Original Articles.

HINTS TO PHYSICIANS SENDING THEIR CONSUMPTIVE PATIENTS TO COLORADO.¹

BY EDWARD O. OTIS, M.D.

Of the advantages of the Colorado climate for either the arrest or cure of many cases of phthisis I do not propose here to speak. That matter, I shall assume, has been already settled by the physicians to whom I address this paper. I will, however, say in passing, for the benefit of those who may desire to investigate the subject, that it has been very carefully considered, with abundant and reliable data, as to temperature, humidity, cloudiness, winds, etc., by Dennison, Fisk, Solly, Eskridge, Wagner, and many others. Especially to be recommended are the papers of Dr. Fisk, of Denver, in various periodicals, giving careful and honest deductions from climatic tables and observations of indisputable authority. I will only stop to add to the large mass of meteorological evidence already adduced in favor of the climate the results of some private observations, made, and recently communicated to me by Dr. Hazelhurst, of Colorado Springs. These observations are for the last three winters, and I have arranged them in tabular form, so that one can see at a glance the number of clear, fair, cloudy, and stormy days. For comparison's sake I have also a table of the weather here in Boston during that time, kindly furnished me by the signal officer at this station. I add also a third table, giving a synopsis of the two previous ones.

TABLE I. BOSTON.

Synopsis of Weather Observations for the winter months. December, January, February, March, for the three years, 1884-85; 1885-86; 1886-87; made at the United States Signal Station at Boston.

	1884-5	1885-6	1886-7		1884-5	1885-6	1886-7
	Dec.	Dec.	Dec.		Feb.	Feb.	Feb.
Clear	6	8	6	Clear	12	10	6
Fair	12	11	12	Fair	10	10	11
Cloudy	13	12	13	Cloudy	6	8	11
Stormy	*13	*14	*12	Stormy	*10	*10	*14
	Jan.	Jan.	Jan.		Mar.	Mar.	Mar.
Clear	9	9	7	Clear	8	7	8
Fair	12	11	11	Fair	16	15	10
Cloudy	10	11	13	Cloudy	7	9	18
Stormy	*9	*18	*12	Stormy	*9	*17	*11

*Including days on which .01 inch of rain or snow fell only.

As a further bit of experimental evidence I will say that in a conversation with one of the physicians of Colorado Springs last summer he told me that he had that very season, after a residence and practice of fifteen years in Colorado, met with the first case of phthisis that seemed to have originated in that climate.

It is unfortunate that up to the present time more physicians treating large numbers of phthisical cases in Colorado have not published the results of their experience; but outside of the two hundred and sixty cases by Dennison, I know of none. It is likely, however, that there will soon be given to the public the results of a large number of cases, carefully noted and observed during many years of practice at Colorado Springs.

¹Read before the Section for Clinical Medicine, Pathology, and Hygiene, of the Suffolk District Society, November 9, 1887.

TABLE II. COLORADO SPRINGS.

Synopsis of Weather Observations for the four winter months. December, January, February, March, 1884 to 1887 inclusive; made by Dr. Hazelhurst, of Colorado Springs.

	1884-5	1885-6	1886-7		1884-5	1885-6	1886-7
	Dec.	Dec.	Dec.		Feb.	Feb.	Feb.
Clear	15	23		Clear	10	23	21
Fair	7	4	Not given.	Fair	14	4	5
Cloudy or overcast	8	2		Cloudy or overcast	2	0	2
Stormy	1	2		Stormy	2	1	2
	Jan.	Jan.	Jan.		Mar.	Mar.	Mar.
Clear	25	22	5	Clear	7	20	
Fair	6	3	24	Fair	14	2	Not given.
Cloudy or overcast	0	3	2	Cloudy or overcast	2	4	
Stormy	0	2	0	Stormy	1	3	

TABLE III. BOSTON AND COLORADO SPRINGS.

Synopsis for Weather Observations for December, January, February, and March, from 1884 to 1887 inclusive (three years), with the exception of December, 1886, and March 1887, at Colorado Springs.

	Boston.				Colorado Springs.			
	1884-5	1885-6	1886-7	Total	1884-5	1885-6	1886-7	Total
Clear	35	34	27	96	57	88	26	171
Fair	50	47	44	141	41	13	29	83
Cloudy or overcast	36	30	50	116	8	8	4	20
Stormy	41	59	49	149	4	8	2	12

For the two years, 1884-85, 1885-86, during December, January, February, March, there were:
In Boston, 69 clear, 66 cloudy, and 100 stormy days.
In Colorado Springs, 149 clear, 16 cloudy or overcast, and 8 stormy days.

