

Diet Deficiency in Every Day Life

Daniel Thomas Quigley, M.D.

Omaha, Nebraska

Lecture presented ANS Convention, May 1953

It is a little recognized fact that in all our activities of every day living we are constantly coming in contact with unrecognized deficiency disease which is robbing the individual and the nation of useful physical and mental energy worth untold billions. In addition to this it is causing immeasurable physical and mental pain. It stimulates the sale of tons of opiates and carloads of barbiturates and fills hospital beds, and doctor's waiting rooms. This group of diseases has been known for many years but while it has been oriented in a general way in connection with extreme specific cases as existing in other parts of the world, no intelligent conception of the situation has ever been arrived at in our own country.

In our classic thinking and teaching, we have come to think of deficiency disease under certain names. A certain symptom complex with certain objective findings has come to be called scurvy; another has been named pellagra and others beri-beri and rickets. This is as far as we go. If a patient is found to be suffering from deficiency disease he is supposed to fall into one of these four classes. Sailors on long sea voyages, deprived of fresh fruits and vegetables, have decayed teeth and pus ridden gums and this is called scurvy. The poor whites in the South have mental disease, pains and aches, and gastro enterological symptoms with tender sensitive skin; this is called pellagra. The natives of the orient have severe pains due to a generalized neuritis which is called beri-beri. A disease which presents a wide rounded forehead, evidence of soft bones and teeth, crooked legs and general weakness is called rickets. A diarrheal disease called Sprue is perhaps not an entity such as scurvy, or pellagra or rickets but is a poorly defined mixture of local irritants and mixed dietary etiology.

The objective evidence of nutritional deficiency occur most plainly at the two extremes of the age pattern. In our every day contacts we encountered the child of five or six who is already afflicted with tooth decay and takes her trips to the dentist as a matter of course. Along with this we see the wrinkled old hag of fifty with eye glasses and upper and lower plates, arthritis, a crooked back and a hearing aid. One of the most common mid age complaints are those of the digestive tract, constipation, gall-bladder disease and ulcer. These diseases paint lines and wrinkles of work and worry prematurely

on the muddy gray skin of the person we meet on the street, the neighbor we meet in church, and the one we do business with behind the counter. On the other hand we may see our co-workers and competitors as fatheaded and fat bellied bipeds, deformed and worried and loaded down not only with extra pounds but with frustrations and inhibitions supposed to be due to their extra weight, but really due to the deficient diet which caused the extra weight.

It is a well known and widely accepted fact that in the parts of the world afflicted with pellagra there is a high level of mental disease. There is much evidence to support the conclusion that other diseases related to food deficiency also cripple to some degree the function of the brain. It is a well known fact that the child with rickets is definitely more stupid in his school work than the child who does not have the disease and that the same child will improve in his school work after being given cod liver oil. Food deficiency then hits brains as well as bodies. It injures mental function as well as muscle function.

In America the disease which is most common and the disease which claims the most hospital beds is mental disease. The only causes advanced for such diseases are psychiatric causes. The patient is supposed to have his disease because he is emotionally upset; he is subjected to mental stresses and strains which he cannot endure, therefore he breaks down and becomes a number in a ward in a state hospital. After he is an inmate he is fed on the same deficient diet on which he had been subsisting before he became a hospital patient. The great number of cases of mental disease imposes such a load on the community, the county, and the state, that it becomes necessary for the state to establish not one hospital but many hospitals for such persons. Two years ago the state of Minnesota held a great meeting of officials, University teachers, doctors, and other interested groups to celebrate the opening of four new state asylums for the insane. What a demonstration of childish thinking dominating our chaotic civilization that these millions were spent to provide for a great group of sick people without one voice being raised to plead for prevention or to spread the gospel of education which would do something to keep their citizens out of such institutions.

Reprinted from September 1953 issue of Modern Nutrition

We accept without question the fact that dementia along with diarrhea and dermatitis are diagnostic points in connection with pellagra but when the picture is confused with tooth decay, hyperacid stomach and constipation, with many other signs and symptoms, then confusion exists in the mind of the doctor who is looking for no deficiency disease except that which presents the text book picture. The case is treated on a symptomatic basis and no real service is rendered to the patient except the kind which may yield temporary relief of pain or a sleeping powder to provide temporary rest.

