anhydride as their basic unit and in addition there are arabinose, galactose, acetyl and methoxyl groups present. The latest work shows that unhydrolysed pectin contains an octagalacturonic acid nucleus.

It was customary to subdivide carbohydrates into those utilized and those not utilized; in other words, we have considered available and unavailable complex carbohydrate. The starches and sugars belong to the available, the hemicellulose, cellulose and pectic substances belong to the unavailable carbohydrates. The caloric value of the available carbohydrates is well known, but those not utilized are considered of little value except to form bulk or roughage.

The raw apple, the banana, and other fresh fruits have been administered with beneficial results to infants as well as adults with certain gastro-intestinal disturbances. The use of these fresh fruits has been more for therapeutic than for preventive purposes.

There are reports using apple and banana powder in place of the fresh fruit, with about the same, if not better results. Some authors have given pectin the credit for the improvement in the clinical picture in cases of diarrhea. Winters and Tompkins (Amer. Jour. Dis. Child., 52:259, 1936) report better results with the use of a pectin-agar-dextrin-maltose formula than they obtained with the use of scraped raw apple in the treatment of infant diarrhea.

The galacturonic acid content of pectin has naturally been assumed to have a detoxifying action similar to gluoronic acid. Malyoth (Klin. Wehnschr., 13:51, 1934), Riesser (Schweiz. Med. Wehnschr., 16:1175, 1936), Manville, Bradway and McMinis (Amer. Jour. Digest. Dis. and Nutrit., 3:570, 1936) and others considered this factor of importance in the action of pectin.

Imhaeusser (Arch. f. exper. Path. u. Pharm., 167: 702, 1932) administered pectin to dogs and failed to find a rise in blood sugar. He also administered pectin to phloridzinized dogs and observed the same fatty changes in the liver as in the controls. This would indicate that no utilizable carbohydrates were derived from the pectin. There was, however, an antiketogenic action shown after pectin was fed to dogs, indicating that this substance was exerting some action and was not entirely unavailable, as had been assumed.

Banana and apple powder were used as carbohydrate source in the basal diet in some rodent experiments by Arnold (Amer. Jour. of Pub. Health, 24, No. 8:554, 1934). The control diets contained cornstarch or sucrose as their energy source. Rodents fed on the powdered fruit diets enjoyed a resistance to B. enteritidis administered by mouth as compared to the controls. The nature of this increased resistance to enteric infection was not determined. Such animals were very susceptible to the B. enteritidis when administered intraperitoneally or subcutaneously, but were resistant to oral feedings of these bacteria.

The so-called unavailable carbohydrates need more attention. The galacturonic acid component of pectin needs further study as to its detoxifying action.

The writer is convinced that pectin, as it is now available on the market, is not a uniform product. There is one very active carboxyl group attached to the pectin molecule. Most of the pectin on the market contains various positively charged elements attached to this carboxyl group, such as sodium, calcium, magnesium, etc., as well as arsenic acid and other insecticidal residues from sprayed fruits. The varying reports in literature may well be due to the use of various pectinates of this nature.

It is of interest to the gastro-enterologist to know that some of the so-called unavailable carbohydrates may, in part, be utilized in some way. The research workers in biology, chemistry, bacteriology and clinical medicine have new problems presented for their consideration.

Lloyd Arnold, Chicago, Ill.

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**Book Reviews**


This is not just another handbook on medical writing, it is a delightful little volume which reflects on almost every page Dr. Dempster's rich culture, his wide experience as an editor, and his kindly philosophy and wit. It is the sort of book that one expects more from a cultured Regius Professor of Physics than from an American physician who commonly knows his medicine but seldom his Sir Thomas Browne, his Keats and his Charles Lamb.

As Dr. Dempster reminds us, writing makes an exact man. No other practice trains one in clear thinking to the same degree. Good writing is an art which a man can enjoy just as a painter enjoys a bit of painting, when at last he gets it just to suit him. As Lord Balfour once wrote, "What pleases me most is to write something quietly by myself—to touch it up and complete it with a feeling that one has really done one's best." How wonderful it would be if more American physicians were to get this thought about writing. Usually our main idea is to get a paper out of our system as quickly as possible, and later when some editor has to spend hours putting the manuscript into such shape that it can be printed and read, we become much annoyed over his efforts in our behalf.

As everyone knows who has ever tried to put his ideas across to others, easy reading means "damned hard writing." Dr. Dempster's comments about this remind the reviewer of the times when physicians have said to him, "If I could only dash things off as easily as you do I could get a lot of writing done." They didn't know that any paper that reads easily must always have been rewritten at least half a dozen times. Even the shiest and the most experienced writer can always find a better and clearer and shorter or a more vivid or musical way of saying a thing if he will spend some time trying.

