

MEDICAL



COLLECTORS



ASSOCIATION

NEWSLETTER NO. 17

March 1990

Dear Colleagues:

This issue of the Medical Collectors Association Newsletter marks the beginning of the seventh year of the existence of the organization. There continues to be increasing interest in the group and the vast majority of members have already renewed their membership this year without the necessity of reminder notices, which I greatly appreciate in terms of the amount of secretarial work that it saves us. Only a small number of individuals continue to actively contribute to the Newsletter and I believe there is considerable room for improvement in this area. In particular, it would be nice to see more interest in the Identification and Patent columns. If you have any interesting items for identification, please send me black and white photographs and if you have any patent models or instruments for which the patent is available, send me a photocopy of the patent along with a black and white photo of the instrument in question.

The most important item to be mentioned at this time is the next Medical Collectors Association meeting. It seems almost unbelievable that this will be our fifth annual meeting. Interest in the meeting continues to grow with active participation by both collector members and dealer members. Another group of individuals who have shown great interest in the organization and have been most helpful are the various professionals who serve as Directors or Consultants to medical historical museums around the country. Gretchen Worden, Director of the Mutter Museum of The College of Physicians of Philadelphia, has kindly agreed to host this year's meeting and the tenta-

tive program and registration sheets are included with this Newsletter. Philadelphia is an exciting city to visit at any time of the year and, coupled with a visit behind the scenes to the Mutter Museum and a visit to the Richard Berman Memorial Museum with apothecary shop and general store, it will be an opportunity for a most enjoyable summer weekend. I encourage all of you to register for the meeting and any one who wishes to

participate actively in the program, to please let either Gretchen or me know. It would be helpful if people who are planning to attend could register as early as possible so that we could begin to finalize our plans and estimate the



attendance. As in previous years, we plan to have an associated tour, a visit to the museum, a scientific program, a banquet for the members and their guests, and a dealers session. These various activities should appeal to everyone's taste.

I have included several informational items with this Newsletter. Recently an article appeared in the NEW YORK STATE MEDICAL JOURNAL listing medical collections of interest held within the State of New York. I have enclosed with their permission, a copy of this article which should

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be of interest to the members. Another listing of medical museums throughout the world has appeared in the Bulletin of the European Association of Museums of the History of Medical Science. Although I received this bulletin at a time which was too late for me to get permission to include in the Newsletter, I am providing the address and the name of the organization for those of you who are interested in obtaining it. A membership application form appears at the end of this Newsletter, which has the correct address.

Another item of interest is the announcement by the Science Museum, London, that they are making available for sale, microfilms of nineteenth century medical instrument catalogues in their collection. Anyone interested in obtaining these data can write to The Science Museum Library, South Kensington, London SW 7 5NH, England.

The Identification column is omitted once again because there has been no submission from any of the members. If interest in this area does not pick up, I will only include identification items on an ad hoc basis rather than attempt to include them as a regular item. The regular Newsletter contributions of Bob Kravetz and of Bill Helfand are included, and I thank them for their very active participation in the group.

While attending an ephemera show lately, I came across an Act from the New York State Legislature dated February 8, 1823. Although the copy is somewhat difficult to read, I thought it would be of interest to see even then the extent to which New York State was involved in regulation of medical practice.

The patent I have chosen for this month is of interest because it is by Robert C. Bowles. The interesting thing is that the stethoscope which he patented in 1894 has no relation with the stethoscope which we normally associate with his name.

Some other items are included and deserve mention. A letter from Alan Hawk has been copied and is self-explanatory. Details on a meeting of interest to this group at the Yorktown Victory Center are included. A copy of a registration form from the Fifth Congress of EAMHMS is included for those who did not receive one. For those who missed the announcement, Harmer Rooke is auctioning the Ben Z. Swanson, Jr., collection of medical and dental pot lids. The catalogue is spectacular and the second session is May 17th. Write Harmer Rooke Galleries, 3 East 57th Street, New York, N.Y. 10022 or call 800-221-7276.

Thanks to the kindness of Dr. Haller and the NEW YORK STATE JOURNAL OF MEDICINE, I have included a fascinating article on the "Quack's Materia Medica". Also the ANNALS OF INTERNAL MEDICINE and Dr. Stephen Adams have given us permission to reprint an informative article on the medicinal leech. Both of these articles should be of great interest to everyone.

I look forward to seeing all of you in Philadelphia in August.

Sincerely,  
M. Donald Blaufox, M.D., Ph.D.

# A LOOK BACK

## FASCINATING ARTIFACTS FROM THE HISTORY OF MEDICINE




This is an outstanding example of an early 19th-century drug jar imported from France. Curare is the poison that was used for centuries by South American Indians on their arrow tips. It causes paralysis of the body's muscles. In more recent years it was used during surgery to relax the muscles.

Historians trace drug jars to early Egypt and, later, ancient Greece and Rome. Pottery and then porcelain factories, mainly in

France, produced these beautiful hand-painted jars for European shops and export.

Some of these jars were imported by American apothecary shops for decorative use. They were too expensive for routine storage of drugs.

Drug jars that are as highly decorated and in as perfect condition as the one pictured are difficult to find. Rare and expensive, they are prized by collectors. 



## Historical Images of the Drug Market—XI

by William H. Helfand

THIS STEEL engraving of the manufacturing facilities of Frederick Stearns appeared in the 1890 edition of their catalog on "Popular Non-Secret Medicines." It shows the standard successful late nineteenth-century plant with smoke issuing from the chimneys and various means of transport pulling up at the entrance. Stearns' success was built on their line of Non-Secret Medicines, a group of products defined as "ready made prescriptions for household use, pharmaceutically prepared without secrecy or fraud, entirely replacing patent or quack medicines, with profit to the retail druggist and satisfaction to the consumer. Non-Secret Medicines are made according to the plan which originated with

us in 1876, the idea being to supply ready-made prescriptions of known and published formulae in popular form to meet the demands for simple remedies for slight illnesses, which demand prior to that time, for want of better remedies, had been supplied by patented or quack medicines, whose chief merits, as a rule, laid entirely in the amount of money spent advertising them by their proprietors." The Stearns company was acquired by Winthrop Laboratories in 1947 and is now part of the Pharmaceutical Division of Sterling Drug, Inc. (Size of steel engraving, 4-3/8 x 7 inches. The original photograph is in the W. H. Helfand collection).

# The Medicinal Leech

## A Page from the Annelids of Internal Medicine

Stephen L. Adams, MD

Leeches have been used in health care since ancient times by physician and layman alike. As just one of several methods of bloodletting, the leech became the focus of a science that included such subjects as indications, modes of attachment, complications, and relative contraindications. The popularity of leeching has varied immensely over the years. In the 19th century, this annelid saw its numbers decimated because of protean medicinal indications. The leech lost its hold on the practice of medicine in the early 20th century. Recently, the use of leeches has resurged in both the lay and the scientific communities.

*Annals of Internal Medicine*. 1988;109:399-405.

From Northwestern University Medical School, Chicago, Illinois. For the current author address, see end of text.

Leeches and the legends surrounding their usage in medicine have been inexorably attached to the physician. The very origin of the word leech may be taken from the old English *laece* meaning physician (1). Anglo-Saxon practitioners of medicine and magic were often referred to as leeches (2). Indeed, even the literary physician Roget (3), in his *International Thesaurus*, cross references the words *doctor* and *leech*.

### Historical Perspective

Bloodletting is an ancient art in which leeches have played but a small part. Early practitioners let blood to eliminate peccant humors in an attempt to restore health (4, 5). Several other methods of bloodletting that involved the use of fleams, lancets, scarifiers, and bleeding cups, were also employed. Bloodletting had both general and local effects (6). Venesection and arteriotomy, done with a lancet, scarifier, or fleam, were thought to abate disease by the general effects of bloodletting on the body. The use of leeches and bleeding cups was advocated for inducing the local effect of bloodletting. A modern analogy to the general and local effects described would perhaps be the oral administration of antipyretics to combat a systemic fever compared with the local application of a topical antibiotic to treat an infection.

Rush (7), an early proponent of venesection, advocated use of phlebotomy treatment during the yellow fever epidemic in the United States in the late 18th century. Various clinicians suggested removing differ-

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ing volumes of blood to treat different diseases, and the use of "bleeding to syncope" as a general treatment became popular. In fact, whether a patient should be bled to syncope while erect or while lying recumbent was a topic of lively debate (6, 8).

The leech or cup was applied on or near a diseased area. Whereas the general therapeutic effect of venesection by fleam or lancet was "rapid and the impression direct and sudden," the effect of local bloodletting was "indirect and gradual" (9). It was noted that "all active congestions and inflammations are, in their origin, local diseases, and are therefore more or less amenable to local treatment, of which one of the most powerful forms is the abstraction of blood, the essential pabulum of inflammatory processes. Hence the utility of leeches in inflammations in whose immediate neighborhood these animals can be applied" (9).

Local bloodletting from an inflamed part of the body was sometimes considered more beneficial than bleeding by general venesection. Leeches, however, were also thought to cause a constitutional (general) effect that was "best observed in children and delicate females." In children, this effect was attributed to the smaller amount of blood and greater vascularity of the cutaneous system they had compared with adults; thus, the smaller quantity of blood removed had a greater effect.

Although archeologists recently dated the existence of bloodletting tools to the Stone Age, the first use of leeches in this process is unknown (4). Nicander of Colophon (200 to 130 BC) may have been the first person to use the leech medicinally and then later Themison of Laodicea (123 to 43 BC), a pupil of Asclepiades (9, 10). Leeches eventually became a popular alternative to the more mechanical instruments of bloodletting, such as the fleam and lancet. Leeches were considered to be less painful and more dependable in removing a fixed amount of blood (6, 11). The use of leeches was also thought to be beneficial when blood had to be taken from a body part, the location or sensitivity of which contraindicated use of the lancet or cup, such as "hemorrhoidal tumors, prolapsed rectum, inflamed vulva . . . watching that they do not creep out of reach within any of the internal cavities of the body, as serious results might ensue" (11).

Leeches became an increasingly popular mode of bloodletting in Europe in the 18th and 19th centuries. Their use peaked in the 1830s in France when Broussais, the "most sanguinary physician in history" (12), was practicing. He believed that every disease could be traced to an inflammation, that is, to an excessive accumulation of blood in one part of the body. After

doing several postmortem dissections, he reported that extravasation of blood was found in the mucous membranes of the gastrointestinal tract of all of the bodies. Although extravasation of the blood is now known to be due to the autolysis of the necrotic cells, he interpreted this finding as proof of an inflammation of the gastrointestinal tract, and he subsequently attributed all fatal diseases to "gastro-enteritis." The therapy for this inflammation was antiphlogistic—a starvation diet and the application of leeches. He applied so many leeches simultaneously to the abdomen of one patient that it looked like a "black glittering coat of mail" (4, 11). During this time, French physicians commonly prescribed the number of leeches to be applied to newly hospitalized patients even before seeing the patient (13).

The numerous indications for leeching included acute laryngitis, nephritis, nephralgia, subacute ovaritis, epistaxis, swollen testicles, ophthalmia, and brain congestion. In acute gastritis, for instance, Stokes (14) recommended the application of 20 to 40 leeches. In dropsy after scarlatina, Behrend (14) recommended the application of 6 to 10 leeches to the lumbar region. Even into the early 1900s, leeches were applied by some practitioners "over the spermatic cord in epididymitis, on the temple in ocular inflammation, and over the right iliac region in mild cases of appendicitis" (15). Between 1829 and 1836, as the use of leeches became more popular, approximately 5 million to 6 million leeches were used yearly in Parisian hospitals; 84 150 kg of blood were drawn annually, and a total of 673 200 kg of blood were drawn from patients (16). Figure 1 shows a patient having leeches applied for bloodletting.

Although several species of leeches were used, the medicinal leech, *Hirudo medicinalis*, became the most popular (Figure 2). This species was imported to the United States from Europe and was so popular that its availability became limited. Millions of these leeches were exported from Hamburg to America (at one time, 30 million per year), and after a while, Germany had no more of this "irreplaceable medical apparatus" (16). Some Americans even recommended cupping because of the difficulty in obtaining medicinal leeches, and in 1835, a \$500 premium was offered to anyone who could breed European leeches in the United States (17, 18). Other species of leeches used in Europe were *Hirudo provincialis* and *Hirudo officinalis* (6, 10). Leeches were also exported from central Europe, Asia Minor, and a small area on the northern coast of Africa (16).

An American leech, *Hirudo (Macrobdeella) decora*, was sometimes used (9), and there were regional differences in the usage of specific leeches. In 1843, the use of indigenous leeches was restricted to Philadelphia, whereas practitioners in New York and Boston imported their leeches. Approximately 250 000 leeches were used per year in Philadelphia; most of these leeches were obtained from Bucks and Berks Counties in Pennsylvania. The American leech did not make as large or deep an incision as the European leech and drew less blood (19).