For the three years, 1884 to 1887, inclusive, during January and February, there were:
In Boston, 53 clear, 59 cloudy, and 73 stormy days.
In Colorado Springs, 106 clear, 3 cloudy, and 7 stormy days.

From a somewhat careful consideration given to the numerous health resorts throughout the world, and a personal acquaintance with some of them, I am prepared to say that I know of none possessing so nearly a perfect climate for many cases of phthisis, taking it all in all, as that of Colorado; or so nearly fulfilling the conditions necessary for the most successful climatic treatment. "Climatic treatment," says Lindsay,² "aims at removing the patient from a climate which induces an indoor and sedentary life to one where an outdoor life of healthful activity may be continuously enjoyed, without hindrance from meteorological conditions. Climatic treatment aims at removing the patient from a comparatively sunless and depressing climate, which impairs vitality and lowers nutrition, to a sunny and tonic climate where appetite, digestion, and sanguification undergo such augmentation as may enable the patient to shake off or hold at bay the tendency to consumptive disease." All this, I believe, does the Colorado climate, and with this opinion, I am confident that very many physicians who have considered the subject, or who have had personal experience in the climate under consideration, will agree. Health resorts there may be which excel in this or that regard, but none, I believe, which possess such an all around favorable climate for phthisis as that of Colorado. One may urge as an objection to it

²The Climatic Treatment of Consumption, a Contribution to Medical Climatology. By James Alexander Lindsay. Macmillan & Co., 1887.

that it is like a mouse-trap, when you are once in it you are obliged to stay there; but is not this true to a great extent of any health resort worthy of the name? Fortunate is the consumptive who can live comfortably and indefinitely, with a chance of getting well, anywhere, particularly among the beauties and attractions of Colorado.

My object, in the present paper, is to aid the physician of the same opinion as myself regarding the Colorado climate, to give his patient, whom he is sending hither, such hints and advice as will enable him to settle and live in the new climate with greater ease, comfort, and safety, than he might otherwise do if left to pick up the knowledge requisite for this by his own experience.

Having spent the last summer in Colorado, I was there long enough, perhaps, to appreciate the many bits of knowledge necessary and useful for the new-comer, and not too long to forget or overlook them. When the physician says "go to Colorado," he may not realize that the State is nearly as large as New England and the State of New York together, or larger than England, Scotland, and Wales; and he must, therefore, give his patient more specific directions than these. How often, alas, is one sent to a new climate in just this vague way, or even left to make the selection of a proper climate for himself! Generally, however, the physician means Colorado Springs, for there the larger number of invalids or "lungers," as they facetiously call themselves there, go; and undoubtedly this town is better prepared to care for the consumptives than most others in Colorado, for it is not an inconsiderable source of revenue to the inhabitants. Scattering cases go to Cañon City, Denver, Salida, Boulder, and other places, but, with the exception of Denver, the accommodations are probably far better in Colorado Springs, if one is able to pay for them. Some, mostly young men, go out on a ranch, if they are strong enough to endure the hardships and privations consequent upon such a life; but they must be prepared for poor food, and much of it canned. Wherever the patient goes, the physician under whose care he comes—and he should be under the observation of some medical man—should be informed by the home physician, of the history and condition of the patient. Better is it if the new physician is personally known by the one at home. Moreover, the former will render great assistance to the recently-arrived invalid by advising him as to boarding places of good repute, and in wholesome localities, and, indeed, in a thousand other ways.

The majority, then, of consumptives, as I have said, go to Colorado Springs, a town of seven thousand, or more, inhabitants, with the purest of drinking water from the melting snows of Pike's Peak. Its streets are traversed by irrigating ditches, from which the lawns and yards are frequently flooded in summer, which has been considered by some persons productive of too much dampness. On one side of the town are the foot-hills and mountains, and on the other the limitless plains, thus offering an endless variety of rides and drives. Almost all the conveniences, and luxuries even, that one has been used to at home, can be obtained here. There are good shops of all kinds, and the markets are well supplied. Fruit comes from California, beef from Kansas City, and game from

* Vide *Some Observations on Health Resorts*, by the author. Reprint from the *Boston Medical and Surgical Journal* of March 11, 1886.

