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CHASING THE CURE: IRVING FISHER'S
EXPERIENCE AS A TUBERCULOSIS PATIENT

CHRISTINE R. WHITTAKER

Tuberculosis underwent a significant change in image during the nineteenth century. At the beginning of the century, the term "consumption" evoked images of frail women gradually sinking under its grasp, of young poets struggling to express their genius before their premature death. The romantic picture of consumption was reinforced by the belief that it was a hereditary disease. It was almost as though sufferers were exhorted to accept the decree of fate. The change in this concept of the disease can be traced to several factors. The romanticism of tuberculosis began to fade when it was seen in the squalid living and working conditions of the working classes. Koch's discovery in 1882 of the tubercle bacillus demonstrated that tuberculosis was a contagious disease. Gradually people realized that it was the result not of hereditary fate but of poor hygiene and inadequate nutrition. The most important factor, however, in changing the public attitude to tuberculosis was the realization of the economic cost to the nation. In 1909, Edward Otis reckoned the country's annual loss from tuberculosis to be \$330,000,000. He estimated that there was a yearly mortality from tuberculosis of 150,000 in the United States. This was equivalent to the total dead, Union and Confederate, during the Civil War. Probably 1,250,000 persons in the United States suffered annually from tuberculosis. The enormous cost was the result of these working lives being cut short by death or hindered by illness, especially since tuberculosis attacked in the prime of life and the majority of its victims were aged between fifteen and thirty-five.¹

This economic motivation for a higher level of community health was expressed by public health specialists like Hermann Biggs who, in 1911, while chief medical officer of the Health Department of New York City, wrote, "Public health is purchasable. Within natural limitations a community can determine its own death-rate."² The cost of public

¹ Edward O. Otis, *The Great White Plague* (New York: Thomas Y. Crowell, 1909), pp. 6-19.

² The desire for improved community health was not merely an economic concern. Biggs wanted also to reduce the suffering of the working classes: "The reduction of the death rate is the principal statistical expression and index of human and social progress. It means the saving and lengthening of the lives of thousands of citizens, the extension of the vigorous

health reforms would be more than off-set by the benefits of longer and more productive working lives. This desire for better methods of prevention and cure of "the great white plague," as tuberculosis was known, coincided with increased medical knowledge of the causes of the disease and the way of life which could effect a cure. An excellent illustration of these factors is found in the case of Irving Fisher (1867-1947), Professor of Political Economy at Yale University, who himself became a tuberculosis victim in 1898. Fisher was to become an ardent crusader in health matters, founding, with another Yale economist, J. Pease Norton, the Committee of One Hundred on National Health. He became convinced that tuberculosis was a preventable disease which could be eradicated to the same extent that smallpox had been wiped out as an epidemic disease. Fisher's own experience with the disease is characteristic of medical knowledge and therapeutic methods at the turn of the century and was to prove the catalyst for his later campaigns for greater attention to national health problems.

Fisher was thirty-one when he was diagnosed as suffering from "consumption" or "phthisis," as pulmonary tuberculosis was then known. The symptoms of consumption had been recognized since classical times. Hippocrates had cataloged the dry cough, thick sputum, chest pains, fever, wasting, possible enteritis, clubbed fingers, curved nails, blood-spitting, raucous voice and flushed cheeks of the consumptive.³ Although diagnosis was straightforward when the majority of these symptoms were present, it was also usually too late to offer much hope of recovery to the patient. The advantage of early diagnosis was gradually realized from the early nineteenth century onwards. The state of medical knowledge at the end of the nineteenth century is illustrated by the section on tuberculosis in *Modern Medicine*, the multi-volume text edited by William Osler, and by such classic textbooks on the disease as Klebs's *Tuberculosis*.⁴ The physician was advised in a possible case

working period well into old age, and the prevention of inefficiency, misery and suffering. These advances can be made by organized social effort. Public health is purchasable." C.-E. A. Winslow, *The Life of Hermann M. Biggs* (Philadelphia: Lea and Febiger, 1929), pp. 230-31.

³ Gerald B. Webb, *Tuberculosis* (New York: Paul B. Hoeber, 1936), p. 117.

⁴ William Osler (ed.), *Modern Medicine, Its Theory and Practice* (Philadelphia and New York: Lea Brothers, 1907); Arnold C. Klebs, *Tuberculosis* (New York: D. Appleton, 1909). Major advances in early diagnosis had resulted from Auenbrugger's announcement in 1761 of his discovery of percussion, which was publicized by Corvisart, and Laennec's discovery of auscultation in 1819. The râles which were so typical of the consumptive could be clearly heard with the aid of the stethoscope even though other symptoms might not yet

of tuberculosis to consider first whether there had been predisposing factors, such as physical strain, poor nutrition, close proximity to another tuberculosis patient. Then he was to look for the following symptoms: loss of weight, fever, loss of strength, cough, haemoptysis, dyspnea, pleurisy (which, it was emphasized, was a symptom of many diseases and not a disease in itself), physical signs from auscultation and the presence of tubercle bacilli in the sputum.⁵

No letters have been preserved giving details of the diagnosis of Fisher's illness, but he described his condition in a letter to his good friend Will Elliot in December 1898:

The truth is I have a threatening of tuberculosis. It has been caught in its early stages and, as you know, is in such cases curable and generally cured. I have been here [Saranac Lake] three weeks now and have regained my normal strength and weight. The Doctors fully expect me to get well but it takes time, especially to be sure the cicatrix is hardened enough not to allow a relapse.⁶

Fisher had several of the classic symptoms, such as fever and loss of weight. There had also been pre-disposing factors; physicians at this period emphasized the importance of psychological as well as physiological factors both in susceptibility to tuberculosis and in the attempt to achieve a cure. Fisher, in this vein, wrote in 1903 to his brother, Herbert, about the circumstances preceding his attack:

I will make another secret confession to you. Dr. Russell in '96 frightened me about my heart. It had been strained by hill-climbing on the bicycle but was not wrong in any other way. He said as much, in fact, but the grave way in which he told me . . . frightened me. I feared sudden death, and I feared to hear my heart beat on my pillow. I might have learned that the former fear was groundless had I enquired. The latter interfered with sleep and I ran down steadily for two years and then, as you know, broke down. So that fear was a contributory cause of my tuberculosis as well as a very serious drag on its cure.⁷

Fisher's illness seems, however, to have been diagnosed without the need of the somewhat controversial use of tuberculin to confirm the diagnosis. Tuberculin was the discovery of Robert Koch, one of the major figures in the history of tuberculosis, who in 1882 had proved that a specific bacterium was the cause of tuberculosis. He was able to cultivate this organism from infected tissues; when it was inoculated

be apparent. Lawrason Brown, *The Story of Clinical Pulmonary Tuberculosis* (Baltimore: Williams and Wilkins, 1941), pp. 62-66; 112-14.

⁵ Osler, *Modern Medicine*, pp. 327-31.

⁶ Letter of Irving Fisher to William Greenleaf Elliot, December 11, 1898, in Irving Fisher Papers (Yale University Library, New Haven). Cited hereafter as Fisher Papers.

⁷ Letter of Irving Fisher to Herbert Fisher, January 1, 1903, in Fisher Papers.

into an animal, it caused the specific disease and could again be recovered.⁸ In 1890, he announced that he had discovered in tuberculin a cure for tuberculosis. Tuberculin was made from a culture of living human tubercle bacilli. Koch advised its use only in early cases, with a 1 milligram dose which was to be repeated until there was no longer any reaction, then a 2 milligram dose given in the same fashion and so on. He believed that a failure of reaction was due to the destruction and lack of tuberculous tissue, which meant that healing was being accomplished. Tuberculin was, however, unfortunately hailed as a miracle cure. Patients traveled to Germany from all over Europe and the United States in an effort to obtain the treatment. Tuberculin was administered to all sorts of cases and the results were often disastrous. It caused fever and often revived old tuberculous patches in the body. Brown described the resulting panic as the age of "tuberculin terror." It was not until 1900-1901 that the use of tuberculin was revived on any widespread scale. It was used in smaller doses with a far more cautious selection of patients. Its real value, however, was later realized to be its diagnostic ability. Infection with bacilli produced an allergic reaction to tuberculin, which was to be developed by Mantoux into a standardized tuberculin sensitivity test.⁹ When Fisher developed tuberculosis, however, the use of tuberculin as a diagnostic test was regarded with extreme caution; Brown advised, "Tuberculin should be used diagnostically only as a last resort. When a patient with suspicious symptoms, with indefinite physical signs and with no tubercle bacilli in the sputum on repeated examinations, wishes a positive diagnosis, tuberculin should be administered."¹⁰

Fisher had succumbed to tuberculosis at a time when the sanatorium movement was at its height and his case is a classic example of this form of therapy. Open-air treatment for tuberculosis had been advocated in ancient times; sea voyages were often recommended to consumptives by Roman physicians.¹¹ In the seventeenth century, Thomas Sydenham advocated fresh air and horseback riding.¹² Such methods were, however, often more dependent upon climate and exercise than

⁸ Webb, *Tuberculosis*, p. 97; Brown, *Clinical Pulmonary Tuberculosis*, p. 101.

⁹ Webb, *Tuberculosis*, p. 111.

¹⁰ Osler, *Modern Medicine*, p. 341.

¹¹ Webb, *Tuberculosis*, pp. 168ff.

¹² "Then ye Doctor sent him into ye County on Horseback (thoe he was see weak yt he could hardly walk) & ordered him to ride 6 or 7 miles ye first day, (which he did) & to increase dayly his journey as he shd be able until he had rid 150 miles. . . ." John Locke, in *Anecdota Sydenhamia*, quoted by Brown, *Clinical Pulmonary Tuberculosis*, p. 16.

the cardinal principles of the sanatorium, fresh air and rest. These were first advocated by George Bodington (1799-1881), who drew attention to the fact that there were few deaths from consumption in the country, in contrast with the high urban death rate from tuberculosis. He pleaded for an end to the practice of confining patients to a sick room and advocated instead constant fresh air:

Consumptive patients are considered hopeless and desperate cases by most practitioners, and the treatment commonly rendered is conducted upon such an inefficient plan as scarcely to retard the fatal catastrophe. One mode of treatment prevailing, consists in shutting the patients up in a close room, to exclude as far as possible the access of atmospheric air, and thus forcing them to breathe over and over again the same foul air contaminated with the diseased effluvia of their own persons To live in and breathe freely the open air, without being deterred by the wind or weather, is one important and essential [sic] in arresting its progress¹³

Bodington suggested the creation of special tuberculosis hospitals in the countryside surrounding large cities. His views, however, met with little favor from the medical establishment of his time. The sanatorium movement was to begin not in England but in Germany.