In evaluating the over all deficiency disease in our population we find that the greatest error is in connection with mental disease and our failure to correct such disease by high vitamin, high mineral, high protein foods, along with supplements to make up for past errors. The time factor is most important in dealing with mental disease; the longer the disease has existed the smaller the percentage of good results. Another factor has a bearing on the results: the doctor having no knowledge or training in nutrition is incompetent to prescribe optimum diets or correct and proper vitamin and mineral supplements. The use of worthless "over the counter" drug store synthetics is as far as the average doctors skill goes, and this usually without altering the deficient diet being taken by the patient. Every patient having been discovered to have food errors deserves the best possible food and the best possible supplements.

As correct food as is available alone will not bring a person suffering dietary deficiency back to optimum health for the reason that all available food has been tampered with to such a degree that even the foods in the high vitamin, high mineral, high protein class have been robbed of some vital elements which have to be supplied by supplements and concentrates.

To properly evaluate our status in present day nutrition we should go back to our beginnings. We come into the world and take our food from the breast of a scurvy, pellagra ridden mother. How do we know? If we apply present day knowledge to the average mother we will find that she has lost part or all of her teeth showing scurvy. She has a tendency to constipation or diarrhea, with hemorrhoids, (often bleeding) and other gastro-intestinal disease showing a pellagra complication. She is usually anemic and has neuritis, arthritic back pains and other evidences of focal infections. If we use transillumination we can find many such persons carrying infected sinuses, along with tonsil disease and enlarged tender, infected glands in the neck. A little pressure in the back of the neck will elicit pain in the fascia at the base of the skull and this is the course

of the headaches from which many of these women suffer. This is the diseased mother from which our subject baby is delivered. He may get a poor grade of milk or he may get from his mother none at all and therefore he is put on artificial feeding out of a can which is diluted with water and sterilized by heat. The heat robs the food of valuable vitamins and enzymes but somehow the baby continues to live in a subnormal sort of way. In some cases the child is put on canned food and this is touted as the best ever because not only is it sterilized by heat but also it is strained to remove all roughage. Roughage is Nature's normal stomach and bowel stimulant. It sets in motion all the machinery along the gastrointestinal canal. In the mouth it starts physiological and mechanical forces to work in the stomach. It starts secretion of digestive juices and peristaltic action to keep the mass moving along, chemically treated in turn by pepsin, by bile, by insulin, and by many other factors each in proper sequence until at last it is in the receptacle called the colon where the mechanical action of the roughage, scratching the mucus membrane of the gut, brings out a reflex contraction which empties the debris as fecal matter. In all this very nicely timed and chemically perfect procedure, nothing is more important than the thing we call roughage. In the first few weeks of life the curd in the milk is sufficient but as the demand for more and different foods develops then more and more there is a physiological reason for more and more roughage to meet the requirements of living. Our digestive canal has been conditioned to food roughage through hundreds and thousands of years of evolution and it is a sad commentary on medical science of today that we allow the advertising of baby foods that put out as one desirable feature of the dead mass that it has been strained and all roughage has been removed; this, when every cell in the baby's guts is crying aloud for roughage, that natures requirements may be fulfilled and that the stage be not set for invalid adulthood. In my own experience, the most common symptom which brings the baby to the doctor is constipation and the constipation is due to two things; a lack of roughage and a lack of vitamins. Cooked, sterilized foods are vitamin deficient. As a result of this, the nerves leading to and from the gut are half dead. Strained foods rob the gastrointestinal canal of it's main mechanical stimulant. The result is stagnation and in every living thing and in every living part, stagnation means death. In adult life the most common symptom which afflicts the human animal is constipation and the reason is the same as with the small children, the necessary food

requirement which we call roughage is missing and the function of the sympathetic nerves is reduced on account of lack of proper nutritional elements. In summing up nutritional requirements we should consider roughage equally as important as vitamins and minerals.

Deficiencies in every day life then start in with the babies but it is shown in a big way in the grade school period. If we visit the kindergarten, one of the first things that we note is that a large number of the children are wearing glasses, and some are wearing hearing aids. The ears have been damaged by infections coming up from the throat, the eyes have been injured by a lack of fat soluble vitamins. Both are curable by correct diet even the unfortunate throat cases that have been sentenced to submit to our major malpractice "tonsillectomy."

