

MEDICINE
on the
EARLY WESTERN
FRONTIER

an exhibit at the
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Cover Photo: Fort Union National Monument, established 1954.

The original Fort Union, constructed in 1851 at the base of the foothills seen in the distance, was located twenty-four miles northeast of Las Vegas, New Mexico on the mountain branch of the Santa Fe Trail. The following year, in 1852, the post surgeon complained bitterly about the many cases of venereal disease he was treating and the quartermaster noted the great amount of food and candles which were stolen and given to the numerous prostitutes who had followed the army from Santa Fe and lived in the caves in the foothills. In 1856, Assistant Surgeon Jonathan Letterman found the decaying buildings at the post a haven for vermin and observed that the water supply was responsible for numerous cases of diarrhea. The adobe ruins in the foreground are the remains of buildings constructed in 1863-1866.

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Introduction

There have been many frontiers throughout American history: the Colonial frontier (1607-1763), the Appalachian barrier (1763-1812), the Mississippi Valley frontier (1812-1840), and the opening, conquest and settlement of the Far West (1825-1890). This exhibit covers the frontier of the trans-Mississippi West, from the early explorations at the beginning of the 19th century to its latter years. The exhibit focuses on the subject of health and medicine as experienced and practiced in the trans-Mississippi West by early Anglo-American explorers, by the fur trappers, by the military in isolated posts along the expanding frontier, by the emigrants along the overland trails, and finally by the early settlers.

Standard medical practice in the first half of the 19th century consisted of a relatively small number of treatments distinguished by their immediate, visible, and drastic impact on the patient. Active and vigorous therapy was the hallmark of medical practice. Patients were dosed with purgatives and emetics, bled often to the point of exhaustion, and blistered with a variety of skin irritants. It is not surprising that sectarian medical groups who decried such violent therapy gained a large following. Both the Thomsonians, with their belief that illness was cured by the restoration of body heat, accomplished by steaming, peppering, and puking with lobelia, and the homeopaths, with their laws of similars and infinitesimals, were as familiar on the western frontier as they were in the east. Similarly, it is not surprising that some of the self-doctoring, the reliance on home remedies, and the domestic medicine texts were not based solely on the inaccessibility of a physician. The Anglo-Americans moving westward into the frontier were knowledgeable about the medicinal plants and practices of the Amerindian population and one finds an interesting interchange between the two cultures.

Early Explorations: The Lewis & Clark, and Astor Expeditions

The medical aspects of the Lewis and Clark expedition (1804-1806) have been well documented. Some historians have been critical of the fact that an otherwise well prepared and equipped expedition was allowed to embark on a two and one half years, 8,000 mile expedition without having a physician as a member of the party. Medical preparations, however, were quite thorough. President Jefferson had enrolled the aid of doctor-statesman Benjamin Rush, who assisted in preparing a list of medicines to be carried along as well as a set of rules for the preservation of health. Furthermore, both Meriwether Lewis and William Clark possessed the medical knowledge common to most educated men of the day, particularly those who had served as military officers.

There was only one death among the 34 members of the outbound expedition. This was caused by "bilious cholera" (possibly a ruptured appendix). The most frequent medical problem seems to have been "tumors and biles," that is, boils and regional lymphadenitis from the constant exposure to the weather and the continually wet skin. Frostbite, colds,

pleurisy, rheumatism, venereal disease, and traumatic injuries also took their toll. Bleeding, purging, and puking were the mainstays of therapy.

The fur trading post, Astoria, was founded in 1811 at the mouth of the Columbia River by two groups of pioneers, one sailing from New York around Cape Horn and the other striking out overland. The privations suffered by the latter group were legion. For one twenty day period they were without food or water; several men drank their own urine to fight the raging thirst, while hunger forced all of them to eat roasted beaver skins and finally their moccasins.

No physician was sent with the Astor expedition, a fact which one diarist of the venture bemoaned with some bitterness. Of the several ships surgeons who landed at Astoria for varying periods of time during the first ten years, two committed suicide and a third was arrested for murder. Scurvy was a frequent problem at the post and was treated by eating certain roots as taught to the traders by the Indians.