No connection has been traced but the theories of Brehmer were very close to those of Bodington. Hermann Brehmer in his graduation thesis in 1853 had contended that in the early stages pulmonary tuberculosis was always curable. Although his contention was hotly disputed, he started to treat tuberculosis patients with some success and in 1859 he took over a hydrotherapeutic institution at Goerbersdorf in Silesia and founded the first sanatorium. His treatment was based on his theory that tuberculosis was caused by a relatively small heart, insufficient pulmonary blood supply and poor general nutrition. His therapeutic measures were based on a special diet, fresh air, hydrotherapy and graded exercise. Sanatorium treatment, in the form which was to be universally adopted, was, however, devised by one of Brehmer's pupils. Peter Dettweiler had been a patient and then assistant at Goerbersdorf; he had been unable through weakness to exercise much and had discovered almost by accident the therapeutic value of rest. In 1876, he opened his own sanatorium at Falkenstein which was based on the twin principles of fresh air and rest. The sanatorium treatment had been born and was soon to become the most widely accepted method.¹⁴ The principle involved in such treatment had been foreseen in the 1860s by an Edinburgh physician who wrote, "Although it was generally considered by

¹³ *Ibid.*, pp. 90-91.

¹⁴ *Ibid.*, pp. 94-96.

the profession that no remedy and no plan of treatment yet proposed could be depended on in cases of consumption, *it was obvious to the author, that if the process employed by nature could be discovered, and then imitated by art, we might ultimately arrive at the true principle of cure.*"¹⁵ When tuberculosis was healed by nature, it was through the presence of fresh air, adequate nutrition and ample rest, all of which were to be embodied in the sanatorium. Gradually this method was to replace the wide variety of remedies previously employed for consumption, which ranged from fusel oil, alcohol, inhalations and narcotics to cold water, milk, malt or meat extracts and the juice of various herbs.¹⁶

When Fisher's tuberculosis was diagnosed, he left New Haven for the sanatorium at Saranac Lake, which was already well established. Its founder, Dr. Edward Livingston Trudeau, was himself a tuberculosis sufferer who, in 1872, had expected to die within a year or two. He tried a period of horseback riding in the South but there was no improvement and in May 1873 he went to a sporting inn, Paul Smith's, in the Adirondacks, where it was expected that he would die. Instead, he gradually became better, gaining weight and losing his fever, and returned to New York City for the winter. Here, however, he relapsed and so he returned to Paul Smith's in 1874 and stayed there through the following winter. He discovered for himself the value of rest:

I found, however, I could not walk enough to stand much chance for a shot without feeling sick and feverish the next day, and this was the first intimation I had as to the value of the rest cure, which in after years I applied so thoroughly and rigidly to my patients. I walked very little after this, and my faith in the value of the rest cure became more and more fully established.¹⁷

Trudeau settled in Saranac Lake and, as he gradually recovered, started to build up his own practice. Other tuberculosis patients followed him there and Trudeau started to consider founding an institution for them: "The idea of building the sanitarium originated on my reading, in 1882, in Anstie's *English Practitioner* an account of a visit to Brehmer's sanitarium in Silesia and a discussion of Brehmer's views as to the value of sanatorium treatment in pulmonary tuberculosis."¹⁸

¹⁵ Professor I. H. Bennett, quoted in Carl Both, *Consumption: and Its Treatment in All Its Forms* (Boston: Alexander Moore, 1873), p. 30.

¹⁶ *Ibid.*, pp. 24-26.

¹⁷ Edward Livingston Trudeau, *An Autobiography* (Philadelphia and New York: Lea and Febiger, 1916), p. 107.

¹⁸ *Ibid.*, p. 154. *The Practitioner* was a monthly journal of therapeutics, first published in London in 1868 and called after Dr. Francis Edmund Anstie, who edited it until his death in 1874.

Trudeau wanted to do something to help tuberculosis patients of only moderate means and decided to found a sanatorium at Saranac Lake which would charge patients less than the economic rate for their treatment. He succeeded in obtaining funds from several sources and the sanatorium accepted its first patients in 1884. It charged patients \$5 a week in 1885, which had risen to \$8 a week by 1915; the weekly deficit per patient was \$2, rising to \$4 by 1915.

Fisher, when he went to Saranac Lake in 1898, probably stayed in a hotel or boarding house, since he did not qualify financially for the sanatorium. In other respects, however, he was a typical patient. Emphasis on incipient cases was employed at the majority of sanatoria in the United States. Trudeau selected patients for the sanatorium carefully:

I realized at once that if I was to try to obtain curative results I must confine the admission of patients to incipient and favorable cases as much as possible, and refuse to take the acute and far-advanced ones. This brought me any amount of criticism from physicians who thought I was trying to make a personal reputation for myself for cures by treating only selected cases.¹⁹

The careful selection, however, was essential if the resources of the sanatorium were not to be wasted on patients whose tuberculosis was too far advanced to admit any hope of arresting or curing the disease.

