

5
INFLUENCES MODIFYING THE OCCURRENCE OF
CERTAIN NERVOUS AFFECTIONS IN THE
UNITED STATES.¹

BY GUY HINSDALE, M.D.,

Lecturer on Climatology in the University of Pennsylvania.

It is a prevalent opinion that nervous diseases have been during recent years much more prevalent in the United States than formerly. The increasing physical and mental strain incident to the conditions of modern life is a well-recognized factor in the production of these diseases, and many think that our climate has much to do in developing an intense and over-eager activity, and that it renders work somewhat more trying than in other countries.

Just how far this is true it is difficult to state accurately, and it is not always possible to secure the necessary data, or, when they are presented in the form of statistics and emanating from official sources, they must be accepted, if at all, with great caution. In a long series of years the changes which occur in the nomenclature of vital statistics are very great, not to speak of the looseness which prevails even in our older states in recording the fact of death and its cause. In the recent census no effort has been made to give for all the states the number of deaths from individual forms of disease, but in those states and cities in which there has been a satisfactory registration this has been done. Unfortunately in Pennsylvania, with the exception of a few large cities, the system of registration of vital statistics is so imperfect, and in many counties so absolutely ignored that studies of the comparative prevalence of disease in various portions of the State are not possible. It is high time that Pennsylvania be put on an equality with other States in this regard.

¹Read at Philadelphia Neurological Society, February 22, 1892.

Trans. Med. & Surg. Assoc. 1892

If we accept government statistics we will not find any very alarming increase in the number of deaths from nervous disorders. The census reports are as follows:

1850, 23,668 deaths from nervous disease, or 1 death to 980 living persons
1860, 40,216 " " " " " 1 " to 782 " "
1870, 60,455 " " " " " 1 " to 638 " "
1880, 81,905 " " " " " 1 " to 512 " "

It was at one time frequently stated that there was an apparent increase of nervous disease in certain cities of the United States of which Chicago is a type. But whatever differences may be apparent this discrepancy may be explained by the variables which must be taken into account in any statistical investigation. For example in the newer cities as a system of registration of all vital statistics is perfected the results are more and more comparable with those reported from older cities. It should be borne in mind in making such comparisons that the population of western cities, and especially the newer ones, is made up of quite different elements from those composing a city founded over two hundred years ago. In new cities there are relatively far more adults and fewer children than in New York or Philadelphia. As time passes, however, these differences undergo correction.

If we compare the prevalence of such a disease as apoplexy in the East with its prevalence in the West we find that there is more than twice as much apoplexy in New York as in Chicago; for in 1880, in 10,000 of population, 2.08 died of that disease in Chicago, while 4.93 died in New York.

It is quite possible that various causes have combined to produce some increase in nervous diseases in recent years, but proof is lacking to show that they have increased to anything like the extent frequently asserted. The accumulation of wealth in cities is often attended by great mental excitement, and renders possible excesses of food and drink which readily account for the slight excess of deaths from apoplexy in towns as compared with rural districts. To afford an explanation of the low rate from this disease in Chicago we must remember that, in general, the active men of

that city are still young men, or in middle life, and that the older men have not led lives of ease and self-indulgence.

It is also commonly believed that insanity is on the increase. Fortunately we are able to show that, on the contrary, in Pennsylvania at least, there has been an actual decrease in insanity during the last ten years. Previous to this period we cannot speak with accuracy, for it is only within recent years that the State has asserted herself in seeking out these unfortunates, compelling their proper care and providing accommodations at public expense for this large class. Many such persons were kept at home and the nature of their disease suppressed as far as possible.

* In 1880 there was one insane to every 615 persons
 " 1890 " " " " " " " 620 "

The actual decrease amounts to one four-hundredth of one *per cent.* This shows that the mental state of the citizens of this commonwealth at least is not deteriorating. The accuracy of the diagnosis of insanity is not modified by changes of nomenclature, differences of opinion, and other causes of error that obtain in the diagnosis, and consequently in the record of other disorders of the nervous system.

Upon comparing Pennsylvania, a typical eastern state, with a western state like Minnesota inferences with reference to these matters may be seriously misleading. The very large Scandinavian element in the population of this State enters into the question. Unrestricted immigration has brought into certain northwestern states vast numbers of Scandinavians not all of whom, by any means, are the hardy, intelligent, self-supporting people that we are accustomed to meet with from Sweden and Norway.