In our experience covering sixteen years, 80% of the adults and children who have been advised to have tonsils removed will recover when put on a high vitamin, high, mineral, high protein diet with proper supplements to make up in some degree for past deficiencies. In those who do not make a satisfactory recovery, the application of radium or high voltage x-ray to the angles of the jaw to thoroughly irradiate the tonsil and throat gland area will prove satisfactory. Recurrence may occur, of course, if the patient returns to a white flour, sugar, canned goods diet, but this also occurs after tonsillectomy. The wound always heals by granulation, in the presence of infection, and the attenuated forms of germ life are buried in the thick, heavy scar, each to serve as a lifetime focus of infection to slowly and consistently distribute disease to all organs and tissues. In the University of Rochester, New York an investigation made several years ago by Dr. A. D. Kaiser disclosed the fact that there were more coughs, colds, bronchial disease and sinus infections following tonsil operations that in a similar group who had been advised to have the operation but who did not submit to it. The conclusion in the tonsil group is that the disease is a deficiency disease and that all but a small percentage of these cases are curable by a lifetime return to a normal diet which is a high vitamin, high mineral, high protein diet. Tonsil disease is a mixture of pellagra, scurvy, and perhaps beri-beri as neuritis is a common symptom in children who have diseased tonsils.

Most of the chronic disease symptomatology which in America we call "old age" is simply composite deficiency disease; the arterial thickening, the coronary blocking, the sick stomach lining commonly called hyperacidity or ulcer, the migraine, the rheumatic pains and aches and many of the allergies are all to be found

in the moronic masses who eat what is set before them without taking thought as to whether it is good or evil, and when disease strikes, look only for some magic cure, some wonder drug or some psychiatric hocus pocus connected with a pencil and pad at the head of a couch.

All living things are in a constant struggle for existence, whether their form be animal or vegetable. Only by the functioning of a little understood thing called "resistance" are we enabled to live. One thing in this connection is assured and that is that resistance to infections varies in different persons and varies from day to day in the same person. In well fed, well nourished persons it is high and in badly fed persons it is relatively low. A small irritation in a badly fed person may get to be a chronic low grade infection, the same thing in a well fed person will heal and the particular incident is closed. The raw swollen edge of an eyelid, the chronic sore lips, the long continued hoarse voice, the torn and neglected cervix, these and many others all represent old chronic infections which may lead to unrestrained cell proliferation called cancer in the badly fed person but which promptly heal with a satisfactory scar in the well fed person. In the breast a milk duct may receive invading microorganisms through the nipple by continuity of surface, swelling of the mucus membrane results in obstruction and this goes on to round cell infiltration (chronic low grade infection). The results may be tumor formation in the relatively weak deficient person but the germ invasion is quickly brought under control in one who is properly nourished.

The person who suffers from "indigestion" has a hyperacid stomach and this is because the mucus membrane lining in his stomach is diseased and is on a "hair trigger." Small stimuli which in a normal stomach would produce no reaction now cause an outpouring of acid. The excess acid is violently expelled and where the jet of acid strikes the wall of the upper duodenum, an ulcer develops. Under alkaline treatment and bed rest the ulcer heals but in a few months it recurs and it all has to be done over again. In a goodly number of victims a part of the ulcer extends itself beyond the pylorus and becomes exposed to the acid of the stomach. The combination of circumstances is now set for the development of cancer. Seventy-six per cent of all stomach cancers are found in this anatomical location. It should be remembered that many cases of death by stomach cancer have spread so far and distorted the anatomy so much that it is impossible to locate the exact point of origin.

In the clinical study of cancer it is found that there are four kinds of irrita-

tion that may produce the proper setting for the disease and these may be single or combined. They are: 1. Mechanical irritation. 2. Chemical irritation. 3. Thermal irritation. 4. Infection. In the actual working out of the change from normal cell life to anarchy in cell life what happens is that one or more of the first three predisposing causes mentioned sets the stage and opens the gateway for the fourth: infection, which actually causes the wild growth of new cells. In primary cancer round cell infiltration is always found in the diseased area showing that infection always preceded cell proliferation.

In a paper read before the American Radium Society several years ago, I called attention to the fact that patients who were undergoing radiation treatment attained results in some degree in relation to the state of nutrition of the individual. In cases of local epithelial neoplasms which are ordinarily cured by irradiation it was shown that there was a better outcome as to cure and freedom from recurrence in the well nourished patients. From a group of 2,707 patients included in that report, we deduced that the state of nutrition of the individual has much to do with the chances for cure and that it also has something to do with the person acquiring the disease. The connection seemed to be through the interposition of various forms of chronic low grade infections engrafted in areas subjected to local trauma which was of such a nature as to carry repeated insults to the tissues. It was shown that the repeated insults to tissue interfered with the epithelial wall of protection allowing the ingress of microorganisms which acted as cell irritants, serving to call out the urge to reproduce in a lawless and unlimited way. In the **poorly nourished** individual the battle between bodily defense and invading microorganisms results in a quick defeat of the bodily forces with the patient dying of infection or the contest is a draw, neither side gaining a decisive victory. This kind of a long drawn out battle often results in cancer. If the body forces are vigorous enough to quickly kill invading microorganisms, the soil for cancer growth has no chance to form for cancer always grows on previously diseased and infected tissues.

