

# PROTECTING THE HEALTH OF THE INDUSTRIAL WORKER: NUTRITION

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I WILL not take up your time with a discussion of the relation of nutrition to health. I assume that you are all acquainted with much of the literature on this subject and that there is general agreement that resistance to disease and fatigue are dependent, to a considerable extent, upon the body's nutritional status. The purpose of this talk is to review briefly the organization and accomplishments of the Government's industrial feeding program and to indicate the major problems which remain to be solved.

The Committee on the Nutrition of Industrial Workers, of the National Research Council, made the following six recommendations in its first report, published April 1942:

1. Nutritious meals of natural foods at prices the workers are accustomed to and can afford to pay should be made available in all plants engaged in production for war or defense purposes, except in small plants where the worker may obtain such meals from private sources in the free time at his disposal. Any meal served in the plant should contribute at least one-third of the daily requirements of specific nutrients recommended by the Food and Nutrition Board of the National Research Council.

2. The practice of serving food between meals to workers has given good results and is recommended. Milk, fruit, and tomato juices are to be preferred as beverages, and other foods which are served should include the necessary nutrients. Thus, when bread is served it should be enriched white bread or a whole grain product.

3. Choice of foods served in the plant should be determined by a trained dietitian or nutritionist. Brief study of workers' diets will enable the dietitian to make up menus calculated to compensate for the ordinary inadequacies. The employment of a dietitian or nutritionist by the plant is recommended.

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4. Suitable educational material should be presented in connection with cafeteria service or supplementary lunches to stimulate acceptance of the meals planned or the selection of good meals when there is a choice of foods.

5. Measures should be taken by the appropriate subdivision of government to condition nutritionally those classes of the population which are likely to become workers in war or defense industries.

6. It is recommended that adequately controlled studies be conducted in selected war or defense industries to determine the facts concerning the influence of diet and nutrition on health, working capacity, incidence of accidents, absenteeism, and the psychological state (industrial unrest).

The Committee also emphasized, in its report, the following recommendations made by the National Nutrition Conference for Defense in May, 1941:

It is urgently recommended that special attention be paid to the diets and nutrition of all workers in industry and particularly of those most directly concerned with the national defense effort. The pressing importance of this problem should be drawn to the attention of the governmental agencies concerned with defense industries, such as the Office of Production Management.

It is recommended that the approval of contracts calling for construction or expansion of defense plants should include consideration of appropriate facilities for feeding the workers.

In view of the fact that in the emergency then existing, defense plants were being constructed in sparsely populated areas where normal community facilities are lacking, the Conference declared that:

In such instances communal feeding with its advantages of economy and expert supervision may be required and is recommended.

It is also recommended that the families of low-income workers in defense industries should be included in the distribution of protective surplus foods.

A direct result of these recommendations was the organization of a section on Industrial Nutrition within the Nutrition Division of the Office of Defense, Health and Welfare Service, in August 1942. In April 1943 the Nutrition Division was transferred to what

is now the Office of Distribution, War Food Administration. At present the Government's industrial feeding program is the immediate responsibility of the Industrial Feeding Programs Division of the Civilian Food Requirements Branch of that Office. The stated objectives of the program are to provide the food needed by industrial workers to maintain the highest efficiency in production; to improve and expand industrial food services to provide for workers in all plants where in-plant feeding is practicable; and to provide assistance and advice to obtain the best possible use of available foods.

