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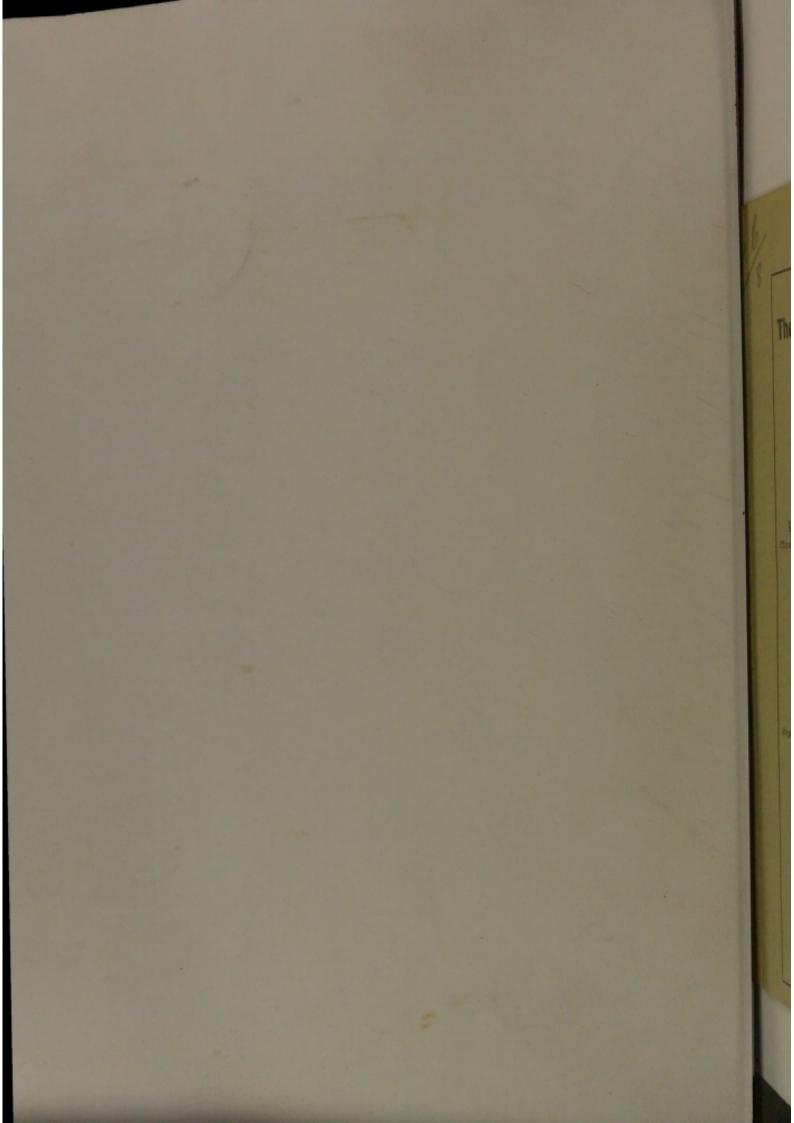
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With the Complements

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NEW YORK CITY.

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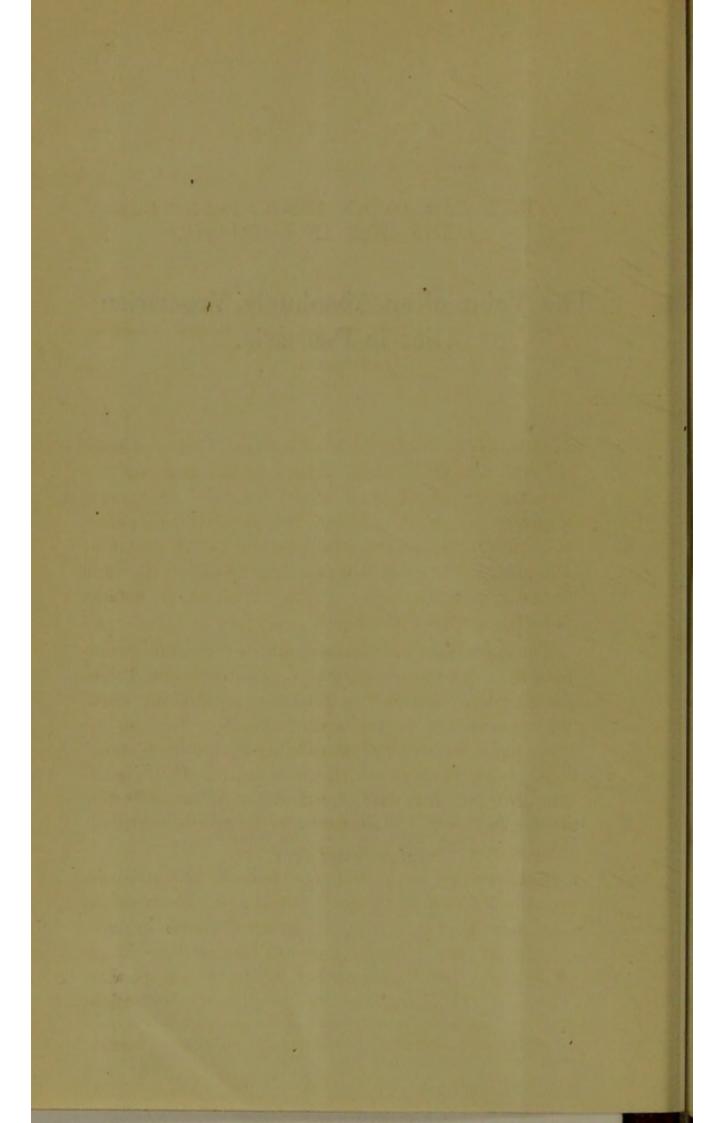