Dr. Rush to Capt. Lewis for preserving his health. June 11. 1803.

1. When you feel the least indisposition, do not attempt to overcome it by labour or marching. *Rest* in a horizontal posture. Also fasting and diluting drinks for a day or two will generally prevent an attack of fever. To these preventatives of disease may be added a gentle sweat obtained by warm drinks, or gently opening the bowels by means of one, two, or more of the purging pills.

2. Unusual costiveness is often a sign of approaching disease. When you feel it take one or more of the purging pills.

3. Want of appetite is likewise a sign of approaching indisposition. It should be obviated by the same remedy.

4. In difficult & laborious enterprises & marches, *eating sparingly* will enable you to bear them with less fatigue & less danger to your health.

5. Flannel should be worn constantly next to the skin, especially in wet weather.

6. The less spirit you use the better. After being *wetted* or *much* fatigued, or *long* exposed to the night air, it should be taken in an *undiluted* state. 3 tablespoonfuls taken in this way will be more useful in preventing sickness, than half a pint mixed with water.

7. Molasses or sugar & water with a few drops of the acid of vitriol will make a pleasant & wholesome drink with your meals.

8. After having had your feet much chilled, it will be useful to wash them with a little spirit.

9. Washing the feet every morning in *cold* water, will conduce very much to fortify them against the action of cold.

10. After long marches, or much fatigue from any cause, you will be more refreshed by *lying down* in a horizontal posture for two hours, than by resting a much longer time in any other position of the body.

11. Shoes made without heels, by affording *equal* action to all the muscles of the legs, will enable you to march with less fatigue, than shoes made in the ordinary way.

At the request of President Jefferson, Dr. Benjamin Rush assisted with the medical preparations for the Lewis and Clark expedition and prepared this list of directions to help preserve the health of the expedition's personnel. Note the final item regarding shoes without heels for marching; shoes of similar construction have become popular in recent years.

The Fur Trade

The early fur trapper or mountain man was a creature in tune with the world he inhabited. Frequently alone in the wilderness, he was his own cook, surgeon, soldier, wrangler, guide, seamstress, veterinarian, and gunsmith. He had to be competent in each role. Shortly after the return of the Lewis and Clark expedition the fur trappers moved into the rich beaver country around the headwaters of the Missouri, Columbia, and Colorado rivers.

An 1830 report from the fur trading firm of Smith, Jackson and Sublette reported that "among our parties in the mountains, sickness and natural deaths are almost unknown." This same report listed 16 deaths at the hands of the Indians, 3 deaths by fighting amongst the trappers themselves, one drowning, one death from wounds received from a bear, and one natural death of a half breed woman. The trappers who survived invariably carried the scars of fights and mishaps, the limbs and twisted limbs of broken bones not properly set, and the rheumatism and arthritis resulting from the thousands of hours spent wading in icy streams. The trapper lived off the land and used medicinal plants learned from the Indians. His "Green River" knife was his surgical instrument. Not known for their attention to personal hygiene, fur trappers frequently deloused their clothes by spreading them over an ant hill.

The highlight of the trapper's year was the annual rendezvous when fur trappers and Indians gathered with their pelts to meet the

traders with their wagon loads of supplies. These gatherings generally lasted twenty to thirty days and once the pelts were sold, rendezvous became an orgy of drinking, carousing, gambling, and fighting. The uninitiated, like the members of the Marcus Whitman party on the overland trail who attended the 1838 rendezvous, always commented upon the tremendous amount of alcohol consumed. The beverage was pure grain alcohol, purchased in St. Louis, cut four or five times with branch water, with tobacco and black gunpowder added for color and flavor!

The brothers William and Charles Bent constructed a huge private fort on the upper Arkansas River (in what is now southeastern Colorado) to trade with the trappers and Indians for pelts and buffalo hides. Completed in 1834, Bent's fort became a mixture of Indian, Mexican and American cultures and was the center of Indian trade for over a decade, until it was destroyed in 1849. This conglomeration of cultures was also evident in the medical therapeutics. When William Bent contracted diphtheria and could neither swallow nor talk, his Cheyenne wife forced a hollow quill down her husband's swollen throat and fed him by blowing broth from her own mouth. A Cheyenne medicine man cleared the obstruction by forcing a succession of small, sharp-thorned sandburs covered with marrow fat and attached to a thread of sinew down his throat. When the fat melted, he pulled each bur out, bringing with it "corrupt matter . . . as dry as the bark of a tree." This was the diphtheritic membrane.