In checking slides on several long drawn out cases of cancer of the breast and lip and comparing them with slides of benign, precancerous ulcers of the lip and early lip cancer it was found that the early ulcer had a heavy growth of round cell infiltration and this persisted in the early cancer, thinning out before the advancing and invading cancer until only scattered islands were found. In a lip ulcer which becomes cancer, bodily resistance was not enough

to check the invader in the beginning, bodily resistance lost ground continually as the disease advanced, but in every case some round cell islands and walls of defense persisted to the end.

On account of the fact that the average person has been living for many years on mineral and diet deficiencies and on account of the fact that these diet deficiencies strike the gastrointestinal tract, and render absorption less active, the remedial agents to combat infections must be given in at least twice the quantities that would be required for maintenance had the person never been on a deficient diet.

As the normal person needs a high vitamin, high mineral diet for optimum life work and maintenance, it follows that any introduction of non-mineral, non-vitamin foods reduces life and resistance in that particular person in just the degree that such devitalized foods are eaten. As the best possible food in the best quantities cannot make up for the years the patient has been starved for vitamins and minerals, it is only by supplying concentrates that the optimum can be regained. All food deficiencies are multiple deficiencies, so multiple concentrates are used. Those supplied commercially are nearly all deficient in the complete vitamin B complex.

Believing that a study of the diets of a number of persons suffering from various kinds of tumor and cancer might be valuable, an inquiry was started in 1922 and continued through 1932. The number of patients involved was 2,707. Inquiry was made as to food habits for as far back as the patient could remember and the relative amounts of various food noted. The consumption of bread, sugar, meat, dairy products, eggs, fruits, vegetables, fats, and salts were noted. Later these are divided into two classes—vitamin and mineral containing foods and deficient foods.

We placed in the deficient class, sugar and all white flour products. In the vitamin and mineral containing foods we placed, milk, cheese, butter, eggs, raw fruits, vegetables, and whole grain products, fresh fish, oysters and other sea foods. The idea back of the inquiry came as a result of noting that patients treated at the University Hospital where all patients were paupers and therefore when released from the hospital did not have the means to provide themselves with good foods, did not do as well as private patients and had a larger percentage of recurrences. It was assumed then that good nutrition had something to do with the efficiency of the radiation treatment and also in protecting the patient from regrowth of his neoplasm. The word regrowth is used instead of recurrence because in many cases it was evident that a completely new growth oc-

curred as a result of constitutional etiologic factors not having been removed.

In checking our group of approximately 3,000 cases, two things at once became plainly evident, that all were on more or less deficient diets and that none had tumor or cancer as a single disease. The main deficiencies were in calcium, vitamins, and iodine and roughage, the concurrent diseases were those of the heart and blood vessels, the joints and the gastrointestinal tract, with a few having cataracts and between 5 and 6 per cent diabetes. Obesity was a factor in over 30 per cent of the cases, 6 women with cancer of the uterus each weighed over 300 pounds, one of the group attaining a weight of 365 pounds. Many had been operated on for gallbladder disease and a large percentage were suffering occasional gallbladder colic. Ninety-five per cent suffered from constipation or some form of stomach or intestinal disease. Some of the diets taken by these patients were almost completely composed of refined carbohydrates, an occasional salad being the only normal food eaten. The disease producing carbohydrate elements were white bread, cake, cookies, biscuits, pancakes and rolls, deserts and candies. For the whole group the percentage of vitamin-containing foods fell as low in some cases as 3 per cent and in none did it rise above 25 per cent. The average for the whole group was 8.5 per cent. There were no cases of extreme single vitamin deficiencies, such as well-marked scurvy, beri-beri, or pellagra, but a large number showed the effects of rickets.

The food consumed showed universal deficiencies in calcium and iodine and iron. Apart from the examination of the foods consumed, vitamin deficiencies were shown by certain signs and symptoms. A lack of vitamin A was shown by susceptibility to colds, bronchial and sinus infections, which was bettered by a more liberal supply of whole milk, cream, butter or leafy vegetables. Vitamin B deficiency was shown by the large number of cases of constipation amenable to treatment by yeast, with concurrent increase in appetite, and the large number of mothers who failed in milk supply for their babies but who furnished sufficient milk when given a quarter to a half ounce of ordinary yeast a day. Vitamin C deficiencies were shown to be common in this group by capillary fragility and the almost universal prevalence of tooth and gum disease which was materially improved by administering a pound of orange or banana or a half pound of raw cabbage a day. Vitamin D deficiencies were shown by the evidences of rickets and tuberculosis, as

checked by physical and roentgen examinations of the chest.

