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by
Alfred W. McCann

§ 73—EXPERIMENT WITH CHICKENS FOR BOYS AND GIRLS

When school teachers manifest an interest in the definition of the word "food" the school children will begin to learn something about themselves not now taught through any text books.

They will learn that the school girls of to-day are destined to be the mothers of the race ten or twenty years hence and they will understand why the school room is the place to study foods in their relationship to health and disease.

In the basement or on the roof there will be ten cages divided into two groups of five each.

There will be four chickens in each cage of the first group. The cages of the second group will be empty. The school children will feed the chickens.

The chickens in cage No. 1 will be fed whole corn, whole oats, natural brown rice, whole wheat, unpearled barley, grass or greens of any kind, and water. The children will note that on this diet the chickens in cage No. 1 will be proud and spirited. Their feathers will be brilliant, their flesh firm, and their bodies well developed.

The same children will feed the chickens in cage No. 2 with simple mixtures of whole grains and denatured grains, the remainder of the diet being the same as that of cage No. 1. They will note that at the end of a period of six months there will be a marked superiority in the appearance of the chickens in cage No. 1.

The same children will feed the chickens in cage No. 3 with pearled barley, polished rice, processed oats, degerminated corn meal, and dough balls made of white flour and water with the same quantity of greens fed to the chickens in cages No. 1 and No. 2.

In a few months the marked physical degeneracy of the health of these chickens will teach the children its own lesson.

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The same children will feed the chickens in cage No. 4 with beet pulp, from which some of the mineral salts have been extracted by leaching in distilled water. In addition to this they will feed the chickens with soda crackers, white biscuits, gingerbread, gingersnaps, white bread, pie crust, and candy, plus water, with the usual quantity of gravel and greens.

The conditions of the chickens in a few months will be eloquently suggestive.

The same children will feed the chickens in cage No. 5 with white bread, white biscuits, white crackers and cakes, cream of wheat, farina, macaroni, corn flakes, caramels, soda water, and other fancy drinks.

As the feathers of these chickens begin to droop and the chickens begin to huddle in the corners of their cages, seeking for the darkness, miserable even unto death, the lesson of the relationship of food to animal life will be taught.

At this stage of the experiment the healthy chickens in cage No. 1 will be transferred to cage No. 6 and there they will be fed on the diet of cage No. 5 until they, too, begin to show the same symptoms of dissolution and disease.

The chickens of cages No. 2, No. 3, No. 4, and No. 5 will then be transferred to cages No. 7, No. 8, No. 9, and No. 10, where they will be fed on the natural, undebased, unimpoverished, undenatured diet of cage No. 1.

The school children will see the sick chickens recover rapidly, and they will go through life with a lesson thoroughly learned. When they assume the responsibility of home life for themselves they will know that to abandon the laws of nature in the pursuit of some capricious food ornament will be at the expense of the health, happiness, and welfare of those dependent upon them.

§ 74—WHAT THE CHILDREN WILL LEARN

Having become familiar with the chicken-feeding experiments, the children will learn that it is possible to alter the resistance of animals at will, and to overcome the effects of one diet by combining it with another.

They will learn that the resistance of animals as determined by Hunt, even to certain poisons, differs greatly according to the character of their diet.

They will learn that Bulletin 69, Hygienic Laboratory, United States Treasury Department, declares "that in extreme cases mice after having been fed on certain diets, may recover from forty times the dose of acetonitrile fatal to mice fed on other diets."

They will learn that a diet of oats or oat meal usually leads to a marked resistance, and that the administration of certain iodine compounds with such a diet further increases an abnormal resistance.

They will learn that the experiments reported by the Government show that as far as resistance to acetonitrile is concerned, iodine exerts its action through the thyroid gland, and the resistance caused by an oat diet is in part an effect exerted upon the thyroid.

The result achieved with iodine in the Rotunda Hospital, Dublin; the thyroid researches of Victor Hoarsely and the discovery of thyroidine by Bauman, have led more than one pathologist to the conviction that iodine is a potent factor in the neutralisation of the toxic substances formed in the human body.

They will learn something of the most amazing developments of the war in the 1918 report from the British government laboratories at Cambridge, Glasgow and London, and various factories and hospitals in which government war bread experiments were conducted.

They may ask the question in the presence of that report, "Is it not strange that after a nation-wide campaign to discourage the use of whole grain bread in the United States, a campaign that received the backing of the Food Administration itself, there should come from the British government a declaration that it finds bread composed of whole wheat flour mixed with 20 per cent. of other cereals not only suited to all ages and digestion, but also yielding a higher percentage of energy?"

They will learn that the British loaves used in the experiment were baked from flour milled under the personal supervision of A. E. Humphreys, president of the National Association of British and Irish Millers.

They will learn that no precaution was omitted to make the experiments complete, and that every result was worked out in a series of tables.

They will learn that at one factory in Yorkshire the tests were applied to a group of men, women and children, whose sole bread supply for two months was whole wheat bread.

They will learn that although under medical supervision throughout their experience, in no case did the whole wheat bread cause digestive troubles, but that the health of the subjects improved during its use.

They will learn that the people of New York City, now consuming more than 100,000 loaves of 100 per cent. whole wheat bread every week, could have told the British government this and much more several years ago.

