

ON
THE PREPARATION
OF
FOOD FOR THE LABOURER:

IN
A LETTER TO JOSHUA HARVEY, M.D.,

FROM

SIR HENRY MARSH, BART.

DUBLIN :

JAMES M^cGLASHAN, 21, D'OLIER-STREET.

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FOOD FOR THE LABOURER.

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TO JOSHUA HARVEY, M.D.

MY DEAR SIR,

I read in *Saunders' News Letter* of the 19th inst. a letter of your's, which appears to me to merit, in no ordinary degree, our attention and consideration. During the existing fearful and calamitous state of the country, every practical suggestion which holds out the prospect of adding to the actual amount or quantity of food ought to be received with gratitude, and acted upon with alacrity. Your suggestion is, I think, a valuable one: you propose for general adoption the use of genuine brown bread, in place of the white bread more generally used in families. I am convinced that you are right. Bread made of mixed flour is more wholesome, better suited to supply the wants of digestion, and consequently to elaborate healthy blood, than that which is made exclusively of the finest flour. In this remark I refer to persons who are in sound health, and capable of digesting and turning into nutriment every variety of wholesome food. For all such individuals, the mixed flour is unquestionably the best. By following out your suggestion, and by its general adoption, much waste would be prevented, and a large supply of nutritious food added to the general store. You have established, numerically, how large an additional supply of wholesome nutri-

ment would thus be obtained. The brown bread sold in the shops is not the article to which you allude, but bread made from the flour of wheat, unrefined, as it descends from the grinding machinery. If such unrefined flour were universally employed, it is clear that a considerable saving would be effected, and the actual amount of consumable food increased. I would offer a remark or two on the general principles which should guide us in the preparation of food ; for oftentimes a steady perception of general principles leads to the best practical details. First, then, it should not be lost sight of that in food *perfectly* fitted for aliment, the presence of four staminal principles is necessary. These are : water, sugar, albumen, and oil. All these, in endlessly varied proportions, are present in milk. Every animal milk which has as yet been analysed possesses these ingredients. It is composed of water, sugar, caseine (cheese), which is an albuminous principle, and butter or oil. Milk then is, as it were, the type of all aliment, and on this model should all food be prepared.

On the necessity for water I need not dwell. Sugar is present in different proportions in a vast number of vegetable productions ; in all the Cerealia, including the grains usually employed for human food, as wheat, barley, oats, rice, and Indian corn ; in many roots and tubers, such as beet-root, parsnips, carrots, turnips, potatoes, &c. ; and in all ripe fruits, this principle constitutes, in part, their value as articles of human aliment. Albumen abounds in all meats, in fish, eggs, and other animal matters containing nitrogen. Nor is it absent in many vegetable productions :—wheat, the most rich in nutriment, the most valuable of all the grasses, contains,—in quantities diversified by the richness and suitability of the soil, by the mode of cultivation, and by the conditions of the atmosphere whilst

growing,—gluten, a nitrogenised element from which, as from animal food, the blood is supplied with albumen. The other grains, in varying quantities, contain the same essential ingredient, on which much of their nutritive property depends. Every article then, yielding albumen, should be brought into requisition to supply human food. The point, however, to which I wish particularly to direct attention is the importance, whenever practicable, of adding to all food a certain amount, even the smallest quantity of the oleaginous principle :—oil, animal and vegetable, fat, lard, butter, provided they be not rancid, should be added. Fish possesses this principle largely, and should be sought for and provided, whenever and wherever procurable. The oleaginous is preeminently the heat-producing principle, and, in the preparation of food, should, if possible, not be omitted. It is somewhat slow of digestion, and hence often unsuited, except in small quantities, to a weak stomach ; but, when received into the stomach of a healthy labouring man it augments the vital energies, and even its tardiness of digestion enhances its value. This important principle abounds in carbon, in virtue of which it maintains, in a high degree, animal heat, so essential to the production and preservation of every vital action. In our damp, often cold, and clouded atmosphere, this stiminal constituent is peculiarly valuable. The Hindoos, for example, who are nourished principally by rice, breathing an atmosphere of high temperature, stand less in need of oleaginous articles of diet. The natives of the higher Polar regions, on the contrary, respiring, at all times throughout the year, air, the temperature of which is many degrees below blood heat, could not subsist without a large supply of this principle. Accordingly, their nutriment is mixed largely with fat, blubber, and the oily flesh of marine

animals. These they devour greedily, and digest fully. In the preparation of soups, no pains should be spared to provide some admixture of the oily fishes : our lakes, rivers, and streams abound in eels, and herrings can be procured perhaps as cheaply as any other animal ingredient. It should, then, be remembered, that fish of every kind will prove to all soups a most nutritive adjunct. The farinaceous compounds, which are so justly valued in the treatment of diarrhoea and dysentery, have their utility much enhanced by the addition of a very small proportion of fresh suet. The popular remedy of flour and milk well boiled, with the addition of suet, is an excellent remedy ; but its efficacy would be diminished were the suet wholly omitted : thus prepared, it possesses, in the most digestible form for a weak stomach, and with the least possible amount of excrementitious matter, all the staminal principles of nutriment. For a healthy stomach, bread and butter is a far more nourishing article of food than bread alone. The "oil cake," so much prized in England, and employed to fatten cattle for the market, is a good exemplification of the combination of all the staminal principles in the preparation of food.

