relationships of various temperature scales and methods of heat exchange are presented. There is discussion of the temperature regulation center as to location in the hypothalamus. A description of various types of hypothermic and hyperthermic reactions constitutes the section on pathology.

A rather extensive review of methods for measuring heat production and more especially temperature changes constitutes an important section. Errors commonly found to occur when temperature measurements are made on skin are emphasized. Temperature differential between various body areas are illustrated with graphs.

Gradients dependent upon skin thickness, distance from the center of the body and size of an extremity, are correlated. Various circulatory disturbances and testing methods for clinical use are described. An excellent section presents skin temperature changes following immersion in cold in the normal as compared to the extremity with vascular insufficiency. The response to sympathectomy is illustrated by this same method. Hypothermia, "à la Laborit," for surgery is briefly discussed. This book is well written, clearly printed and illustrated.

D. W. EASTWOOD, M.D., AND
FRANZ SCHUBERT, M.D.

Blood Volume Determinations with Radioactive Isotopes and Index of Cardiac Clearance—Atomic Energy Commission Bulletin AECU-3614 BY S. N. ALBERT, M.D., D.A.; W. A. SPENCER, M.D.; C. A. ALBERT, M.D.; JO SHIBUYA, M.D. AND E. E. HENLEY, M.D. Paper $1.00. Pp. 45 with 20 illustrations. Published by the Office of Technical Services, Dept. of Commerce, Washington 25, D. C., March, 1958.

This manuscript should be welcomed particularly by anesthesiologists. During the past few years they have become increasingly aware of the desirability and value of determinations of blood volume, especially in the critically and chronically ill patient. Many, however, have not known how to make such determinations or the theory on which they are made. By specific mathematical formulas and clear cut illustrations Dr. Albert and his coworkers present this needed information. The chemical procedures to be followed, preparation of radioactive chromium tagged red blood cells (CR^{51}), or radioactive iodinated human serum albumin (RISA), and results of their use are presented. The value of the use of a standard volume plastic coil to simplify determinations is explained, and results from determinations on patients are given. Possible application of the methods to determinations of cardiac output are discussed.

While techniques and their applications are given in a very understandable manner, a considerable amount of expensive and highly involved equipment is necessary, as well as training in radioactive techniques for actual blood volume determinations.

O. SIDNEY ORTH, M.D.

A Practical Manual on the Medical and Dental Use of X-rays with Control of Radiation Hazards. Prepared by the American College of Radiology. TEXT BY RICHARD H. CHAMBERLAIN, M.D., with the assistance of ROBERT J. NELSON, D.D.S. Paper—Pp. 30 with illustrations. One copy FREE to all practicing physicians. Cost for additional copies, twenty-five cents. Obtain from the American College of Radiology, 20 N. Wacker Drive, Chicago 6, 1958.

This manual points out the X-ray and radiation hazards to people in general and physicians in particular. It is concise, amazingly factual and effectively illustrated by cartoonograms. It should be read by all anesthesiologists who participate in procedures requiring X-rays.

VINCENT J. COLLINS, M.D.