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International Council of Ophthalmology/  
International Federation of Ophthalmological Societies

## ICO International Clinical Guidelines

### Dry Eye Syndrome (Initial Evaluation)

**(Ratings:** A: Most important, B: Moderately important, C: Relevant but not critical  
**Strength of Evidence:** I: Strong, II: Substantial but lacks some of I, III: consensus of expert opinion in absence of evidence for I & II)

#### Initial Exam History

- Ocular symptoms and signs **(A:III)**
- Exacerbating conditions **(B:III)**
- Duration of symptoms **(A:III)**
- Topical medications used and their effect on symptoms **(A:III)**
- Ocular history, including
  - Contact lens wear, schedule and care **(A:III)**
  - Allergic conjunctivitis **(B:III)**
  - Corneal history (prior keratoplasty, LASIK, PRK) **(A:III)**
  - Punctal surgery **(A:III)**
  - Eyelid surgery (e.g., prior ptosis repair, blepharoplasty, entropion/ectropion repair) **(A:III)**
  - Bell's palsy **(A:III)**
  - Chronic ocular surface inflammation (e.g., ocular cicatricial pemphigoid, Stevens-Johnson syndrome) **(A:III)**
- Systemic history, including
  - Smoking **(A:III)**
  - Dermatological diseases (e.g., rosacea) **(A:III)**
  - Atopy **(A:III)**
  - Menopause **(A:III)**
  - Systemic inflammatory diseases (e.g., Sjogren's syndrome, graft vs host disease, rheumatoid arthritis, systemic lupus erythematosus, scleroderma) **(A:III)**

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- Systemic medications (e.g., antihistamines, diuretics, hormones and hormonal antagonists, antidepressants, cardiac antiarrhythmic drugs, isotretinoin, diphenoxylate/atropine, beta blockers, chemotherapy agents, any other drug with anticholinergic effects) **(A:III)**
- Trauma (e.g., chemical) **(A:III)**
- Chronic viral infections (e.g., chronic hepatitis C, human immunodeficiency virus) **(B:III)**
- Surgery (e.g., bone marrow transplant, head and neck surgery) **(B:III)**
- Radiation of orbit **(B:III)**
- Neurological conditions (e.g., Parkinson's disease, Bell's palsy, Riley-Day syndrome) **(B:III)**
- Dry mouth, dental cavities, oral ulcers **(B:III)**

### Initial Physical Exam

- Visual acuity **(A:III)**
- External examination
  - Skin **(A:III)**
  - Eyelids **(A:I)**
  - Adnexae **(A:III)**
  - Proptosis **(B:III)**
  - Cranial nerve function **(A:III)**
  - Hands **(B:III)**
- Slit-lamp biomicroscopy
  - Tear film **(A:III)**
  - Eyelashes **(A:III)**
  - Anterior and posterior eyelid margins **(A:III)**
  - Puncta **(A:III)**
  - Inferior fornix and tarsal conjunctiva **(A:III)**
  - Bulbar conjunctiva **(A:III)**
  - Cornea **(A:III)**

### Care Management

- For patients with aqueous tear deficiency, the following measures are appropriate:
  - Elimination of exacerbating medications where feasible **(A:III)**
  - Ocular environmental interventions **(A:III)**
  - Humidification of ambient air **(A:III)**
  - Computer work site intervention **(A:III)**
  - Aqueous tear enhancement **(A:III)**
- For patients with aqueous tear deficiency, the following surgical therapies are used when medical treatment has not been adequate or appropriate:
  - Correction of lid abnormality resulting from blepharitis, trichiasis or lid malposition (e.g., lagophthalmos, entropion/ectropion) **(A:III)**
  - Punctal occlusion **(A:III)**

- Tarsorrhaphy for severe cases (A:III)

### Patient Education

- Counsel patients about the chronic nature of dry eye and its natural history. (A:III)
- Provide specific instructions for therapeutic regimens. (A:III)
- Reassess periodically the patient's compliance and understanding of the disease, risks for associated structural changes and realistic expectations for effective management, and reinforce education. (A:III)
- Refer patients with manifestation of a systemic disease to an appropriate medical specialist. (A:III)
- Caution patients with pre-existing dry eye that LASIK or PRK may worsen their dry eye condition. (A:III)

\* Adapted from the [American Academy of Ophthalmology Summary Benchmarks, November 2006 \(www.aao.org\)](http://www.aao.org)

(For more ICO International Clinical Guidelines, see [www.icoph.org/guide](http://www.icoph.org/guide))

### Preface to the Guidelines:

International Clinical Guidelines are prepared and distributed by the International Council of Ophthalmology on behalf of the International Federation of Ophthalmological Societies.

These Guidelines are to serve a supportive and educational role for ophthalmologists worldwide. These guidelines are intended to improve the quality of eye care for patients. They have been adapted in many cases from similar documents (Benchmarks of Care) created by the American Academy of Ophthalmology based on their Preferred Practice Patterns.

While it is tempting to equate these to Standards, it is impossible and inappropriate to do so. The multiple circumstances of geography, equipment availability, patient variation and practice settings preclude a single standard.

Guidelines on the other hand are a clear statement of expectations. These include comments of the preferred level of performance assuming conditions that allow the use of optimum equipment, pharmaceuticals and/or surgical circumstances.

Thus, a basic expectation is created and if the situation is optimum, the optimum facets of diagnosis, treatment and follow up may be employed. Excellent, appropriate and successful care can also be provided where optimum conditions do not exist.

Simply following the Guidelines does not guarantee a successful outcome. It is understood that, given the uniqueness of a patient and his or her particular

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circumstance, physician judgment must be employed. This can result in a modification in application of a guideline in individual situations.

Medical experience has been relied upon in the preparation of these guidelines, and they are whenever possible, evidence-based. This means these Guidelines are based on the latest available scientific information. The ICO is committed to provide updates of these guidelines on a regular basis (approximately every two to three years).

(Also see the Introduction to the ICO International Clinical Guidelines at [www.icoph.org/guide/guideintro.html](http://www.icoph.org/guide/guideintro.html) and the list of other Guidelines at [www.icoph.org/guide/guidelist.html](http://www.icoph.org/guide/guidelist.html).)