There had been a fairly rapid development of sanatoria in the United States in the years immediately following Trudeau's founding of the sanatorium at Saranac Lake. Many were built on similar lines to Trudeau's; the Adirondack Cottage Sanitarium, as he called it, comprised a central hospital, a laboratory and administration buildings, as well as housing for the patients in the form of many small cottages. Such an arrangement both gave the patients, whose stay was usually lengthy, greater independence and privacy and also minimized the risk of infection. Other sanatoria, however, were built in the more traditional institutional style, such as the first state sanatorium at Rutland, Massachusetts, which was founded in 1898 by Dr. Vincent Y. Bowditch.²⁰ When *The Journal of the Outdoor Life* conducted a survey in 1905, it found the following numbers of sanatoria: ²¹

¹⁹ *Ibid.*, p. 244.

²⁰ Brown, *Clinical Pulmonary Tuberculosis*, p. 99; Lawrence F. Flick, *Development of Our Knowledge of Tuberculosis* (738 Pine Street, Philadelphia, 1925), p. 708.

²¹ "What is being done in the United States and Canada to stamp out tuberculosis," *The Journal of the Outdoor Life*, II, No. 1 (February, 1905), pp. 18-23.

	Free	Under \$10 per week	Over \$10 per week
Sanatoria accepting all cases	37	8	14
Sanatoria " early cases only	13	27	30
Sanatoria " advanced cases only	7	3	1

Like many tuberculosis patients, Fisher was not really prepared for the length of time his cure would take. Shortly after he arrived in Saranac Lake, he wrote to his friend Will Elliot:

I have given up my work till next September and may even take another year off. The cure will probably take place in the first year but a second is considered advisable in most cases. I have thought of going to Colorado Springs but am getting along so well here at present that I shall probably stay till March and then decide on the future.²²

This initial optimism was somewhat qualified only a month later in a letter from Fisher's wife, Margaret:

As soon as this season is over we are seriously thinking of going to Colorado for a year at least, and for longer if necessary—The Doctors say that a year is a *very* short time in which to get perfectly well even from a slight case of tuberculosis.²³

In February, Fisher caught a slight cold and had to return to bed for several days; he was experiencing one of the many setbacks which were typical of the pattern of recovery and which taken together increased greatly the time needed for a cure.²⁴

Time was an essential ingredient in the cure by sanatorium methods; the others were rest, fresh air and an enriched diet. The place of climate and exercise was somewhat more controversial. Fisher became a complete convert to the sanatorium method. By 1902 he was sending to Will Elliot his advice on how to seek a cure:

Your tuberculosis friend should receive an answer at once. *Time* is everything in a parasitic disease.

T. is cured by persistent faithful *patient* hygiene. This consists of

1. Air cure
2. Food cure
3. Rest "
4. Mind "
5. Avoid reinfection
6. Climatic reinfection (i.e. cure)
7. Medication very occasionally

The last two are not essential.²⁵

²² Fisher to Elliot, December 11, 1898, Fisher Papers.

²³ Letter of Margaret Fisher to William Greenleaf Elliot, January 19, 1899, Fisher Papers.

²⁴ Letter of Irving Fisher to William Greenleaf Elliot, February 6, 1899, Fisher Papers.

²⁵ Letter of Irving Fisher to William Greenleaf Elliot, March 24, 1902, Fisher Papers.

The sanatorium regime was devised in large measure by Trudeau, adapting Brehmer's and Dettweiler's methods. Its practice spread from Saranac Lake, where Fisher learned it, throughout the country and was adopted, with variations, at every sanatorium and health resort.

The most important ingredient was rest. Together with the breathing of pure, uncontaminated fresh air and ample nutrition, rest was the healing agent in the cure. The importance of rest was not always fully appreciated at first. Brehmer had believed that tuberculosis was caused partly by a small heart and therefore had prescribed exercise for his patients in an attempt to strengthen their hearts. Dettweiler, however, found that rest was far more effective and his methods were adopted by Trudeau who, as mentioned above, discovered for himself the value of rest. Webb and Ryder, in their manual for the tuberculosis sufferer, exhorted, "Do not forget that *of all the countless remedies proposed, Rest alone has stood the test of time.*"²⁶ The patient was never to hurry, to attempt strenuous exercise or to neglect any of the numerous rest periods advised in the daily timetable, and was to have at least nine hours sleep each night. The philosophy, in Trudeau's words, was to "conquer fate by acquiescence." The patient had to win his way back slowly to a full and active life or, if that proved impossible, build for himself a passive life that was worth living.²⁷ Rest took over the dominant position previously held by fresh air. In 1915, Lawrason Brown, one of Trudeau's associates at Saranac Lake, published a small handbook on the *Rules of Recovery from Tuberculosis*, in which he told sufferers:

There are three great medicines in the treatment of tuberculosis: medicines which when rightly used are far superior to those found in any pharmacopoea, Rest, Food and Fresh Air. Formerly this order of their importance was reversed and the value of fresh air and food so emphasized that rest was placed last, hyphenated often to exercise and modified by "properly regulated." . . . The value of rest at the outset of treatment cannot be over-emphasized.²⁸

Brown justified this overriding insistence on rest by explaining that complete rest caused the least irritation to the pleura and thus permitted better and faster healing. Latham and Garland, however, gave a more complex explanation of the function of rest, which had been hinted at

²⁶ Gerald B. Webb and Charles T. Ryder, *Recovery Record for Use in Tuberculosis* (New York: Paul B. Hoeber, 1925), p. 17.