On many occasions the "Green River" hunting knife was the only surgical instrument available to the fur trapper.

*Courtesy of Denver Public Library
Western History Department*

The Overland Trail

One of the best documented of American experiences is the migration of the thousands of emigrants to California and Oregon, particularly in the 1840's and 1850's. Numerous journals and diaries kept by the overland travelers have been published and myriads more are preserved in various manuscript repositories. Many of these document the hardships and privation sustained by families in transit, including the incredible amount of disease that plagued these travelers. Diseases that were particularly prevalent were malaria, dysentery, typhoid fever, cholera and scurvy; smallpox, measles and diphtheria were also not uncommon.

It is estimated that 50,000 persons traveled the Overland route through South Pass in 1850. Such vast numbers of animals and human beings passing over the same trails and camping at the same locations without any sanitary precautions made contamination of water and soil inevitable. There were also drownings while fording numerous waterways, and traumatic fractures from overturned wagons and other accidents were frequent. A few wagon trains included a physician, but the vast majority relied on a supply of patent medicines or carried along texts on domestic medicine such as the particularly popular books written by John Gunn or William Buchan.

The military posts along the California and Oregon trails frequently became havens for

medical care. Sick emigrants were often abandoned along the trail and had to be brought in by the soldiers. Others were left at the posts without means or a friend to tend them. In 1852, the drain on the medical supplies at frontier garrisons reached such a point that the Surgeon General complained about the situation in his annual report. Shallow graves were a common sight along the trails. One observer in the fall of 1850 counted six hundred graves along the south side of the Platte River between the Missouri and Fort Kearney.

The diary of James Akin, Jr., which chronicled his overland trip from Iowa to the Oregon Territory in 1852 was typical of contemporary chronicles in describing the tragedies that accompanied these journeys. Akin lists three drownings, a man crushed by a wagon, three deaths from cholera, considerable unspecified illness, the death of his mother and sister on the trail and finally the death of his father two weeks after arriving in Portland. The journal of Henry A. Allyn, written in 1853 during his trip from Iowa to the Oregon Territory, also details misfortune. He described his repeated attacks of malaria and dysentery, a drowning, two murders in the wagon train followed by a hanging, a death from lightning, and numerous cases of "lung fever" and diarrhœa.



PILGRIMS OF THE PLAINS.

Large numbers of emigrants (in 1850, 50,000 traveled through South Pass) and animals passing over the same trails and camping at the same locations without sanitary precautions contaminated the water supply and the soil and made disease inevitable.

*Courtesy of Denver Public Library
Western History Department*

The Frontier Garrisons

After 1833 and the convening of the first army board of examiners for those seeking a commission, the 19th century army surgeon was not only equal to his civilian counterparts, but superior to many of them. Since there were never enough commissioned medical officers to cover all the garrisons and troops in the field, civilian physicians were frequently hired for a year or less. These so-called contract surgeons were often stationed at the smaller and more isolated posts and saw considerable field service.

The life of the military surgeon at the isolated frontier posts was far from easy. He shared the boredom, the dull routine, the hardships, and often the sickness of his comrades-in-arms. Although some turned to alcohol and others pleaded for transfer, a few made the best of their miserable surroundings and trained themselves to be naturalists and ornithologists. Some of these officers became experts in the study of their environment; the names of B. J. D. Irwin, Elliot Coues, and C. B. R. Kennerly are especially well known.

