

NUTRITION

Vitamins for Workers

Some scientific support is given to the wholesale use of vitamin pills to aid war workers, but the weight of opinion urges reliance on food in good diet

► SHOULD WAR workers be fed vitamin pills? Leading scientists were asked that question by State Senator Thomas C. Desmond, of Newburgh, Chairman of the New York State Joint Legislative Committee on Nutrition. Replies reveal that the weight of opinion is against mass administration of vitamin capsules, that use of the synthetic concentrates is approved only under special conditions, and that a strong minority viewpoint contends that while vitamins may not be a complete answer to the need for better nutrition of employees, it is justifiable as a war-time measure.

Excerpts from typical responses received by Senator Desmond follow:

Prof. E. V. McCollum, Johns Hopkins University . . . In my opinion it is a much wiser policy to consistently educate the public in the use of proper combinations of our common natural, wholesome foods so as to make diets which are complete rather than rely upon synthetic vitamins. The promotion of synthetic vitamins is on a very low level at the present, a little, if any, above the old patent medicine days.

Dr. F. G. Boudreau, Chairman, Committee on Nutrition in Industry, National Research Council . . . In the last analysis good nutrition must be built upon a

foundation of an optimum diet of natural foodstuffs. It is impossible to insure an optimum intake of all the essential food factors through the use of any of the poly-vitamin preparations now on the market. Where cooking and refrigeration facilities are inadequate, transportation poor and living conditions unsatisfactory, conditions exist in which vitamin concentrates and synthetic vitamins might be indicated. Vitamin concentrates may also be indicated where there is a high prevalence of nutritional deficiency diseases, determined through a survey conducted by a qualified physician. However, it must be recognized that synthetic vitamins and vitamin concentrates are expedients that cannot form the basis for a sound nutrition program.

Dr. Howard W. Haggard, Director, Laboratory of Applied Physiology, Yale University . . . There was time for education before the war; there will be time after the war; and it can go on during the war. But at present, our attention is focused not upon normal, logical and rational conditions but upon the abnormal, illogical and irrational conditions of wartime. If the use of vitamin supplements were to increase production in American factories by one per cent, if they were to make even this small contribution to decrease in absenteeism, spoilage and feeling of fatigue after long hours, then, to my mind the procedure would be rational, wise and economical, no matter what the cost. Two studies in a large defense plant, when all experimental conditions were controlled as rigorously as the conditions of management permitted, showed that there was a moderate but definite improvement in production by men fed vitamins, a marked decrease in spoilage and accidents and a considerable decrease in absenteeism. We are definitely of the opinion that increasing the vitamin intake of the American worker would be highly beneficial in production for the war effort."

Dr. Otto A. Bessey, Public Health Research Institute of the City of New York Inc. . . . The correct answer depends on the particular plant, locality, etc. In gen-

eral, the feeding problem should be met by an adequate wholesome food supply in plant cafeterias. However, at the present time there is apt to be some difficulty in obtaining the necessary equipment. Therefore, the use of synthetic vitamins on a voluntary basis may be a worthwhile activity in certain cases.

Dr. W. J. Dann, Duke University . . .

It is not desirable to supply synthetic vitamins to workers at industrial plants because it tends to focus too much attention on vitamin content of the diet and may engender an attitude that provided a vitamin pill is taken one can be as careless as one likes about what other food is eaten. A great deal of recent work emphasizing necessity of such large intakes of vitamins has been more enthusiastic than critical. Our knowledge of all the vitamins required by man is still incomplete and of those known only a few can be supplied as synthetics. Above all, the experience gained in British industry through the last three years shows conclusively that an unprecedentedly high output can be maintained by attention to meals without use of synthetics. If vitamin supplements must be supplied, it is more economical to use by-products such as yeast and natural materials such as fruit juice which also supply other vitamins not at present being given as synthetics.

Dr. Wilbur A. Sawyer, Director, International Health Division, the Rockefeller Foundation . . . The crying need for better nutrition can be answered only with food. Giving synthetic vitamins is a stopgap procedure, of great value to some of the ill or depleted but having little or no value for the normal working individual needing better nutrition.