²⁷ *Ibid.*, p. 2.

²⁸ Lawrason Brown, *Rules for Recovery from Tuberculosis* (Saranac Lake, New York: By the author, 1915), p. 22.

by Klebs.²⁹ The cure was, they claimed, brought about by auto-vaccination, that is, vaccination with the patient's own poison. Rest allowed only very small portions of the poison to be absorbed into the general circulation. The production of the antidote was stimulated and the white phagocytic cells could destroy the small number of invading bacilli. Very carefully regulated amounts of exercise allowed gradually increasing quantities of bacilli into the system without overcoming the resistance of the white phagocytic cells and thus in the course of time the disease was arrested.³⁰

Fisher's treatment took place when the importance of rest, especially at the outset of the cure, had been recognized. It was not, however, until a few years later that the extreme emphasis on rest developed and Fisher, from fairly early on in his illness, began to exercise. In his advice to a fellow tuberculosis sufferer, he expressed this balance between rest and exercise:

*Rest. Keep rested. Learn to relax and make mind a blank. Exercise but be careful to stop short of fatigue. Then rest thoroughly and exercise again. Alternate rest and exercise is the rule. I got to walk five miles a day when I could not walk over half a mile at a time by walking ten times with perfect rest between.*³¹

In subsequent years, rest was given much greater importance. Fisher's amount of exercise was far in excess of that suggested by Webb and Ryder in 1925; the patient was to rest in bed if his temperature was 98.8 or over, or if his pulse was over 80 after 15 minutes in bed. They advised that initially one should, "Be lazy. Be selfish."³² They also warned the patient that he should expect the cure to require at least three to four years. Fisher was to discover this fact and accept it, in spite of his initial optimism about a relatively quick cure. In January 1900, he wrote to Will Elliot, "The disease is absolutely arrested and . . . barring accidents, it is only a question of time until I shall be entirely cured."³³ He also realized that he would be able only gradually to resume the duties of his Yale professorship, probably at first living in New Haven for only the fall months.

The other major characteristic of sanatorium treatment was initially even more apparent than rest; residents were invariably to be seen rest-

²⁹ Klebs, *Tuberculosis*, pp. 679-80.

³⁰ Arthur Latham and Charles H. Garland, *The Conquest of Consumption* (London: T. Fisher Unwin, 1910), pp. 39-40.

³¹ Fisher to Elliot, March 24, 1902, Fisher Papers.

³² Webb and Ryder, *Recovery Record*, p. 23.

³³ Letter of Irving Fisher to William Greenleaf Elliot, January 2, 1900, Fisher Papers.

ing outdoors, even when the temperature was below zero and they had to be wrapped in several layers of blankets and furs. Fisher became an ardent exponent of the virtues of fresh air, and indeed accorded it first place in his list of essential components of the cure. His suggestions were:

Be out of doors all day

Sleep out by all means

Keep windows open when indoors & air move at all times

Avoid as much as possible contam. of pure air by gas jets lamps, etc. These sources vitiate air much more than occupants. Electric light is the only hygienic light. Average 15 to 20 hours a day out of doors.³⁴

In accordance with the majority opinion at that time, Fisher ascribed the most important place in regaining health to fresh air:

I agree with you fully in regard to the importance of many other things besides fresh air in the matter of preservation and regaining of health: nevertheless, by almost every test by which we can make a comparison, I believe air is of the most importance. . . . As measured by the results obtained in the treatment of tuberculosis, air is much more important than any other hygienic element.³⁵

The sanatorium was a monument to this belief. Its patients would sit out during the day, resting on such reclining chairs as the patented "Adirondack Recliner," regardless of temperature, in order to breathe the pure outdoor air. This air was not contaminated with the bacilli which they might emit while coughing or spitting. They were free from the danger of reinfection or infection by other germs. If the temperature was low, as it was during the winter at Saranac Lake and in Colorado, where Fisher went in the spring of 1900, the patient would wear several layers of clothing and then wrap himself in furs and blankets so that he was impervious to the cold. Publications for the tuberculosis sufferer, such as *The Journal of the Outdoor Life*, founded at Saranac Lake by Trudeau, were full of small items advising one how to dress for the cold and which gloves allowed one to write and advertisements describing different styles of balaclava helmet. Fisher adopted such practices wholeheartedly; he wrote from Saranac Lake, "I am sitting out in the porch, thermometer 20° and snow two feet deep! I find ink freezes and so use pencil."³⁶

Sleeping out had been part of the cure for the previous half-century.

³⁴ Fisher to Elliot, March 24, 1902, Fisher Papers.

³⁵ Letter of Irving Fisher to William Greenleaf Elliot, April 11, 1901, Fisher Papers.

³⁶ Fisher to Elliot, December 11, 1898, Fisher Papers.

In a letter to *The Journal of the Outdoor Life*, Trudeau mentioned early advocates of sleeping out. The practice had started in the 1860s when consumptives used to travel west by prairie schooner; sleeping out during the two months or so on the trail often proved one of the most effective methods of cure. After that, several western physicians had recommended to their patients camping out on the plains. The practice was adopted by sanatoria and also by physicians in areas previously thought unfavorable to tuberculosis.