I am informed¹ that the Scandinavian race, as observed in this country, are especially susceptible to home-sickness; that a large number of them find that the demands for the necessities of existence, the activity and competition characteristic of social and industrial life

¹ Through the courtesy of Dr. H. A. Tomlinson, of the Minnesota State Hospital for the Insane, St. Peter, and H. H. Hart, Esq., Secretary of the Minnesota State Board of Corrections and Charities.

in America are more than their limited capacity can cope with; and that the degenerative class in the population of the State of Minnesota for example, is steadily increased from this source. Thus there has been a relative increase of insane population in that section of the country out of proportion to the increase of general population.

To show how serious a matter has been this influx of a weak-minded population in Minnesota, it is only necessary to state that while the Scandinavians form about 16.5 per cent. of the population of the State they contribute 28 per cent. of the inmates of the insane asylums.² The somewhat greater proportion of adults in the immigrant population no doubt slightly raises their proportion of insane, but the increment of asylum population from this source is steadily increasing throughout Minnesota.

It may therefore be well understood that any increase of insanity which has been observed is not so much due to causes operating upon the native population, but from the "influx of defective immigrants who break down mentally after coming to this State."³

But whatever may be the course of nervous diseases in this country the cause will be readily found in the excesses or errors committed through recklessness or ignorance of the laws of health. It is not necessary to mention the long category of such causes of disease. At any rate the American climate, if we may use such a term, shares but little of the responsibility.

The points which I wish to make are: (1) that nervous diseases are probably not increasing at least to any very alarming extent; (2) that insanity in Pennsylvania, for example, shows a very slight decrease in frequency; (3) that

² Third Annual Report State Board of Charities and Corrections, Minnesota, 1889, p. 123.

³ The influence of an altered diet in causing insanity is shown in the case of "a young man who had been accustomed in Norway to eat large quantities of coarse food, such as cabbage, turnips, etc., with very little meat. Upon coming to this country and being introduced to a farmer's table he ate great quantities of meat, rich gravies, pastry, etc., resulting in a complete derangement of his digestive apparatus and finally ended in insanity."—Private Communication from H. H. Hart, Esq., St. Paul.

statistics regarding the less-firmly established states are liable to variables which make conclusions unsafe; (4) that whatever increase of nervous disease may be observed will be found to have other causes beside those of a climatic nature; (5) that we must recognize that the various elements of climate such as altitude, barometric changes and variations of temperature produce physiological effects; (6) that in choosing a locality to promote health, especially in the case of nervous disease, too much stress must not be placed merely on meteorological conditions. The manner of life and effect upon the mind must be strictly regarded, and more may be expected from these agencies than from what are generally understood as factors of climate in and of themselves.

To illustrate the latter statement I wish to add my observation of two cases, one a well-known physician, and the second a theologian.

CASE I.—“I went to Colorado in February, 1880, returning to Philadelphia, February, 1881. I was driven away from my work by sleeplessness, which kept me from fixing my mind for any length of time on scientific matters in the daytime. I roughed it from the moment I arrived there, lived on a ranch, herded cattle, hunted antelopes, traded horses, trapped and cooked for a “round up,” in short, lived the roughest kind of a life. I think it was the peculiar life there, rather than the peculiar climate, which resulted in rapidly restoring me to health. The air, however, is very bracing and the climate thoroughly pleasant. And, although the temperature in winter sometimes varies greatly, one feels it less than in the East on account of the extreme dryness of the atmosphere. I think the most satisfactory life in the State of Colorado is on a cattle-ranch on the plains. Sheep-ranche life is miserable, so is a life in the mines in the winter.”

CASE II.—A clergyman sends me this testimony: “You have asked me to tell you why I did well in Colorado. I had been working under a strain in my parish work, and I felt the need of a release. The great change from parish work to the life of a ranche was a great help. I am unable to say whether or not the climate, as such, was favorable to a depressed nervous condition. Certainly the bright sunshine, dry air, and exhilarating influences of the rare air all in-

duced to an out-of-door life, basking in the sun, riding on horse-back, etc. The *life* helped me."

Results such as these are clearly attributed to a factor of climate which may be termed configuration of ground and nature of soil and its products, which renders possible such a life as has been described.

It must be borne in mind, however, that it is the requirements of the individual that must be considered. Physical factors of climate must be given their proper place in making a choice, but individuality takes precedence. The temperament of the patient, his previous habits, tastes, and mode of life, and degree of physical activity are of prime importance. The mind must be studied, for no matter how nicely we may adjust the elevation, temperature, sun and wind to the requirements of heart or lung, nothing will avail if the patient's mind, his psychologic needs, are disregarded.