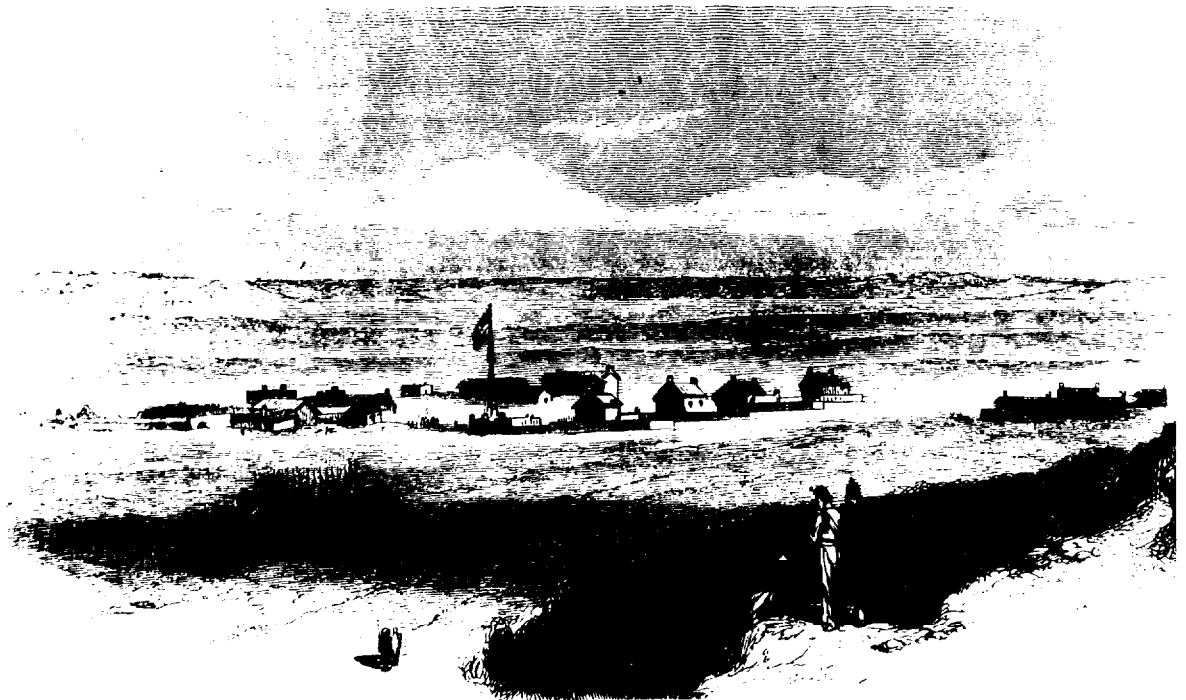
The hospital and living facilities at frontier posts left much to be desired. Dr. Leonard C. McPhail was furious when, upon his return in 1835 to Fort Gibson in the Indian Territory with many dragoons ill with intermittent fever, he found the hospital unfinished and unfurnished. "I had to lay my sick on the puncheon floors, and cursing the choke-damp policy of government that has made

Fort Gibson the charnel house of the army, I determined that the death scenes of 1833-34 should not again be visited on the here ill-treated and worse provided for dragoons," he wrote in his diary. Later he reported to the Surgeon General that only one room in the hospital under construction had a floor, and that this was installed only because it was used as a ballroom! Captain Lemuel Ford was stationed at Fort Gibson from 1832 to 1834 and had intermittent fever and lost 22 men out of 71 in his company. When ordered to move back to Gibson from Fort Leavenworth in 1837 he promptly resigned from the army. He would willingly sacrifice his life in time of war, Ford claimed, but in time of peace there was no such need. Fort Gibson was not unique. In 1854, two years after the establishment of Fort Ewell on the west bank of the Nueces River in Texas, the post surgeon described it as "manifestly unfavorable to health" and pleaded "for the sake of humanity and the credit of the service" that the post should be abandoned. Alcoholism was a serious problem in the frontier army. One post surgeon reported that the customary daily intake of some soldiers was 3 quarts of whiskey, one being required "to set them up before breakfast." Many of the ante-bellum enlistments were newly arrived immigrants who sought a means of transport to the western frontier.

The medical problems of the frontier army were chiefly scurvy, the "miasmatic" fevers

(primarily malaria), typhoid fever, dysentery, cholera, chronic diarrhea, venereal disease, and alcoholism. The most frequently reported major surgical procedure was amputation. The military surgeon on the Western frontier became an authority on the treatment of arrow wounds even before the Civil War. He quickly learned the physical dimensions and structural characteristics of the different arrows of the Indian tribes in his environs. He

could judge the depth of penetration by measuring the exposed shaft and he could determine the plane in which the arrowhead lay by examining the slit in the feathered end of the arrow. Even today the most frequently cited article on the treatment of arrow wounds is that of Assistant Surgeon J. H. Bill who was stationed in the Southwest and published his work in the *American Journal of Medical Sciences* in 1862.