Let us see what the accomplishment of these objectives involves, in Government organization alone. A number of Federal agencies, in addition to those acting as claimants for food for the armed services, lend-lease and for relief, directly or indirectly control in some measure the quantity, quality, variety, and cost of foods available for civilian consumption. The most important of these are the War Food Administration, the Office of Price Administration, the War Production Board, the Office of Defense Transportation, and the War Manpower Commission. The Federal Public Housing Authority and the Federal Works Agency, by means of their activities in defense housing, dormitories for war workers and community facilities in congested areas, influence the food consumption of thousands of war workers and their families. In addition the procurement agencies (Army, Navy, and Maritime Commission) through their control over funds and facilities in manufacturing establishments owned by them, and the authority they carry with prime contractors, must bear considerable responsibility for the amount and type of food service available to millions of workers. The Defense Plants Corporation, under certain conditions, has the authority to enter into contracts with plant management to finance industrial feeding facilities. There are other agencies, such as the Office of Community War Services and the President's Committee for War Congested Areas, which have a varying interest in the

adequacy of the nutrition of industrial workers. I mention these few to emphasize the fact that the Government's industrial feeding program is not and cannot be the sole responsibility of any one Federal agency.

Realizing this, the War Food Administration has consistently striven to develop understanding of the program among other Federal agencies, in addition to its efforts with management and labor, and has worked in cooperation with them. The various cooperative arrangements were formalized by the establishment of an Inter-Agency Committee on Food for Workers in October 1943. The first act of this Committee was to draw up a statement of "Agreement Regarding Objectives and Responsibilities," October 4, 1943. The following is an extract from this agreement:

The program includes:

A. Nutrition education conducted on a national scale as an integral part of the War Food program, enlisting the cooperation of all Federal agencies concerned, State and local government agencies and nutrition committees, labor, management, professional and trade groups, at all levels. Nutrition education should be conducted in all war plants. Nutrition education and in-plant food services operations should be integrated.

B. The establishment of food service standards to conserve food, equipment, and manpower.

C. Provision of rationed foods for workers on the basis of OPA ration allowances to individuals and to institutional users, unless such allowances are insufficient to meet physiological requirements because of non-availability of nonrationed foods, increased need or any other circumstance making it impractical to meet requirements through an increased consumption of nonrationed foods. In such cases, supplementary allowances should be made on an institutional basis.

D. Maintenance of prices of prepared food at reasonable levels.

E. Provision of materials, equipment, and operating supplies needed for the feeding program. This involves the full use of second-hand and installed equipment.

F. Adjustment of manpower requirements for food services and for production of necessary materials, equipment, and operating supplies, stabilization of employment in and training of employees for restaurants and in-plant food services where necessary.

G. Such other steps as appear necessary.

### Responsibilities of Federal Agencies

A. The Inter-Departmental Committee as a whole shall recommend and advise on over-all policies affecting development of the program.

B. The War Food Administration shall have the responsibility for coordinating the activities of Federal agencies relating to the industrial feeding program. It shall:

1. Conduct a comprehensive program of nutrition education.
2. Determine food needs to meet physiological requirements.
3. Determine food service standards.
4. Consult with OPA on food rationing and price problems.
5. Make recommendations regarding requirements for materials, equipment, and operating supplies. This shall be done with the assistance of the WPB, WMC, and the Maritime Commission.
6. Survey and make recommendations to war plants desiring assistance in the operation of industrial feeding programs.
7. Receive and review all applications, certifying them to WPB as to (a) need for the installations and (b) need for specific items for efficient operation.
8. Make recommendations to WMC regarding manpower requirements.

C. The War Production Board shall:

1. Prepare a materials, equipment, and operating supplies program, based on requirements submitted by WFA.
2. Act as claimant agency for the programmed requirements.
3. Take priorities action on application for materials, equipment, and operating supplies. No action shall be taken on any case until a recommendation has been received from WFA unless no recommendation is received after the lapse of a reasonable time for investigation and report.
4. Cooperate with WFA in devising methods for bringing into use second-hand and installed equipment not used to capacity.

5. Cooperate with WFA in the development of equipment based on recommended food service standards.

**D. The Office of Price Administration shall:**

1. Provide sufficient rationed food.
2. Be responsible for maintaining reasonable prices.
3. Determine the circumstances and methods under which supplemental food allowances shall be provided in accordance with the memorandum of understanding between the OPA and the Department of Agriculture, dated February 12, 1943.

