

syntheses and transformations. An early application of this procedure led to the recognition of a possible chain reaction in purine synthesis. In many instances, the antagonism between structurally related agents may serve to maintain physiological order as evidenced by the beneficial antagonism between potassium and sodium ions, or between testosterone and various estrogens. In still other instances, the process of blocking cellular reactions may disturb physiological order with a net result which is beneficial to the organism. The antagonism between dicoumarol and vitamin K with its anticoagulant effect and that between acetyl-choline and prostigmine which results in an anticholinesterase effect are typical examples. At times, the blocking effect may inhibit growth or cause death of the cell. Hence, the phenomenon may be applied to the fields of bacteriology, virology, and cancer research.

The concept of biological competition, or antagonism, has achieved sufficient importance to merit three recent and important reviews<sup>1, 2, 3</sup> which should be of considerable interest to the medical profession. In these reviews, the application of the concept to pharmacology, chemotherapy, physiology, and biochemistry covers such diversified units as antibacterial agents, vitamins, amino acids, purines, pyrimidines, steroid hormones, antithyroid compounds, a variety of drugs, simple ions, and antiviral substances. Both synthetic and naturally-occurring antagonists have been investigated. The former have been applied largely to the field of therapeutics and include such substances as sympathetic-blocking agents, antihistamines, sulfonamides, and folic acid antagonists. The latter may be extremely important in the maintenance of biological order through the stabilization which results from antagonisms between ions, or amino acids, or hormones.

Although the concept is not a new one, the discovery of the competition between sulfonamides and para-amino benzoic acid has resulted in the renaissance of a somewhat neglected idea. It seems to hold a clue not only to the etiology of certain diseases and the therapy of others, but also to the maintenance of order in the constant flux of physiological processes.

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#### REFERENCES

- <sup>1</sup> D. W. Woolley, Consulting Editor: Antimetabolites, Ann. N.Y. Acad. Sci. 52:1197-378, 1950.
- <sup>2</sup> Martin, G. J.: Biological Antagonism. The Theory of Biological Relativity. New York, The Blakiston Company, 1951.
- <sup>3</sup> Woolley, D. W.: A Study of Anti-metabolites. New York, John Wiley & Sons, Inc., 1952.

#### PATIENT EDUCATION AND THE A.D.A. FORECAST

The *A.D.A. Forecast* is the Association's foremost means of direct service to the diabetic patient. A great deal of time, thought, and effort have gone into the continued development and improvement of this publication, under both its original editorial guidance and its current management by Frederick W. Williams, M.D., Editor in Chief, and Mr. Groff Conklin, Managing Editor. Since it began publication in 1948, the magazine has proved its usefulness for many types of diabetics.

The value of the *Forecast* to the individual diabetic is easy to describe. It gives him practical information to help him in his day-by-day diabetic regimen. It prepares him for problems which may confront him in the future. It strengthens him by giving a feeling of solidarity and fellowship with the many others like himself—other diabetics with the same problems, frustrations, discomforts and complications. One of the magazine's popular and effective departments is "The Funny Side," in which diabetics enjoy a laugh at themselves or at the non-diabetic outside world. Finally, the *Forecast* helps the patient to free himself from needless anxiety and unhappiness. Letters are frequently received from readers who express their satisfaction at finding that others have learned how to cope with diabetic problems, and who say that because of the magazine they no longer feel so isolated or so different.

An effort is constantly being made by the Editors of the *Forecast* to broaden its scope and make it of interest to a wider segment of the diabetic population. This is not a simple task, since diabetics are of all ages, educational levels, tastes, and degrees of sophistication. As consistently as possible, the magazine has been kept firmly in the middle of the road, so that diabetics of nearly every type, barring the semiliterate, will be able to find something in it to their taste.

The *Forecast* is useful to physicians as well. They find the magazine an aid in their efforts to teach their patients and to secure their cooperation in achieving good diabetic management.

Finally, the *Forecast* helps the Association to bring itself to the attention of diabetics everywhere. It is the most effective means, outside of individual correspondence, of providing—as an Association—direct assistance to persons with diabetes. It does not trespass on the intimacies of the doctor-patient relationship, being careful not to intrude medical advice when that advice should be given personally. Yet it makes constant and fairly successful efforts to set diabetics straight on many knotty problems and obscure questions; two examples

from the current issue concern the facts about the alleged claim that a tea for diabetics would eliminate the need for insulin, and information regarding the nature and cause of hemochromatosis.

With the advice of the medical Editorial Advisory Board, and the good judgment of its Editor in Chief, the *Forecast* cannot fail to be useful to diabetics from the point of view of providing sound and useful information about their condition. This statement will hold true, however, only as long as articles presenting needed information are forthcoming from the medical profession. The future of the *Forecast* depends both on the willingness of members of the Association to contribute original medical papers, and on the enthusiasm and persistence with which physicians recommend the magazine to their diabetic patients. The Editors report that there is rarely a scarcity of lay contributions.

Diabetics seem to enjoy writing about their experiences and expressing their opinions; the only problem the Editors face in this connection is the unpleasant one of having to reject unacceptable contributions.

However, nontechnical but informative articles on the nutritional, metabolic, physiological and psychological problems of diabetes are less easily secured, according to the Editors. If any members of the Association would like to help, they should first examine recent issues of the magazine to find out what has already been published; then they should write the Editors and offer to prepare a simple article on some medical subject of general interest to diabetics. If the subject has not already been covered, their papers will be welcome. Prospective contributors can be assured that each article submitted will be studied thoroughly, and that the selection for publication will be fair and unbiased.

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## BOOK REVIEWS

**THE FACTS OF LIFE FROM BIRTH TO DEATH.** By Louis I. Dublin, Ph.D., in collaboration with Mortimer Spiegelman. Cloth. \$4.95. Pp. 461 plus index. The Macmillan Co., New York, 1952.

A volume by the distinguished Second Vice President and Statistician of the Metropolitan Life Insurance Company concerning the vital statistics of life and death merits serious critical consideration. Here is a work of over 460 pages, containing a large amount of information of significance to the doctor, lawyer, statistician, and most of all to the intelligent citizen. In 25 chapters Dr. Dublin and his collaborator cover the major highlights of modern living in relation to health. From an illuminating picture on who we are and the nature of our population, through various subjects such as the needs and problems of the average American family, the care of the sick, changes in mortality, and the specific problems created by the various major diseases and causes of death, they follow in proper sequence.

An unusual and worthwhile chapter deals with the control of diabetes. Here in a relatively few pages one finds the answers to a great many of the questions that come to mind concerning diabetes and its control. Following this there appears a broadening comment on the circulatory diseases and on rheumatic disorders.

Topics such as the problems of our older people, the toll of accidents, the hazards of various occupations, all are dealt with in a most readable style, as are the present status of mental health in America, the situation concerning public health and public health administration, and, finally, the prospects and problems of longevity.

The question and answer form in which the book is cast makes for readability, and interest is sustained throughout by the compact consideration of each topic and the natural sequence with which the reader passes from one aspect of the subject to another. He will, indeed, have considerable difficulty in laying this volume aside once he begins to turn its pages.

Not the least of its values is the fact that this work