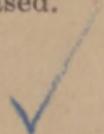


Rice (C. C.)

How the Therapeutic Value  
of our Mineral Springs may  
be increased.

BY



CLARENCE C. RICE, M. D.,

INSTRUCTOR IN DISEASES OF THE NOSE AND THROAT IN  
THE NEW YORK POST-GRADUATE MEDICAL SCHOOL  
AND HOSPITAL.

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MORE attention has been paid to the mineral springs of the United States and their medicinal virtues during the last few years than ever before; and this is not that we have largely developed new resources, but because there is a demand on the part of the public for this line of therapeutics. Our patients have been educated abroad, and have discovered the benefit of treatment to be derived from mineral waters before the physician himself has become aware of it. The physician meets people constantly who have spent a season at Carlsbad or Ems. In these days of rapid traveling the distance to Europe is not considered a serious obstacle to one who is willing to be at any trouble to regain his health; and as for expense, it may easily cost as much to remain at home. Just why so many thousand Americans go to European spas for their health, when na-

\* Read before the American Climatological Association at its third annual meeting.

ture has been so lavish with the same resources here at home, would seem at first thought difficult to explain, but a little inquiry will show that the physician rather than the patient has been at fault, and has been the cause of this vast emigration of our invalids to Europe. The owners of mineral springs and the proprietors of watering-place hotels have also been somewhat to blame, because they have not up to this time furnished the public with the apparatus for using mineral waters which can be found at European spas. There are many Americans who have been under medical care at Wiesbaden and Homburg who, perhaps, are not acquainted with a single American mineral spring, and imagine that people visit Richfield and Saratoga solely because these places are fashionable summer resorts, and not at all on account of the waters to be found there. A number of times I have heard visitors express surprise when they learned, for the first time, that many of the hotel guests were at these places for the sole purpose of taking the baths. I speak of this only to show that Americans are to-day less acquainted with their own than with European mineral springs. Saratoga means to them a place of gayety, where the water may be drunk or let alone, according to one's fancy. I have talked with many people who are in the habit of spending their summers at our watering-places, and they seemed to consider the matter of drinking the mineral waters mostly in the light of a joke. They took them for no special purpose; they had little idea of their effect, but drank the waters mainly because their neighbors did, or because it was fashionable. Using the waters in this aimless, careless manner, is it any wonder that harm is done, and that the efficacy of the waters oftentimes falls into bad repute? Europeans at their spas drink the waters and take the baths as carefully, punctually, and religiously as they say their prayers, and even Americans seem wholly

changed when at foreign watering-places, and they would as soon think of selecting any spring, without regard to their ailment, as of drinking the waters which had been selected for them without first consulting the physician of the place as to the proper quantity of water to be taken, and the correct time for drinking it. If Europeans were as much in the habit of visiting our springs as we are of going to theirs, I dare say they would treat our waters with the same marked respect.

It is possible, too, that the value of European mineral waters, like that of some other things, is enhanced in the minds of Americans because, if not always English, they are foreign. One reason for the difference in the behavior of the American at home and abroad is that he does not appreciate home waters because they can be so easily obtained. Feeble appreciation means little faith, and lack of faith in any remedy is almost always accompanied with little or no benefit, partly from mental causes, and partly because the remedy is not given a fair trial. A voyage across the Atlantic puts an American in condition to be benefited by European waters by improving his general health. I have no idea that Ems or Wiesbaden would have so many American admirers if these springs were situated in Virginia instead of in Germany.

