

diagram of the inner ear are cases in point. The liberal use of color in the illustrations is of great value in complicated diagrams. A more satisfactory result would have been achieved, however, if certain of the diagrams had been enlarged to cover two pages instead of one. A table giving a bird's-eye view of the stage reached by the various systems at different fetal lengths and fertilization ages would have been of value for students trying to place the approximate age of any given embryo. It is gratifying to see included a table of mean weights of organs corresponding to different fetal weights. An additional feature of great value here would have been the range of these weights, the standard deviations, or both. It is to be hoped that these will be included in the next edition.

This is a book dealing with the human embryo, and the comparative details of cleavage, germ layer, and membrane formation in lower forms have been omitted with resultant clarification of presentation. The student must study the young embryo as a unit rather than as a series of body systems; hence, the chapter which takes the reader through the early phases of development in all the systems is an excellent one. The general topics of gametogenesis, changes in the maternal organs in preparation for fertilization and implantation, membrane formation, early development of the embryo, age and growth changes in external appearance, twins and teratology are all discussed before the "system by system" description is dealt with. Then follows an account of development in the integumentary, connective tissue and skeletal, muscular, and nervous systems, sense organs, face and teeth, digestive and respiratory systems, coelom and mesenteries, ductless glands, pharyngeal derivatives, urogenital and circulatory systems.

An excellent bibliography of 42 pages, arranged according to chapters, and an index in which pages with illustrations are set in boldface type complete a highly satisfactory text on human development which should stimulate makers of medical curricula to recognize this as a science in its own right, not as a mere adjunct of gross anatomy.

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Diseases of the retina. Herman Elwyn. Philadelphia-Toronto: Blakiston, 1946. Pp. xi + 587. (Illustrated.) \$10.00.

The comprehensive exposition of retinopathy as primary eye disease and as secondary eye changes developed in the course of chronic systemic disease is presented for the use of physicians in this most recent book by Elwyn. When one considers the importance of vascular changes in the body during growth, development, anatomical disorders, and disease—changes that for the most part must be inferred by indirect means—the value of ophthalmoscopy is incalculable. Only in the fundus of the eye can the blood vessels be clearly seen, greatly magnified, in their natural state. The vascular networks of the retina and choroid constitute the most important feature of the fundus picture, since they not only undergo changes due

to aging and diseases of the vascular system but are subject to wear and tear of circulatory effects of general systemic and local diseases such as arteriosclerosis, hypertension, and many of the blood dyscrasias.

In 1871 Clifford Albutt published a book on the ophthalmoscope, much of which was devoted to vascular changes and their sequelae in the fundus. The ophthalmoscopic picture of Bright's disease and other disorders of the kidneys, of diabetes, of uremia, and of many conditions which effect the general circulatory mechanism, was meticulously described and commented on by a general practitioner rather than an ophthalmologist.

Since that time many volumes have appeared on cardiovascular-renal disease. The nature of the changes in the blood vessels themselves and the resultant changes in organs with various types of blood supply, particularly the kidney, have been studied, and of the results of these studies new explanations have frequently been offered. It is hardly conceivable that a book on disease of the retina could be published that would give in detail the various conceptions of retinal manifestations of vascular disease. Ophthalmologic studies have contributed a great deal to the fund of knowledge that has been built up about vascular and related diseases. The cooperation that has existed between ophthalmologists and internists has made possible a good understanding of certain eye diseases that would otherwise have been hazy in the minds of most of us.

It is no accident that the author opens his book with an account of retinopathy resulting from disturbances in circulation and from vascular malformations. Together they constitute the largest of the sections. In 170 pages he describes the pathological changes as well as the clinical appearance and adds, where possible, an explanation of physiological processes. The current conceptions of the significance of ophthalmoscopically visible retinal changes are stated clearly and understandingly. They may not always be the explanations most acceptable to the reader, but they are historically correct, reasonable, and only slightly controversial, as he has wisely omitted arguments to sustain his theme. The most difficult of all ophthalmological subjects to write upon at the present time has been presented in a most useful manner for the understanding and use of all persons interested in ophthalmology and in the retinal changes in circulatory disease.

In seven chapters, or parts, the diseases of the retina on a hereditary basis, inflammatory diseases of the retina, tumors of the retina, diseases of the retina leading to retinal detachment, developmental anomalies of the retina, and radiation injuries of the retina are described briefly, with comment on the systemic relationship, pathology, and treatment. These have to do mostly with conditions that concern the ophthalmologist. The classification of ocular diseases is based on physical and pathological findings adequate for the needs of clinicians. The work is comprehensive enough to be a valuable handbook on diagnosis.

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