Although several species of leeches were used, some leeches would not bite and others caused painful and obstinate wounds. In France, disgruntled leechers reported such wounds to the Prefet de Police and the Council de Salubrité, who determined, after conducting a thorough investigation and hearing perhaps biting testimony, that the horseleech, although it could induce painful wounds, could not perforate human skin (6).

As leeches could be found in the attaché case of the physician, they also became a staple of the pharmacy. In the 1870 edition of *The American Dispensary*, the authors described the regimen necessary for the successful maintenance and care of leeches in great detail and even discussed the type of plant to be kept in the leech jar (valisneria), the number of water snails to be used per 100 leeches (ten), and the importance of including metallic iron to prevent the water from becoming putrid (11).

The leech as a therapeutic agent began to loosen its grip at end of the 19th century, but not without the sadness of some clinicians. In *Good Remedies, Out of Fashion*, Hare (20) included a table listing the metropolitan clinical hospitals in London and the amount of leeches used throughout the years. For example, Bartholomew's Hospital used 97 300 leeches in 1832, but only 1700 in 1882. Hare, an advocate of auspicious bloodletting, bemoaned the fact that bloodletting and leeching had fallen into disfavor and noted that the professional bloodletter, at one time available in every hospital in London, was so uncommon in England that he was "no more found in the *Post Office Directory*, than . . . the Dodo or the Ichthyosaurus." He was concerned that the poor reputation of bleeding was "due to an unreasoning reaction from the over bleeding of former times, and to the weak tendency of the human mind to run in grooves." He advocated the use of bloodletting when "the Right Heart is engorged with blood, and . . . the only hope of rescuing the patient from death is by bleeding." He eloquently described a patient in apparent congestive heart failure who was successfully bled. In the same vein, however, he related similar stories of cures of headaches, "very acute meningitis," and fits by leeching (20).

By the turn of the century, physicians became increasingly detached from the art of leeching. Interestingly, however, even in the 1920s to 1940s, leeches were occasionally used. Several authors suggested applying leeches as a treatment of thromboses, including embolisms after surgery (21-23), and at least one suggested their use in treating acute coronary thrombosis (24). Applying leeches over an inflamed jugular vein was reportedly touted by one author as a new treatment of poliomyelitis (10).

### Physiology of the Leech

Leeches are a class of the phylum Annelida. Their anatomic and biochemical characteristics make for an interesting basis as a therapeutic method. Most leeches used for medicinal purposes were probably of the species *H. medicinalis*, a freshwater leech approximately



10 cm long that can contract and lengthen. The leech has two suckers, muscular organs, located in the anterior part at the head and on the posterior end. The mouth lies in the anterior sucker and has three jaws that have chitinous teeth for biting. The leech swims in water in an undulating manner and can crawl on a solid surface by alternating the use of its suckers. Blood is sucked by the leech through contractions of the muscular pharynx into the crop, where it is stored until digested (25, 26).

The leech can ingest an amount of blood almost ten times its own weight and may digest the blood for as long as 12 to 18 months, during which time the leech will not bite (25, 26). Early clinicians expert in the use of leeches suggested that a leech could remove approximately 5 to 15 mL of blood (6, 9), which would then be broken down by flora in the gut (26, 27).

The salivary glands of the leech contain a formidable formulary for any pharmacist, as they secrete several biologically active substances. Hirudin, which was first described by Haycraft (28) in 1884 as a substance secreted by the medicinal leech, is a polypeptide of a known amino acid sequence that has an affinity for the coagulation enzyme thrombin (29, 30). Hirudin inhibits the thrombin-catalyzed conversion of fibrinogen to fibrin. One microgram of pure hirudin inhibits about 10 U of human thrombin, and the substance has been described as the most potent natural inhibitor of coagulation known (29, 30). It is secreted into the wound and prevents coagulation of the ingested blood (25). Haycraft showed that hirudin had anticoagulative properties, and until the discovery of heparin, it was one of the few agents used to prevent blood from clot-



Figure 1. "Les Saignees" by Louis Boilly shows a physician applying a leech to a patient's neck. Notice the boy holding a glassful of leeches. Occasionally, a leech would pierce an artery or nerve; more than one was indicated, colored to photograph. (27). From: *Yale Medical History* 2: 1 (Prase, A. Kleinfelder, Yale Dept. of Prepress Services, 1984).

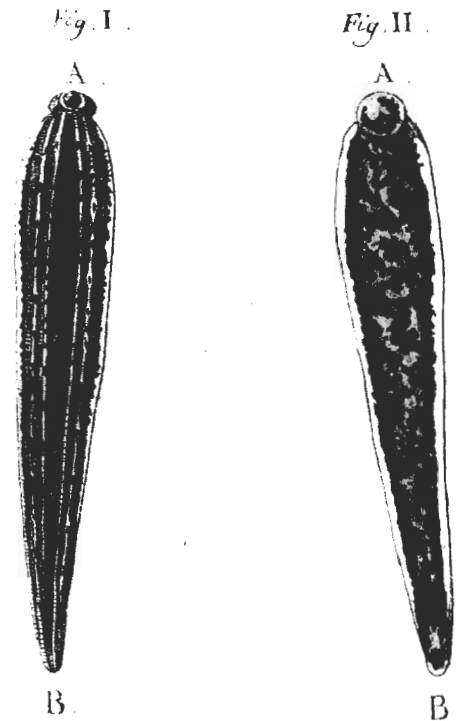


Figure 2. The medicinal leech, *Hirudo medicinalis*, from an 18th-century German medical text (71). On the left is the dorsal surface, with its characteristic markings; on the right, the ventral surface. At the top is the posterior sucker (A); at the bottom, the anterior sucker (B), which contains the jaws.

ting (30, 31). In early medical experimentation, hirudin was used as an anticoagulant in the transfusion of blood (31). The secretions of one leech prevented the in-vitro coagulation of 50 to 100 cc of blood (10).

Hementin, an enzyme excreted by the salivary gland of the Amazon leech *Haementeria ghilianii*, prevents clotting by the proteolysis of host fibrinogen, causing direct fibrinogenolysis. It does not affect thrombin (32-34). The Amazon leech contains enough hementin to inhibit 300 mL of blood from coagulating (34). Another leech species, *Haementeria depressa*, has a plasminogen activator whose mechanism resembles that of streptokinase (34).

Another pharmacologically active substance secreted by leeches is hyaluronidase, which may serve as a spreading factor in the wound (35-38). Proteinase inhibitors such as bdellins, trypsin-plasmin inhibitors (39), and eglins, inhibitors of chymotrypsin, subtilisin, and the granulocytic neutral proteases elastase and cathepsin G, have also been isolated from the leech, *H. medicinalis*, and may have antithrombotic, antifibrinolytic, and possibly anti-inflammatory activity (40, 41).

Leeches may also secrete a vasodilator in the form of an antihistamine (34, 42). This vasodilator may contribute to the prolonged bleeding seen after a leech bite (34). An anesthetic may also be secreted by the leech (34, 43), although the presence of such an anesthetic has been questioned (44, 45). Fibrinases, apyrases, and collagenase have also been found in the secretions of the leech (44, 46, 47). The salivary apy-

rases and collagenase seem to prevent platelet aggregation (44, 46). Antibacterial properties have also been attributed to the salivary extracts of the leech, and as early as 1913, a study claiming the efficacy of leech extract in causing remission of the growth of carcinoma in mice was reported (34, 48).

### Applying The Leech

When the application of a leech was indicated for an ailment, it had to be attached. Several suggestions were proffered to the clinician to induce the leech to attach and subsequently draw blood from the patient. The part to be leeched was thoroughly washed with warm water, and with hot water if it was an area not sufficiently vascular, and some insisted on shaving any hair present (9, 19). To induce the leech to bite, the skin was moistened with sugared water or milk or rubbed with a piece of raw meat. The leecher could also prick the part of the skin to be bled with a needle and smear the blood over the skin or even prick his own finger and place the blood over the area. The leech would then be applied to the skin by either placing it in a cup and inverting the cup over the area to be leeched, or by placing its head directly on the skin. Blotting paper with a hole cut over the area to be bled was occasionally used to make the leech bite a particular spot. When placed on the rough surface of the paper, the leech would creep about until it came to the smooth opening and would consequently bite the exposed skin (14). To apply the leech to an anatomically difficult area, such as the nostril, throat, or vagina, a tube open at both ends, known as a leech-glass, was used. Sometimes a quill was used instead (19).

In certain states of the body, such as poisoning by nux vomica, strychnia, or oxalic acid, and where sulfur had been used, a leech would not attach itself or else it would quickly perish (11). The presence of vapors, such as tobacco fumes, could also prevent a leech from biting (6).

In 1884, Pereira (6) vividly described the attachment and suction of the medicinal leech.

Having fixed on a suitable spot, the animal applies his oval disk, and firmly fixes it . . . so that the anterior end forms an angle with the other portions of the body. The three cartilaginous jaws bearing the sharp teeth are now stiffened and protruded through the triradiate mouth against the skin, which they perforate, not at once, but gradually, by a saw-like motion . . . The wound is not produced instantaneously, for the gnawing pain continues for two or three minutes after the animal has commenced operations. Thus, then, it appears that the leech saws the skin; hence the irritation and inflammation frequently produced around the orifices. The flow of blood is promoted by the suction of the animal, which swallows the fluid as it is evolved. During the whole of the operation the jaws remain lodged in the skin. In proportion as the anterior cells of the stomach become filled, the blood passes into the posterior ones; and when the whole of this viscous is distended, the animal falls off.

The leech was left on until it removed the prescribed amount of blood, quit feeding, or became engorged with blood and fell off. If more blood than the leech could hold had to be removed, some practitioners,

rather than applying another leech, would cut off or puncture a hole into the tail of the leech, and it would then continue to suck blood, losing it through the tail as if an open conduit (9). This practice was described by Galen (5) in Rome, and although some practitioners commonly used this method, others considered it barbarous (19). The leech usually became filled with blood in 15 to 20 minutes if it was feeding vigorously (11, 14).

A leech that was actively sucking was removed with table salt or vinegar, which caused it to vomit and fall off. It was recommended that a leech not be forcefully removed, because its jaw could break off and remain in the wound, which could become the starting point for a phagogenic ulceration (15, 49).

Once the leech was engorged with blood, it could not be used again until it had digested its intake (25). Two methods of avoiding this were used. One method was to submerge the leech into a weak solution of salt and water or vinegar and water, thus causing the leech to regurgitate the blood and once again be ready to feed (9, 11). Another method involved stripping the leech (9, 11, 19). Pressure was applied with the thumb and forefinger from the tail of the leech anteriorly, forcing the blood out of its mouth (11). Such leeches were considered more susceptible to disease and were kept separate from fresh ones.

On the practice of leeching, several warnings were given, representative of which were "M. Lisfranc's Rules for the Application of Leeches" (14). These included such suggestions as avoiding placing leeches on the eyelids, because they produce unseemly ecchymosis and often an edematous erysipelas; not placing a leech over the costal cartilages, because moving them was likely to entail troublesome bleeding; and avoiding applying leeches to a tumor of doubtful character, because if the swelling proved carcinomatous, the leech bites may accelerate the open or advanced condition of that disease (14).

### Complications of Leech Therapy

The continued oozing of blood after removal of the leech was perhaps the commonest complication. Blood would also continue to be lost from after-bleeding, and some clinicians promoted the sanguineous discharge. Warm fomentations or cataplasms, and sometimes cupping glasses, were applied to facilitate this process (6). Some authors noted that there may be some bleeding from the wound for up to 24 hours (10). This bleeding may be due to the combination of the secretion of the anticoagulant hirudin and the presence of a vasodilator (25, 34). Continued bleeding after the removal of a leech was considered so serious that it was recommended that a leech never be applied to an infant in the evening "lest hemorrhage continue unchecked through the night" (14). Bleeding was considered a difficult problem to remedy, especially if the leeching site was on the epigastrium, neck, or other part of the body where firm pressure could not be readily applied (9).

The treatment of continued bleeding, including firm



pressure, involved the use of various hemostatics available at the time. Periera (6) advocated compression with a sponge and stated that he had never had a patient who did not respond to such treatment. But other physicians suggested such remedies as the application of scraped lint, burned rag, or cobweb. Lint saturated with perchloride of iron or of tannic acid also was suggested. If these remedies did not work, inserting a lunar caustic (silver nitrate) pencil reduced to a fine point or the point of a red hot knitting needle on the wound was advised (6, 9, 11, 14, 16). If these remedies were unsuccessful, excising the bite, especially if it was a deep bite, or passing a needle through the skin, including the wound, and surrounding it with a ligature were suggested (9, 11, 15, 19).

Contraindications to leeching also existed. In persons with a hereditary predisposition to hemorrhage, the slight wounds induced by the leech could result in serious or even fatal effects (6, 50). Those diseases in which the leech did not remove blood fast enough were also considered contraindications for leeching. Croup was such a disease, and consequently, venesection was indicated in its treatment (6, 11). Erysipelas was also considered to be a relative contraindication to leeching (6, 11).

