

# BRITISH JOURNAL OF OPHTHALMOLOGY

*Editorial*

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## Photic sneezes

Christmas approaches, and what could be better as a secular text for the festive season than a quotation from *Alice's Adventures in Wonderland*:

Speak roughly to your little boy,  
And beat him when he sneezes:  
He only does it to annoy,  
Because he knows it teases.

Such drastic treatment for one of the minor manifestations of photophobia (although in this case due to pepper) would certainly not be approved by modern paediatricians, for most of whom the old adage of sparing the rod and spoiling the child is at present unfashionable. Nevertheless, the title of the paper in this issue by B Katz and colleagues, 'Photic sneeze reflex in nephropathic cystinosis', provides an irresistible temptation to introduce the quotation.

There is a certain amount in the ophthalmic literature about the biological effects of light, including papers on such curiosities as photophobia in porphyria<sup>1</sup> and astigmatism,<sup>2</sup> the photoconvulsive response,<sup>3</sup> the influence of retinal stimulation on the blood cholesterol,<sup>4</sup> and even the effect of photostimulation on the gonads of the duck.<sup>5</sup> Lewkonia<sup>6</sup> has given an excellent account of the photic sneeze reflex, which is of course familiar to everyone who has ever tried to consummate a promised but tantalisingly suspended sneeze by looking at a bright light.

In the case described by Katz *et al.* in this month's issue cystinosis, in which crystals are deposited in the cornea, was associated in a patient with an enhanced photic sneeze reflex, and one presumes that the mechanism had something to do with the corneal abnormality. The mystery is, how does it

work? One had to assume that the close linkage between the eyes and the nose via the trigeminal (Latin: three born at a time, or triplets) nerves must be the mediator, and there is of course another well known linked reflex in this connection, namely, lacrimation on being punched on the nose. There is, however, a slight inconsistency in comparing sneezes and lacrimation, directly linked via the trigeminal nerves, with photic reflexes. The photic reflexes are much harder to explain. Indeed photophobia itself, though obviously valuable as part of a system of protective reflexes, must have a fairly complex pathway in the central nervous system, since it is obvious that light cannot directly stimulate the trigeminal nerve. Nevertheless once photophobia has been initiated it is not difficult to accept a sneeze almost as easily as a blink as a valid part of the process. One can only be grateful to nature that the sneeze factor is usually in abeyance, otherwise we should have to insist on our patients wearing face masks to undergo slit-lamp examination, and one shudders to think what explosions would rock the consulting room during routine indirect ophthalmoscopy.

REDMOND SMITH

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- 2 Hellner KA. Photophobia of obscure origin. *Ber Dtsch Ophthalmol Ges* 1967; 68: 518-9.
- 3 Procopis PG, Jameson HD. The photoconvulsive response. Modification by monocular occlusion in Man. *Arch Neurol* 1974; 31: 31-4.
- 4 Hayashi Y. Studies on the influence of retinal stimulation due to luminous stimuli on the living body. 4. Fluctuations of total cholesterol and ester and the lipoprotein fraction of the blood. *Folia Ophthalmol Jpn* 1970; 21: 79-95.
- 5 Benoit J. Photo-neuro-endocrine systems: the role of the eye and hypothalamus in the photo-stimulation of gonads in the duck. *Ann NY Acad Sci* 1964; 117: 204-16.
- 6 Lewkonia I. An infrequent response to slit lamp examination. *Br J Ophthalmol* 1969; 53: 493-5.