"When the whole wheat bread was tried on various sufferers from tuberculosis," declares the British report, "most of them gained weight. The main fact established is that the human body can make better use of the parts of the wheat grain which have hitherto been discarded, than pigs and poultry to which these rich and nutritive by-products of milling have been given in the past. The country has gained enormously in food and energy from the compulsory inclusion in the loaf of these rejected by-products."

Well may the children ask, "What did the millers, the profiteers and the Food Administration officials say when this British report was made public?"

In the meantime they will learn, from such hints as these, that man is guilty of sin, when he knowingly and deliberately removes from his food supply, in order to make it commercially profitable, those profoundly active and indispensable substances that God has compounded not for the benefit of the food manufacturer, but for the benefit of little children, and the fathers and mothers who lovingly, anxiously, and in pain watch over them.

They will learn that all through nature are exhibited subtle hints that the fixed laws under which all unjuggled food comes to man's hands were intended with the co-operation of man's intelligence to serve his needs.

They will learn that nature demands of man that he shall accept her dispensations not as accidents, but as exquisitely rhythmical processes, as profound in their operation as they are benevolent in their functions.

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§ 99—INFANTILE PARALYSIS

In June, 1916, an epidemic of infantile paralysis broke out in Brooklyn, N. Y.

The disease spread so rapidly that after 187 deaths had been reported in New York City and hundreds of cases discovered in eleven states and Canada, Health Commissioner Haven Emerson announced that he would appeal to the National Red Cross for help.

Three thousand three hundred physicians and nurses were put to work in New York and Brooklyn, and the Health Department informed the public that the United States Public Health Service and the Rockefeller Institute would begin active work at once to assist in stamping out the scourge.

Fifty-five street playgrounds were ordered closed. Every children's reading room in Manhattan and Brooklyn was closed. Sunday schools were closed. Summer camps were broken up. Children not only could not cross the state line but they were not permitted by the police to pass from town to town.

Dr. Lewis C. Ager called for public subscriptions to buy braces and other supporting devices for victims of the disease.

Then came this remarkable statement, July 9th, 1916, from Professor Simon Baruch, who diagnosed the first recorded case of perforating appendicitis successfully operated on, and who is one of the foremost members of the American medical profession:

"For several months I have watched the scientific development of the malign influence of defective or absent vitamins in certain foods, as published in the weekly reports of the United States Public Health Service, together with articles in the medical journals on beri-beri and pellagra.

"Pigeons fed on polished rice are affected by paralysis, technically called polyneuritis, which begins with loss of weight and

ends fatally. Dr. Sidell found that pigeons fed on this exclusive diet did not become paralysed (within the two months of experiment at least) if they were given also some otherwise useless yeast products (rich in mineral salts) from the brewery vats which are usually wasted. He has also shown that if this waste material be given to a pigeon already paralysed it will recover within an hour and to all appearances it will be normal in twelve hours.

"There is a striking similarity in some of the causes predisposing to infantile paralysis and beri-beri. Both occur chiefly in overcrowded localities, in hot weather, and more among males than females. Both are accompanied by fever and paralysis, and both are extremely fatal. Both have prevailed as epidemics, and their fatality has caused terror and despair.

"Beri-beri was formerly regarded as an infectious disease from undiscoverable sources, but is now known to be due chiefly if not solely to absence of vitamins in the diet.

"May not infantile paralysis, which has eluded thus far the most searching investigations, be likewise traceable to some defect in diet that may be discovered?

"We have a clue to the possibilities in this direction in the report of the United States Public Health Service of April 17th, 1916, on bread as food, in which the fact is clearly brought out that the fine roller-milled wheat flour is devoid of vitamins, and that owing to the use of baking powders containing bicarbonate of soda the vitamins in other foods are likely to be destroyed.

"In a study of pellagra in South Carolina, Voegtlin regards this malady as somewhat related to beri-beri. He found that this disease prevailed in the factory districts, where people eat mostly fat bacon, cereals and soda raised biscuits or corn bread made of highly milled corn, while in the backwoods, where coarsely milled grain is used, pellagra is rare.

"The high cost of vitamin-containing foods, like eggs, milk and meats, makes it impossible for these poor people to protect themselves against the loss of vitamins in purchased cereal foods.

"It may be of interest to ascertain if infantile paralysis has been more prevalent since 1878, when the new milling processes were invented. I omitted to mention as proof of similarity of

causes that the experiments made on pigeons have been confirmed in chicken, which fed on whole corn remain healthy, while the same fowls fed on highly milled cornmeal are affected with paralysis.

"These briefly stated scientific facts lead me to believe that close scrutiny of the food of the children afflicted may lead to the discovery of a dietetic cause of infantile paralysis."

Perhaps it will be found that the diet of the mother before the birth of the infant predisposed it to infantile paralysis.

Comment by Royal Lee:

Dr. Baruch would have been interested to learn that the first reported case of polio (infantile paralysis) appeared in Vienna within a year after the introduction of the world's FIRST ROLLER MILL MAKING WHITE FLOUR. And this was long before bleach poisons were used to destroy what little nutrition was left in the refined product.

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LEE FOUNDATION FOR NUTRITIONAL RESEARCH
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