



# Ocular side effects

## Supplements and herbal remedies are reflected in the eye

BY JERROD S. KENT, BSC, SHEFALEE SHUKLA, MD AND CINDY M.L. HUTNIK, MD

Recent attention surrounding natural remedies as medical cures has led to a significant increase in the use of alternative treatments such as herbal products. Between 1990 and 1997, their use in the U.S. increased by 380%, and extended to over 40% of patients. In the year 2000, \$5 billion U.S. was spent on herbal medications alone. With this degree of market penetration, it's pivotal that physicians stay abreast of the potential side effects that may result. Unfortunately, up to 70% of people don't tell their doctors that they're taking supplements, so it's vital to be able to recognize the symptoms and signs. This is especially true of ocular side effects, as many may mimic other disease processes.

Over 16 supplements and herbal medications have been recognized to affect the eye. It's important to ensure that a thorough medication history is taken, including questioning about all complementary and alternative therapies. Patients can then be properly managed, and if necessary, referred to an eye care specialist if any of the following manifestations become apparent.

*Jerrod S. Kent is a fourth-year medical student at the University of Saskatchewan, in Saskatoon.*

*Shefalee Shukla, MD, is a second-year ophthalmology resident at the University of Western Ontario in London, ON.*

*Cindy M.L. Hutnik, MD, PhD, FRCSC is an associate professor in the Department of Ophthalmology at the University of Western Ontario and an ophthalmologist at the Ivey Eye Institute of St. Joseph's Health Care.*

### Visual disturbances

#### General

- 5-hydroxytryptophan
- horse chestnut (*Aesculus hippocastanum*)
- wormseed (*Artemisia cina*)
- licorice (*Glycyrrhiza glabra*) — used for upper respiratory infections, ulcers, appendicitis, constipation, hepatitis C

#### Transient vision loss

- mountain laurel (*Kalmia latifolia*)

#### Decreased vision

- niacin (nicotinic acid, vitamin B<sub>3</sub>)

#### Diplopia

- yellow jessamine (*Gelsemium sempervirens*)

#### Colour perception discrepancies

- lily-of-the-valley (*Convallaria majalis*)
- strophanthus

#### Visual hallucinations

- marijuana (*Cannabis sativa*)
- peyote (*Lophophora williamsii*)

### Conjunctivitis

#### Allergic conjunctivitis

- chamomile topical (*Matricaria chamomilla*) — indicated for styes, irritated eyes, insomnia, migraines, burns, bronchitis, fevers, cold, inflammation

#### Non-allergic conjunctivitis

- propolis (bee glue)
- cypress spurge (*Euphorbia cyparissias*)
- psyllium (*Plantago isphagula*)
- psyllium seed (*P. agra*)
- echinacea (*Echinacea purpurea*)

### Irritation

#### General eye irritation

- black mustard (*Brassica nigra*)
- echinacea (*Echinacea purpurea*) — taken for colds, coughs, fevers, urinary tract infections, burns, flu

#### Burning eyes

- dimethyl sulfoxide (DMSO)

#### Dry eyes

- vitamin E nicotinate — given for cholesterol-lowering, schizophrenia, diabetes, arthritis, hypertension, sexual dysfunction, migraines
- niacin (nicotinic acid, vitamin B<sub>3</sub>)

#### Ocular toxicity

- vitamin E nicotinate
- niacin (nicotinic acid, vitamin B<sub>3</sub>)

#### Hyphema, bleeding

- Ginkgo biloba — used for tinnitus, asthma, tonsillitis, angina, hypertonia

### Mydriasis

#### Pupil enlargement or dilatation

- 5-hydroxytryptophan
- valerian (*Valeriana officinalis*)
- horse chestnut
- cypress spurge
- kava kava (*Piper methysticum*)
- Jimson weed (*Datura stramonium*, *D. wrightii*) — given for eye inflammation, asthma, bronchitis, flu, coughs — contains trace amounts of hyoscyamine and atropine

### Eye muscles and orbit

#### Abnormal extraocular movement

- yellow jessamine (*Gelsemium sempervirens*)

#### Proptosis

- vitamin E nicotinate
- niacin (nicotinic acid, vitamin B<sub>3</sub>)

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### Cornea and eyelids

#### Corneal defects

- cypress spurge

#### Superficial punctate keratitis

- niacin (nicotinic acid, vitamin B<sub>3</sub>)
- vitamin E nicotinate

#### Eyelid swelling

- cypress spurge
- niacin
- vitamin E nicotinate

#### Discolouration of the eyelids

- niacin
- vitamin E nicotinate

#### Loss of eyebrows and eyelashes

- niacin
- vitamin E nicotinate

### Retinopathy

#### Retinal damage

- melatonin

#### Crystalline retinopathy

- drug deposits in superficial layers of the macula that take years to disappear
- canthaxanthine, carotenoid — used as bronzing agent for artificial suntan; cosmetics, food colouring

#### Retinal hemorrhages

- Ginkgo biloba

#### Cystoid macular edema

- niacin (nicotinic acid, vitamin B<sub>3</sub>)
- vitamin E nicotinate