Our patients then showed deficiencies in vitamins and minerals and also a deficiency in roughage. These patients and their diets represented a cross section of the mid-west agricultural region, but the disease producing "white flour, and sugar diet" is more or less common to all civilized countries.

The "protective foods" function by conferring resistance against infections. A lack of protective foods favors infections. Cancer and diabetes have increased as the consumption of sugar and other refined carbohydrates has increased because these refined, high calorie foods have crowded out the protective foods.

Because of the lack of roughage which through many generations has functioned as the main stimulant to intestinal glands and intestinal peristalsis, atrophy and atony with consequent infective invasion of intestinal mucous membrane has occurred. Returning to an approximately normal roughage intake is in some cases somewhat unpleasant, but it is important in rehabilitating these neurotic, scurvy-ridden, sugar-saturated, chronically infected patients.

In conclusion we may state that deficient diet has an etiological relation to many chronic diseases and this is proven by the fact that improvement or recovery may be brought about by correct diet with supplements. In some diseases involving anatomical change such as neoplastic and blood vessel diseases prevention rather than cure is all that may be expected. In a medical practice extending over fifty years we have never seen a case of high blood pressure, stomach ulcer or cancer in a well fed person. Mental disease as well as physical disease may be the result of diet deficiency. Arthritis and neuritis are due to distribution of attenuated disease organisms from foci of infection. Such foci do not exist in the well fed as resistance is high and local infections heal. Diabetes which is the result of chronic infection of the pancreas or is a congenital condition in which the pancreas is too small, is perhaps the most completely neglected disease in the list of deficiency diseases. The doctor strikes a balance between insulin and carbohydrate, sugar disappears from the urine and everything is considered to be all right, but in the prescribed diet lists as we see them there is no provision whatever for vitamins or minerals or roughage and many such cases go on to blindness, neuritis, threatening gangrene, many of which we are able to

cure by adding the life giving vitamins and minerals to the diets already prescribed and using natural foods instead of milled and processed foods.

Deficiency disease may take many forms and may strike any part of the body either in an objective or subjective way. As an example of the former we may cite a middle aged attorney who was born without hair. He did not have even an eyelash or eyebrow; no beard, no pubic hair, no under arm hair, and no hair on his head. He had a good practice but spent much of his earnings travelling about Europe and America trying to find some magic application or medicine which would grow hair. Since the absence of hair was congenital we did not expect much from treatment. We had treated many other cases of baldness by dietary methods with good results but this was different as we did not know whether he had any hair roots in his skin. He was given the usual instruction and diet list with supplements with the result that in six months he had a good growth of hair in every place where he should have it. Several years have passed and he still has normal hair and his great satisfaction is that now he can shave.

As a concrete example on the subjective side is the case of a 29 year old girl who was forced to give up her occupation as a school teacher on account of migraine. Her medical advisers believing it to be connected with sex hormones, removed a slightly cystic right ovary. No improvement was noted but attacks became more frequent and more severe so as gastric

symptoms appeared, her gall bladder was removed, then at intervals her appendix, her teeth and her tonsils were taken out, her remaining ovary was removed and later a hysterectomy done. Finally a brain surgeon was called in and the left lobe of the brain was exposed and examined. No improvement was noted in the migraine headaches but in each operation it was thought that disease in that particular organ was the main etiological factor and that the operation would cure the disease. After listening to the story I asked "Did any of the many doctors you have had ever ask you about what you eat or did they suggest anything in the way of diet?" The answer was "No, not one."

This patient was put on a high vitamin, high mineral, high protein diet with supplements with the result that in a month her attacks were reduced from one a day to one a week and in the second month she had only one attack, after that she had no more.

Every patient should be examined as to his dietary intake. If this is done and proper diet and supplements prescribed, it will be found that many objective as well as subjective disease conditions will improve or cease to exist. The principal disease producing foods are white flour, sugar and canned foods. Enriched flour is no better than nonenriched as 25 nutritional elements are removed and only four are put back in. Also lacking is the wheat bran, nature's best all round intestinal stimulant.

Reprint No. 63

Lee Foundation for Nutritional Research
Milwaukee 3, Wisconsin