FORT UNION.

The original Fort Union, New Mexico, from an 1857 drawing made six years after construction. The buildings were a haven for vermin, the water supply was a frequent cause of diarrhea, and the prostitutes who lived in the caves in the foothills overlooking the post were accused of keeping the rate of venereal disease at an alarming level.

*Courtesy of Denver Public Library
Western History Department*

The Early Settlers

In many early pioneer communities the medicine practiced was the same as that practiced on the overland trails, basically home remedies and a reliance on the medicinal plants native to the area. Physicians were few and many of those that did practice did so only part-time while they mined, farmed, or were otherwise engaged in business pursuits. Josiah Gregg, a literate adventurer who was interested in obtaining a medical education and who spent a number of years in the Santa Fe trade, commented in 1834 that despite the fact that there was no doctor in the whole province (New Mexico), it was not an attractive place for a physician to settle because the poverty of the populace made for an unprofitable practice. Gregg stated that many of the cures that were performed in the area were achieved with indigenous roots and herbs which grew in abundance.

In the Oregon Territory, at the Waiilatpu and Lapwai mission settlements established in 1836 by the Marcus Whitman party, there were three individuals who had some medical training. There were actually four if one includes Narcissa Whitman, who was a Thomsonian, in spite of the fact that her husband was a regular doctor with an M.D. degree. The medicine practiced in these settlements was certainly not Thomsonian but relied on the standard therapies of the day, including bleeding, purging with calomel, and blistering. Diseases mentioned in the letters and diaries of these early settlers include malaria, scarlet fever, whooping cough, mumps, chicken pox, influenza, diarrhea, and measles. In 1847, immigrants introduced a virulent strain of measles which decimated the Cayuse tribe and subsequently became a major cause for the Whitman massacre. In-

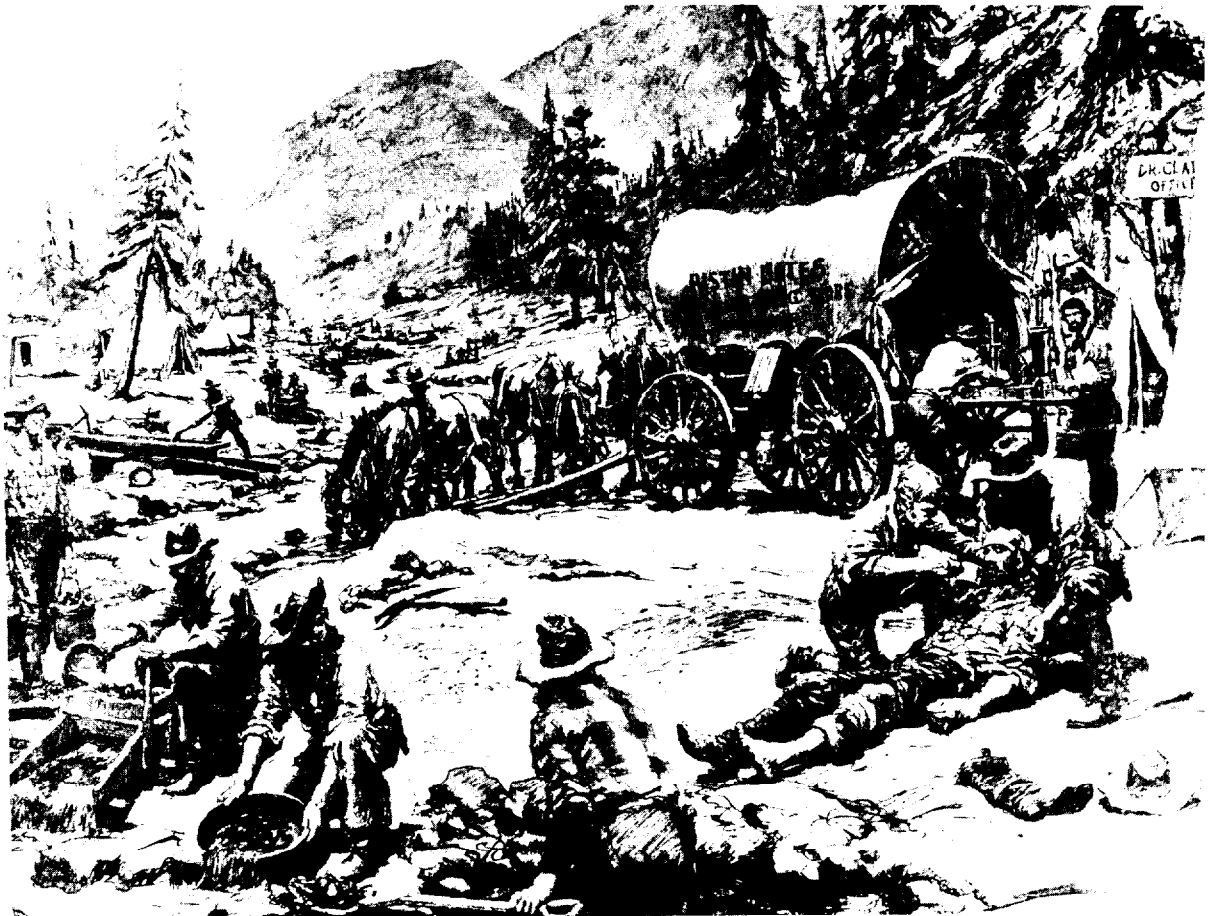
cluded among the medical incidents reported at this locality were those of a seven year old who developed an inguinal hernia for which the blacksmith constructed a truss, and a case of post-partum mastitis which was treated with heat by the application of hot stones to the breast and the administration of calomel and morphine. An unsuccessful attempt was made to ease the difficulty of the nursing mother by creating an artificial nipple, using the teat of a mare.