Colorado itself. There is an opera-house for passing shows, a club-house, a free postal-delivery, and a horse-railroad. The town is most orderly, and there is not, or cannot be, from the conditions under which all building lots are sold, a drinking saloon in it. The physicians, nearly all of whom are there per force, on account of pulmonary trouble, are men of ability and skill. There is no system of sewerage as yet, but one is in contemplation, and, I should say, was much needed. The boarding houses are many, and, for the most part, seem to offer good accommodations, the average price of board and lodging being from twelve to fifteen dollars a week. What the physicians there advise, and which obviously is the best plan, is house-keeping, if the invalid is strong enough, and is with friends; but rents are high. There is a good hotel, the "Antlers," where the new comer will spend his first few days until he has selected his permanent quarters. The character of the society is much like that of a summer resort, quite cosmopolitan, as one would naturally expect from the coming together of people from so many different parts of the country.

There are many—too many—social entertainments, teas, balls and the like, where consumptives are crowded together in a small space, and strength which ought to be husbanded is wasted in this way. The physicians see and fight against these excesses, but there, as elsewhere, it is hard to stem the tide of fashion and society. The daily life of the invalid is essentially an outdoor one, which is very possible when one considers that there are only about thirty-five to forty-six cloudy days in the whole year, and from "October 1st to April 1st there is an average of less than one-half a day of each week when the patient will be deprived of sunshine." During the winter there is practically no rain, and one can sit on the veranda or be in the saddle every day; the day of sunshine during this season being about eight hours.

For some time after coming to this altitude (Colorado Springs being 6080 feet high), comparative rest and inactivity is enjoined, and probably with wisdom; but sometimes it seemed to me that this injunction was carried to an extreme, and that moderate exercise would have hastened the improvement, or recovery. Horseback riding is the exercise par excellence at Colorado Springs, as elsewhere in the State, and horses are good, and comparatively cheap. The rides are innumerable. Out on the plains; to the various Cañons; to Manitou; the Garden of the Gods, etc. Could anything be more exhilarating than a gallop out on the limitless plain in a Colorado saddle, on an easy-riding broncho, the prairie dogs barking at the doors of their little mounds, the rabbits hopping through the sage bush, and in the distance a long line of cattle going for water or salt!

It seemed to me that there was no very great opportunity for one to find remunerative employment in Colorado Springs, for it is not commercially active. Probably some of the other and more busy towns would serve better for this purpose. My impression of Colorado in general, however, is that a man of sufficient strength, with energy and adaptability, who desires self-supporting work, will not be long in finding it. As an illustration of this, I know a young clerk, from this city, who went to Colorado Springs for pulmonary trouble, but who was strong enough to be about and around after a little. At the Springs he

* Wagner, in a recent issue of the *N. Y. Medical Record*.

found a cattle-man, who took him into his employ and sent him up into Estes Park to look after his cattle. He got the use of a good horse, and was paid a fair monthly salary, together with his board. Possessing Yankee shrewdness he found an opportunity to preëempt a quarter-section of grazing land at the same time, and now he bids fair to regain his health, and have some dollars in his pocket at the end.

In summer, Colorado Springs, judging from my experience, is likely to have many uncomfortably hot days, and it seems to be well for the invalid to seek the coolness of the mountains somewhere, and, moreover, it makes a pleasant and agreeable change, after a winter spent in civilization, with its consequent and inevitable evils, to have something of the wild and free life of the mountains. There are many of the so-called mountain parks near or more distant, and ranging in altitude from 7,000 to 10,000 feet high, which offer both a cool temperature and all the attractions of grand mountain scenery. One finds hotels in some, in others boarding ranches, and in the more remote places he must go prepared to camp out. In all the food will be found to be more or less bad, depending upon the distance from any source of supplies, but, unless very delicate, the invalid will soon learn to put up with it, and will have such an appetite from the life and invigorating air that he can sit down and eat a piece of raw ham. If one enjoys, and is strong enough for, long trips on horseback, he can start on his horse from Colorado Springs, or Denver, and ride to the mountains, and have his horse there for use. I met a company of young men in Estes Park, two of whom were "lungers," though they looked the picture of health, who had ridden from Colorado Springs, and were en-route for North or Middle Park, with their camping paraphernalia, in search of trout and deer. For those who are delicate, and need moderately comfortable quarters and care, there is Manitou Park, Idaho Springs, Salida, and Poncha Springs, near by. Georgetown, a typical mountain village, most picturesquely situated in a deep, narrow gulch, on Clear Creek cañon, and Estes Park, one of the most charming spots in all Colorado, and of which I shall speak a little more at length. It is one of the smallest of the Colorado parks, and is about ten miles square, and seventy-five hundred feet, about, above sea-level. It is reached, from Denver, by railroad to Lyons or Loveland, and from thence by a stage road of twenty odd miles. The journey is made in a day from Denver. There are but few buildings and settlements in the park, the most of it being owned by the so-called English company. Some years ago the Earl of Dunraven visited the place and was so much impressed with its beauty that he got possession of it. There is a small hotel there of moderate price, and three or four boarding ranches. Ferguson's and James's are the best, at which room and board can be obtained for about twelve dollars a week. Each of these ranches consists of a number of small cabins of two or three rooms, some of logs and others of rough boards, but one is very comfortable in them, and he is, or should be, only in them to sleep. The food is fair for the mountains, about the same quality as in the Adirondacks. It seems paradoxical that the beef should be of poor quality, when all around are herds of cattle preparing for the Chicago market. One has, however, every day, an abundance of the most delicious brook trout.