It does not seem worth while to enter deeply into the analyses of the various American mineral waters, nor to determine in what points they are different from those most celebrated in Europe, for I do not believe that this is, at present, the most important part of the subject for American physicians to consider. It is vastly more to the purpose that, whatever mineral spring is used, it should be employed intelligently and on scientific principles, and that the particular spring should be selected by the physician with some regard to the ailment of the patient. The patient

should be under strict detailed orders from his physician; and these instructions should cover not only the manner of using the waters, but the matter of food, exercise, social life, mode of living, etc. It is in regard to these points that physicians at the European spas are most particular, and we can learn from them in this respect. Their patients are under good discipline, and understand thoroughly what the treatment is intended to do for them. Carlsbad has not a greater reputation for curing people so much because its waters are better medicinally than the Congress or Hathorn of Saratoga, as because patients at Carlsbad are under better therapeutic conditions; and the same may be said in comparing the waters of Aix-la-Chapelle and of Aix in Savoy with the sulphur waters of Richfield. Trousseau says, in speaking of the waters of Carlsbad and Vichy: "I know of no medication more perilous than that of these waters administered without reserve, without discernment, and without regard to individual conditions of health, etc."

Let us for a moment look for the factors which have tended to make European watering-places so celebrated. Are the "cures" to be credited to the medicinal properties of the waters alone? How much have habits of living at European watering-places to do with the benefit the patients derive, and what part of the physical improvement is due to a sea voyage, changes in climate and scene, and rest from business? These are pertinent questions in searching for the secret of the success of the celebrated German and French mineral springs.

First, I believe that the *mental effect produced upon a patient by the rigorous course of treatment* which is customary at German springs is very salutary, and is a factor which hitherto has not been sufficiently appreciated at our mineral sanatoria. The physician who loses sight of the

value of mental medicine in any kind of practice is working at serious disadvantage, and especially in treating patients who visit mineral springs, for they are, as a rule, a peculiar class. They have traveled much, and have seen everything. They have been treated for their complaints by many physicians in many different ways, and they have long since lost all faith in medicines. They talk over their ills with each other, and are proud to relate how many different "cures" they have tried, and how little benefit they have received. Such a patient can not be cured unless his mental condition can be placed upon a healthy basis. He must be made to feel that his visit at the springs is not mere pastime, but that he has a disease which is understood by his physician, and that the waters are suited to that disease. If they are not, he should be sent to the proper springs. These patients, then, must be taken hold of in a strong manner, for there is no class of patients so unimpressionable as the one to be found at the hotel of a watering-place. They must be made to work for themselves, and in this way they will soon become interested in their recovery, and their thoughts will be upon their cure rather than upon their disease. The whole mode of life at the European spas is one calculated to impress the invalid with the idea that not only is a great deal being done for him, but that he also is doing much for himself to regain his health. There is something in this mental tonic which is very healthful.

During a visit at the French and German springs last summer, I had the pleasure of meeting many of the physicians who practiced there. I was very much impressed with the enthusiasm exhibited by these medical men in regard to their mineral waters. They seemed never tired of talking of them, and they had great faith in their curative properties. A patient quickly sees and feels this quality in

a physician, and his own confidence is increased. Among American physicians I have noticed the half-hearted manner in which they advised the use of mineral springs, when it seemed that the highest praise they could pay the water was that if it was used carefully it would do no harm—"damning it with faint praise."

Another point of difference between European and American spas is in the social life. Life at Richfield and Saratoga is almost a repetition of gay New York during the season. Only a small proportion of the visitors imitate their European cousins in rising early and going to the springs for the waters, but they breakfast at the usual city hour—from eight to ten. Frequently their servants carry the water to their rooms and the invalids drink it in bed. In Europe a person is rarely so feeble that he can not be wrapped up and carried by two attendants in a Sedan chair to the spring and bath, and this is done rain or shine. I was at Aix-les-Bains one day when the rain was falling in torrents, but this did not diminish the number of people at the bath-house. The feeble patients were wrapped up head and foot in rubber blankets and carried from their hotels to the spring. One sees little of this in America. It certainly would not become popular at our leading mineral spas unless it was fashionable, and it would not readily become fashionable unless the better classes of people had the sole monopoly. The ladies who, as they themselves express it, are "literally worn out" by the season's work, and who have come to the sanitarium to regain their health and to rest, do not in the slightest degree relax their interest in society matters and dress. And the lines separating the various "sets" are as rigidly drawn in the country as in town. It is unfortunate that this should be the grade of life at our mineral springs, and that our mineral waters should be expected to cure not only gout and bronchitis, but the vices of living which occa-

