasion	Protocol
Surgery for traumatic optic neuropathy	Protocol
Steroids for traumatic optic neuropathy	Title
Steroids for traumatic optic neuropathy	Registered title