Secondly, I am anxious to say a few words on the importance of giving bulk and firmness to food prepared for the labourer. A soft, semi-liquid diet will maintain the life and health of children, and, in times of scarcity, will be sufficient for those adults whose occupations are sedentary, and is best suited to those who are reduced by, and recovering from a wasting disease. Such persons do not stand in need of the more abundant and more substantial nutriment which is essential to those who are daily engaged in occupations exacting much muscular labour. In the preparation and distribution of food, this I believe to be an important point, and one which should be held steadily

in view. For the labourer, the food should be in part solid, requiring mastication and insalivation, and not rapid of digestion. Food, however nutritious, which is too quickly digested, is soon followed by a sensation of hunger and emptiness, and consequent sinking and debility. Food of this description is unsuited to the labourer—it will not maintain strength, nor will it maintain health; and, if long persevered in, it will be followed by some one or other of the prevailing diseases, which result immediately from deficient, imperfect, and impoverished blood. Of this fact the labourer fed on the potato was practically, though not theoretically aware; his potato, when cooked to suit his taste and feeling, was never thoroughly boiled; he wished, to use an expression which I have often heard from the labourer himself, “to leave a bone in it, that it might stick to him.” By this method of cooking, two valuable objects were attained: first, the food in the stomach required more time to undergo the process of digestion, and consequently the return of the sensation of hunger was postponed; and secondly, it required a more prolonged and more perfect mastication and insalivation. For these reasons, the addition of even non-nutritious, solid material, provided that it be not deleterious, is practically useful; it increases the bulk, imposes the necessity of more complete mastication and insalivation, protracts the digestive process, and prevents the food from passing too hastily from the stomach into the lower intestines. When famine raged, in the year 1832, in the parish of Degernä, on the borders of Lapland, earth mixed with flour, and the bark of trees, and baked so as to form bread, became an useful article of diet. The earth employed was silicious earth, containing the remains of nineteen different forms of Infusoria.

In the preparation of health-preserving nutriment for the labourer, this principle should never be lost sight of. My object in making these remarks, is that our attention should not be too exclusively directed to soups, and other semi-liquid articles of food; these pass away too rapidly from the stomach, are swallowed too hastily, and violate a natural law in superseding the necessity of mastication, and a proper admixture with the salivary secretion. Restricted to such food, the carnivora cannot maintain life; nor can man—being half carnivorous—if laboriously employed, long preserve health and strength on food of such quality.

Bakeries should be as earnestly and as anxiously provided as soup kitchens; the former are absolutely necessary to preserve the health of those devoted to daily muscular labour. Were this accomplished, the lives and health of many would be preserved who must otherwise sink beneath the rapidly and widely extending famine and disease. Insufficient and bad food produces impoverished and tainted blood; and blood so altered in quantity and quality must, of necessity, prostrate the vital actions, and predispose to epidemic disease of the lowest type, and of the most distressing and fatal character. If soup kitchens and bakeries were simultaneously and judiciously constructed, fuel might be economised, and both solid and soft food cooked at the same time.

I wish some person practically skilled in the construction of boilers, ovens, and furnaces, would furnish a model of a soup kitchen, cheap in material, simple in construction, and capable of effecting the double object of baking and boiling with the least possible expenditure of caloric. Most willingly would I give a prize for such a model; I think it would be a subject worthy the attention of that public spirited and useful body, the Dublin Society.

The unfermented cakes which should be prepared to sustain the labouring poor, should consist of flour, just as it descends from the grinding stones. The flour of any of the grains most cheaply procurable, or of several mixed together, should form the principal material; salt should be added, and, whenever procurable, even a small proportion of oil, or suet, or butter. Lignine or woody fibre, properly prepared, would form an useful adjunct, as it would increase the bulk, and at the same time impart some nutriment. Woody fibre is a constituent of the potato, turnip, carrot, cabbage, and many other vegetable articles of food. I have lately been informed that it is the practice with millers to steep Indian corn in water previously to its being ground: this I believe to be an objectionable proceeding, and one which will, I fear, lead to a more rapid deterioration of the meal, and consequently to disease. I think too, that oaten meal should only be employed in combination with other flours; if used alone it will increase the predisposition to bowel complaints; but inasmuch as mixed food is the most wholesome and nutritious, it may very advantageously be added to any compound prepared either for baking or boiling. I cannot but think that in all localities distant from water mills, a great advantage would be derived from the construction, in the cheapest possible manner, of windmills for grinding corn; they would not cost much; their rotating arms would yield to every breeze that agitates the air; the expense and risk of distant carriage would be avoided; the flour, unsifted as it falls from the pulverizing apparatus, could be made at once into cakes or biscuits; and thus the waste, the cost, and the deterioration of storage would be completely obviated.

From every consideration I can give to the subject, I am convinced that much good would result from this proposition, if judiciously carried into effect.

I would observe, in conclusion, that food, to be at once sustaining to the labourer, and preventive of disease, must have bulk—must possess solidity—must not be rapidly digestible—and must contain, in varied proportions, all the staminal ingredients of nutriment. It is of the highest moment to maintain the vigour and the health of the labourer—the head, the supporter of a family. If, from exhaustion or disease, he be incapacitated, those who are dependent upon him become paupers, and sink with him into the gulf of famine and disease. The consideration of the diet best calculated to uphold his strength and maintain his health, is at all times one of the highest national importance—at the present time, and in the existing disastrous state of the country, it is one which claims the utmost amount of attention, scientific and practical, which can be devoted to it. When famine prevails, every thing eatable is earnestly laid hold of—principles are forgotten—the only thought which occupies and pervades the mind, is to arrest and ward off the dreadful cravings of hunger, and to preserve human life. But when systematic plans are devised, and are in progress for supplying more permanently the wants of a starving population, then, indeed, it is important to recur to principles, and to effect the object, without violating any of the established laws of nature; and more especially so, when this can be done, as in the present instance, without infringing upon the economy necessary to render these plans extensively effective.

It is with this view that I have written this letter to you, whose mind is so much occupied with every usefully-benevolent project.

I am, my dear sir,

&c., &c.,

H. MARSH.

MERRION-SQUARE,

March 27th, 1847.

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