sion these diseases. The same change is needed as in a patient whom Trousseau and Pidoux thus describe: "Living in the midst of luxury, not getting up till midday, confining herself most of the afternoon to a perfumed room which the light scarcely penetrates, taking a drive in a close carriage when the weather is fine enough, living on made dishes which are made the more piquant as her appetite grows more fantastic. Next she is influenced by her passions, good or bad, sad or gay, her social and family duties—the routine of every-day little annoyances, and finally by ennui, that pest of idleness and of riches. Her appetite fails, her digestion is languid, her nervous system is exalted. She gives an endless deal of trouble to her doctor, who can do little for her and who in despair sends her to some spa. There her habits are changed in every way. She has to get up early in the morning for her water or her bath. She leads a comparatively simple life in the open air—and, without going into further details as to her changed mode of life, can you wonder if she returns to Paris cured?"

I was impressed with the simplicity of life and habit at Carlsbad. Among the hundreds of people who were waiting in line to reach the famous Sprudel, almost every nationality under the sun was represented, as could be seen by their different styles of dress. People, too, in every station of life were there, from the nobleman to the poor Pole. Side by side they drank the waters with apparently but one desire—to regain their health. They were enthusiasts. They observed to the minutest detail the instructions of their physician both as to the temperature and the amount of water they drank. Many of them were out of bed at four o'clock in the morning, in order to get the water before the great rush began; and, from conversation, I learned that some of these people retired as early as eight in the evening to get sufficient sleep before the early start. It was a little

ridiculous to hear patients exalt the virtues of the spring they were assigned to, and speak disparagingly of the others, when it is remembered that the waters of Carlsbad differ from one another but slightly except as to the temperature. The greatest man in Carlsbad is the veteran of many seasons who can drink without discomfort large quantities of the waters. He is envied by all the men and women who are limited by their physicians to a single glassful. It was very evident that these people had come to Carlsbad from all parts of the world for the *waters* and for nothing else. Patients there breakfast simply on coffee and rolls, and each patient goes to a bakery, buys his bread, and carries it to a coffee-house, where he eats it. I speak of these simple details because they present such a striking contrast to the mode of life at our watering-places. At Saratoga I heard a woman say, when she was asked if she did not fear that the bountiful breakfast she was eating would counteract the desired effects of the mineral waters she had taken an hour before, that "it was hard enough to get out of bed at seven in the morning and drink the waters, and she did not propose to starve herself." She was a stout woman and had been sent by her physician to drink the waters for rheumatism and gout. Under such circumstances, is it a matter of much importance whether the waters contain a little more or a little less lithium, or whether the cathartic principle is Epsom or Glauber's salts? Physicians and hotel-keepers at mineral springs, who lay great stress upon the presence of a fraction of a grain of some valuable medicinal salt in their pet mineral water, are not looking at the question in all its different phases. We all know that there is a great deal of truth in the statement of Dr. Beale, an English writer. He says: "If patients could be induced to retire to a pleasant part of the country, where they would take moderate exercise and be free from mental anxiety, meet with agreeable

society, live regularly, take small doses of alkalies, and bathe themselves for an hour or two a day in warm water in which some carbonate of sodium has been dissolved, they would receive as great benefit as by traveling hundreds of miles away and at much less trouble and expense." But, after all, such a happy combination of circumstances and conditions can not be readily found in our country, and certainly not nearer to New York than our watering-places, where all the desirable factors recommended by Dr. Beale can be at the disposal of patients, if their physicians in town and in the country will not content themselves with simply telling them how to use the water, but will also give careful instructions about eating, exercise, and habits of life generally. The amount of benefit the patient obtains and the reputation of the spring will largely depend upon these commonplace matters of living. While I found that almost all of the physicians I met at the different watering-places throughout Belgium, Switzerland, Germany, and France were fully convinced that their own spring was competent to cure every patient whose ailment came in their particular line, I also noted that these physicians did not have faith enough to believe that their waters could cure a gouty man who continued to drink wine at late dinners or reduce the weight of a woman who sat in her hotel-room all day. They order their patients to walk a great deal, and, as many of the European spas are situated at the foot of mountains, the walks are up and down steep inclines. The physicians did not lay much stress upon these outside matters of eating and exercise, and were disposed to give to the waters the entire credit of the cure. But they were giving their mineral waters a fair trial by placing their patients in the best hygienic conditions. Patients, too, were educated to believe that the *waters* were the sheet-anchor upon which they were to depend. They walked many miles to digest the waters and