POLYURIA AND SCIATICA.

At a recent meeting of the Medical Society of the Paris Hospitals, Drs. Debove and Rémond announced certain phenomena which they had observed in their cases of sciatica. In the first case they found that polyuria was present, the amount of urine passed daily, varying from 2 to 4.25 litres.

Inquiry elicited the fact that the same thing had occurred three years before when the patient had suffered from an attack of sciatica.

This led to further investigation and three other sciatic patients were found in whom a like condition was present. In one of these cases azoturia was found in addition to the polyuria.

Dr. Mathieu, having heard of these facts from his confrères, was led to make investigations on his own account and he also found polyuria present in two patients suffering from sciatica.

Dr. Desnos thought that he had found this condition present in other painful affections, as for example in hepatic colic.

W. F. R.

brain. As the part recovered from the effects of the injury and of pressure, the later acquired speech faculties would be regained. Evidently in this case the temporal lobe was not affected, and in all probability the island of Reil was not injured.

Dr. GUY HINSDALE read a paper on

INFLUENCES MODIFYING THE OCCURRENCE
OF CERTAIN NERVOUS DISEASES IN THE
UNITED STATES. (See page 268.)

DISCUSSION.

Dr. J. P. CROZER GRIFFITH.—The only thing which I wish to add to the very interesting paper of Dr. Hinsdale's is the result of my own observations, together with the general popular and medical impression regarding the effect of high altitude upon general nervous conditions. It seems to be an impression among many in the west that one is not able to perform the same amount of mental work at high altitudes, such as that of Colorado Springs, as can be done in the east. If you will allow me to talk about myself, I want to say that I went to Colorado Springs last March to remain several months. My health was perfect, and I laid out for myself considerable literary medical work which I had had on hand for a long time. Medical friends in the place assured me that I would not accomplish much,—that nobody did. I was disposed to laugh at the idea, but they were right, and I was wrong. For some reason I found it difficult to concentrate my thoughts in any continuous mental effort. Were this my own experience only, I would not relate it, as it might perhaps be accounted for in other ways.

It is also well recognized in Colorado Springs that persons of a nervous disposition frequently do not do well at that altitude,—about 6,000 feet,—and that in some instances they are entirely unable to remain and enjoy any comfort in life.

One instance I call to mind especially, in which a family appears to have been actually disrupted by the influence of the climate. The father and husband, a sufferer from phthisis, is obliged to remain in Colorado Springs, the wife is so affected nervously by the altitude, that she cannot remain, and the son, likewise, is compelled to live at a lower altitude on account of heart disease.

Referring again to my own sensations, I found that for the first part of my stay, I could for some reason sleep but poorly, though I never have any such trouble here. I do not think I am alone in this experience.

Again, it is reported among local physicians, that persons coming from the east are much disposed to neuralgias. I am never troubled by it, but soon after reaching Colorado Springs, I was attacked by severe supra-orbital neuralgia, which continued for three weeks. Like the other features mentioned, I would regard this as a coincidence were I alone in the experience.

I throw out these personal experiences for what they are worth,—very little, I know, by themselves. But I believe that the general opinion of the physicians of these regions is worth a great deal.

We should therefore hesitate before sending to a high altitude, persons with well-marked nervous erethism. Even in phthisical patients we should seriously consider whether the bad effect on the nervous system may not counterbalance the benefit which otherwise might accrue to the pulmonary condition.

Dr. J. MADISON TAYLOR.—An important practical point was referred to by Dr. Griffith which I wish to emphasize as of my own experience. I spent over six weeks once in the Rocky Mountain country at an altitude of between eight and ten thousand feet enjoying perfect health with four others. We all slept badly, and many who I met before after similar circumstances, got poor sleep when so high. The exercise was enormous, and the life delectable, and each day we felt abundantly refreshed, and often got good *siestas* during the day, but at night it was unusual to sleep long and soundly.

I have lived under much the same conditions with tremendous daily exertions, but at lower altitudes, as in the Canadian woods, when the sleep was abundant and prolonged. This tendency to nervous exaltation must be gravely considered when sending patients into rarified air, for long and suitable directions should be always given, first by the one sending, and always to some competent physician familiar with local conditions.

This matter seems to me imperative. Again, when in the mountain country the tendency for all is to lose weight, at least at first, or at any rate, not to gain. Not so in the lower countries. If nutrition be distinctly below par it is rarely wise to go above one or two thousand feet till this