The California gold rush brought numerous physicians to the gold fields to try their luck. Some practiced part-time, others gave up and returned to San Francisco or Sacramento to practice medicine. A French physician who visited California in 1851 commented on the number of "doctors" in practice, including charlatans and quacks with no training; there were 8 in Monterey and 12 in Los Angeles. The French visitor was distressed at the public advertising and claims of these "health merchants," and commented upon the frequent surgery required for knife and gunshot wounds because the Yankees had the deplorable habit of settling minor quarrels with their revolvers. He further noted that physicians were often not consulted because the Yankees would turn to the apothecary who served as a doctor for them, the European would not spend the money, and the Californians and Indians usually doctored themselves and placed more trust in the "weird remedies of the old witches and Indian healers." Those who would seek out a doctor when ill would go to anyone with the title and demand a quick cure for a disease that they themselves had diagnosed. Generally the patients refused a physical examination and simply wished to be provided with medicine.

The 1850 journal of Dr. Mendell Jewett in California is probably rather typical. In the space of a year he moved to three different mining areas, occasionally mining, occasionally selling hay, but continuing to practice medicine whenever possible. Diseases he treated included malaria, dysentery, typhoid fever, erysipelas, gonorrhea, cholera, and a skin cancer. A study of physicians in Clear Creek County, Colorado, between 1865 and 1895 again points out the mobility of the early western physicians. For 89 physicians, the median length of stay within the county was 2 years and the mode was one year. Only 7 doctors had lived in the county more than 15

years. Those with other occupations (65% in mining, 46% in politics, 48% in business) remained an average of 5 1/4 years longer than those doctors who were solely in the practice of medicine.

Physicians had a variety of motives for moving west. A fair number did so for reasons of personal health; others went to find an area with less competition, or to strike it rich in the gold and silver mines. Many military surgeons stayed in the far west and southwest after the Mexican War. As a group they soon became involved in the politics and economic development of the newly settled areas.



During the California gold rush doctors moved from one mining camp to another in search of patients as well as gold. This traveling drug store made the rounds in a similar manner selling medicines to both doctors and laymen who diagnosed their own illnesses and dosed themselves with self-prescribed medications.

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