Infection with repeated use of the leech was a potential problem. Syphilis and puerperal fevers were transmitted by the injudicious and hasty application of leeches that had been previously used in those diseases. Erysipelas as a result of leeching also occurred (14). Infection due to leech therapy has also been discussed more recently in the literature. *Aeromonas hydrophilia*, the normal flora of the leech gut, has been cultured from *H. medicinalis*, and the possibility of infection with this organism due to leeching has been suggested (27, 51). In a recent report in which a leech was used to reduce congestion after breast reconstruction, the patient developed an infection with *A. hydrophilia* shortly after therapeutic leeching (52). Laboratory studies have shown that the leech may be a vector for *Trypanosoma cruzi* and may be able to harbor certain viruses unchanged in its alimentary tract for extended periods (53, 54). Leeches have not been used again because of the potential hazard of cross infection (55).

Other complications from the use of leeches have been due to the tendency of the leech to circumnavigate after application. Although the leech is very thin and may easily crawl into an orifice such as the pharynx to attach itself, it becomes engorged as it feeds and may sometimes cause obstruction of a previously patent orifice (9). This complication has occurred in patients from areas where leeches inhabit drinking water (56). In applying the leech as a remedy for tonsillitis, the physician was instructed to tie a string to the leech and attach the string to his finger to prevent locomotion of the annelid (6). A leech inadvertently attached to the pharynx could be removed by a strong gargle of salt water, which caused the leech to loosen its hold. Vinegar was asserted to have the same effect. More recently, the necessity of anesthesia and removal with visualization was reported (57). Swallowed leeches

were usually managed by the ingestion of wine, although many authors doubted that leeches could withstand the action of gastric juice. Other complications occurred when leeches were placed in the vagina or on the cervix, where they would disappear into the uterus; when they were placed on the anus and would migrate into the rectum, causing lower gastrointestinal bleeding; when they would attach to the upper airway, causing hemoptysis; and when they would invade the genitourinary tract, resulting in hematuria (6, 9, 11, 54).

Scarring was not an uncommon sequela of leeching (14, 15). After feeding, leeches would leave a wound likely to become ecchymotic with a classic triradiate scar from their bite into the skin (15). It was recommended that smaller leeches be used on the face to minimize scarring (14). Various skin and allergic reactions to the bite of the medicinal and nonmedicinal leech have included local reactions and anaphylaxis (10, 58). Hypochromic anemia due to therapeutic leeching, was reported as an untoward effect of overzealous medicinal leeching just 30 years ago (59).

### Current Therapy

After a bad public relations image, probably dating back to Bogart in *The African Queen*, ("filthy little devils"), the leech has crawled out of its therapeutic closet (44, 60-64). Interestingly, in a fashion similar to our predecessors, the therapeutic effects now attributed to leeches can be divided into both local and general effects. The local effects of leeching have been used in surgery because of their anticoagulative and blood-removing properties. Leeches have been used to repair grafted skin flaps (65-67), breast reconstruction (52), and digital reimplantations (64, 65). In digital reimplantations, for example, the leech is applied to the suture line and removes congested venous blood (64). Leeches have also been used to evacuate periorbital hematomas (68).

The use of leeches for general effects appears to be increasing as the products of the leech salivary gland are further studied. Extracts are marketed in biochemical and pharmaceutical trade publications (69), and their effects in the clinical situation are being studied (30, 44, 69, 70). Hirudin, which has been studied in experimental disseminated intravascular coagulation, has been reported to prevent such characteristic pathologic changes as the consumption of clotting factors and the development of multiple microthrombi, with the resulting circulatory disturbances and subsequent organ damage. It has also been reported to inhibit the development of the localized Schwartzman-Sarnarelli phenomenon induced by endotoxin injection (30). An extract from the giant Amazon leech *Hae-menteria* has been suggested as interfering with the metastatic growth of lung tumor by inhibiting tumor cell collagenase (44, 70). In Moscow, researchers are studying the effects of a fibrinase on atherosclerotic plaques (44). Lay persons also use leeches for such ailments as black eyes, varicose veins, and apparently

even depression, according to a Chicago pharmacy (60).

Leeches have never completely disappeared from the body of medicine, albeit they may only have been clinging to the periphery. If media coverage of the use of leeches is any indication, interest in their usage in both the lay and scientific communities is growing (60-64). Perhaps soon, to Dr. Hare's amazement, we may again see "Leechers" listed in the *London Post Office Directory*. The same presumably cannot be said for the dodo or the ichthyosaurus.

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## A short history of the quack's materia medica

JOHN S. HALLER, JR, PhD

From the 17th century through the early decades of the 20th, readers found it impossible to pick up a newspaper or periodical, either literary or scientific, artistic or religious, without finding considerable space advertising quack medicines. These advertisements were highly uniform: claiming some remarkable discovery, providing a long list of endorsements or testimonials from fictitious or influential persons with impressive degrees and credentials, promising unending success under all conditions, accusing medical orthodoxy of attempting to stifle sale or use, and selling under an attractive, euphonious, and original name. In addition, the ads almost always referred to the small quantity necessary to effect results, the saving of doctors' fees, and the great variety of diseases which the quack medicines cured.<sup>1(p99),2(pp4-5)</sup>

These products, known popularly as "secret medicines," "nostrums," or "patent" or "proprietary" medicines, were manufactured as elixirs, syrups, tablets, and pills. Manufacturers gave these medicines catchy names ending in "-ia," "-ine," "-ites," or other terminal syllables intended to impress upon buyers the idea that they were derived from the active principles of plants or chemicals. Reading that preparations such as Bromidia, Febriline, Maltine, Hypophosphites, Celerina, and Lactopeptine were endorsed by members of the medical profession, users found themselves justified in thinking they were saving the price of the doctor's visit.

### ORIGINS

Since antiquity, manufacturers, chemists, and physicians have prepared and advertised secret preparations promising to cure man's ills, for a high price. From the *Terra Sigillata* tablets (Lemnian clay) to Epsom salts and ague drops, drug manufacturers exerted a steady influence on the practice of medicine and pharmacy. As this market grew, European governments stepped in to protect the rights and rewards of discovery and reap some of the revenues. By definition, *nostrums* were medicines whose composition was kept secret from the public. A *proprietary* medicine, such as Beecham's Pills, was one to which a proper possessive title was added. Finally, a *patent* medicine was sold under the protection of a Royal Letters Patent or Patent Letters, and derived from the time when the English monarch gave an individual the right to be the

exclusive manufacturer or seller of a specific article of trade.<sup>1(p96)</sup>

Following the American Revolutionary War and the resulting financial strain to the British Crown, a coalition ministry of Fox and North, with Lord John Cavendish as Chancellor of the Exchequer, brought "quack medicines" under direct taxation. The Act (23 Geo. III, c. 62), passed in 1783 and amended (25 Geo. III, c. 79) in 1785, divided "quack medicines" into two categories: medicines sold under the king's patent and those sold as proprietary medicines or nostrums. The first Act granted the Crown the right to place a stamp duty upon all licenses to manufacture and sell medicines. Two years later, George III signed a second Act which stated:

Any person whatsoever who has, or claims to have, any secret art or sole right of compounding preparations of drugs, and advertising and recommending the same as specifics for the cure or relief of any complaint or malady, shall affix a Government stamp to the vials, vessels, or inclosures containing them.<sup>3(p80)</sup>

These two acts, and those which followed, excluded from the tax those medicines prepared and sold by chemists following doctors' prescriptions.

By strict definition, a patented medicine could not be a secret medicine. Etymologically, "patent" derives from the Latin *patere*, meaning "to be open." Thus, a patented medicine was an open and nonsecret medicine; the inventor had to disclose both the ingredients and the process of manufacture, which became public property after a set period of time (17 years in the United States). Nevertheless, the etymology of the word and its actual use from the 17th century on suggest a substantially different meaning. In effect, the manufacturers of sarsaparillas, perunas, tonics, pain killers, blood purifiers, favorite prescriptions, and golden nervenes refused to disclose the ingredients of their patented medicines because of the limited period of protection. Instead, manufacturers chose to secure a more exclusive property right to their products by registering the names as trademarks. In this manner, the trademarked nostrum remained a monopoly in perpetuity rather than becoming public property.<sup>4(pp1675-1676)</sup>

In the United States, general patent acts were passed in 1790 and followed the pattern set by the British. These laws remained in force until 1874 when Congress rescinded the practice of copyrighting labels for patent medicines and provided instead for registering such labels in the Pa-

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tent Office.<sup>3(pp80-81)</sup> In 1883, the British Parliament passed an Act (46-47 Vict., c. 57) for the regulation of patents, designs and trademarks. This Act, built upon earlier Parliamentary restrictions, stated that for a medicine to be declared a patent preparation, it should be an original invention, with its complete description or secret made known. It should be obtainable by the public, and useful patents should cease after a specified number of years. Under the Adulteration of Food and Drugs Act (38-39 Vict., c. 65), manufacturers of drugs which were not prepared in this manner were liable to prosecution. As a result, there were actually few genuine patented medicines; instead, manufacturers continued to introduce a great number of secret or proprietary medicines erroneously called patent medicines.<sup>1(p97)</sup>

Of those medicines patented after 1812, most passed out of existence quickly—a strange fate for substances that promised to cure most of mankind's ills. Remedies such as the Friend to Man, Schults' Vegetable Acid Air, Ward's Liquid Sweat, Solomon's Balm of Gilead, and the Vital Balm seemed not to live up to their claims. By 1845, one critic of quack medicines guessed that some 20,000 different remedies had been manufactured and sold over a period of just 50 years. "And each one," he observed, "has been proclaimed by extravagant certificates, and pompous assertions of thousands cured, to be *the* infallible remedy for some disease, or more generally for *all* diseases." Ironically, "every one, although infallible, has disappeared from the light of *trial*, like gaseous meteors from the morning sun, in less than a dozen years from the time of its fabrication."<sup>5(p99)</sup>

By the 1890s, in a study of 100 consecutive sales by a large wholesale druggist, H. C. Wood, MD (1841-1920), of the University of Pennsylvania, discovered that 58% of the orders were for patented and proprietary articles, 6% for pharmaceutical preparations, 1% for packaged goods, and the remainder for crude drugs. A three-month purchase pattern by five druggists who bought supplies from one wholesale druggist indicated similar statistics. Nearly 64% of the purchases consisted of patented and proprietary drugs, 1% packaged goods, and 35% legitimate pharmaceutical preparations and crude drugs. For Wood, this indicated that only 40% of the sales of the retail druggist were connected with legitimate pharmacy. This figure was down nearly 80% from the earlier part of the century.<sup>6(p908)</sup>

Even more troublesome to Wood was his estimate that physicians were involved in 10% of the patent and proprietary trade—either by providing testimonials or through prescriptions. "We, as members of the medical profession, and especially those of us connected with the medical press," he wrote, "are accustomed to inveigh against newspapers, secular and religious, for accepting the advertisements of patent and proprietary medicines, whereas in truth, unless the pot be warranted in calling the kettle black, we ought to keep silence with shamefacedness." He found these doctors not so much corrupt as "disgustingly weak," having sold to some vendor a statement or certificate of support. "So far as I can remember," recalled Wood, "I never gave but one certificate concerning a drug or a commercial article, and so far as I know no greater scoundrel ever misused a certificate than did the one to



FIGURE 1. Chromolithographed advertising card given out by druggists (189-?) for Lydia Pinkham's Vegetable Compound (from the National Library of Medicine, Bethesda, Md).

whom I gave this lonely representative of personal weakness."<sup>6(p909)</sup>

Interestingly, an 1899 study of advertising circulars confirmed that most of the certificates supporting these remedies came from physicians, professors, and graduates of so-called "mushroom" medical schools. None came from the University of Michigan, Harvard, Yale, University of Pennsylvania, or the Johns Hopkins University. The study also showed that 128 editorials supporting patent and proprietary articles were "found largely in corrupt medical journals."<sup>7(pp169-170)</sup>

Curiously, some of the most enthusiastic advocates of sectarian systems and patent medicines were clergy whose names graced published recommendations in religious newspapers, magazines, booklets, circulars, and handbills.<sup>8</sup> "I have often attended the conferences of the Southern Methodist Church of Kentucky," remarked S. J. Harris, MD, "and I have actually seen proprietary and patent medicines all around the steps, piled up to such an extent that one could hardly get in or go around without stepping on them."<sup>9(p275)</sup>

### THE SYSTEM BUILDERS

Just as orthodox medicine faced a continuous assault from homeopaths, the botanico-medical Thomsonians, eclectics, and other sectarian system-builders, so, too,

medicine faced a challenge from quackish claims to replace the *materia medica* with new "secret" formulae.