One of the great charms of the park is the nearness of the mountains. On two sides are the great snowy ranges terminating in Long's Peak, 14,272 feet high, the "Matterhorn of the Rockies." The air is of the purest, and almost every day is a sunny one. Very rarely is it uncomfortably hot, and the nights are always cool. Generally a fire is comfortable. But once during a stay of six weeks there did I notice any dew, and one can sleep under the open sky without danger from dampness. Many spend the summer in tents, which dot the park over, but most of the cabins have chinks and cracks enough in them to let in sufficient air. The flora is large and luxurious, and the botanist will find continual surprises and delights in it. Indeed, I do not see how it is possible to find a clearer or more invigorating air, sunnier or bluer skies, grander or more beautiful scenery in the whole Rocky Mountains than here in Estes Park. I have known of a consumptive getting up from her bed in Colorado Springs to go to the park, and in a short time after her arrival there riding horseback. The winter is not uncomfortable there, I am told, or very cold, and, so far as the climate is concerned, one could well live the entire year there if he could endure the loneliness. Indeed it would be to me infinitely preferable to a winter among the snows and ice of the Adirondacks; and if a mountain health resort of such perfect climate existed anywhere in Europe, Davos would be deserted. If one has passed the winter at Colorado Springs I would advise them to go to Estes Park about the middle of June, when occasional hot days come at the former place, and remain until the first of October. If one rides horseback—and half the pleasure in the park is gone if he does not—it is the cheapest way to take your saddle with you, and buy a pony there, which one can do for forty dollars and upwards. There is a mail once a day, but no telegraph. Comparing my experience of the climate of Estes Park with that of the Adirondacks, I should say that it was rather warmer in the former place, far dryer, and much more sunny. One feels the same invigorating influence in both places. The night temperature is about the same, I should think, in both places.

In winter and spring, either at Colorado Springs or elsewhere in the State, there are occasional high winds—"wind storms" they call them—accompanied with clouds of dust, which may produce an irritating and injurious effect upon those whose pulmonary trouble is accompanied with much secretion, and who have sensitive throats. It may be a question whether it is best for them to remain in consequence of this. The damper, but more quiet and soothing, atmosphere of Southern California, or the South, may serve them better, which is again an illustration of the fact that no one climate suits every case of phthisis.

The best time to go to Colorado is probably in September or October—most delightful months there. The best time to come East for a visit, I should think, would be either in May, June, or October. The best way to go from Boston is, in my opinion, by the New York Central and Lake Shore Railroads to Chicago, and from the latter city to Denver by the Chicago, Burlington and Quincy Railroad. By this route there is but one change from Boston to Denver.

One or two general hints in closing, and then I desire to present a rather remarkable series of photographs of Colorado Springs and surroundings, and of

Estes Park, which I am enabled to do through the kindness of Mr. F. H. Chapin, of Hartford, Conn., who took them.

Clothing.—One should have as thick winter clothing in Colorado as in this climate, for the mornings and nights are often very cold. In the sleeping room, moreover, one must make sure that the floor is tight and covered with a warm carpet. A fire should be made in the morning before the invalid arises.

Expense.—It is expensive both going to and living in Colorado. The cost of the journey there is from seventy-five to one hundred dollars; and board in Colorado Springs, as I have said, is from twelve to fifteen dollars a week. Rent of cottages is from fifty dollars upwards. About the only thing that is cheap is horse-hire.