make room for more. They ate only the simplest varieties of food, because all luxuries were incompatible with the chemical action of the salts, which were to revolutionize their disordered bodies, and they went to bed early only for the sake of being able to drink the waters at the most appropriate time—at day-break. Is it any wonder that the majority of patients who visit these springs and who have led the sedentary lives common to the inhabitants of cities improve on such a regimen and return to the same watering-place whenever they are out of health, believing that it is the only spot on earth for them? We were almost going to say that their improvement under these conditions would be as pronounced if there was nothing but Croton water to drink and bathe in, but this would not be true, for many of the European waters are wonderful.

The social life I have spoken of, which is common to our watering-places, *shuts out the real invalid*, who must be away from noise and gay, active life; and many of these people go to Europe.

While I believe that the majority of visitors at European spas are to some extent invalids, Dr. George E. Walton says, in his excellent book on "The Mineral Springs of the United States," that "many, and in this country perhaps the majority, of visitors at springs journey thither not because of any specific malady with which they are afflicted, but to obtain relief and rest from the harassing care of business." It has come to be believed that, while our springs are good for healthy people, they have not sufficient virtue to cope with organic diseases. This feeling has come about, not from a lack of waters in the United States whose analyses show them to be equal to those abroad, but because of the inefficient manner in which they have been employed. It will readily be seen that the comparison between our waters and those of the Old World can never be a fair one

to us until we follow the example of our profession across the water and place our patients under all the conditions most favorable to health.

Another feature, which up to this time has been wanting, and which our mineral springs sorely need to give them reputation and efficiency, is the *indorsement of the medical profession*. And I do not mean subscribing to the advertisement of any company who are bottling the waters of some spring, but physicians, individually or in committees appointed for the purpose, should have careful analyses made, and they should ascertain by clinical investigation the therapeutical value of our mineral waters, and, if they are found to be valuable medicinal agents, they should be given a place as such in our *materia medicas*. This is another advantage that the European springs have had. Mineral-water treatment forms quite a large portion of the therapeutics recommended by von Niemeyer\* in his "Text-book of Medicine," and he speaks in no doubtful manner, as, for example: "In our present state of knowledge, a course of water at Carlsbad is the measure which should deserve the chief reliance as a remedy for diabetes mellitus." In the treatment of renal calculus Sir Henry Thompson † says: "Of all medicinal remedies, perhaps none are so valuable as mineral waters," and Trousseau and Murchison speak in the same emphatic terms in respect to the treatment of other diseases.

Not only have the medical profession of Europe made the therapeutics of mineral waters popular by their indorsement, but the German and French governments have largely supported their springs. In Germany a majority of the springs belong to the Government, which appoints general

\* Von Niemeyer, "Text-book of Medicine," vol. ii, p. 781.

† Thompson, "On the Urinary Organs," 1869, p. 202.

and local inspectors, whose duty it is to regulate all matters connected with them. The price for the use of the water and baths is fixed by the Minister of Commerce. In some instances the bath physicians hold official positions under the Government. It is usual to arrange the tariff in three classes, in order to bring the price within the reach of the poor and rich alike. Austria supports baths for the use of her invalid soldiers. By means of this governmental support large luxurious bath-houses, furnished with all necessary and sometimes most elaborate apparatus, are kept open for the public. In America the improvement of mineral springs, erection of bath-houses, purchase of apparatus, etc., have been effected entirely by private capital; and the want of money has frequently been the main obstacle in developing our mineral resources.

