

**THE PRINCIPLES
AND PRACTICE OF
PERIMETRY**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649208869

The principles and practice of perimetry by Luther C. Peter

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

www.triestepublishing.com

LUTHER C. PETER

**THE PRINCIPLES
AND PRACTICE OF
PERIMETRY**

M Eye
P

THE
PRINCIPLES AND PRACTICE
OF
PERIMETRY

BY

LUTHER C. PETER, A.M., M.D., F.A.C.S.

ASSOCIATE PROFESSOR OF OPHTHALMOLOGY, PHILADELPHIA POLYCLINIC AND COLLEGE FOR
GRADUATES IN MEDICINE; OPHTHALMOLOGIST TO THE RUSH HOSPITAL
FOR CONSUMPTION AND ALLIED DISEASES

ILLUSTRATED WITH 119 ENGRAVINGS



170830.
27.4.22

LEA & FEBIGER
PHILADELPHIA AND NEW YORK

Entered according to the Act of Congress, in the year 1916, by
LEA & FEBIGER,
in the Office of the Librarian of Congress. All rights reserved.

THESE PAGES
ARE AFFECTIONATELY DEDICATED
TO MY
MOTHER



PREFACE.

THIS book has been written with a twofold object in view: (1) to give to the student in ophthalmology and ophthalmoneurology a collective study of the perimeter and its application, and (2) to stimulate, if possible, greater interest in the practice of perimetry.

It is a fact to be regretted that, although our textbooks on ophthalmology treat the subject of perimetry with due consideration from the standpoint of its clinical value and application as an aid in diagnosis, few authors devote sufficient space to the fundamentals of perimetry, to the normal field, the methods of taking fields, and the general pathology of the field, to enable the student to acquire a good knowledge of the subject.

So far as I have been able to learn, there is not a single volume in the English language devoted entirely to perimetry; and with the exception of the excellent chapter by Wilbrand in the *System of Diseases of the Eye*, by Norris and Oliver, a complete collective study has not appeared in the English language. The volumes of Ole Bull and Karl Baas in the German language are well known.

To present, therefore, to the student a systematic study of perimetry, its principles and practice, has been my first inspiration in writing this volume.

A second inspiration in offering this book to the profession is the hope that it may be the means, in a small way at least, of stimulating interest in the minute study of the visual field as a refinement in diagnosis. When we recall the facts that the ophthalmo-

scope often fails to reveal minute changes in disease of the anterior part of the visual path, as for example, in beginning toxic amblyopia and forms of retrobulbar neuritis; that in disease of the visual path posterior to the chiasm, eye-ground changes are late phenomena, and that disease above the primary optic centers may not be visible at any time by means of the ophthalmoscope; that in chorioidal disease and in disease of the neuro-epithelial layer of the retina, color changes differ materially from those observed in disease of the nerve-element layers of the retina; that central vision may be well preserved in glaucoma while indirect vision has almost disappeared, we can hardly fail to be impressed with the value of carefully practised perimetry as an aid to diagnosis and prognosis.

The text as presented is, in substance and arrangement, the course of lectures which I give to the students in ophthalmology in the Philadelphia Polyclinic and College for Graduates in Medicine. Exception may be taken to the order in which I have treated the various subdivisions. It is, however, the order which has been most helpful to the student in grasping the subject. The methods employed and the proper use of the instruments follow naturally after the explanation of the fundamental laws which govern the projected field and establish the normal size and character of the form and color fields. On the other hand, some knowledge of the anatomy of the visual tract and the physiology of vision must necessarily precede a study of the changes which take place in disturbance of structure and function of the visual path. Dovoetailing, therefore, of the practical and academic has been found to be the logical method of presenting the subject of perimetry to the student body.

The treatise is not exhaustive. On the other hand, I have endeavored to state concisely and briefly many

of the elementary facts which need neither amplification nor verification because they have been accepted by the medical profession as established facts. In the matter of instruments, it is impossible to do justice in so small a treatise to all the valuable instruments and modifications of the perimeter, and an effort has been made to confine the subject matter of the book in general to what I feel is essential to the correct use and application of the perimeter.

I trust, therefore, that the student in ophthalmology will not only find in it a foundation for a good working knowledge of the perimeter, but that he may also find it helpful as a book of reference.

Public acknowledgment is due my friend and counsellor, Dr. Wendell Reber, for his helpful suggestions from time to time, and for his courtesy in placing at my disposal much of the clinical material used in the illustrations.

L. C. P.