Perhaps the most famous of the early system nostrums originated with Mithridates VI, King of Pontus (132–63 BC), who reputedly compounded 54 substances into a universal antidote called mithridate. Brought to Rome, it was made popular by Galen of Pergamon who passed it on under the name *theriaca*, containing 64 ingredients beyond its opium base. Eventually produced in many different countries, *theriaca* remained a popular panacea well into the late 18th century. Based on the philosophical speculations of humoral pathology, the nostrum was formulated according to the body's affinities for the humors and elements.<sup>10(pp39–43)</sup>

The so-called Morisonian system of "vegetable universal medicines" was another case in point. James Morison of Bognie, Aberdeenshire, began his career as a broker of medical articles in Russia and the West Indies. Later, settling in Bordeaux, he proceeded to establish a therapeutic regime consisting mainly of cream of tartar and aloe which he sold on "puffs, . . . pamphlets, and advertisements." His popular #1 pills contained equal parts of aloe and cream of tartar made into a mass with either mucilage or syrup. His #2 pills contained colocynth, gamboge, aloe, and cream of tartar, also made into a mass with mucilage or syrup. Morison's Aperient Powders, made with equal parts of cream of tartar and sugar which he flavored with powdered cassia, was touted as "morning lemonade" to its users.<sup>11(pp10,25)</sup>

Morison based his vegetable universal medicines on a simple formula which he trumpeted in countless advertisements.

All animals consist of *fluids* and *solids*.  
All embryo animals consist *entirely* of fluids.  
The chief fluid is the blood, from which all others are derived.  
Blood forms the body—*air* gives it life.  
All constitutions are radically the same.  
All diseases arise from impurity of the blood.  
All diseases arise from *one* source, and therefore require but *one* medicine.  
Proper purgation by vegetables is the only effectual way of curing *all* diseases.  
This vegetable purgative must be capable of being digested, and mixing with the blood, so as to rid the body of all superfluous humors (disease).  
This panacea was discovered by James Morison in the composition of his vegetable universal medicine.<sup>11(p25)</sup>

Morison was certainly not alone in his claims or his concoctions. Thomas Holloway's Pills and Ointment were advertised in seven different languages and Dr. Locock's Pulmonic Wafers promised to cure a cough in ten minutes and asthma or consumption in a "proportionately small space of time." Others included Dr. Locock's Female Wafers made of licorice and horehound candy, and a host of remedies whose chief ingredient was aloe—Dr. Baillie's Dinner Pills, Dixon's Antibilious Pills, Hooper's Female Pills, James's Analeptic Pills, Wyndham's Pills, Peter's Pills, Dr. Fothergill's Pills, Lady Crespigny's Pills, Lady Webster's Dinner Pills, and Fordyce's Pills.

Parr's Life Pills (after Thomas Parr, who reputedly lived to the age of 152!) consisted of aloe, rhubarb, jalap, extract of gentian, soft soap, liquorice powder, treacle,

moist sugar, oil of cloves, and oil of caraway. The claims made by Parr tempted one critic to take license with the manufacturer's testimonials<sup>11(p186)</sup>:

I hereby certify and swear to it, that at the age of fifteen years I had the misfortune to fall into the crater of Vesuvius, and was burned to a cinder; but on taking two of Parr's Life Pills, I completely recovered. At Waterloo I was blown to atoms by a Congreve rocket; but after taking one box and a half of the Pills I speedily got well, and with the exception of occasional *shooting* pains, which a single pill invariably relieves, I have since been a better man than ever. In 1828 I was cut in two by an engine and forty-five ballast waggons; but on taking one box of those life-renovating pills, I became one again. Last year, I fell from the Monument, and my head was driven in; but on taking three of thy pills, O Parr! a new head was observed springing up, and the old one sloughed off.

Mit Hochachtung,  
Verbleibe ich u.s.w.  
Munchausen, Ph.D.  
Langerbogenschussprofessor

Soothing syrups containing opium or morphine, face preparations consisting of arsenic and oxide of zinc, stomach bitters made with whiskey, and health restorers containing narcotics were but a few of the products in the quack's *materia medica*.<sup>3(p82)</sup> One popular antineuralgic water contained inferior brandy soaked in tobacco and colored with sulphate of indigo. Similarly, specifics for rheumatism contained little more than red pepper, licorice, and sugar yet claimed to be charged "with electricity in combination with essential oils!"<sup>12(p171)</sup> Under the rubric of aperient, antibilious, and stomachic were the popular Abernethy's Pills, containing mercury and compound extract of colocynth; Bath's Digestive Pills, containing rhubarb, ipecac, capsicum, ginger, and gamboge; and Norton's Chamomile Pills, containing aloe, gentian, and oil of chamomile.<sup>11(p406)</sup>

Nostrums which sold as worm lozenges, worm cakes, soothing syrups, carminatives, cordials, and infants' preservatives were usually narcotics or mineral poisons in disguise. Ching's worm lozenges, containing a large quantity of mercury, combined with jalap or a similar purgative, were advertised as safe for children. Mrs. Winslow's Soothing Syrup promised a perfectly safe "natural sleep" and its manufacturer sold it as a harmless preparation for



FIGURE 2. Chromolithographed advertising card (189\_?) for Mrs. Winslow's Soothing Syrup (from the National Library of Medicine, Bethesda, Md).



children. However, if left standing uncorked, the preparation evaporated, leaving a dangerously concentrated narcotic residue of opium or morphine at the bottom of the bottle. The same was true of Godfrey's Cordial, Holt's Specific for Whooping Cough, Steedman's Teething Powders, and Atkinson's Infants' Preservative.<sup>1(p107)</sup>

Among the plasters were Baynton's Plaster, Mahy's American Plaster, Scott's Plaster, Sterry's Poor Man's Plaster, Ali Ahmed's Plaster, Roper's Royal Bath Plaster, and Berg's AntiRheumatic Plaster. Most of these nostrums contained a mixture of powdered white lead, olive oil, cantharides, black resin, and bees' wax.

In America, the highly touted half pint bottles of United States Sarsaparilla, United States Extract of Sarsaparilla, Mr. Moat's Sarsaparilla, and Dr. King's Sarsaparilla Pills flavored with guaiacum contained not a particle of sarsaparilla.<sup>11(p227)</sup> Repeated examinations of these nostrums showed that iodides and mercurial salts, generally chlorides, and alcohol, were the chief agents.<sup>12(pp167-168)</sup> Of the eleven sarsaparillas studied by the Colorado State Medical Society, the smallest amount of alcohol in any of them was 17%.<sup>13(p246)</sup>

Sexual problems were cured with nostrums sold as "silent friend," "cordial balm of syriacum," "concentrated detersive essence," "purifying specific pills," and "preventative lotions." Promising cure for "nervous patients," "barrenness," "deficiencies of natural strength," "female complaints," "weakness," and "turn of life," the Cordial Balm of Syriacum offered a ready and complete cure. Perry's Purifying Specific Pills offered an effectual remedy for gonorrhoea, gleet, strictures, irritation of the bladder, and other disorders of the urinary passages. Perry's Preventive Lotion guaranteed that its users could have "connexion with the fair but frail Cyprians who perambulate our streets, without any fear or reason to dread the consequences in the shape of the venereal disease." Similar promises existed for La'Mert's Self-Preservation, Curtis's Manhood, and Curtis's Anti-Venereal Lotion.<sup>11(pp284,362)</sup>

Many nostrums were concocted to restore men to "those duties which are among the most sacred to human nature." Advertisements warning of "premature decline," "decay," "early excesses," "youth chained by noxious indolence and complete imbecility," "ruinous practices," "ebbing energies," "losses of the system's most important fluid," "hereditary debility," and the "consequences of youthful indiscretion" fed the anxieties of Victorian men who feared impotence as a result of either masturbation or nocturnal emissions (spermatorrhoea). One such nostrum, known as Sir Astley Cooper's Vital Restorative, sold during the 1860s and guaranteed a cure for those "special ailments" peculiar to the male. Each drop of the Vital Restorative's concentrated powers pervaded the entire system, acting directly upon the brain and spinal cord, strengthening "the whole frame work of man, rendering it strong, and fitted to suit all his wants and desires." According to the manufacturer, its precious drops re-invigorated "God's favoured masterpiece." When taken in the prescribed quantities it resulted in "reviving nature's exhausted functions, and restoring health, nervous and muscular power, and manhood, under every circumstance, and at every age, nourishing, fertilizing, and developing



FIGURE 3. Chromolithographed advertising card (189-?) for Ayer's Sarsaparilla (from the National Library of Medicine, Bethesda, Md).

every part of the human organization, thereby insuring to the mind and heart its fondest desires."<sup>14(pp28,30-31)</sup>

Another form of hucksterism focused on pregnancy. Without making any direct insinuation, advertisements for pills such as Sir James Clark's or Periodical Drops promised to correct "female irregularity;" they cautioned, however, that women in "a delicate situation" should not use them. In effect, manufacturers promised to restore women to their regular menses through the use of nostrums containing powdered savin, aloe, hellebore, ergot, and the solid extracts of tansy and rue. These became the main ingredients of 19th century abortifacients.<sup>15</sup>

Probably the most unethical of all the nostrums were those promising to relieve the horrors of opium addiction. Advertising for these remedies assured that cure was possible, and for a specified sum of money, payable in advance each month, the habitue could receive a vial of pre-



FIGURE 4. Lithograph, hand colored. 1820, by Caroline Naudet, 1775-1839.

cious cure. Without an examination of the patient and with no knowledge of the circumstances surrounding the addiction, the vendor provided an eight-ounce vial of liquid which, upon analysis, proved to be little more than a solution of morphine with coloring matter and essence to disguise the contents. All this for only five times the price of opium itself! Actually, this amounted to shrewd economy. In effect, vendors sold off the residue of the manufacture of morphine as a cure for the victims of the opium habit.<sup>12(pp174-175)</sup>

Typically, nostrum vendors concealed the alcohol content of their products. According to the Massachusetts State Board Analyst, the amount of alcohol by volume in the most popular nostrums was significant (Table I).<sup>16</sup>

### OPPOSITION

Opponents of proprietary medicines argued that their popularity discouraged the practice of scientific pharmacy, defrauded the sick, and obscured the distinction between quack medicines and legitimate prescriptions. In addition, they gave quackery a degree of unwarranted respectability, degraded rational therapeutics, and demoralized the medical profession by tempting the retail druggist to prescribe for customers. Equally important, the marketing of patent medicines rendered scientific nomen-

**TABLE I. Alcohol Content of Nostrums, 1902<sup>16</sup>**

Name	Percent of Alcohol by Volume
Lydia Pinkham's Vegetable Compound	20.6
Paine's Celery Compound	21.0
Dr. Williams's Vegetable Jaundice Bitters	18.5
Whiskol, "a non-intoxicating stimulant"	28.2
Colden's Liquid Beef Tonic, "recommended for treatment of alcohol habit"	26.5
Ayer's Sarsaparilla	26.2
Thayer's Compound Extract of Sarsaparilla	21.5
Hood's Sarsaparilla	18.8
Allen's Sarsaparilla	13.5
Dana's Sarsaparilla	13.5
Brown's Sarsaparilla	13.5
Peruna	28.5
Vinol, Wine of Cod Liver oil	18.8
Dr. Peters' Kuriko	14.0
Carter's Physical Extract	22.0
Hooker's Wigwam Tonic	20.7
Hoofland's German Tonic	29.3
Howe's Arabian Tonic, "not a rum drink"	13.2
Jackson's Golden Seal Tonic	19.6
Mensmen's Peptonized Beef Tonic	16.5
Parker's Tonic, "purely vegetable"	41.6
Schneck's Seaweed Tonic, "entirely harmless"	19.5
Baxter's Mandrake Bitters	16.5
Boker's Stomach Bitters	42.6
Burdock Blood Bitters	25.2
Hoofland's German Bitters, "entirely vegetable"	25.6
Hop Bitters	12.0
Hostetter's Stomach Bitters	44.3
Kaufman's Sulfer Bitters, "contains no alcohol"	20.5
Puritana	22.0
Richardson's Concentrated Sherry Wine Bitters	47.5
Warner's Safe Tonic Bitters	35.7
Warren's Bilious Bitters	21.5
Faith Whitcomb's Nerve Bitters	20.3



FIGURE 5. Chromolithographed advertising card (189\_?) for Malt Bitters (from the National Library of Medicine, Bethesda, Md).

clature problematic. After reading the claims of such inventive mixtures as Lactopeptine, Maltine, Vitalized-Phosphites, Celerina, Bromidia, Iodia, Petroleum syrup, Soluble Phenole, Malto-cocoa, Hydroleine, Listerine, Caulocorea, and Viburnum Compound in the advertising pages of journals and newspapers, it was difficult for both the medical profession and the public to discern their difference from prescription medicines. When prescriptive drugs could no longer be distinguished from the popular Jayne's Expectorant, Hop Bitters, and Swain's Panacea, the relations between the physician and pharmacist could only deteriorate. Curing dysmenorrhea with Hyden's Viburnum Compound which carried the testimonials of several prominent physicians and which women could purchase off the shelf seemed far easier and less expensive than a visit to the physician for an examination and prescription, and then another trip to the pharmacist for a prescribed cure.

