

1987 YEAR BOOK OF

OPHTHALMOLOGY®

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1987

# The Year Book of OPHTHALMOLOGY®

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**Year Book Medical Publishers, Inc.**  
**Chicago • London • Boca Raton**

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Printed in U.S.A.

International Standard Book Number: 0-8151-3141-0

International Standard Serial Number: 0084-392X

Editor-in-Chief, Year Book Publishing: Nancy Gorham  
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Acta Endocrinologica  
Acta Ophthalmologica  
American Journal of Ophthalmology  
American Journal of Surgery  
Anesthesiology  
Annals of Emergency Medicine  
Archives of Disease in Childhood  
Archives of Neurology  
Archives of Ophthalmology  
Arthritis and Rheumatism  
Australian and New Zealand Journal of Ophthalmology  
British Journal of Ophthalmology  
British Journal of Radiology  
British Medical Journal  
Canadian Journal of Ophthalmology  
Canadian Medical Association Journal  
Cancer  
Clinical Genetics  
Contact and Intraocular Lens Medical Journal (CLAO)  
Cornea  
Deutsche Medizinische Wochenschrift  
Developmental Medicine and Child Neurology  
Diabetes  
Diabetic Medicine  
von Graefes Archiv für Klinische und Experimentelle Ophthalmologie  
Investigative Ophthalmology and Visual Science  
Japanese Journal of Ophthalmology  
Journal of the American Medical Association  
Journal of Cataract and Refractive Surgery  
Journal of Clinical Neuro-Ophthalmology  
Journal of Français d'Ophthalmologie  
Journal of Neurological Sciences  
Journal of Neurology, Neurosurgery, and Psychiatry  
Journal of Pediatric Ophthalmology and Strabismus  
Journal of Refractive Surgery  
Journal of Rheumatology  
Klinische Monatsblätter für Augenheilkunde  
Lancet  
Neurology  
New England Journal of Medicine  
Ophthalmic Surgery  
Ophthalmologica  
Ophthalmology  
Orbit  
Plastic and Reconstructive Surgery  
Radiology  
Retina Journal of Retinal and Vitreal Diseases  
Semaine des Hôpitaux  
Southern Medical Journal  
Stroke



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## Introduction

We would like to call your attention to a special article written as an introduction to our chapter on cataracts. The article is titled "The Cataract Surgeon in Transition" but it could just as well have been titled "Ophthalmology in Transition." It is based on history but history has not prepared us for the "brave new world" in which we now find ourselves. We have been moving along continuously improving our ophthalmic care when suddenly, if not unexpectedly, our work has suffered a convulsion and our problems are less the result of medical developments and more the result of government policies. A bureaucracy, by its nature poorly understood, is now dictating how we will care for our patients with eye disease. It is clear there will be more controls, not fewer, and the end is not in sight. We do not know where this will lead us and while the editors of the YEAR BOOK OF OPHTHALMOLOGY will continue to select the best scientific articles they can, there will be the occasional paper to help us understand the economic and political problems confronting all of us.

J. Terry Ernest, M.D., Ph.D.  
Thomas A. Deutsch, M.D.





# 1 Lids, Lacrimal Apparatus, and Orbit

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## Blow-out Fractures of the Orbital Floor: Surgery or Observation?\*

ALLEN M. PUTTERMAN, M.D.

*University of Illinois Eye and Ear Infirmary and Michael Reese Hospital and Medical Center, Chicago*

When the eye is struck by an object larger than the orbital entrance, such as a fist, a blow-out fracture of the orbital floor can occur. The force of the blow to the eye is transmitted to the orbital contents and then to the orbital walls. The weakest areas of the orbital walls, the medial wall and floor of the orbit, rupture, and the force of the blow is transmitted into the ethmoid and maxillary sinuses, which absorb the impact like a pressure valve. (This is most likely “nature’s way” of preventing the eyes from rupturing.)

When an orbital floor fracture occurs, there can be associated diplopia due to entrapment of orbital fat or the inferior ocular muscles into the fracture site and maxillary sinus. Enophthalmos and hypo-ophthalmos (downward sinking of the eye) can also occur due to displacement of the orbital contents migrating into the maxillary sinus. Infraorbital anesthesia is another symptom of a blow-out fracture; it is due to injury to the infraorbital nerve as it courses through the orbital fracture.

When a blow-out fracture of the orbital floor is suspected, a thorough eye examination should be performed. The trauma that causes a blow-out fracture can also lead to a 5% to 10% incidence of injury to the eye such as iritis, hyphema, retinal detachment, or glaucoma.

When an orbital floor fracture is suspected, conventional orbital roentgenograms should be performed. If this does not demonstrate a fracture, orbital tomograms or computed tomographic (CT) scans of the orbit should be obtained.

The treatment of orbital floor fractures remains controversial. From 1950 to 1974, most of these fractures were considered a medical emergency and immediate surgery was advocated. Most surgeons believed that unless immediate surgery was performed, the patient would have permanent, visually handicapping double vision as well as cosmetically unacceptable enophthalmos. In 1974, Stevens, Urist, and I described 57 patients with

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\*Supported in part by Core Grant EY1792, from the National Eye Institute, Bethesda, Md.