

**LECTURES ON THE HUMAN  
EYE IN ITS NORMAL AND  
PATHOLOGICAL  
CONDITIONS**

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Lectures on the human eye in its normal and pathological conditions by Adolf Alt

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LECTURES  
ON  
THE HUMAN EYE

IN ITS

NORMAL AND PATHOLOGICAL CONDITIONS

BY

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WITH 95 ILLUSTRATIONS BY THE AUTHOR

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Biomedical  
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## DEDICATION.

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THIS BOOK IS DEDICATED TO THE MEMORY OF MY FATHER,  
DETTMAR ALT,  
LATE PHYSICIAN IN MANNHEIM, AND HIS FRIENDS, MY HIGHLY-  
ESTEEMED TEACHERS,  
DR. TH. VON DUSCH,  
PROFESSOR AT HEIDELBERG, AND  
DR. H. KNAPP,  
OF NEW YORK, FORMERLY PROFESSOR AT HEIDELBERG.

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## PREFACE.

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THE histological conditions of the human eye have of late received a good deal of attention, and their study has been opened to a wider circle by a number of atlases, which, like the one published conjointly by *Pagenstecher & Genth*, and another by *Becker*, can boast of an excellent execution.

A book treating systematically on this subject, and especially on the histological conditions of the pathological human eye, whose execution and price would allow it to be of usefulness to every one interested in this matter, has been to this day a want often felt.

For quite a number of years I have been engaged in collecting for my own instruction, microscopical specimens of normal and pathological eyes. This material for examination, especially its pathological part, has by the kindness of Dr. H. Knapp, of New York, and a great many other colleagues, to whom my sincerest thanks are due, become so large, that I think it in season to give the results of my researches to the medical public in systematic order. I have confined myself, however, in this book entirely to the eye-ball itself, and have left the accessory parts to be treated at a later period, when I shall be better able to do so than I can at present, on account of the scarcity of material which is at my disposal. Furthermore, I have given especial attention to the pathological conditions of the eye-ball. This I thought only natural, as with regard to the

normal conditions I could bring forward but little that was new; and I could doubtlessly presume that all my readers would be more or less acquainted with these.

All of the illustrations are drawn from my own specimens, and I have anxiously tried to copy only what I really saw without being influenced by preconceived ideas.

I have thought it unnecessary to enlarge the book by an elaborate record of all the authors and articles I consulted, when studying up this subject, as a summary of them may be found in *Graefe & Saemisch's* cyclopedia. I have endeavored, however, to do justice to every author whose opinion I stated, confirmed, or disagreed with, by adding the name in brackets. If in consequence of having only my own comparatively small library at my disposal, I should have unconsciously omitted some, or been mistaken with regard to others, I beg herewith the pardon of the persons offended. Since the German manuscript, of which this book is a translation, was finished during November, 1878, of course I could not take into account the literature of this year.

This book is an elaboration of the notes written down while lecturing on the subject under consideration, at the New York Ophthalmic and Aural Institute in 1876 and 1877. Since these lectures were kindly and forbearingly received by my audience, I may, perhaps, venture to hope that they will also find readers who will peruse them in the same spirit. And if this book should be able to enlarge the interest already taken in the study of the histology of the finest human organ, and to act as a new stimulus to renewed strife to fill up the chasms

yet unfilled in our knowledge, what labor I had to bestow on it will be amply repaid.

My sincerest thanks are due to Dr. T. R. Pooley, of New York, who has kindly undertaken the revision of the manuscript and proofs of my volume with a view to the correction, as far as practicable, of any errors of style or expression.

THE AUTHOR.

TORONTO, CANADA, *August*, 1879.