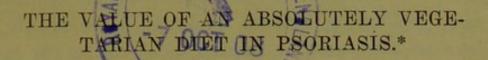
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Although psoriasis is one of the most clearly defined and well recognized of all diseases of the skin, and has been the subject of much study, clinically and microscopically, we are still in the dark as to its true nature and etiology; moreover, good observers are by no means all agreed as to whether it is a local disease of the skin or one of internal origin. Certain it is that no definite cause has yet been established.

The appearance and character of the individual lesions have time and again suggested a parasitic origin, but as yet no micro-organism has been demonstrated by which the eruption can be produced artificially; nor, on the other hand, has any one constitutional state been shown to be always productive of the eruption. Certain observers have, therefore, characterized it as a local affection of the skin itself, a misbehavior of its cellular elements, even as epithelioma is recognized as such.

But there are many facts and features of the disease which point to its not being a purely local disease of the skin, but show that it is due to some underlying constitutional state or condition which at one time or another favors the development of the lesions on the skin. Not to lay too much stress on the clinical observations

<sup>\*</sup> Read before the Sixth International Dermatological Congress, New York, Sept. 9, 1907.

of many in regard to the connection of psoriasis with rheumatism and gout, hereditary or acquired, or the appearance of the eruption after vaccination, the exanthemata, debilitating illnesses, prolonged lactation, etc., there are some peculiar features which can not be ignored. Thus, the intermittent character of the eruption, often without treatment, shows some change in the individual which, even on the theory of a microbic origin of the separate lesions, causes the omnipresent microorganisms to have effect. Also the well-known proclivity of the eruption to appear at certain seasons of the year, at which we know that the diet and mode of life vary greatly, points to a systemic change or modification of the metabolic processes favoring the eruption.

One of the most striking facts in regard to the production of the eruption of psoriasis is that relating to the subject of this paper. Almost twenty years ago, at the First International Dermatological Congress,1 held in Paris in 1889, in a "Clinical Study and Analysis of 1,000 Cases of Psoriasis," I stated that "excessive meateating will also increase this disease, which will frequently yield with much greater rapidity, under the same treatment as before, when the amount of meat taken is lessened, or when it is entirely cut off," as I had observed in private cases for some years. In 1895, from a clinical study of 366 cases of psoriasis in private practice,2 I made the same statement, adding "I have a considerable number of psoriatic patients who have taken no meat, or only a very little fish and white meat of poultry, with the result of being free from the eruption for a long period of time."

In 1896 I brought the subject of "The Restriction of Meat in the Treatment of Psoriasis" before the Third

Trans. First Internat. Cong. Dermatol. and Syph., Paris, 1889,
 P. 892.
 Trans. Med. Soc. State of N. Y., 1895, p. 151.

International Congress of Dermatology,3 and stated that:

Free indulgence in meat is very apt to aggravate greatly the eruption of psoriasis, whereas its restriction, especially the avoidance of beef and mutton, including extracts, strong soups, etc., will aid materially in its removal; furthermore, their continued avoidance will; I believe, contribute very greatly to a removal of the cause of the eruption, and assist in effecting a permanent cure of the disease. . . I have careful notes of many cases where the improvement has been most marked as soon as the stringent diet has been rigidly observed, and also notes concerning many patients who have for several years maintained the same, with the most manifest gain as regard to a recurrence of the eruption.