The medical profession loudly criticized druggists for defrauding them of their fees by prescribing medicines across the counter. In response, many doctors chose to dispense their own medicines, thus removing both the pharmacist and the temptation to self-dose. Naturally, pharmacists accused physicians who dispensed their own drugs of depriving them of their livelihood. As one physician admitted, the medical profession deliberately and without apology had defrauded the pharmacist of his function.

We degrade his vocation to the business of a storekeeper, we compel him to pay the profits which are justly his to other manufacturing pharmacists of distant cities, and so enhance the cost of medicines to our patients. Having in this way hindered the cultivation of pharmacy as a science, injured our local pharmacist in his business, and increased the cost to our patients, it is not astonishing that we are still so blind to the impropriety of the whole thing that we cannot see that in doing so we have also provided the most direct, effectual, and surest means of injuring ourselves, and even opened up another serious source of danger to the public.<sup>17(p6)</sup>

Opposition to the patent medicine trade also contained elements of racism and nationalism. In *A Bomb in the Camp of the Enemy, Or an Exposure of Quackery and "Patent Medicines,"* published in 1845, J. P. Epperson took particular issue with the so-called Indian remedies. "What a wretched state of intelligence must that be," he wrote,

which venerates and cherishes the traditions and crude notions of that absolutely ignorant and stupid race!—a race, which, in respect to all proper human characteristics, are but little elevated above the stupid beasts which they hunt and slay! What sort of intelligence is that which is captivated more by a remedy, or notion of Indian renown, than by the experiments and opinions of the most enlightened and scientific men? The venerator of Indian physic should be consistent, and go on to adopt Indian religion, Indian morals, and Indian government; or, more correctly speaking, Indian heathenism, brutism, and barbarism: or, in a word, Indian ignorance and stupidity.<sup>5(pp4-5)</sup>

Epperson, who lived in Pulaski, Tennessee, also blamed much of America's interest in nostrums on "Northern quacks with Southern pills." He attributed the Yankee fondness for money as a catalyst to the popularity of patent medicines in America. "It is equally well established," he wrote,

that many of them [Yankees] are opposed to following ordinary and useful occupations to gain it. Hence they invent all sorts of notions. It is also certain that they are shrewd enough to guess that, as the people are generally captivated by pompous novelties from a distance, and the South is in a state of commercial dependency on the North, they can conveniently tack on a medical dependency likewise.

Given that northern cities were "overstocked with physicians and druggists," the "inferior members of both classes" chose willingly and deceptively to avoid "honorable competition" and engage in nostrum selling. For Epperson, northern nostrums contributed no small amount of the "inconsiderable channel by which Southern money is drained into Northern pockets."<sup>5(pp17-18,22)</sup>

## CONCLUSION

As with many of America's reform efforts, legislation covering the use and abuse of nostrums did not occur until late in the 19th century. Initial attempts by city and state governments to register dispensers of drugs met with only limited success. Nevertheless, city governments implemented regulations as early as 1804 in New Orleans, 1851 in Louisville, 1866 in Williamsport, and between 1870 and 1876 in Baltimore, San Francisco, Philadelphia, St Louis, Cincinnati, and Milwaukee. These legislative initiatives to license pharmacists had the effect of reducing the number of individuals vending drugs. By 1870, some 25 states had passed statutes concerning the adulteration of drugs. Much of this legislation required the manufacturer to label the contents of dangerous medicines. Many of these same states had passed legislation prohibiting the sale of abortifacients and regulating the sale of alcohol.

In addition, the American Pharmaceutical Association, founded in 1852, presented a model law on the regulation of drugs and medicines at its meeting in Chicago in 1869. This model law became the basis of some 30 state laws adopted in the 1870s and 1880s. Although this legislation

attempted to define the difference between pharmacists and merchants and in effect establish the professional identity of the pharmacist, it did little to curb the proliferation of patent and proprietary medicines. Eventually, the uneven nature of this social legislation resulted in a model food and drug act prepared by the National Board of Trade, and efforts by the Bureau of Chemistry in the US Department of Agriculture to address the problems of adulterated foods and drugs.

The frustration over the lack of consistent regulatory legislation across state lines and the increased level of social concern with drug adulteration lent impetus to "progressive" legislation at the turn of the century. The Federal Food and Drug Act of 1906, although initially responding to practices in the meat-packing industry, also affected patent medicines. This legislative act superseded efforts of self-regulation and resulted in a more comprehensive interstate control of food and drugs. Within a few years, most states had revised their own legislation to address intrastate violators in a manner consistent with the federal legislation. Despite the best intentions, however, patent and proprietary medicines continued to flourish within the pervasive language of the statutes and were not sufficiently regulated until the Harrison Narcotic Act of 1914, the Food, Drug and Cosmetic Act of 1938, and later amendments which insisted on more exact labeling of contents and directions.

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# History of medicine archives in New York State

KATHLEEN S. ANDERSEN, DANIEL M. FOX

**Because so much** history of medicine has been made in New York for three centuries, the state's institutions are rich repositories of primary sources; of, for example, letters, diaries, patient records, official documents, photographs, and equipment. These primary sources have been used by historians of medicine from all over the United States and from abroad as the basis for articles and monographs.

This description of archival resources in the history of medicine in New York State is a joint effort of the author-compilers and the medical archives members of the Archivists Round Table of Metropolitan New York. The work was undertaken as one of several medical activities in conjunction with New York Archives Week 1989.

This description of archival resources is intended both to guide and inspire. It should guide physicians and others interested in particular questions about the history of medicine to new evidence. Some of the evidence bears on important local events; for instance, what happened in the past in particular medical societies or hospitals. But the evidence in the state's archives can also help scholars to explore events of national and international significance. Such events include research findings that have led to advances in prevention and treatment, the founding and maturing of great institutions to provide education and care, and the participation of New Yorkers in important decisions about the course of medicine and science.

These archival resources should also inspire physicians and other interested persons to explore the history of medicine in New York State. The records of great events and splendid careers are close at hand. The archivists who manage these resources are eager to make them available to people who want to write history, to experience the past at first hand, or to reclaim a part of their lives or the collective life of an institution with which they are closely associated.

The descriptions that follow can be read in several ways. Some readers will skim them looking for records in which they are particularly interested. Others will scan them looking for names that spark particular interests. Still others will read them as one reads a catalog of a museum or an auction house--as an exercise to stimulate the imagination, a prelude to further action

The materials in the archives described below are vital

connections to our past. They are better, because truer, than memory. They are vital to the future of medicine in New York because they are the surviving records of the achievements, the failures, the joy and the anger of those who preceded us in making history.

The archives are described in alphabetical order, as follows:

1. Archives of Albany Medical Center
2. Bellevue Hospital Center Archives
3. Beth Israel Medical Center Archives
4. The Brooklyn Hospital-Caledonian Hospital Archive
5. Columbia University  
Augustus C. Long Health Sciences Library
6. Cornell University  
Department of Manuscripts and University Archives  
Olin Library
7. Archive of the Long Island Jewish Medical Center
8. Medical Society of the State of New York Archives
9. Memorial Sloan-Kettering Cancer Center Archives
10. Montefiore Medical Center Archives
11. The Archives of the Mount Sinai Medical Center
12. Special Collections  
New York Academy of Medicine
13. New York City Municipal Archives
14. Medical Archives, New York Hospital-Cornell University Medical College
15. New York Hospital-Cornell Psychiatry Department  
Archives of Psychiatry
16. New York Medical College Archive
17. Russell S. Hibbs Memorial Library  
New York Orthopedic Hospital
18. The New York Public Library  
Rare Books and Manuscripts Division
19. New York State Archives
20. New York State Library
21. New York University College of Dentistry Archives
22. New York University Medical Center Archives

From the Center for Assessing Health Services, State University of New York at Stony Brook, Stony Brook, NY

Address correspondence to Ms Andersen, Associate Director, Center for Assessing Health Services, State University of New York Health Science Center at Stony Brook, Stony Brook, N.Y. 11794-8400

23. The Rockefeller Archive Center
24. The Medical Research Library  
Health Science Center  
State University of New York at Brooklyn
25. Robert L. Brown History of Medicine Collection  
Health Sciences Library  
State University of New York at Buffalo
26. Slide Archive of Historical Medical Photographs  
Health Sciences Center  
State University of New York at Stony Brook
27. State University of New York Health Science  
Center at Syracuse  
Library Archives
28. Museum and Library of the Suffolk Academy of  
Medicine
29. Special Collections  
Milbank Memorial Library  
Teachers College  
Columbia University
30. Edward G. Miner Library  
History of Medicine Section  
University of Rochester

### 1. ARCHIVES OF ALBANY MEDICAL CENTER

47 New Scotland Ave  
Albany, NY 12208  
(518) 445-5197  
(518) 445-5810

<b>Inquiries to</b>	Rue Moore, Canon
<b>Access</b>	Open to anyone
<b>Hours</b>	Mon-Fri: 8:00 AM-11:30 AM Appointment preferred Telephone reference service is limited; letter preferred
<b>Finding aids</b>	No published finding aids
<b>Photocopy</b>	By staff, at cost

Papers of the faculty and institutional records of Albany Medical College, 1839-present. Records of Albany Medical Center Hospital 1849-present, including minutes of the Hospital Board of Governors. Records of the Albany Medical College also include scrapbooks, alumni files, and student theses, 1839 to 1891 (on microfiche). Photographic collection (1½ file drawers). A few oral histories, a few paintings, and a collection of old medical instruments and equipment.

### 2. BELLEVUE HOSPITAL CENTER ARCHIVES

467 1st Avenue (27th St)  
Rooms C & D 740  
New York, NY 10016  
(212) 561-3920

<b>Inquiries to</b>	Lorinda Klein, Assistant Director, Public Affairs
<b>Access</b>	Open to anyone
<b>Hours</b>	Mon-Fri: 10:00 AM-6:00 PM By appointment only Telephone reference service available
<b>Finding aids</b>	No published finding aids or on-line systems
<b>Photocopy</b>	Staff makes copies, no charge.

Centerpiece of the archives is the Board of Managers collection,

which includes documents and photographs from the Bellevue Nursing School (1872-1972), the first nursing school in this country based on Florence Nightingale's precepts. Medical board minutes (1848-present), board minutes of Bellevue and allied hospitals (1901-1929), old medical volumes, and pathological reports of the medical examiner's office (1904-present). Numerous photographs and some lantern slides of the buildings, scenes from surgery, and other hospital activities. A few instruments and pieces of medical equipment. Original documents date from 1848 to the present; photocopies of documents from as early as 1798. Most of the collection is from 1870 to 1935.

### 3. BETH ISRAEL MEDICAL CENTER ARCHIVES

First Avenue at 16th St  
New York, NY 10003  
(212) 598-6007

<b>Inquiries to</b>	Deborah Tadevich, Archivist
<b>Access</b>	Open to the public
<b>Hours</b>	Mon, Wed, Fri: 9:30 AM-3:30 PM Appointment required for researchers outside the institution Telephone reference service available
<b>Finding aids</b>	No catalog, but Ms Tadevich is available to assist in finding items.
<b>Photocopy</b>	Staff makes copies, no charge.

Institutional records and minutes of the Board of Directors from 1889 to the present. Minutes from 1889 to 1891 are in Yiddish. Records of the nursing school (1904-1920s). Reports of medical research, including physicians' papers (1950s-present). A few recent oral histories. Records of the Bernstein Institute for Alcohol and Drug Dependency, the largest substance abuse treatment center in the world (1964-present). Newspaper clippings from 1907 to 1915, which include descriptions of early surgical methods in New York City. Letters from physicians in the field in World War I to the hospital director. Extensive photographic and archival material documenting the institution's involvement in the implementation of the Medicare and Medicaid programs. Large collection of photographs (1900 to 1950s and 1960s).

### 4. THE BROOKLYN HOSPITAL-CALEDONIAN HOSPITAL ARCHIVE

121 DeKalb Ave  
Brooklyn, NY 11201  
(718) 403-6943 or 6944

<b>Inquiries to</b>	Roy Brayton, Archivist
<b>Access</b>	Open to hospital staff and qualified researchers
<b>Hours</b>	Mon-Fri: 9:00 AM-5:00 PM By appointment only Telephone reference service available
<b>Finding aids</b>	Some materials in RLIN; catalog available
<b>Photocopy</b>	Staff makes copies of some material.

Records of the Brooklyn Hospital-Caledonian Hospital and the institutions absorbed by it, including Board of Trustees minutes, correspondence, annual reports, and other items of historical and antiquarian interest (1845-present). Fairly complete record of The Brooklyn Hospital from 1845; most complete record from 1986 to the present. Collection includes records of the Brooklyn Thoracic Hospital (1881-1956), providing a good source of information about the history of a tuberculosis hospital. Photographs.