Sleeping out became one of the key features in what was known as the "home sanatorium treatment." When one compares the numbers of tuberculosis sufferers known in the United States with the number of places available at sanatoria, the need for a method of treatment which could take place at home is immediately apparent. The need was even greater when one took into account the poverty of the majority of tuberculosis sufferers and the length of time needed for a cure. One of the first physicians to recommend such home treatment was Dr. C. S. Millet of Brockton, Massachusetts, who in the 1890s advised tuberculosis patients under his care to sleep out at nights. His patients were mainly mill workers who had to work indoors during the day.³⁷ Similar methods were adopted at sanatoria and were also recommended to patients on their return home, as a means to ensure the permanence of their apparent cure. Fisher considered the effect significant:

Did I ever tell you of the decided leap forward I took in health as soon as I began to sleep out of doors, although before making this change, I had been sleeping in a room with the door wide open to the East and two windows wide open to the South! . . . the very night that I slept out, I noticed a decided difference and within a very few days my symptoms abated very markedly. The change was so striking as to make it extremely probable, on the basis of one fact alone, that the slight difference between the purity of nature's air and the air in my bed chamber had produced this difference in my health.³⁸

This experience made Fisher almost fanatical on the subject of fresh air. He described fifteen different degrees of purity of air and claimed that if only the human race would live in the top half, "consumption would become in ten years as rare as leprosy."³⁹ After his return to New Haven in the fall of 1901, he continued to keep up "the practice of out-

³⁷ Edward Livingston Trudeau, "First advocates of outdoor sleeping," *The Journal of the Outdoor Life*, II, No. 6 (July, 1905), p. 137.

³⁸ Fisher to Elliot, April 11, 1901, Fisher Papers.

³⁹ *Ibid.*

of-door life in accordance with the principles which I have learned." He wrote to Will Elliot:

I see that Mrs. Fisher and the children are not far behind [in the practice of open-air living] I have an out-of-door study in which I am now writing, and have arranged my bedroom, which is a corner room, with both windows wide open at the top and the head of the bed pushed up against one of them, with a screen on the side to prevent a cross-draught.⁴⁰

The majority of handbooks written to aid the tuberculosis patient contained plentiful advice on how to adapt the sanatorium method to treatment at home. The key factor was outdoor living. The patient was advised to build a porch or verandah to his house, in direct imitation of the porch on sanatorium cottages or the verandahs at large institutional buildings. If this were not possible, there were other possibilities. Galbreath described the sleeping shacks which he had built in Colorado and Maryland. Knopf's handbook was full of advice, down to measurements and building instructions for the suggested devices. The most popular recommendation for patients in cities was the window tent. This contraption worked on the same principles as Fisher's sleeping arrangement but shut the patient off completely from the rest of the room, thus making it safer for others, if need be, to sleep in the same room. A miniature tent, covering the upper half of the bed, was open on one side to the window, thus ensuring that the patient had constant fresh air.⁴¹ Another advantage to treatment at home was that it prepared him for living and working in that climate when recovered, rather than requiring an adjustment to a completely different climate after several months in a resort climate. The whole philosophy of fresh air was contained in Brown's advice: "One should be so 'faithful to the cure' that his conscience will trouble him when he remains inside; in other words, he should develop an 'outdoor conscience.'"⁴²

The importance of climate was still a controversial subject at this time. Fisher followed the typical pattern of financially able consumptives in going to climates which supposedly were most beneficial. Many authorities advised a cool, dry, sunny climate, with reasonable extremes

⁴⁰ Letter of Irving Fisher to William Greenleaf Elliot, November 5, 1901, Fisher Papers.

⁴¹ Thomas Crawford Galbreath, *T.B. Playing the Lone Game Consumption* (New York: Journal of the Outdoor Life Publishing Company, 1915), pp. 27-31; S. Adolphus Knopf, *Tuberculosis, A Preventable and Curable Disease* (New York: Moffat, Yard and Co., 1910), pp. 60ff; Joseph H. Pratt, "The home sanatorium—a successful method of treating pulmonary tuberculosis," *The Journal of the Outdoor Life*, III, No. 1 (February, 1906), pp. 8-9.

⁴² Brown, *Rules for Recovery*, p. 65.

of temperature, as the most beneficial.⁴³ The most popular areas were the Adirondacks and the states of Colorado, Arizona and New Mexico. When Fisher was first diagnosed as having tuberculosis in November 1898, he went to Saranac Lake. He left the following March for Colorado Springs. He remained there until May 1900 before going to Santa Barbara, California, which was also recommended for its climate and which Fisher wanted to try since, like New Haven, it was at sea level.⁴⁴ Fisher himself was aware of the changing emphasis in the ingredients of the cure. He wrote to Will Elliot from Santa Barbara, "Of course it is something of an experiment for me but the Doctors think that the risk in coming was extremely small, and as you know the modern idea is that it is not the climate but the life that cures."⁴⁵ By 1902, he was telling his wife, "I don't fear any climate as to any effect on my lungs and I don't like to think that you have any of that old fear. It doesn't matter whether the weather is dry or not either. But I think our summers ought to be inland because our winters are not."⁴⁶