At Aix-les-Bains, in Savoy, there are four large swimming baths with douches of various kinds and about fifty rooms, each having two attendants, who administer what is there called the "grande douche." The patient sits on a low wooden stool with his feet in warm mineral water; one attendant, standing behind, deluges the back with the water, which pours out of a large hose, while the second attendant washes and rubs the front of the body. Dr. Grainger Stewart, of Edinburgh, who took a course of baths at Aix-les-Bains, says: "It is astonishing with what skill, patience, tenderness, and firmness the shampooing and passive movements are performed." Dr. Brachet, of Aix-les-Bains, told me that the large increase in the number of bathers—from eleven thousand in 1872 to twenty-four thousand in 1882—was, in his opinion, due as much to the skill of the two hundred employees as to the therapeutic reputation of the waters. These attendants bring their patients in Sedan chairs from their hotels, and, after the bath and massage, they carry them back and put them to bed, rub-

bing them until the normal temperature is restored. I might speak of the many varieties of douches at Ems, some of which are to be found in our Russian bath-houses—of the inhaling-rooms, filled with finely pulverized mineral waters; of the departments devoted to the spraying of the waters for the relief of nasal and bronchial catarrh; of the carbonic-acid-gas baths; of the various appliances for directing mineralized steam upon a single rheumatic or gouty joint; of the mud and peat baths to be found at Carlsbad, and the amphitheatre at Royat in France, where numerous patients sit about a large opening which looks like the funnel of an ocean steamship, and inhale the mineralized steam which pours out of it. The interesting method of douching at Royat deserves a word. The attendant in charge stands on a raised platform about six feet from the patient. Within easy reach there are a number of faucets which regulate the temperature of the water and the force and size of the stream. With a hose and nozzle the attendant can direct any kind of a stream upon the patient, from fine needles to a large douche, and at any temperature. This is used so skillfully that a patient's temperature can be nicely regulated after he has taken his bath and before he goes home. There are many more styles of treatment, but you are all familiar with them. It is not my purpose to describe any methods of medication, nor to endeavor to ascertain the amount of benefit that patients derive from them. That great benefit is obtained is not to be doubted, and it is equally true that the reputation of the leading European mineral waters is increasing every year. I have been interested in searching for the causes that have contributed to this success, because I believe that if they can be ascertained they can be employed with advantage by us at home. We have the waters, and, if this subject of mineral-water therapeutics is an important one, then what has been said

in this paper is not inappropriate for the consideration of this association.

Last year, at New York, your president, Dr. A. L. Loomis, spoke of the necessity of making further investigation and obtaining greater knowledge of mineral-water therapeutics, and more attention is being paid to this subject by the medical profession. At Richfield Springs, I learn that between two and three hundred mineral baths are given daily during the season, that new springs have been developed during the last six months, and that they have sufficient water now to give one thousand baths daily. Two years ago a department for the atomization of sulphur water for the treatment of catarrh of the upper air-passages was also arranged at Richfield, a room where the water was sprayed by steam, and stalls where it was atomized by compressed air. There is a similar department connected with the sulphur baths at Sharon.

Before closing, I wish to express my obligation to Dr. Brachet, of Aix-les-Bains, Dr. Brand, of Royat, Dr. Schnee, of Carlsbad, and Dr. Reuter, of Ems, for courtesies and valuable information extended to me. Allow me to repeat the suggestions offered in this paper, which, if followed, I believe will increase the therapeutical value of our mineral springs :

1. Physicians, individually or in committee, should make careful analyses of our mineral waters.

2. The medicinal value of the waters should be tested by clinical investigation, and the conclusions arrived at given to the profession.

3. If the waters are found to possess marked medicinal merit, physicians should interest themselves in the development of the springs and the improvement of bath-houses and apparatus.

4. Physicians, in sending patients to a mineral spring,

should be most careful to select the proper water, and should send with the patient his history and the diagnosis of his disease for the benefit of the physician at the bath.

5. Patients at our mineral spas should be placed under more rigid medical discipline, and more attention should be paid to their habits of living.

6. The social life at our watering-places should be placed on a more wholesome basis.





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