Following up the matter since that time, I finally stated last year<sup>4</sup> (1906) at the American Medical Association, in a study of 2,100 cases of psoriasis, over 500 of which were seen in private practice, that:

For many years I have placed numerous psoriasis patients on a strictly vegetarian diet with most excellent results; and these results are corroborated by the fact that now and again, when one has broken through the regulations, he or she has reported a recurrence of the eruption. I make the diet absolutely vegetarian, not even allowing eggs or fish, or milk as a beverage with eating, and sometimes I have even excluded coffee and tea with advantage, and of course all distilled and fermented drinks.

### RELATION OF VEGETARIAN DIET TO PSORIASIS.

The bearing of the relation of an absolutely vegetarian diet to psoriasis is understandable if one watches intelligent patients in private practice, over a number of years, with careful and repeated note-taking and study of their metabolic processes; especially when this latter is effected by means of frequent and complete quantitative analysis of the urine in all possible aspects, While psoriatic patients are commonly considered to be in perfect health they will constantly be found to ex-

<sup>3.</sup> Trans. Third Internat. Cong. of Dermatol., London, 1896, p. 734.

<sup>4.</sup> THE JOURNAL A. M. A., Nov. 17, 1906.

hibit assimilative disturbances, especially along the line of faulty nitrogenous metabolism and diminished (or at times greatly increased) elimination of the purin products. The variations which may be observed in the urine from time to time are most striking, often varying in the same patient from a limpid, pale secretion to one of a very high specific gravity; in one instance this reached 1.040 (no sugar), and an acidity, as measured volumetrically, of almost four times the normal, with 4.5 per cent. of urea, over double the normal amount.

Time does not permit of any elaborate consideration of the physiologic chemistry of nitrogenous metabolism as affected by a purely vegetable diet, especially as this is a practical paper based on clinical facts, but very brief mention may be made of the scientific basis for my observations.

It has been shown that the urinary discharge of uric acid does not by any means correspond with the amount of ordinary nitrogenous food ingested, but that:5

- 1. Uric acid is formed in the body by the disintegration of the albuminous substances of the tissues, especially of the nuclein or nucleins.
- 2. The excretion of uric acid becomes increased or diminished by all factors (diseases, medicines, poisons, etc.) which give rise to a more rapid or slower disintegration of the cellular elements of the body, and especially of the leucocytes.

Taylor<sup>6</sup> has demonstrated that a diet rich in nucleins, such as sweetbread, more than quadrupled the excretion of uric acid, while a heavy proteid diet hardly increased it at all; and, moreover, under an exclusively vegetable diet it was still above that found in a normal mixed diet, without coffee, while the addition of coffee more than doubled the output of uric acid. Under a carbonaceous, nitrogen-free diet it fell to 78 per cent. of normal. It is not, therefore, the much discussed element

<sup>5.</sup> Levison: Uric Acid Diathesis, etc., Engl. translat., London, 1894.

<sup>6.</sup> Amer. Jour. Med. Sci., August 1899, cxviii, p. 141.

of uric acid which we have to consider, but rather the entire nitrogenous metabolism.

In the long and carefully conducted experiments of Taylor he found that under a heavy proteid diet the total excretion of nitrogen was increased almost 50 per cent., and the amount of urea passed was also almost 50 per cent. above that excreted under a normal diet. Under a vegetable diet, however, the nitrogen eliminated was reduced almost 50 per cent., as was also the urea; and finally, on a purely carbonaceous, non-nitrogenous diet, the nitrogen output and the urea were not one-quarter that passed under normal diet, with or without coffee—the latter was found to more than double both the amount of the purin bases and the uric acid.

It is now pretty well established that in health the daily excretion of uric acid is a fairly constant quantity, depending on the formation and destruction of leucocytes; also that it varies in certain diseased states, and may be increased by anything which increases the leucocytes in the blood, while in leucocythemia it has been found eight times the normal amount. Foods containing large amounts of nuclein also augment it, although ordinary proteids do not, except as they increase the leucocytes. In other words, the production of uric acid is not much affected by changes in diet.

The matter is very different, however, in regard to other outputs of nitrogen, urea, etc., of which it is stated that 73 per cent. of that ingested escapes by the kidneys. The amount of nitrogen in the urine is found to vary very definitely according to the amount of nitrogenous food taken, as has been shown by many observers.

#### THE URINE AS AN INDEX.

While the studies which have been made on the urine of patients with various diseases of the skin do not as yet throw the light which we could desire on the etiology of such maladies, we know enough to show that alterations in the urine, of important character, are constantly found in connection with psoriasis and some other skin affections. Among hundreds of carefully made volumetric analyses I have found in the urine of untreated psoriatic patients a greater acidity (two, three or even four times the normal), a higher specific gravity (1.030 to 1.040 being not uncommon), and increased urea (even to double the normal amount), evidences of faulty nitrogenous metabolism, or, rather, of an excessive intake of highly nitrogenized foods; as yet we know very little as to the effect of faulty metabolism of carbonace ous elements on the urine.