The older remedy was to prescribe the climate out west for every consumptive. Former sufferers, such as George Price, wrote handbooks like *Gaining Health in the West: Being Impressions of a Layman, Based on Seven Years' Personal Experience with "Climate."* Price warned patients not to expect a quick cure; they must learn to accept the fact that they had tuberculosis and settle down to a lengthy cure rather than fool themselves imagining that their attack was not serious and would soon be cured. He described in some detail the resorts and small climate differences in Colorado, Arizona and New Mexico.⁴⁷ There was, however, one major obstacle in prescribing climate as a remedy—the expense. Comparatively few patients could afford the cost of transportation to the west and accommodation there for at least a year. Possibly it was this economic factor which brought about a change in medical theory. Patients who could not afford the trip west started to

⁴³ Cf. Brown's advice "that coolness, dryness and active motion of the air are factors to be sought after and further, as James puts it, that 'many atmospheres are good enough to be breathed which are not good enough to be lived in.'" *Rules for Recovery*, p. 56. Webb and Ryder thought that most patients did better in varied, semi-severe climates than in very mild and equable ones, *Recovery Record*, p. 39.

⁴⁴ Letter of Irving Fisher to Margaret Fisher, January 28, 1901, Fisher Papers.

⁴⁵ Letter of Irving Fisher to William Greenleaf Elliot, June 18, 1900, Fisher Papers.

⁴⁶ Letter of Irving Fisher to Margaret Fisher, September 2, 1902, Fisher Papers.

⁴⁷ George B. Price, *Gaining Health in the West: Being Impressions of a Layman, Based on Seven Years' Personal Experience with "Climate."* (New York: B. W. Huebsch, 1907), pp. 13-14, 26-40.

follow an open air life at home and the results demonstrated that climate was only a minor factor in the cure. Handbooks started to advise patients to consider carefully whether they could really afford a lengthy stay in the west; if not, they would be far more successful following sanatorium methods at home then spending all they had on a short stay in Colorado, only to return while still seriously ill. Galbreath reminded tuberculosis patients of Dettweiler's opinion that, "elements like temperature, humidity and atmospheric pressure are really of slight consequence; pure air and proper nutrition are the main things."⁴⁸ He also cited the similar conclusions of the Committee on the Influence of Climate in Pulmonary Tuberculosis which had been appointed by the National Association for the Study and Prevention of Tuberculosis. Ward's major treatise on climate concluded that it was, at most, an important help in the treatment of tuberculosis, in so far as it afforded clean and pure air.⁴⁹

Climate was still a vested interest in some quarters. Sanatoria and physicians in climatic resorts such as the Adirondacks and the Rockies were dependent upon continued belief in at least some climatic benefits. The American Climatological Association represented this interest and argued that there was a real, if not indispensable, benefit from a "healthy" climate. In May 1906, *The Journal of the Outdoor Life*, which as a publication of the Saranac Lake sanatorium had an interest in maintaining the claims of climate, contained an article which contended that: "It is now a well-established fact that climate is an unimportant factor in the treatment of tuberculosis. It cannot be gainsaid that treatment can be conducted in certain climates more comfortably than in others, but tuberculosis can be cured in all climates."⁵⁰ The author attributed much of the supposed beneficial effect of climate to the incentives for living out of doors in a good climate. While not disagreeing with the major premise that tuberculosis could be cured in all climates, the editors of *The Journal* nevertheless went on record to state the value of climate in providing change, refreshment and pure air.⁵¹ In his handbook on tuberculosis, Flick brought a common sense verdict to several

⁴⁸ Galbreath, *T.B.* p. 16. One wonders also whether patients found Denver an exceedingly inhospitable place if the "phthisiophobia" was such as described. Cf. Galbreath, *Chasing the Cure in Colorado* (Denver, Col.: by the Author, 1907), pp. 27-33.

⁴⁹ Robert DeCourcy Ward, *Climate* (New York: G. P. Putnam's Sons, 1908), p. 208.

⁵⁰ J. W. Pettit, "The open air treatment of tuberculosis," *The Journal of the Outdoor Life*, III, No. 4 (May, 1906), p. 146.

⁵¹ "In re climate," *The Journal of the Outdoor Life*, III, No. 10 (November, 1906), p. 389.

of the debates over treatment. His comment on climate is perhaps the best, for it encompasses psychological and environmental factors: "New York was at one time a health resort for consumptives, so was Pennsylvania and so was every State in the Union in turn and in order going west. The reputation earned in the primæval forest was lost in the cultivated fields. When consumption became prevalent, it was said that the climates had changed."⁵²

The remaining ingredient of the cure which all authorities agreed upon was nutrition. Consumptives usually lost weight quite severely and an enriched diet was essential if they were to regain strength and energy. Sanatorium patients were usually given three meals a day, with extra lunches of milk and raw eggs between meals. Milk and eggs were thought particularly valuable in building up strength. Handbooks are full of advice on the easiest way to learn to enjoy raw eggs. The success of the diet was judged by the amount of weight gained. Webb and Ryder's *Recovery Record* contained detailed charts to record weight change and *The Journal of the Outdoor Life* advertized similar charts for sale.⁵³ The diet was also to be fairly bland to avoid digestive difficulties which tended to be common in tuberculosis sufferers. Rest before and after meals was strongly recommended. There is no evidence to show when Fisher first became interested in diet problems, but he became a zealot on the subject. In his advice to a fellow sufferer, he wrote:

Rest on back with eyes closed and body *relaxed* an hour before meals. The stomach needs rest before its work. After meals rest $\frac{1}{2}$ hour in *semi-sitting* posture. Eat *slowly*. Masticate until all taste is gone and food disappears without voluntary effort to swallow. Any residue in mouth reject. Eat *heartily* *very*. Eat a *variety*. Eat what agrees with you. *Milk & meat* & other nitrogenous foods are best in general. Raw eggs are excellent. I have known of a person eating a *dozen* at end of each *meal!*⁵⁴

Later, however, Fisher was to change his opinion on the value of meat. He gradually gave up eating meat and considered his new diet far superior. His stay at Battle Creek Sanitarium confirmed his belief in a predominantly vegetarian, "aseptic" (i.e. pure or poison free) diet.⁵⁵ He later conducted various diet experiments, using his Yale students as subjects in order to try to determine the most important elements of diet to ensure good health.⁵⁶

⁵² Lawrence F. Flick, *Consumption: A Curable and Preventable Disease* (Philadelphia: David McKay, 1903), p. 96.

⁵³ Webb and Ryder, *Recovery Record*, pp. 7-8, 80ff.

⁵⁴ Fisher to Elliot, March 24, 1902, Fisher Papers.

⁵⁵ Letter of Irving Fisher to Margaret Fisher, January 7, 1905, Fisher Papers.

⁵⁶ Letter of Irving Fisher to William Greenleaf Elliot, April 20, 1906, Fisher Papers.

The cure for tuberculosis at this period was a total way of life; Fisher was a good candidate for such a regime. His personal psychological traits, including a somewhat compulsive nature and a strong sense of duty, made him an excellent patient, once convinced of the necessity of following such a regime. Timetables intended to guide the patient, such as Brown's, left him little or no free time to himself.⁵⁷ Compulsory rest, short exercise periods, frequent meals and long periods of sleep filled the patient's day as effectively at home as if he had been in a sanatorium. Fisher responded to this prescription with complete faith. Flick had written that "Every action of the patient must be brought under control."⁵⁸ For many physicians, this included the state of the patient's mind. Tuberculosis sufferers were constantly exhorted to accept their fate, give up fighting the disease mentally and instead put their mental energy into maintaining a healthy cheerful disposition. This aspect of treatment was a direct reflection of late nineteenth century preoccupation with the practice of mind cure.⁵⁹ It allowed the patient to feel that he was constructively aiding his cure. Fisher applied the principles of mind cure to himself and then, in the usual pattern, tried to convert others. He wrote to his brother that he had managed to conquer "the blue devils," by which he meant the depression lasting for almost three years after he knew he had tuberculosis, by "hard work and the application of auto-suggestion." The discovery that he could control his nerves was, in his opinion, the most important lesson he had ever learned. He wanted to help others to see, "that fear is at the bottom of most diseases, especially 'chronic diseases'—fear and foul air."⁶⁰

The distinction was frequently made in works on tuberculosis between an "arrested" case and a "cured" case. Although the disease might be arrested and the patient apparently be in good health, one could not be certain of a cure until several years later, when there was no further danger of a relapse and when the lung tissue had healed. Fisher's case was fairly quickly arrested and he could safely be pronounced "cured" a few years later. His recovery from tuberculosis is a classic example of the therapeutic methods employed at the turn of the century. This period marked a breakthrough, when it was recognized that tuberculosis was indeed, as many authors on the subject proclaimed, a preventable

⁵⁷ Brown, *Rules for Recovery*, p. 63.

⁵⁸ Flick, *Consumption*, p. 212.

⁵⁹ For a brilliant description of such movements, see Donald B. Meyer, *The Positive Thinkers* (Garden City, N.Y.: Doubleday, 1965).

⁶⁰ Irving Fisher to Herbert Fisher, January 1, 1903, Fisher Papers.

and curable disease. The sanatorium method, although lengthy, offered a good chance of recovery provided that the disease had been diagnosed at a fairly early stage. The means of cure was not dramatically changed until the discovery of effective drugs a half century later. Fisher's case was typical in his adoption of the "cure" as a total way of life. The cardinal principles of rest, fresh air and nutrition ruled all his actions. It was also typical that the convert became a zealot; like many other former tuberculosis patients, Fisher advocated a similar regime as the means to a healthy life. He became an ardent crusader for greater attention to health and hygiene issues throughout the country. His voice was added to the growing chorus of physicians and others calling for prophylactic measures.⁶¹ His most important work was in the foundation of the Committee of One Hundred, a national campaign whose aim was to secure the establishment of a federal department of health.⁶²

⁶¹ The emphasis on prevention was the result of Koch's discovery of the tubercle bacillus. As soon as it was generally realized that tuberculosis was a contagious disease, the cry was raised for greatly improved personal and public hygiene. Health education programs were instituted to teach people how to avoid spreading the bacillus (especially by taking care of sputum). The campaign had some comical side-lights, such as a call for shorter women's skirts because trailing skirts might pick up bacilli from the street.

⁶² George Rosen, "The Committee of One Hundred on National Health and the Campaign for a National Health Department, 1906-1912," *American Journal of Public Health*, LXII, No. 2 (February 1972), pp. 261-63.