Size: 75 linear feet.

## 5. AUGUSTUS C. LONG HEALTH SCIENCES LIBRARY OF COLUMBIA UNIVERSITY

701 West 168th Street  
New York, NY 10032  
(212) 305-7931

**Inquiries to** Barbara Paulson, Librarian  
**Access** Open to qualified researchers  
**Hours** Mon-Fri: 9:00 AM-5:00 PM  
Appointment is strongly recommended  
Telephone reference service available  
**Finding aids** No published finding aids; some in-house aids  
**Photocopy** Yes, depending on condition of the materials to be copied; staff makes copies for a \$5.00 service charge plus 50c/page.

The archives are part of the Health Sciences Library and include materials on the history of medicine and the history of Columbia-Presbyterian Medical Center and affiliated institutions (1770-present, majority of the materials from 1920 to 1965). Collection includes institutional documents, manuscripts and private papers, photographs and films, instruments and equipment. The large rare book collection is especially useful for the study of the history of medicine in the 15th-19th centuries and for study of medical illustration.

Size: archival materials, 50 linear feet; manuscripts, 300 linear feet; rare books, 15,000 volumes.

## 6. DEPARTMENT OF MANUSCRIPTS AND UNIVERSITY ARCHIVES

### OLIN LIBRARY OF CORNELL UNIVERSITY

101 Olin Library  
Cornell University  
Ithaca, NY 14853  
(607) 255-3530

**Inquiries to** Thomas Hickerson, Assistant Director  
**Access** Open to the public  
**Hours** Mon-Fri: 8:00 AM-5:00 PM; Sat: 9:00 AM-1:00 PM  
Telephone reference service available  
**Finding aids** In addition to other published finding aids, there are documentation newsletters published by the archive that describe the various collections, including those in medicine and health care. Collections are included in RLIN.  
**Photocopy** Staff makes copies. Charges vary depending on the type of document and number of copies requested.

Included in the archives are 100 collections related to the history of medicine, hospitals, health planning, and nursing. The archives include the private papers of physicians in New York State and the papers of a number of county medical societies and the Medical Society of the State of New York.

## 7. ARCHIVE OF THE LONG ISLAND JEWISH MEDICAL CENTER

Administration Building  
400 Lakeville Rd  
New Hyde Park, NY 11042  
(718) 470-8659

**Inquiries to** Silvia Bakst, Director of Archives  
**Access** Open to qualified researchers

**Hours** Tues: 9:00 AM-5:00 PM  
By appointment only  
No telephone reference service  
**Finding aids** No finding aids available  
**Photocopy** Staff makes copies, charge varies.

Material documenting the planning, founding, and history of the Long Island Jewish Medical Center (founded 1954) and the Schneider Children's Hospital (1971). Records of Hillside Hospital (1932), LIJ's psychiatric division, including planning documents from the 1920s. Papers of Dr Gene Rosenfeld, first administrator. Institutional records and press clippings from 1950 to the present. A few manuscripts or private papers. Films documenting the construction of the facility and dedication ceremonies. Newspaper clippings and photographs of major news events, personalities, and activities from 1954 to the present. About 60 oral histories of members of the board of directors, chairs of the clinical departments, other physicians, and staff.

## 8. MEDICAL SOCIETY OF THE STATE OF NEW YORK

420 Lakeville Rd  
Lake Success, NY 11042  
(516) 488-6100

**Inquiries to** Ella Abney, Librarian  
**Access** Open to qualified researchers approved by the President, Chairman of the Board of Trustees, or the Executive Vice-President of the Society  
**Hours** See above entry for the Department of Manuscripts and University Archives, Olin Library of Cornell University  
**Finding aids** "  
**Photocopy** "

The older archives of the Medical Society of the State of New York are on deposit at the Olin Library of Cornell University in Ithaca, New York. These archives include minutes of meetings and agendas of the Council (1934-1973), records of annual meetings of the House of Delegates (1931-1971), minutes of meetings of Trustees (1941-1965), President's files (correspondence of Norman S. Moore, MD, 1960-1961), membership records (1945-1959).

Publications include the *New York State Journal of Medicine*, 1910-1972, *Transactions of the Medical Society of the State of New York*, 1807-1903, *The Reflex*, 1966-1967, newsletters, journals, and other printed records, subject files, committee files, biographical sketches, and photographs. Post-1973 materials are on file at the Society's headquarters in Lake Success, New York. Complete holdings for the *Transactions of the Medical Society of the State of New York* and for the *New York State Journal of Medicine* are housed in the Society's Albion O. Bernstein Library at Lake Success.

## 9. MEMORIAL SLOAN-KETTERING CANCER CENTER ARCHIVES

1275 York Ave  
New York, NY 10021  
(Entrance at 430 East 67th St)  
(212) 639-8487

**Inquiries to** Jeanne Becker, Director of Library Services  
**Access** Open to all qualified researchers; access to some records is restricted  
**Hours** Mon-Fri: 9:00 AM-5:00 PM



By appointment only. Records are located at the Rockefeller Archive Center, North Tarrytown, N.Y. Researchers must contact Ms Becker for permission to access the Archives at the Rockefeller Archive Center.

Telephone reference service available

- Finding aids** No published finding aids or on-line systems  
**Photocopy** Available upon request. Library staff or Rockefeller Archive Center staff make copies at charge of 10¢ per copy (library) or 20¢ per copy (Rockefeller Archive Center).

The collection includes the records of Memorial Sloan-Kettering Cancer Center, Sloan-Kettering Institute, and Memorial Hospital for Cancer and Allied Diseases (1884-1989). Materials from the 1940s and 1950s predominate. In addition to institutional records, the collection includes manuscripts or private papers, photographs, rare books, oral history, medical instruments, and equipment.

Size: 455 cubic feet.

## 10. MONTEFIORE MEDICAL CENTER ARCHIVES

111 East 210th St  
Bronx, NY 10467  
(212) 920-6149

- Inquiries to** May Manheimer, Archivist  
**Access** Open to qualified researchers  
**Hours** Mon-Tues: 9:00 AM-5:00 PM  
By appointment only  
Telephone reference service available  
**Finding aids** No published finding aids; catalog is being prepared  
**Photocopy** Researchers may make copies on library's photocopy machine at charge of 10¢ per page.

Institutional records of the Montefiore Medical Center and affiliated institutions. Most valuable period is 1884-1950. Patient records (1917-present), which include detailed information on the background and behavior of patients in the Home for Chronic Invalids. Minutes of the Board of Trustees and its Executive Committee (1884-present). Annual reports from 1884 to 1934; intermittent reports in subsequent years. Minutes for the medical board (1893-1918). Newsletter, *The Montefiore Echo*, edited by patients from 1915 to 1928. Autopsy reports from 1913. Professional papers published by staff (1917-present). Photographs from 1889 to present. Tape recorded interviews with physicians, administrators, nurses, patients, and social workers. Newspaper clippings.

Size: archival materials, 234 linear feet; photographs, 73 linear feet.

## 11. THE ARCHIVES OF THE MOUNT SINAI MEDICAL CENTER

Box 1013  
Mount Sinai Medical Center  
1 Gustave L. Levy Pl  
New York, NY 10029-6574  
(212) 241-7239

- Inquiries to** Barbara Niss, Archivist  
**Access** Open to the public; restricted access to certain collections  
**Hours** Mon-Fri: 9:00 AM-5:00 PM  
By appointment only

Telephone reference service available

- Finding aids** No published or on-line aids; in-house catalog and guides available  
**Photocopy** Staff makes copies at charge of 10¢ per page.

Administrative and historical records of the Mount Sinai Hospital, Mount Sinai School of Medicine of the City University of New York, Mount Sinai School of Nursing, Neustadter Convalescent Center, and the Mount Sinai Medical Center from 1852 to the present (most materials from 1950 to present). Private papers: Charlotte Friend, PhD; Hans Popper, MD, PhD, and Horace Hodes, MD. Films and photographs. Instruments and equipment that were developed either at Mount Sinai or by Mount Sinai staff. Large oral history collection started in the 1960s containing information particularly rich for the study of the graduate medical education experience in the early decades of this century, the description of Crohn's disease, and the history of surgery at Mount Sinai.

Size: 450 linear feet.

## 12. SPECIAL COLLECTIONS, NEW YORK ACADEMY OF MEDICINE

2 East 103rd St  
New York, NY 10029  
(212) 876-8200

- Inquiries to** Florie Berger, Head, Special Collections  
**Access** Open to qualified researchers  
**Hours** Mon-Fri, 9:00 AM-5:00 PM  
By appointment only  
Telephone reference service available  
**Finding aids** *Subject Catalog of the New York Academy of Medicine* (G. K. Hall: 1969, Supplement 1974); *Author Catalog of the New York Academy of Medicine* (G. K. Hall: 1969, Supplement 1974); *Illustration Catalog of the New York Academy of Medicine* (G. K. Hall: 1976).  
**Photocopy** Copy service is available. Hours and fees vary. Call for specific information.

Records of the New York Academy of Medicine and other institutions and societies (1847-present), including the Medical Society of the County of New York, the Health and Hospital Planning Council of Southern New York, the American Hungarian Medical Association, and the Rudolf Virchow Medical Society of the City of New York. Late 19th and early 20th century materials predominate. The collection also includes manuscripts or private papers of individuals, including the Michael M. Davis Collection, and also photographs.

Size: 2,388 linear feet.

## 13. NEW YORK CITY MUNICIPAL ARCHIVES

31 Chambers St  
New York, NY 10007  
(212) 566-5292

- Inquiries to** Kenneth Cobb, Deputy Director  
**Access** Open to the public  
**Hours** Mon-Fri, 9:00 AM-4:30 PM  
Limited telephone reference service available  
**Finding aids** No published finding aids or on-line systems but finding aids are available.  
**Photocopy** Reader makes copies at charge of 15¢ per page.

Collection consists of municipal government records of New

York City. Those pertinent to the history of medicine and health care include the Almshouse Collection (mostly late 19th century) and the minutes of the Board of Health. The Almshouse Collection contains the records of institutions on Blackwell's Island (now Roosevelt Island)—detailed admission, discharge, census, and housekeeping records (beginning 1758) for the almshouse, city home, and hospitals located on Blackwell's Island. Health Department records include the minutes of the Board of Health from 1732 to 1960s. Mayors' papers contain all correspondence between mayor's office and other municipal agencies. Photographs from the Department of Public Charities/Department of Hospitals (c. 1900). Photographs from the Health Department have not yet been cataloged. Films from television station WNYC.

Size: 1,300 cubic feet.

#### 14. MEDICAL ARCHIVES, NEW YORK HOSPITAL-CORNELL MEDICAL CENTER

1300 York Ave  
New York, NY 10021  
(212) 746-6072

- Inquiries to** Adele A. Lerner, Archivist  
**Access** Open to qualified researchers; access to certain collections is restricted.  
**Hours** Mon-Fri, 9:00 AM-5:00 PM  
 Prior phone call requested  
 Telephone reference service available for short questions. Usually a written request is needed as follow-up to a telephone request.  
**Finding aids** *An Introduction to the Medical Archives, New York Hospital-Cornell Medical Center* (November 1976, Adele A. Lerner). The archives are also listed in the Historical Documents Inventory and many finding aids and databases, including RLIN.  
**Photocopy** Available on premises.

The Archives of the New York Hospital-Cornell Medical Center is the repository for the official records of the following institutions and associations: The New York Hospital-Cornell Medical Center, 1927-present; The Society of the New York Hospital, 1771-present; Cornell University Medical College, 1898-present; Cornell University Graduate School of Medical Sciences, 1952-present; Cornell University-New York Hospital School of Nursing, 1877-1979; The Society of the Lying-In Hospital of the City of New York, 1799-present; Manhattan Maternity and Dispensary, 1905-1939; Nursery for the Children of Poor Women and Nursery and Child's Hospital, 1854-1910; New York Infant Asylum, 1865-1910; New York Nursery and Child's Hospital, 1910-1947; New York Asylum for Lying-In Women, 1823-1899; The American Medical Women's Association, 1915-present; The Women's Medical Association of New York City, 1902-present.

In addition, the Archives collects the personal papers of people of note connected with the Medical Center, such as Drs George N. Papanicolaou; Vincent du Vigneaud, the 1955 Nobel Laureate in Chemistry; Connie M. Guion; George J. Heuer; and Walsh McDermott.

The approximately 4,600 linear feet of records and manuscript collections date back to 1771. The Archives also has a photograph and print collection with over 20,000 items, architectural plans, films and tapes, oral histories, and over 500 antique medical instruments, many from the Reichert Collection of Diagnostic Instruments. The records of the Archives include medical case histories from the New York Hospital, 1808-1932

(192 linear feet), and the Lying-in Hospital, 1891-1932 (103 linear feet), and other patient related records.