Knowing the effects attributed to faulty nitrogenous metabolism on other structures of the body, it is natural to suppose that prolonged errors of this nature would produce some injurious effect on the skin; and working on this hypothesis for many years I am convinced by clinical observation that psoriasis has its foundation in errors in regard to the passage of nitrogenous elements into and out of the body. How far back in the system this erroneous nitrogenous metabolism extends can not be stated, for the urine is only the index as to how more occult processes are carried out. Whether Haig's view as to the retention of uric acid in the system is correct, or whether by imperfect oxidation in the tissues of the body other irritating compounds of nitrogen are formed, need not particularly concern us; the main fact to recognize is that, probably from improper diet and other causes, imperfect anabolism and catabolism of the proteids take place, and in some way either excite the skin to wrong action or render it susceptible to other causes of disease.

It would lead us still further away from the practical purpose of this paper if we attempted at all to trace the causes or methods by which this faulty nitrogenous metabolism takes place, for, indeed, a good deal of it is involved in mystery. We know that the life processes of

the body are carried on by oxidation, and it is quite understandable how, by a lowering of the oxygenating powers of the system, imperfect oxidation of the proteid molecules occurs. While this process of oxidation is going on all the time in every part of the organism, it is, of course, the blood which is the active agent, both in furnishing the requisite oxygen, in various combinations, and in carrying away in turn the more or less imperfectly oxydized products of catabolism. It must be remembered, too, that it is from the arterial blood current that the kidneys seize such waste products as they may be able to handle. It is recognized also that this blood current represents the results of the final efforts of many vital organs, each contributing its quota of result in the interchange of external elements with vital tissues; and also the removal of effete or waste primary elements, in various combinations, after they have accomplished their purpose in the organism.

### OTHER TREATMENT NECESSARY.

While I am strongly advocating an absolutely vegetarian diet in psoriasis, therefore, I wish emphatically to declare that this is only one element in the treatment of the disease—although perhaps the most important one. In order to obtain the best results there is constant need of careful medical supervision in order to secure the proper working of the economy in all directions, and internal and external medication are called for as necessity arises.

I know that with all that has been said in regard to the absolute avoidance of meat, many are ready to reply that some years ago exactly the opposite plan of treatment was advocated, namely, an exclusive or almost exclusive meat diet in psoriasis; this fact has been so frequently alluded to in text-books and current literature that it is necessary to devote a few words to it.

EXCLUSIVE MEAT DIET IN PSORIASIS.

In 1867 Gustav Passavant of Frankfort, Germany, in

an open letter to Prof. F. V. Hebra, reported his own case of psoriasis of twenty-five years standing. After trying for many years all known external and internal treatment, with but temporary benefit, he states that he was soon free of psoriasis and from an accompanying catarrh, after entering on an almost absolute meat diet, including soups, pork, fats, cod liver oil, milk, and bacon, and practically no vegetables or bread. He advised against any amount of vegetables, wine, beer, coffee and tea or spices. He cites one case of squamous eczema also relieved by this treatment.

There are a number of points in connection with this brief report which quite invalidate any importance which might be attached to it. First, Dr. Passavant does not mention if possibly he used any treatment, external or internal, in connection with the diet; then he does not state if the improvement in his condition lasted any length of time, or if he had any return to the eruption, either under the diet or without it. He refers also to only one other case, and that of eczema, which was benefited by this plan of treatment.

Finally, Hebra,<sup>8</sup> to whom Dr. Passavant addressed his open letter, ridiculed the claim made, some years after its publication, and, as far as I can find, there has been no subsequent corroboration in literature of the correctness of the claims of Passavant that psoriasis can be cured by a meat diet. Surely if there were any truth in it some proof would be forthcoming in the forty years which have elapsed since its publication. On the other hand, there are abundant, though brief, allusions in literature in regard to the injurious effect of excessive meat-eating in psoriasis.

More attention has been given to this matter than is perhaps warranted, but as the statement of Passavant is so often called up whenever the subject of diet in psoria-

Archiv. f. Heilkunde, 1867, p. 251.
 Lehrb. d. Hautkrankheit., 1874, i, p. 352.

sis is referred to, it is thought worth while to analyze the subject and refute the error, once for all. My personal experience in regard to the effect of diet on psoriasis extends over more than twenty years, as has been already stated.

