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Food and Citizenship.

By E. H.CLUVER, M.A., M.D., B.Ch. (Oxon.), D.P.H., Professor of Public Health,
University of the Witwatersrand, and Director of the S.A. Institute for Medical Research.

It is an interesting fact, one of which thinkers throughout the ages have been aware, that the human animal can only achieve complete contentment, complete happiness by being of service to his fellows. He must be a contributing member of a team, otherwise neurosis develops.

The objective of students of nutrition is to produce the citizen able to make the maximum contribution of service to the state and thereby attain the maximum of contentment and happiness to himself. Let us frankly admit that we have hitherto only exceptionally been successful in attaining this objective, partly because of lack of scientific knowledge, mainly because of economic and political reasons. Our scientific knowledge of human nutrition has made tremendous strides. The nutritionist knows enough to contribute his share to the attainment of useful happy citizenship. How is this invaluable information to be imparted?

To combat malnutrition, the cause of most of our ill-health, one of the main causes of inadequate citizenship, it is urgently necessary that the people as a whole be informed how to eat correctly. Having been taught what to eat it will be necessary for students of economy to devise the mechanism whereby the needed food substances can reach the people.

Our job should be a comparatively simple one because of two advantages. Firstly, the information to be imparted is relatively simple, well within the understanding of the man of average intelligence; secondly, the food we wish him to eat is palatable, it is a pleasure to eat.

Let us then review briefly these simple facts about the foods which the human animal, unless his palate has become sadly perverted, is only too willing to partake — if he can afford it. “If he can afford it”; that is an important proviso. Under civilized conditions the foods which are easiest to grow cheaply in bulk are unfortunately not the ones which are the most important for health. Starch is everywhere in the civilized world the cheapest food. The agricultural scientist has been very clever at making two and more blades of grass grow where only one grew before. The result has been more and more cereal starch being produced more and more cheaply. But man cannot live by bread alone; particularly when other clever industrialists come along and remove from the original grain practically everything that is not starch.

Now starch is a fuel for the body and nothing else. We can do with quite a lot of it for running our engines, those innumerable muscle fibres which make up so much of our bodies. But it is of no use whatever when it comes to constructing and maintaining in a state of repair those engines and all the other tissues of the body such as the glands, brain, nerves and bloodvessels. For this we need foods rich in protein and the protective substances — vitamins and minerals.

I said that the information to be imparted to the public is relatively simple of comprehension. All they need to know is that at every meal the inevitable starch must be supplemented and generously supplemented by foods containing protein and the protectives. They need to know that the foods containing these are milk and milk products, flesh of animals, vegetables and fruit. But these foods are under present conditions expensive and the great bulk of our population will need some form of financial assistance if they are to get enough of them. These foods are pleasant to eat and provided we make them cheaply available little inducement will be needed to get people to partake of them.

We need an army of trained dietitians to supervise dietsaries. They must be available to instruct the poorer groups in the community in the best use they can make of available funds for purchasing the most nutritious foods. They must instruct mothers and the catering of institutions in the methods of preparation of the food for the table, so that as little as possible of the important constituents are lost. It is their duty to keep abreast of the scientific advances in the field of dietetics. At the South African Institute for Medical Research Dr. Goldberg and Dr. Fox and their assistants are working steadily on local foods of every description. By elaborate assay methods they are ascertaining their content of the various vitamins. Their findings are made available in convenient charts which can easily be consulted by dietitians. Similar work is being done elsewhere in the Union and overseas. It is the results of such work with which dietitians must keep abreast if they are to be of greatest service in combating the evil of malnutrition. But let me repeat, it is not necessary for the general public to be worried by such scientific matters. All they need know is which are the protective foods; that they must partake of such foods daily and adequately if they are to keep in good health and in a condition allowing them to contribute their share to the world's work, and to remain out of expensive hospitals. The food research to which I have referred is really only necessary because of the economic problem which one cannot evade. The protective foods are pleasant to eat and adults and children alike would consume enough of them if they were freely available, if there were not the financial barrier. Because there is this financial barrier, and there appears little prospect of its early complete removal, the food scientists must go on working. They must make it possible to construct physiologically satisfactory dietsaries at the minimum cost.

