



Antibiotics Plus?

Good medical practice is based upon the principle that the physician be well educated so that he can choose from the various therapeutic agents available those most suitable for the treatment of each patient. A corollary to this is the principle that mixtures of drugs may lead to "polypharmacy" and limit the free choice of the physician in the prescription of individual medicines for the best treatment of each patient. For example, the Council on Pharmacy and Chemistry of the American Medical Association states "the Council considers for evaluation drugs with a single active ingredient or extracts from a single source. Combinations or mixtures containing two or more active ingredients may receive consideration only if it is deemed desirable to present the Council's views regarding any such preparation for the information of the medical profession."¹ Finally, mixtures of drugs unless carefully studied may complicate evaluation of each of the drugs. It is for these reasons at least that many physicians look askance at the presently widely advertised mixtures of broad spectrum antibiotics in combination with vitamins.

Recently, several papers have appeared purporting to support the efficacy of such mixtures. In general, these papers imply, and in some cases state, that the antibiotic-vitamin combinations are more effective than the antibiotics alone. Scrutiny of the data does not support the allegation. One paper² states: "Because of the established experimental and clinical evidence that stress vitamins are of vital importance in reparative and recuperative efforts in persons subjected to serious surgical, traumatic, or infectious disease and trial, it is the author's impression that the antibiotic-vitamin combination represents a most valuable addition to the physician's armamentar-

ium." Unfortunately, although this is the author's impression it should be remembered that his experimental and clinical evidence does not prove the point. In addition, the paper² offers no collateral controls; that is, the results of the treatment of patients with the antibiotic alone are not compared with the results of the antibiotic-vitamin mixture. From data such as these it is impossible to draw any but highly tentative surmises.

In another paper³ the author discusses the use of tetracycline with vitamins in pediatric practice. Here again no controls are presented and it is stated "It is well established that, with the stress of infection, there is a need for increased vitamin intake." Unfortunately, there is little scientific evidence to justify such a statement. Tolerance to tetracycline combined with water-soluble vitamins has also been studied.⁴ In this instance, it was concluded that the combination of water-soluble vitamins with tetracycline was clinically as effective as tetracycline alone. This presumably means that it is the authors' impression after comparing the vitamin-antibiotic treated cases with this previous experience. They note that a blindfold test of a large series of cases would be necessary before the impression could be established that untoward effects were less severe when vitamins were given with antibiotics than the antibiotics alone.

In support of the addition of vitamins to antibiotic preparations the report of the Committee on Therapeutic Nutrition of the National Research Council has been cited,⁵ but no such combination was suggested. Furthermore, it was clearly stated in the introduction that the report was to be considered tentative pending further research results. The clinical and experimental effectiveness of vitamins in relation to antibiotics and to infection in general

has been ably reviewed.⁶ Here it is clearly evident that little is known of the relation of vitamin nutrition to infection and other stress situations, nor is the relationship of antibiotic administration to vitamin metabolism at all clear. Finally and perhaps more important, vitamins are not the only nutrients required by sick (in addition to well) people. An adequate supply of calories, protein and certain minerals are needed as well. The availability of antibiotic-vitamin preparations is certainly no substitute for careful attention on the physician's part to the prescription of an adequate diet or the supplying in some other way of all needed nutrients to patients in the amounts required. In fact, it often cannot be accomplished, as the combination of vitamins and an antibiotic prevents altering the dose of the former without changing the latter.

Until it is an established fact that it is necessary to add vitamins to antibiotics and that the two in some way supplement each other, it seems both unnecessary and expensive for the patient to promote the use of these combined medications. Each is, of course, available separately and they can be given in any way a

physician deems necessary on the basis of scientific evidence, his experience, and the patient's clinical condition. This would seem to be the best medical practice.

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Coming

The March-April 1957 issue of THE AMERICAN JOURNAL OF CLINICAL NUTRITION will be of widespread interest. The entire issue will be devoted to a *Symposium on Nutrition and Behavior*, the proceedings of a meeting held in April 1956 at the School of Public Health, University of Minnesota, in cooperation with The National Vitamin Foundation. A large group of interesting observations are reported under the general headings of Impact of Diet on Behavior, Hunger and Appetite, Food Appraisal and Acceptance by Man, and Satiety and Weight Control. The unique program, arranged by Dr. Josef Brožek, will provide a permanent and useful record of active research in one of the most important—and neglected—spheres of human biology.