

"I will not attempt a definition . . . everyone knows what I mean. . . ." It appears that thirst and satiety are very different problems. For example, a dog with an esophageal external fistula will stop drinking when the stomach is inflated with a balloon. Fluid ingestion is determined by many factors other than simply that of establishing normal tonicity of body fluid.

Chapter IV concerns the regulation of fluid volume. The current concepts of volume receptors are well covered. However, the author is not certain that volume alterations per se can be incriminated as causative agents in thirst or satiety.

Chapter V is a fascinating account of problems of thirst. It is stated that the maximum tolerance of man for water deprivation is about 20 per cent of his weight, whereas the slug may endure water loss equal to 75 per cent of its weight. The chemical findings of water deprivation are discussed, along with descriptions of the classical experiments of McCance, Elkington, and others. The pros and cons of drinking sea water are weighed. Though no definite conclusion is reached, the majority of opinion quoted appears to condemn this practice. No conclusions are given either concerning the ingestion of fish, though tables of fish composition are available.

The book is recommended to all interested in physiology. The author succeeds in his efforts to accumulate and assemble information about thirst.

CHEMISTRY OF PANCREATIC DISEASES. By *Harris Busch, M.D., Ph.D.* \$5.25, pp. 160, Charles C Thomas, Springfield, Illinois, 1959.

Although the practicing physician is naturally and most immediately concerned with procedures that aid him in the diagnosis and treatment of his patients, he cannot resist a curiosity about the basic mechanisms of disease. Moreover, he realizes that what may be an interesting but seemingly irrelevant consideration at the moment can become a cogent and practical matter in the near future.

To the growing number of general books that describe the biochemical bases of disease, the present short volume on the pancreas by Dr. Harris Busch is a most welcome addition. The discussion is divided into three main parts: I. Chemistry of the exocrine diseases of the pancreas with chapters on the metabolism and exocrine secretions of the pancreas and on the biochemical aspects of acute pancreatitis and pancreatic insufficiency; II. Chemistry of the endocrine diseases of the pancreas with two main chapters on hypoinsulinism and hyperinsulinism; III. Neoplasia in the pancreas.

The aspects of basic biochemical interest are judiciously combined with those of clinical applicability. For example, the metabolism of the pancreas on a cellular level is described in chapter I, and the biochemical effects of insulin are considered in terms of enzyme mechanisms in pages 91-98 of chapter VI. General consideration is given to the diagnostic use of serum enzyme levels in acute pancreatitis (pages 56-58) and of analyses of stools and of ingested labeled protein and fat in pancreatic insufficiency (pages 65-72). Principles for the treatment of pancreatic insufficiency (pages 74-78) and diabetes (pages 103; 110-18) are briefly outlined.

Dr. Busch's book is admittedly not a text, and the practicing physician will be acquainted with a number of the clinical and laboratory features that are presented. Nonetheless, it is warmly recommended to the internist and to all others who are concerned with diseases of the pancreas, for it surveys in lucid fashion the present biochemical borders that will be the

core of future knowledge of the diseases of this organ.

THE TREATMENT OF DIABETES MELLITUS. By *Elliott P. Joslin, Howard F. Root, Priscilla White, and Alexander Marble.* \$16.50, pp. 798, tenth ed., Lea & Febiger, Philadelphia, 1959.

This book is to diabetes mellitus what the Encyclopaedia Britannica is to knowledge in general and, as past reviewers have noted, the task of reviewing it is formidable. The format, number of pages, and, in general, the method of presentation and chapter headings are similar to the previous edition. The same wealth of exhaustive detail, carefully updated, is presented with authority.

Whether one agrees with the Joslin group's approach to the subject or not, one is not left in doubt regarding their basic philosophy. Their viewpoint at the outset is succinctly stated by Dr. Joslin himself, who concludes the introductory chapter dealing with present concepts of diabetes with: "We still believe the pancreas underlies all diabetes, either because of the disease in it or because of its involvement by influences in the pituitary, adrenals, thyroid or liver. Even the advent of oral treatment has not changed our conviction." Also the conviction that control and absence of vascular and neurologic complications have a cause and effect relationship is forcefully set forth in this edition's preface: "One still reads that retinitis, nephropathy and neuritis bear no relation to control, but our detailed investigation of diabetics who have come under our own supervision proves the contrary."

These statements representing the philosophy of the Joslin group are the unifying feature which ties the individual chapters into a whole. There is one exception to this in an excellent chapter on the physiology of diabetes mellitus written by Dr. Albert E. Renold. This chapter distinguishes between "the endocrine defect (one or several) . . . and the metabolic defect (one or several)." With reference to the endocrine defect, Dr. Renold concludes that "the diabetic syndrome is the result of either absolute or relative insulin deficiency. This in no way precludes, however, the presence of additional features or anomalies in all or some forms or cases of diabetes." This chapter is followed by Dr. Marble's presentation of applied physiology with reference to insulin and blood sugar.

A new and timely chapter dealing with the oral hypoglycemic agents is presented by Drs. Marble and Leo P. Krall. Following introductory and historical comment, the experience and results of the Joslin Clinic with various agents are discussed. The authors stress that any conclusions are tentative, and conclude that perhaps the greatest contribution of these agents has been the impetus to research in diabetes.

As in previous editions, much of this book teaches by an impressive collection of statistical data. One can only admire the studious care in the collection of so much data over so many years. However, this reviewer feels compelled to comment that the statistical method has many limitations, and out of statistics emerges a picture scarcely, if ever, encountered clinically when the physician is handling an individual human being with diabetes mellitus. This statistical approach sets the tone of the book, and perhaps accounts for the fact that the only mention of psychological problems occurs in Dr. White's chapter concerning diabetic children and their later lives. It seems to this reviewer that future editions would be enhanced by an expert discussion of the emotional aspects not only associated with diabetes mellitus itself, but also involving iatrogenic and parental (in the case of children) factors.