**E. The War Manpower Commission shall:**

1. Determine manpower requirements receiving recommendations from WFA and WPB.
2. Be responsible for recruitment and training programs.
3. Take necessary steps to stabilize employment.

Subsequently, January 31, 1944, more detailed expressions of objectives and accepted responsibilities were received from the above mentioned agencies plus the United States Public Health Service, the War and Navy Departments, and the Maritime Commission. There is now no reason for doubt concerning the particular responsibilities of the various Federal agencies. A sound basis for an effective industrial feeding program has been established.

The War Food Administration has accepted the responsibility for program development and coordinating activities. It provides technical advisory service to labor and management, to other Federal agencies, and to state and local agencies and groups. In this function, it is assisted by the United States Public Health Service. It also serves as a "clearing house" for the handling of requests for assistance. It screens applications for facilities and brings trouble spots to the attention of the appropriate agency. Among Federal agencies, it has the prime responsibility for nutrition education programs, and it has the sole responsibility for the solution of food supply problems involving nonrationed items. The Procurement agencies, the Office of Labor Production of the War Production Board and the Committee for Congested Areas have varying responsibilities for seeing

that agreed upon recommendations actually reach the stage of implementation. Of course, the final responsibility for the success or failure of the program rests upon labor and management. Where these two groups are in agreement regarding what needs to be done and are equally desirous to see something done, there are generally few insurmountable obstacles.

The Office of Distribution of the War Food Administration operates through regional and district offices. Other Federal agencies have similar field offices. The cooperation established in Washington extends into the field, to a most encouraging degree. Inter-Agency Committees are established and functioning in all of the Office of Distribution Regions and in a number of smaller areas with a high concentration of war industries.

What has the Industrial Feeding Program accomplished, besides establishing this rather awe inspiring organization which I have outlined only in small part, limiting it, as I have, to Federal agencies?

Prior to Pearl Harbor, less than 20 per cent of the industrial workers had access to any type of in-plant food service. More exact figures are not available. Surveys made by the War Food Administration indicate that, by January 1944, about 30 per cent of the industrial workers were actually receiving meals through industrial feeding facilities (about 6.5 million of the 22 million engaged in war industries).

The number of plants having feeding facilities varies directly with the size of the plant. In the WFA surveys of industrial plants, only 27 per cent of the plants employing less than 250 had any type of feeding facilities, while 90 per cent of the plants employing over 2,500 had some type of feeding facility. The surveys also indicated that 49 per cent of all manufacturing establishments have food service facilities and that 79 per cent of the workers are employed in those establishments.<sup>2</sup>

<sup>2</sup> These data are based on surveys of manufacturing establishments which report employment information to the War Manpower Commission. During November 1943, 12,500 establishments employing 12.7 million workers reported.

In the San Francisco Bay area, however, it was found that not more than 15,000 meals a day were served to 176,000 shipyard workers. Less than 9 per cent of the workers are able to obtain any kind of food within the shipyards. Nevertheless, the number of war plants which are making efforts to provide food for their employees is steadily increasing.

We have estimated that an additional 5.5 million workers can be provided for during 1944. By January 1, 1945, in-plant feeding should be available to a total of 12 million. However, this goal will not be reached without sustained effort on the part of all the Federal agencies concerned with war production and the health of workers.

The establishment of new in-plant feeding facilities is not by any means the major task of the Industrial Feeding Program. At least 75 per cent of the time of the eighteen industrial feeding specialists now working out of the regional offices of the Office of Distribution is consumed in giving assistance on problems of operation, e.g. menu planning, food preparation and service, efficiency of operation, etc. The Industrial Feeding Programs Division of the Civilian Food Requirements Branch, Office of Distribution, has prepared material on meal planning and kitchen and food service facilities and organization which it recommends as standards for industrial feeding operations.