#### 15. NEW YORK HOSPITAL-CORNELL PSYCHIATRY DEPARTMENT, ARCHIVES OF PSYCHIATRY, HISTORY OF PSYCHIATRY SECTION

525 East 68th St  
New York, NY 10021  
(212) 746-3726

- Inquiries to** Dr Eric T. Carlson, Director  
**Access** Open to qualified researchers  
**Hours** By appointment only  
 Telephone reference service available for brief inquiries  
**Finding aids** Not published but do have finding aids on site  
**Photocopy** Staff makes copies at cost.

Manuscripts relating to the history of American psychiatry, currently with the most extensive holdings in child psychiatry, the development of the mental health movement, and legal psychiatry. The Archives is the official depository for the American College of Psychiatrists, American Psychoanalytic Association, American Psychopathological Association, Group for the Advancement of Psychiatry, New York Psychiatric Society, and a number of other organizations, in addition to two major foundations based in New York City whose special interest is mental health: the Ittleson Foundation and the van Ameringen Foundation. Papers of notable psychiatrists include those of Marion E. Kenworthy, David M. Levy, Frankwood E. Williams, and the English child psychiatrist Donald W. Winnicott, in addition to audiotapes of seminars given by Erich Fromm and papers relating to Harry Stack Sullivan. The origin and growth of the mental health movement is documented through the papers of its founder, Clifford W. Beers, the National Committee for Mental Hygiene, and the World Federation for Mental Health: U.S. Committee, Inc. Prints and photographs portray numerous medical people who influenced the development of psychiatry and scenes illustrating various aspects of this broad field. There are also papers of a few 19th century English psychiatric patients and miscellaneous papers of the 18th and 19th centuries. The holdings date from 1708 to the present, with the vast majority devoted to the 20th century.

Size: 61 collections occupying nearly 400 cubic feet.

#### 16. NEW YORK MEDICAL COLLEGE ARCHIVE

Medical Sciences Library  
Basic Sciences Building  
Valhalla, NY 10595  
(914) 993-4209

- Inquiries to** Judy Myers, Assistant Director  
**Access** Open to qualified researchers  
**Hours** Mon-Thursday: 8:30 AM-11:00 AM, Fri: 8:30 AM-8:00 PM, Sat: 9:00 AM-5:00 PM, Sun: 2:00 PM-10:00 PM (shorter hours during summer; open only until 8:00 PM, closed on Sundays)  
 By appointment only  
 No telephone reference service. (Callers are referred to the New York Academy of Medicine.)  
**Finding aids** No published finding aids; all materials are cataloged and accessible through the OCLC network.  
**Photocopy** Reader makes copies at charge of 10c per page.

Early history of the New York Medical College, established in 1860 as the first homeopathic medical college in New York City. Collection includes full runs of all institutional documents (year-books, catalogs, announcements), minutes and ledgers of the Board of Trustees, a few manuscripts, photographs, and a good collection of journals on homeopathic medicine. Materials date from the 1860s to the present. Original collection of the College's library, which contains early texts on homeopathic medicine.

### 17. RUSSELL A. HIBBS MEMORIAL LIBRARY OF THE NEW YORK ORTHOPEDIC HOSPITAL

Columbia-Presbyterian Medical Center  
622 West 168th St  
New York, NY 10032  
(212) 305-3294

**Inquiries to** Jack E. Termine, Medical Librarian-Archivist  
**Access** Open to staff and qualified researchers  
**Hours** Mon-Fri: 8:30 AM-7:00 PM  
By appointment only  
Telephone reference service available  
**Finding aids** No published finding aids  
**Photocopy** Staff makes copies, no charge.

Archives of the New York Orthopedic Hospital, founded in 1866 by Theodore Roosevelt, Sr. Most materials date from 1910 to the present. Papers of famous orthopedic surgeons: Russell Hibbs, Charles Fayette Taylor, and Newton M. Shaffer. Institutional records include minutes of committees and daily operating schedules. Photographs, lantern slides, and films. Rare books include anatomy, surgery, and orthopedic surgery, including incubula. Instruments, equipment, and memorabilia.

Size: 50 linear feet.

### 18. THE NEW YORK PUBLIC LIBRARY

Astor, Lenox and Tilden Foundations  
The Research Libraries  
Rare Books and Manuscripts Division  
Manuscripts and Archives Division  
Fifth Ave and 42nd St, Room 324  
New York, NY 10018-2788  
(212) 930-0801

**Inquiries to** Mary B. Bowling, Curator of Manuscripts  
**Access** Open to qualified and experienced researchers who need access to original materials  
**Hours** Mon-Wed, Fri-Sat: 10:00 AM-5:45 PM  
By appointment only. A minimum of 24 hours' notice is required because materials are stored off site.  
Telephone reference service available, but limited to confirming whether a particular item or collection is available. However, thorough responses will be provided to written requests for information.  
**Finding aids** *The New York Public Library, Research Libraries, Dictionary Catalog of the Manuscript Division* (Boston: G. K. Hall, 1967).  
**Photocopy** Paper photocopy is limited to 30 pages for requests by mail, 10 pages per day on site. For more pages, readers must place order for microfilm. Staff makes copies at charge of 30¢ per page. A postage and handling charge of \$2.00 is added to mail orders.

The Lillian Waid papers (Henry Street Settlement, visiting nurses, social policy issues). Records of the U.S. Sanitary Commission, a Civil War era voluntary relief organization that supported the Union troops; collection includes many medical records. Collections in psychiatry and psychology, including papers of Erich Fromm, Robert J. Lifton, Gustav Scholer, and Max Wertheimer. Miscellaneous letters and manuscripts listed in catalog. Earliest item in the collection is an Arabic manuscript on medicine from 1375. Western materials date from 1758 to the present. Most materials pertinent to the study of medicine and health care are from 1850 to 1950 and are predominantly American. Photographs, instruments, and equipment, memorabilia of area physicians.

Size: ca. 850 linear feet.

### 19. NEW YORK STATE ARCHIVES

Room 11D 40  
Cultural Education Center  
Empire State Plaza  
Albany, NY 12230  
(518) 474-8955

**Inquiries to** William Evans, Chief of Reference  
**Access** Open to anyone; restricted access only to records covered by personal privacy legislation  
**Hours** Mon-Fri: 9:00 AM-5:00 PM except for state holidays  
Telephone reference service available  
**Finding aids** *Guide to the Records of the New York State Archives* (new edition scheduled for 1990). On-line finding aids through the Collections Management System and RLIN for all series descriptions  
**Photocopy** Staff will xerox material that fits machine at charge of 25¢ per page. Will arrange to have photostatic copies at charge of \$2.50 per photostat. Patrons may bring their own camera.

Records generated by state government. For example: records of the Department of Health; state hospital; Veterans Home at Oxford; scientists on state museum staff; New York State Investigation Commission; State Board of Charities; New York Insurance Department; and Attorney General. Materials date from 1640 to present; strong in colonial period and post-1911 except in the area of legislative records. No manuscripts in this collection, but they share facilities with Special Collections, Manuscript Division of the State Library. A few educational films. Photographs—glass plate photograph collection of the Division of Visual Instruction (in schools), State Board of Charities. Largest motion picture script collection in the world (54,000 scripts). Scripts date from 1921 to 1965; computer-generated microfiche index with 23 access points to the script collection. Strong in foreign language scripts (with translations); all include censors' notes.

Size: 49,000 cubic feet.

### 20. NEW YORK STATE LIBRARY, MANUSCRIPTS AND SPECIAL COLLECTIONS

Empire State Plaza  
Albany, NY 12230  
(518) 474-5963

**Inquiries to** James Corsaro, Associate Librarian  
**Access** Open to state government employees and qualified researchers; restricted access to some collections

**Hours** Mon-Fri: 9:00 AM-5:00 PM  
Telephone reference service available

**Finding aids** A number of finding aids are available. Most collections are included in the National Inventory of Documentary Sources (microfiche) and on RLIN.

**Photocopy** Photocopy, microfilm, and photostat available depending on condition of the material to be duplicated. Staff makes copies, at charge of 25¢/page for photocopy, \$4.00/page for photostat. Fee for microfilm varies.

Private papers of individuals and documents of private organizations in New York State or related to the state, 1630 to the present, with most materials from the 19th century. Important examples of published medical literature, including a large collection of 19th century pamphlets from state hospitals. Notable collections include the following: Willowbrook Developmental Center Research Collection (41 cubic feet); Elber van der Veer Collection, bound volumes of surgical cases observed in Albany Hospital, private papers (19th century); Dutchess and Putnam Counties Medical Society: 1913-1919; John W. Francis papers: 1780-1866; Earl W. Stevens papers: 1795-1856.

## 21. NEW YORK UNIVERSITY COLLEGE OF DENTISTRY ARCHIVES

Dental Library  
345 East 24th St  
New York, NY 10010  
(212) 998-9792

**Inquiries to** Erich Meyerhoff, Archivist

**Access** Open to NYU students and staff, interested scholars

**Hours** Thur: 2:00 PM-5:00 PM  
By appointment only  
Telephone reference service available

**Finding aids** No published finding aids but catalog available there.

**Photocopy** Staff makes copies if condition of material permits: \$7.50 service charge and 25¢ per page.

History of the College of Dentistry: institutional documents, clippings, some personal papers of the faculty. Materials from 1865 to the present; most materials from 1880 to 1969. Some photographs and films. Rare book collection contains 1,600 volumes of dental and medical books, chiefly 19th century, some (300) earlier, including the first printed work devoted exclusively to dentistry and the first English language dental book. Oral history, instruments and equipment.

Size: 170 linear feet.

## 22. NEW YORK UNIVERSITY MEDICAL CENTER ARCHIVES

Ehrman Library  
550 First Ave  
New York, NY 10016  
(212) 340-8280

**Inquiries to** Michael Rissinger, Archivist

**Access** Open to NYU students and staff, interested scholars

**Hours** Mon-Fri: 9:00 AM-5:00 PM  
By appointment only  
Telephone reference service available

**Finding aids** No published finding aids; catalog to collection available there

**Photocopy** Staff makes copies if condition of material permits; \$7.50 service charge and 25¢ per page. Copies of photographs are also available; \$2-5.00 per exposure, by medical center staff only.

Material documenting the history of the Medical Center: institutional documents (occasional minutes, bulletins); photographs; newspaper clippings; no personal papers of faculty or administrators. Some materials from the NYU Veterinary Hospital, the Postgraduate Medical School and Hospital, and some Bellevue Hospital Medical College records. Materials date from the founding of the Medical Department of NYU in 1841 to the present; materials from 1880 to 1960 make up most of the collection. Films and photographs, rare books, instruments and equipment, memorabilia (chairs, hats, paintings).

## 23. THE ROCKEFELLER ARCHIVE CENTER

15 Dayton Ave  
Pocantico Hills  
North Tarrytown, NY 10591-1598  
(914) 631-4505

**Inquiries to** Darwin H. Stapleton, Director

**Access** Open to serious scholars and researchers

**Hours** Mon-Fri: 9:00 AM-4:45 PM  
Appointments not required but prior contact is preferred.  
Telephone reference service available

**Finding aids** *A Guide to Archives and Manuscripts at the Rockefeller Archive Center* (1989). *Photograph Collections in the Rockefeller Archive Center* (1986). Published surveys of resources for the history of nursing, psychiatry and related areas, child studies, and labor and industrial relations. Unpublished registers and inventories are available at the Archive Center. The Rockefeller Archive Center participates in RLIN.

**Photocopy** Researchers may request photocopies of documents and photographs; Archive Center staff copies and mails the material with invoice. Charges are 20¢ per page for the first 1,000 copies ordered during a six-month period; 30¢ per page for 1,001-5,000 copies; 50¢ per page after 5,000 pages.

The Archive Center was founded to house, preserve, and make available to researchers records related to the wide-ranging philanthropic activity of members of the Rockefeller family. Founding institutions whose archives are housed here include the Rockefeller family, the Rockefeller Foundation, Rockefeller Brothers Fund, and the Rockefeller University. Subsequent additions have brought in the papers and records of organizations and individuals associated with these institutions, as well as the records of the Commonwealth Fund and the Russell Sage Foundation. Collection also includes films and photographs. Materials begin as early as John D. Rockefeller's first ledger in 1855 and continue to the present.

Archives and records of organizations: Bureau of Social Hygiene; China Medical Board; Commonwealth Fund; Davison Fund, Inc; General Education Board; Health Research Fund, Inc; Laura Spelman Rockefeller Memorial; Memorial Sloan-Kettering Cancer Center; Population Council; Rockefeller Brothers Fund; Rockefeller Foundation; Rockefeller Sanitary Commission for the Eradication of Hookworm Disease; Rockefeller University. Papers and manuscripts of individuals: Oswald

T. Avery; Alexis Carrel; Alfred E. Cohn; Nelson C. Davis; Lindsley F. Kimball; John H. Knowles; Rebecca C. Lancefield; Phoebus A. T. Levene; Jacques Loeb; Harold H. Loucks; Alfred E. Mirsky; the Rockefeller Family; Hugh Smith; Benjamin Washburn.