Dr. L. A. Maynard, Director, School of Nutrition, Cornell University . . . I do not favor such a program. It represents a very inadequate and incomplete nutrition program in terms of the needs of workers. It tends to over-emphasize the contribution to nutrition and health which can be made by a few vitamins and to cause management and workers to give less attention to the many other essential components of an adequate diet, with a possible detrimental effect in terms of nutrition as a whole. There may be a place for supplementary vitamin feeding in special situations in industry, but not as a general program and not with any hope that it can be a suitable substitute for a program based upon a better diet of natural foods.

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Dr. Walter H. Eddy, professor emeritus, physiological chemistry, Teacher's College, Columbia University . . . I am definitely in favor of supplying war workers with multiple vitamin and mineral preparations for the following reasons. I have seen the use of such supplements accomplish quick results in a number of plants and know the procedure is effective. As an expediency measure, I am strongly in favor of using what we have available to accomplish our immediate needs and such material is available in the multiple vitamin and mineral offerings of many of the reliable drug firms today. Extensive surveys have shown that a large part of the people are not selecting foods so as to secure all the necessary vitamins and minerals.

Some Already Furnish Them

Senator Desmond said that Trojan Powder Co., Atlas Powder Co., Remington Arms Inc., and other munition plants are furnishing their workers with 100 m.g. of vitamin C free to help prevent powder poisoning. "Some of the companies," he declared, "are adding vitamins of the B complex."

"The number of vitamins distributed by war plants to employees is certainly amazing. One company alone, the North American Aviation Inc., Inglewood, Cal., furnishes their workers with 1,000 tablets every three months. Some concerns sell the pills to their workers at cost price, others give them free. Pills now being used in industry cost from $\frac{3}{4}$ c to 5c depending on quantity and content.

"The trend toward vitamin feeding of workers is significant for one main fact: Management today is eager to improve the nutritional status of its employees. In this fact lies one of the most encouraging developments for achievement of better health for our millions of workers."

Science News Letter, July 31, 1943

CHEMISTRY

Waxing Glass Filaments Makes Firmer Thread

► GLASS THREADS, and glass fabrics woven from it, will be firmer, smoother, less likely to fray and ravel, through the application of a process on which U. S. patent 2,323,684 has just been granted to Allen L. Simison of Newark, Ohio. Essentially, it consists in coating each fine filament, as it is drawn out, with wax, and then spinning the filaments together into thread or yarn before the wax has time to harden.

The filaments are either drawn indi-

vidually from the bath of molten glass, or are produced by directing an air blast at a slender stream of the melted substance, literally blowing it to slivers. In either case, the individual filaments are passed over a roller carrying a layer of softened wax of relatively high melting point (150 to 170 degrees Fahrenheit), after which they are gathered and twisted into a single strand which is packaged or wound as fast as it is produced.

The inventor claims that his wax-coating process is very effective in re-

ducing the tendency of glass yarns to bristle with innumerable microscopic loose ends, and to split and fray readily. He states further that wax coatings are superior to those requiring the use of solvents as well as less costly, and that if desired the wax can be eliminated after processing, to leave the final fabric wholly fire- and chemical-proof.

Rights in Mr. Simison's patent are assigned to the Owens-Corning Fiberglas Corporation.

Science News Letter, July 31, 1943



This is an "Optical" War



Pete Miller, glass inspector, is pleased with that chunk of precious optical glass. He knows this is an optical war. He knows that accurate gunfire depends upon optical glass . . . flawless and crystal-clear.

But Pete Miller is not thinking of his skill as a glassmaker at Bausch & Lomb. In that glass he sees his friends at gunfire-control stations on battle cruisers, in the turrets of tanks roaring down on an enemy position, or making aerial photographs behind enemy lines. And always he sees them peering into the sights of a

Bausch & Lomb optical instrument.

This glass is but one of dozens of types of Bausch & Lomb glass, made to meet exacting specifications for the optical systems of binoculars, range finders, microscopes, refractometers, metallographic and spectrographic equipment and scores of other products.

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