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Some Observations on the State of Nutrition in The Union of South Africa.

By PETER ALLAN, M.D., Ch.B., D.P.H., Secretary for Public Health.

Within recent years attention has to an increasing degree been focused on the question of nutrition as it exists in the human population of the Union. Evolution is not a constant, gradual process, but advances, when they do occur, seem to come in leaps and bounds and within one's lifetime many far-reaching and important developments have taken place, and not least in medical science. Definite causes can now be ascribed to conditions which in days not so very long gone past seemed inexplicable. Nutritional conditions such as diabetes mellitus and pernicious anaemia are now known to be due to deficiencies in certain essential gland products and it is possible to balance up so that the affected person can lead a normal life. In my time as a medical student certain perioral conditions were described as "bread and butter mouths." These conditions are now definitely known to indicate "B complex" deficiency. We did not know anything about vitamins in those days, but we did recognise certain signs without however knowing sufficient of the story to fill in the whole picture. We realised that there was a lack of balance in feeding but did not know where the deficient lack lay. Today we recognise the signs of unbalanced and deficient diets and can place the deficient factor with considerable accuracy.

While advances in medical knowledge were taking place, far-reaching changes were also occurring in the lives of many of the people. South Africa, through force of circumstances, had to accelerate a change which was bound to take place sooner or later, namely, the change from an agricultural and pastoral country to a country highly industrialised. These changes affected particularly the non-European population. Many of the Europeans were descendants of a generation which had seen similar changes in Europe. Conditions a century ago in England, when industrial development was in process of evolution, were definitely even more unsatisfactory than those pertaining in South Africa today.

Within the past 25 years there has been a very marked deterioration in the health of the Bantu people. The Bantu until comparatively recently was not a worker, and this is shown by the fact that the sugar industry in Natal was developed largely by using Indian labour, while it was necessary to import Chinese labour to work in the gold mines. After centuries of a certain type of life the Bantu had evolved a diet which suited him. He lived a life of ease, but nevertheless had to be physically fit as a fighting man. Anyone who could not be an asset in a tribal fight was useless and not likely to be allowed to survive for long. There is no doubt that under the old tribal rule, public health did play a large part. It was crude but effective. When infectious disease broke out the patient and his family were isolated. If the case proved fatal the huts were burned down and the contacts driven out to die or survive and if they did survive to return later. Thus after generations of practically selective breeding where the strongest had survived, the Bantu people were a virile race without much to worry about. The land was not overstocked, food for a sufficient and balanced, though monotonous diet was available and there was no call for sustained and arduous labour. The picture is altogether different today. Many of the Bantu possess no cattle, milk is scarce and often unobtainable, there is no game to provide meat so that today the diet of vast numbers of the Bantu is absolutely unbalanced.

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Extreme poverty results in starvation. Starvation is, however, one form of malnutrition though a very terrible one and one that calls urgently on humanitarian grounds for assuagement. At levels above this extreme degree of poverty malnutrition of a very insidious form but one very damaging to health and efficiency will still occur. Insidious, because the child with a full stomach will not so urgently invoke our charity. But if that stomach is filled with starch, in the form, say, of mealie-meal porridge, to the virtual exclusion of the protective foods, its owner cannot develop a healthy body. In extreme forms such malnutrition manifests itself in obvious deficiency disease such as the scurvy of the Transkei and pellagra of Zululand. But of more social importance than this because not so obvious to the statesman are the general effects in lowering of health and productive efficiency.

The child malnourished because of prolonged deprivation of protective foods, even though such deprivation was never sufficient to cause manifest deficiency disease, cannot build up a body resistant to disease germs and fit to do the work necessary for earning its owner's living and to ensure him a happy and contented position in society.

Our hospitals are filled largely with patients who would not have been there had they been adequately and correctly fed during the early years of their lives. Our new and developing industries will be starved of efficient labourers if we do not immediately set to work to combat the evil of malnutrition among all sections of the community, but particularly among the lowest strata commencing with the African.