Size: A total of about 23,000 cubic feet of material is housed in the RAC. Approximately 50% of the materials are related to medicine and health care.

**24. THE MEDICAL RESEARCH LIBRARY OF THE HEALTH SCIENCE CENTER STATE UNIVERSITY OF NEW YORK AT BROOKLYN**

450 Clarkson Ave  
Brooklyn, NY 11203  
(718) 270-3780

**Inquiries to** Gordon Mestler, Archivist  
Kathleen E. Powderly, Director,  
Division of Humanities in Medicine

**Access** Open to anyone

**Hours** Mon-Fri: 9:00 AM-5:00 PM  
By appointment only  
Telephone reference service available

**Finding aids** No published finding aids; handwritten catalog to the collection available on site.

**Photocopy** Staff makes copies if materials are not too fragile at charge of 10¢ per page.

Collection includes archives of the Long Island College of Medicine (est. 1860) and Long Island College Hospital; current archival materials of SUNY at Brooklyn; materials related to the history of medicine in Brooklyn (1860-present, predominantly from the Civil War to 1920). Dr William Schroeder's collection on the history of medicine in Brooklyn (1860-1900). Daybooks of some important Brooklyn physicians, including Alexander Skene, the author of a widely used 19th century text on gynecology and obstetrics, and various annual reports from Brooklyn's hospitals, charity associations, and dispensaries, many of which are now closed. The varied correspondence of Dr Joseph Raymond, secretary of the Long Island College Hospital during the 1890s and early 20th century. Also many of the materials formerly kept at the Kings County Medical Society, including copies of directories, reports, and newsletters sent to its membership. Photographs and rare books.

**25. ROBERT L. BROWN HISTORY OF MEDICINE COLLECTION STATE UNIVERSITY OF NEW YORK AT BUFFALO HEALTH SCIENCES LIBRARY**

Abbott Hall  
SUNY at Buffalo  
Buffalo, NY 14214  
(716) 831-3024

**Inquiries to** Lilli Sentz, Associate Librarian

**Access** Open to anyone; restrictions on who can borrow materials, some materials are noncirculating.

**Hours** Mon-Fri: 8:30 AM-5:00 PM or by appointment  
Telephone reference service available

**Finding aids** *Pre-Nineteenth Century Catalog of the Robert L. Brown History of Medicine Collection*

**Photocopy** Yes, depending on the condition of the materials; staff makes copies at charge of 10¢ per page.

Collection consists of more than 12,000 volumes of 19th century medical monographs with particular strength in the areas of surgery, obstetrics/gynecology, dentistry, psychiatry, and pharmacology in addition to the 439 titles included in the catalog of pre-19th century works (earliest holdings are from the 15th century). Includes the private collections of Roswell Park, James Platt White, George N. Burwell, and L. Maxwell Lockie (collection on gout and rheumatism), as well as the medical collection of the former Grosvenor Library. Small collection of medical instruments, the Edgar R. McGuire Medical Historical Instrument Collection.

**26. SLIDE ARCHIVE OF HISTORICAL MEDICAL PHOTOGRAPHS STATE UNIVERSITY OF NEW YORK AT STONY BROOK HEALTH SCIENCES CENTER**

PO Box 66  
East Setauket, NY 11733  
(516) 444-3100

**Inquiries to** Jeanne Nook

**Access** By mail

**Hours** Not applicable  
No telephone reference service

**Finding aids** *Illustrated Catalog of the Slide Archive of Historical Medical Photographs at Stony Brook* (Westport, Conn, Greenwood Press, 1984)

**Photocopy** Not applicable

Almost 5,000 slide copies of historical medical photographs taken from the 1850s to the present. The collection has a representative sample of photographs in archives across the United States. It is designed to make slides accessible at cost for teaching and scientific publications. Prospective users should consult the published catalog, which is indexed and contains instructions for ordering slides. The catalog is indexed by personal name, institutional name, photographers, geographic location, medical conditions, chronology, and subject.

**27. STATE UNIVERSITY OF NEW YORK HEALTH SCIENCE CENTER AT SYRACUSE LIBRARY ARCHIVES**

766 Irving Ave  
Syracuse, NY 13210  
(315) 473-4580

**Inquiries to** Rosemarie Bundy, Senior Staff Associate

**Access** Open to the public; primarily used by staff and students of the Health Sciences Center

**Hours** Mon-Fri: 10:00 AM-8:00 PM  
Telephone reference service available for brief inquiries

**Finding aids** No; they are just beginning to catalog the collection.

**Photocopy** Reader makes copies at charge of 10¢ per page or 8.3¢ with purchased copy card.

Records of the SUNY Health Science Center at Syracuse and its predecessor institutions, the Geneva Medical College and Syracuse University. Personal papers of presidents of Syracuse University and SUNY Health Science Center (late 19th century-present, most materials devoted to 1930-present). Some 19th and early 20th century records from area hospitals (Crouse Ir-

ving Memorial, Good Shepherd, Silverman). Personal papers, book collections, and memorabilia of area physicians connected with the institution. Large collection of instruments and equipment, including old medical supplies and orthopedic equipment. Large photographic collection. Separate rare book collection of 2,000 volumes: early American medicine; late 19th and early 20th century German medicine; material pertaining to Geneva Medical College (1834-1872). Includes materials from the 17th through 19th centuries, with the majority of materials devoted to the 19th century.

Size: archives, ca. 1,600 linear feet.

## 28. MUSEUM AND LIBRARY OF THE SUFFOLK ACADEMY OF MEDICINE

850 Veterans Memorial Highway  
Happauge, NY 11788  
(516) 724-7970

- Inquiries to** Joyce Bahr, Acting Librarian  
**Access** Open to the public; access to rare books by application to librarian  
**Hours** Mon-Fri, 9:00 AM-5:00 PM  
Telephone reference service available  
**Finding aids** No published finding aids, but a catalog to collection is available there.  
**Photocopy** Staff makes copies at charge of 10¢ per page.

Museum collection of medical and surgical instrumentation, including complete sets of Civil War era surgical instruments, pharmaceutical instruments and equipment, early baby bottles, and nursing devices. A few archival materials: some letters, documents, minutes of the Academy (incomplete and uncataloged). Materials from the early 1800s to present; most are 19th century. The book collection includes all holdings of the Suffolk County Historical Society related to medicine.

Size: 15-20 display cases.

## 29. SPECIAL COLLECTIONS, MILBANK MEMORIAL LIBRARY, TEACHERS COLLEGE, COLUMBIA UNIVERSITY

New York, NY 10027  
(212) 678-4104

- Inquiries to** David Ment, Head, Special Collections, or Lucinda Manning, Manuscripts Curator  
**Access** Open to anyone  
**Hours** Mon: 2:00 PM-6:00 PM, Tues, Thur, Fri: 10:00 AM-6:00 PM, Wed: 2:00 PM-9:00 PM (during fall and spring semesters); closed daily for lunch 1:00 PM to 2:00 PM. Appointments recommended but not required  
Telephone reference service available  
**Finding aids** A three-volume set of guides to the collection, available on microfilm: *The History of Nursing:*

*An Index to the Microfile Collection*; vol. 1, Adelaide Nutting Historical Nursing Collection (1983); vol. 2, *Archives of the Department of Nursing Education* (1985); vol. 3, *Supplement to the Archives of the Department of Nursing Education* (1988). The three volumes are published by University Microfilms International, Ann Arbor, Michigan.

- Photocopy** Staff makes copies at charge of 20¢ per page; for microfiche, reader makes copies at charge of 10¢ per page.

Archival collections relating to the history of nursing and nursing education, including administrative records of the Teachers College Department of Nursing Education and papers of leading faculty members, such as M. Adelaide Nutting, Isabel Stewart, and R. Louise McManus. The Nutting collection also includes manuscripts relating to the history of nursing other than at Teachers College; for example, materials concerning Florence Nightingale, nursing and hospitals in France in the 17th and 18th centuries, and rare books and historical artifacts from the 1600s-1980s, but mostly between 1900 and 1970. Collection also includes 600 photographs and several prints, and oral histories, both audio and videotape.

Size: rare books, 1,200 titles; archival records, 220 linear feet; old manuscripts, 200 items.

## 30. EDWARD G. MINER LIBRARY, HISTORY OF MEDICINE SECTION, UNIVERSITY OF ROCHESTER

601 Elmwood Ave  
Rochester, NY 14642  
(716) 275-2979

- Inquiries to** Christopher Hoolihan, History of Medicine Librarian  
**Access** Open to qualified researchers; access to some parts of the collection is restricted.  
**Hours** Mon-Thurs: 8:00 AM-4:30 PM, Fri: 12:30 PM-4:30 PM  
Telephone reference service available  
**Finding aids** No published finding aids, but they have inventories for the archival materials.  
**Photocopy** Staff makes copies at charge of 15¢ per page.

Archival collections include papers of faculty members of the School of Medicine (George Hoyt Whipple, Wallace Fenn, Edward Adolph, John Romano, et al); institutional and private collections reflecting the history of medicine in 19th-20th century Rochester and surrounding area; extensive photo archive of the Medical Center.

Rare book collection, 15th-20th century (approximately 8,000 volumes), with subject strengths in pre-1800 anatomy, orthopedics, obstetrics, hydropathy, yellow fever, and cholera. Supported by some 6,000 secondary works on the history of medicine and related topics.





DEPARTMENT OF DEFENSE

ARMED FORCES INSTITUTE OF PATHOLOGY

WASHINGTON, D.C. 20366-6000

15 December 1989

Medical Collectors Association  
c/o Donald Blaufox  
Mazer Bldg. Rm 324  
1300 Morris Park Ave  
Bronx, NY 10461

Dear Dr. Blaufox:

Enclosed is a list of Dealers of Medical Instruments and a statement why the National Museum of Health and Medicine, AFIP cannot appraise donations. Could you please enclose this in the next Medical Collectors Newsletter. I need the following information:


1. Anyone not on this list who would like to be included
2. Anyone included in the list who wants their name to be removed.

This list is sent to people who request information dealers to buy and sell medical antiques. It is also sent to people requesting appraisals of artifacts, and anyone who wants to be on the list should be prepared to give appraisals. Please send comments to:

Alan Hawk  
Collections Manager  
National Museum of Health and Medicine  
Bldg 54, Walter Reed Army Medical Center  
Washington, D.C. 20306-6000  
(202) 576-2348

Thank you.

Sincerely,

  
Alan Hawk  
Collections Manager  
National Museum of Health & Medicine  
Armed Forces Institute of Pathology

## WHY THE ARMED FORCES MEDICAL MUSEUM CAN'T APPRAISE YOUR GIFT:

The Armed Forces Medical Museum is unable to provide appraisals of the monetary value of materials offered as gifts, brought in for identification, or submitted for any other purpose.

The Internal Revenue Service regards libraries and museums as interested parties, and appraisals prepared by them for gifts that they receive are subject to question. Such appraisals are likely to be challenged by the IRS.

Donors desiring appraisals must themselves acquire and pay a professional appraiser. Remember, that the cost of an appraisal may qualify as a miscellaneous deduction if it was paid to determine the amount allowable as a charitable contribution. An appraiser earns his fee because he must be prepared to defend his appraisal in court. This requires an expert knowledge of prices which comes from observing the market closely and continually. Curators, who are not in the business of daily buying and selling, are not necessarily conversant with prices on the current market. Accurate establishments of prices can be a complex procedure, requiring a time-consuming search in auction records and price guides not readily available in libraries. Appraisers must form extensive personal libraries to keep abreast of their field.

Appraisers can be located by checking the telephone directory under headings such as "Appraisers," "Books -- Rare and Used," and "Antiques -- Dealers." The Antiquarian Booksellers Association of America, Shop 2 Concourse, 630 Fifth Avenue, New York, New York 10020, will supply a list of members free if the request is accompanied by a stamped, self-addressed envelope. The Appraisers Association of America, Inc., 541 Lexington Avenue, New York, New York 10022, will send a directory of members for a small fee.

For further information about IRS regulations one may obtain free from the local office of publication 561, "Determining the Value of Donated Property" and publication 526, "Income Tax Deduction for Contributions."

Dealers of Medical Scientific Antiques

Alex Peck  
P.O. Box 710  
Charleston, IL 61920  
(217) 348-1009  
Medical Antiques

The Doctor's Bag  
397 Prospect St.  
Northhampton, MA 01060  
(413) 584-1440  
Medical Antiques

TESSERACT  
Box 151  
Hastings on Hudson, NY 10706  
(914) 478-2594  
Scientific Instruments

Perceptions Scientifica  
P.O. Box 2515  
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