Some of the chapters in Dr. Dempster's book which are not ordinarily found in works of this kind are those on the editorial functions, on preparing illustrations, on the use of the dictionary, on where to look for references, on Greek derivatives, on the history of medical journalism, and on copyright regulations. There is also a short list of books which can be read with profit.
The reviewer is particularly delighted to find Dr. Dempster approving of the occasional use of such things as a split infinitive. As he says, at times it is highly desirable that it be used. Unfortunately, an editor who sits all day correcting manuscripts tends to develop a number of reflexes which enable him or her to blue pencil certain grammatical constructions inevitably and without any cerebration. The experienced writer will follow no rule but will be guided always by his ear for good rhythm and accent in a sentence. If it does not sound right something is wrong and the arrangement of the words must be changed.

Dr. Dempster wisely quotes some unknown man who said that one good illustration is worth a thousand words of description. This holds true not only for drawings and photographs but also for verbal illustrations. One of the faults of medical writers is their tendency to write long sentences full of abstract statements the meaning of which may or may not be grasped after several careful readings. If the writer had only told a short interesting story about a patient or if he had briefly described one crucial experiment the reader might have gotten the meaning immediately and without the expenditure of much effort.

We physicians commonly make the same mistake in talking to patients. Too often we use long technical words, or worse yet, medical jargon about "flat plates" and B.M.R.'s, and the patient leaves with only the vaguest idea of what we were trying to tell him. More of us should practice talking to ignorant people in such simple speech that they can understand us. Whenever possible, we should teach as Christ did with the help of parables; we should use simple illustrations and similes, and should tell short stories of other patients with similar troubles whose experience taught them and the physician many things. Such stories will commonly interest and convince, and years later when the physician meets an old patient he may be surprised to find that some story that he told is still remembered together with the lesson that it taught. An abstract statement would probably not have been remembered for more than a few hours, if it was remembered at all. The same technique is useful also when one is talking to or writing for tired doctors. As a busy physician once said to the writer, "When I come home from my last call at night and slump down into my chair by the fire I would like to read my medical journals but often I am too tired to look at anything difficult. I just can't face a lot of long words and long sentences. But perhaps then my wife says: 'Here is a delightful article by Dr. John Stokes, which this afternoon I read and enjoyed and understood.' And then I read it, sitting up long after I should have gone to bed, because it flowed along so easily and interestingly, with here and there a delightful little story to make and hammer home a point. Some long-winded doctors tell me that such writing is not dignified, but all I say is, give me a lot more like it.'"

Surely physicians who would like to improve the appearance and the reading qualities of their papers would do well to buy this little book and to read it over and over again.

Walter C. Alvarez, Rochester, Minn.


This book has been written from the point of view that, in the case of proctology, the reader needs not only a good description of disease entities, with details as to symptoms, diagnosis and treatment, but also special instruction in the ways in which the roentgen ray and sigmoidoscope can be used to help in understanding the problem of the particular patient. An effort has been made by the three writers to bring together in this book information available in Austria, Germany and the United States.

The book is interestingly written and well illustrated. There are many colored representations of what can be seen through the sigmoidoscope. As usual with textbooks, the reviewer must feel that in many places the treatment of the subject is inadequate from the point of view of the specialist, but the answer would probably be that specialists never look to textbooks for information. Perhaps they would if writers who were really competent to teach would make their books adequate and up-to-date. Unfortunately they rarely do, and as a result the specialist who looks through a textbook is usually repelled by the number of statements he finds there which are antiquated, inadequate, or positively misleading. On the whole, however, this book will be of considerable assistance to students of proctology. Particularly helpful will be the fine bibliography.

Walter C. Alvarez, Rochester, Minn.

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One of the finest things that Paul Hoeber has done through the years is to produce in beautiful format, valuable handbooks on technics of various kinds, each chapter being written by an able specialist in the particular field. This work is a beautiful example of his craft. Dr. McClung has gathered together as contributors such men as Chambers, Cowdry, Downey, Mallory, Penfield and Florence Sabin. All those who work in laboratories are in their debt and will want this book.

Walter C. Alvarez, Rochester, Minn.

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The author states that "this book is based on the premise that the functional tests of the stomach used for the last sixty years have failed as methods of diagnosis and that only the morphological methods — X-ray and gastroscopy — are of direct diagnostic value."

The volume contains much information for the gastro-enterologist and particularly for the gastro-scopist. No one making gastroscopic studies can afford to be without this book as it explains in detail the methods used by a pioneer in gastroscopy who has