Effect from the Altitude.—Some patients think it wise to make the ascent from the Missouri River to Denver gradually, so as to become accustomed to the altitude. The majority, however, I think, go at once to the altitude at which they are to live, and generally, so far as I can learn, experience no especial discomfort or harm from doing so. For about ten weeks I lived at an altitude of from six to seven thousand five hundred feet or more, and climbed mountains, three of which were over fourteen thousand feet high, without experiencing the slightest discomfort. Nor, indeed, was I in any way unusually affected, except, perhaps, on three occasions. Twice when on high mountains I had a slight headache, and the third time when at Leadville, which is over ten thousand feet high, nearly to timberline, it seemed to me that in walking I got out of breath more quickly than usual. I have climbed high mountains with one of affected lungs, who seemed to endure the exertion and altitude about as well as I. A curious effect of the altitude was noticed by a physician in his own case. When about ten thousand feet high, at which altitude he generally lived, the fever which accompanied his pulmonary trouble was kept in abeyance. When, however, he descended to a lower level it recurred, or increased in severity.

Length of Residence.—In whatever climate one finds his lung trouble improving steadily, there he should remain, not only until all signs of mischief disappear, but, in many cases at least, as long as he lives. I feel convinced that this is the safest and wisest plan, and I think that physicians of experience are gradually growing to this opinion. This is especially true of the Colorado climate, which is such a radical change from the one the patient is likely to come from. I believe the slow improvement, or lack of any improvement, in many cases is due, partly at least, to the worry over the enforced exile, and eager watching for the time when they think they will be able to return to their homes. It is often noticeable how quickly and permanently those improve and recover who take up their residence in Colorado, and settle down to permanent living there, with their friends and family about them. The contrary is also observed with those who make it a mere health resort, and are separated from their family and friends; as, for instance, a wife from her husband, or a daughter from the rest of her family.

—The *Ecole Pratique*, of Paris, was lately damaged to the extent of \$20,000 by fire.

LOCAL MASSAGE FOR LOCAL NEURASTHENIA.¹

BY DOUGLAS GRAHAM, M.D., OF BOSTON, MASS.

NEURASTHENIA, as I understand it, may be either general or local, affecting the nerves or nerve-cells of all, or any part of the cerebro-spinal or sympathetic system. Its manifestations are those of exhaustion or too easy exhaustibility of nerve-force; and its pathology, malnutrition of the nerve-cells involved, with concomitant instability of their circulation in the form of anæmia or hyperæmia, or alternations of these. It predisposes to, it accompanies, it results from disease; the nervous shock and the tedious recovery from injuries point to other sources, and it may be caused by overwork, worry, or sheer laziness. The agreeable fatigue after a satisfactory day's work that insures sound sleep may be regarded as a healthy form of neurasthenia, if the Hibernianism may be pardoned.

It is a matter of common observation that those who are compelled to hard manual labor seldom suffer from nervous prostration; and amongst the more fortunate who may be predisposed to neurasthenia, those who are deeply interested in some hobby or occupation that keeps mind and body active, have found the best means of prophylaxis. The same means that serves for its prevention also supplies us with a clew to one of the most valuable agents that can be employed for its relief or recovery. Exercise keeps the circulation active, but requires effort of brain, spinal cord and nerves, as well as muscles, at a time when our object may be to afford rest to one or all of these parts of an over-taxed nervous system. Massage supplies this want, and will keep the circulation going with a minimum or no expenditure of nerve-force from the patient, and deep massage without friction will lessen the beats of the heart, and afford it rest also. Nay more, for it is getting to be the fashion not only amongst the laity, but also with some physicians, to say that massage imparts energy to the patient, though I confess I do not exactly understand what this means. Certainly, many who submit to massage feel much more vigorous, light, and supple after even the first application than they did before it. But may not this rather be owing to the rousing of their latent energies, and restoring the equilibrium of their forces, by facilitating the circulation of blood and lymph, and the transmission of nerve-force?

I have previously stated elsewhere that in cerebral exhaustion the relative value of massage was almost *nil*, and that out-of-door exercise was of paramount importance; but I have since found reason to modify this in favor of more massage and less exercise. In such cases, massage of the head alone daily, or every other day, is better than applying it all over the patient, unless there be a rare idiosyncrasy that will not allow the head to be manipulated.

There are people, not a few, who, when using their brains, suffer from uneasy sensations in the lumbar or dorsal region, and these discomforts continue after the cessation of study, causing wakefulness. Generally, there is also some spinal irritation in the region affected. In such cases, massage of the back alone will often induce sound sleep, and, next day, the patient feels inspired with faith, hope, and courage, in place of doubt, dread, and fear of meeting appoint-

¹ Read before the Section of Clinical Medicine, Pathology, and Hygiene of the Massachusetts Medical Society, Suffolk District, November 9, 1887.