There has been considerable progress in the field of education. Of course, with educational programs, it is difficult to determine accurately what one has accomplished. One can, of course, record the contacts that one has made and the distribution of material. A nutrition news service reaches a large number of organizations and newspapers, the labor press and publications of one sort or another. During the past year the demands for material on nutrition by war plants for their own publications has increased from 800 to 6,000. Articles and feature stories are supplied regularly to 850 labor press editors throughout the country. Material is also provided to some 1,800 trade and business publications.



More than 125,000 copies of a Manual on Industrial Nutrition have been distributed. A manual on planning meals for industrial workers, containing menu suggestions for all varieties of industrial feeding setups has been prepared and more than 80,000 of these booklets have been distributed in response to requests.

There is in preparation a manual or recipe guide for mass feeding, primarily meant to instruct cafeteria managers on the utilization of meat alternates and meat extenders. There is available a pamphlet, entitled "Your Employees are No Better than the Food They Eat," directed toward management.

We have also prepared some material for nutrition programs within industrial plants. This consists of posters, table tents, and a "take home" pamphlet designed primarily to assist housewives who must pack lunches.

There has been some discussion as to whether or not this type of material, directed to the plant and designed to reach the worker in the plant, is effective in actually changing food habits. To answer this question, a study was conducted by the War Food Administration in several plants in two communities.

Very briefly, the survey shows that a well-run in-plant nutrition education program, integrated with the industrial feeding setup, can be very effective in changing eating habits. Sixty per cent of the industrial workers eating in the cafeteria in one plant manifested a change in food habits due to an educational campaign, closely tied in with the cafeteria operation. At the same time, within this group, there was a carry-over of the effect of nutrition education into the home, to the extent of 25 per cent of the group. I think that is very encouraging and indicates what can be done.

It must be admitted that nutrition education programs for workers and their families, both within and outside of plants, have not received the emphasis that the importance of poor dietary habits as a cause of nutritional deficiencies would seem to merit. There is not sufficient time to discuss the reasons for this, most of which are

based upon considerations of expediency and limitations upon personnel and budget.

The task of assuring workers the opportunity to eat adequately does not consist simply of providing in-plant feeding facilities. Access to proper food in the home and community is certainly at least as important. Aside from the 100 cafeterias in operation or under construction by the Federal Public Housing Authority in connection with their dormitories and the restaurant facilities provided with their housing developments, no governmental program for the provision of adequate community feeding facilities for workers in congested areas is in operation.

Obviously, a great deal remains to be done before any claims can be made that all reasonable effort is being expended to protect or improve the nutritional status of industrial workers. An itemized list of tasks requiring attention would include:

1. The devising and implementation of methods to provide adequate food for the some eight million industrial workers for whom in-plant feeding is not considered feasible.
2. The solution of problems arising from congestion and inadequate community and home facilities.
3. The training and employment of qualified dietitians, nutritionists, and managers for mass feeding services and industrial plants. One of the most pressing problems existing is the shortage of such qualified personnel.
4. The adoption of satisfactory food standards by food service operators.
5. Scientifically conducted on-the-job studies on the relation of nutrition and nutritional factors to the health and productivity of the worker.
6. Similar studies on the relation of nutritional status to toxic reaction in industry.
7. The development of effective techniques which can be applied by individual plants or local groups to get acceptance of basic nutritional facts by the workers, and the general application of such techniques.
8. Studies on the effect of food preparation and cooking practices, used in mass feeding operations, upon the nutritional value of the food

and practical recommendations on methods of protecting the worker from any loss of nutrients which results from such practices.

Although each of the above items represents a major task by itself, the most important and most urgent need remains to be stated. It is of prime importance that industrial management recognize the extent of its responsibility for the nutrition of its employees. I believe that this will result when the relationship between nutrition and health, morale, fatigue, industrial diseases, and accidents is clearly presented to management. This is a responsibility which should be assumed by the industrial physician, who should also take an active supervisory role in the industrial food service. Unfortunately, except in a few noteworthy instances, industrial physicians have been too preoccupied and overworked to take a very active interest in the workers' nutritional problems.