## EXPERIENCE WITH VEGETARIAN TREATMENT.

In analyzing the notes of 565 cases of psoriasis observed in private practice I find that about one-half of the cases were seen in consultation, or for but a short period, and, of course, many others only at intervals. But of those cases which were observed long and frequently enough to understand their true condition and observe the results of treatment over a long period, I find that there were forty in whom a more or less vegetarian diet was observed, and from a dozen to twenty patients who carried it out strictly, and from whom conclusions can be drawn. The limits of this paper do not admit of the presentation of the histories of individual cases.

During the earlier years the restriction was less severe and related mainly to the abstinence from beef and mutton; and even these patients noticed a marked change in the character and severity of the eruption, and often attributed a relapse to indulgence in the prohibited articles.

But of late years I have made the diet much more strict, excluding entirely all animal food, even strong soups, poultry, eggs and fish; and I have had a number of patients for years on an absolutely vegetarian diet, only allowing butter, but not milk as a beverage, and in some cases I have excluded tea and coffee.

The effect of this cutting off the supply of animal nitrogenous food has been very remarkable and striking in many instances (a considerable amount of nitrogen is still supplied by certain vegetables, as the legumes and oatmeal). Patients continually notice the change in the color and character of the eruption, it paling and becoming less scaly, and even entirely disappearing in some weeks, with absolutely no local treatment.

In a number of instances this diet has been given to patients who had long been under my care, even for years previously, and the patients and myself have been well able to judge of the result of this radical change in the mode of life; and we have watched with great interest the often rapid improvement in the eruption, under precisely the same treatment as before, except that I commonly suspend local measures.

This treatment has been given to patients at all periods of life, from 9 to 78 years of age, and, as has been stated, has been carried out with varying degrees of fidelity. The note has been repeatedly made that when there has been a neglect of the dietary element there has been a recurrence of the eruption, which again yielded rapidly when stringent measures were enforced.

On the other hand, there have been a number of patients who have faithfully pursued this plan of treatment, in whom a long existing psoriasis has remained absent and who, having become accustomed to the diet, say that they have lost the desire for animal food and will not touch it again.

This plan of treatment has been tried on some of my patients in the New York Skin and Cancer Hospital with evident benefit, but naturally it is very difficult to carry out effectually such a measure for a long time in this class of patients. In one very striking case, however, in a young woman aged 33, who had been repeatedly in the hospital with most aggravated psoriasis, of many years' duration, the eruption, which covered almost the entire body and assumed a general exfoliative condition, disappeared entirely under an absolutely vegetarian diet and large doses of nitric acid, with no local treatment. She remained afterward many months in the hospital free from eruption, and when she went out she was seen occasionally, still faithful to treatment and free from eruption.

The oldest patient, a man 78 years of age, who had severe psoriasis all his life and had been some years under observation, showed a very remarkable improvement as soon as he was persuaded to follow this diet, some five months ago, and old thickened patches have almost disappeared.

It is not always easy to convince patients of the value of this treatment, and to secure that they shall carry out an absolute vegetarian diet with perfect strictness for a sufficient length of time or permanently; and it will often require no little insistence, as well as intelligent aid on the part of the physician, in order to effect the result desired. But after an experience with it for twenty years I know that it can be effectually accomplished, at least in a certain proportion of intelligent patients in private practice, and I have a number who are really enthusiastic on the subject and have been so for many years. If from carelessness or necessary causes, as in traveling, visiting, etc., the rules of diet are transgressed and there should be some little return of the eruption, this has yielded to a very strict observance of the dietary restrictions, with other proper treatment, better than occurs with the latter alone.

Little need be said in regard to the general subject of a vegetarian diet, for abundant experience has shown its value under many conditions of health and disease. The opinion is, I believe, gaining ground both among the medical profession and the laity that far too much meat is eaten by those who can get it; and in London, certainly, the practice of vegetarianism is increasing, as is evidenced by the large number of well-patronized restaurants which make this a specialty; these are also increasing in New York City.

In my experience patients have felt remarkably well, when this was rightly directed and carried out, and in numerous instances I have found distinct and steady gain in weight in the spare, and loss of weight in the obese, when tested repeatedly on the same scales.

Finally I wish to emphasize the fact that while an absolutely vegetarian diet is advocated in psoriasis, I believe that it has its limitations, and must be directed with care and intelligence; but that in proper cases it can control the eruption and prevent its recurrence I am confident. I wish also again to make clear that patients with this eruption at times will require in addition the most varied treatment, internal and external, in order to accomplish the quickest and best results. How internal remedies act can not yet be fully stated, but in the light of our present study they probably have their action in improving the metabolism of nitrogenous substances.

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