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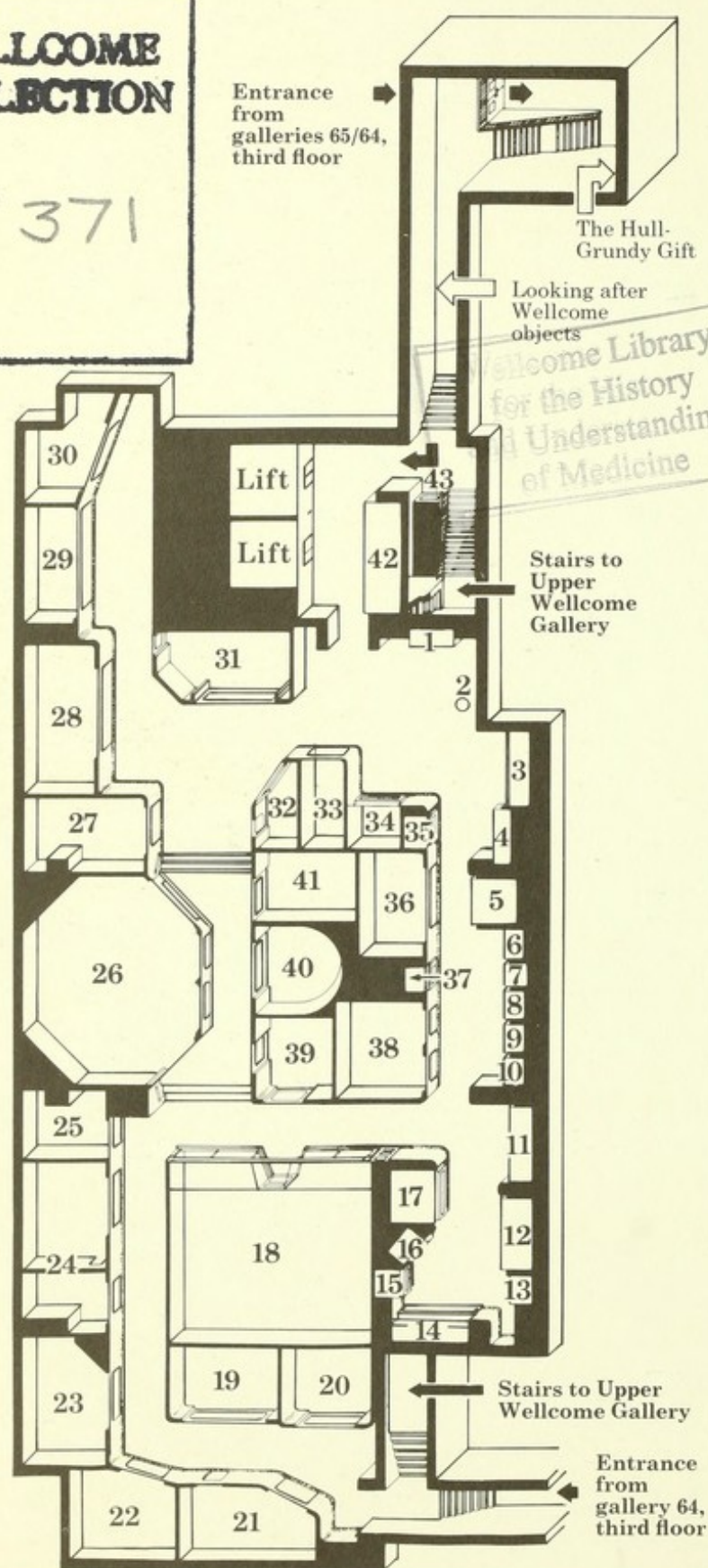
The Wellcome Museum of the History of **MEDICINE** a part of the **SCIENCE MUSEUM**



**full colour souvenir
guide with easy-
to-use plans**

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LOWER WELLCOME GALLERY Glimpses of Medical History



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2. Roman battle casualty*
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All are Dioramas except asterisked items which are Reconstructions.



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1. A pharmaceutical laboratory in 1840 (LG.27).

Introduction

This guide to the Wellcome Museum of the History of Medicine at the Science Museum contains plans and a description of its two galleries, and colour pictures of a range of its exhibits. The lower gallery – Glimpses of Medical History – is an introduction intended to help the visitor to gain an insight into how it might have felt to be a doctor or patient at other times in history or in other cultures. Full-size reconstructions and detailed models of events from Neolithic times to 1980 show aspects of medicine throughout this period. The upper gallery, on the fifth floor, offers greater detail. Its title – The Science and Art of Medicine – emphasises the importance of the scientific basis of modern medicine, and also the skill of the practitioner in applying it.

The Wellcome Museum of the History of Medicine owes its existence to Henry Solomon Wellcome (1853–1936), who became sole proprietor of Burroughs Wellcome and Co. in 1895. For many years he spent much of the profit of the firm on collecting. His intention was to create a museum to illustrate man's history and life with special reference to health and medicine. Although he arranged for some of his collections to be displayed from 1913, his grand plan had not come to fruition by the time he died. In 1977 the Wellcome Trustees placed on permanent loan to the Science Museum their objects dealing with medical history, and a selection of them is now on display in these galleries.

The collection is the largest of its kind in the world, and the galleries can display only a small part of what is available. More than 1,600 microscopes, dating from the seventeenth century to 1980, are included in the Museum. In addition there are about 10,000 microscopic slides and a number of microtomes and other instruments used in making such preparations. The collection of surgical instruments exceeds 40,000 items, dating from Roman times to the present day. Complementing these is the collection of several hundred catalogues published by manufacturers of surgical instruments and medical supplies. Approximately 7,000 coins and medals of medical interest form a collection which includes examples from ancient Greece through to those of this century. Other important groups of objects are the several thousand spectacles, and the 10,000 specimens of *materia medica* from all over the world. The holdings in medical and pharmaceutical ceramics and glassware are well known, and include approximately 1,500 examples of Roman and Islamic glass. A strength of the Museum is its interesting collection of objects associated with tribal medicine.



The total number of objects in the Museum's collections comfortably exceeds 125,000, constituting an extensive and unique three-dimensional record of man's concern with his health. Many of the artefacts are beautiful in their own right. Many are associated with famous people. Some of them are very old, some virtually new. Each one has been catalogued, and its details will be stored in a computer. Questions about our historical medical objects can then be answered rapidly and efficiently. This is important for those conducting specialised research. The Museum places suitable objects on display in other museums for varying lengths of time, and also arranges temporary exhibitions on special topics in its own galleries.

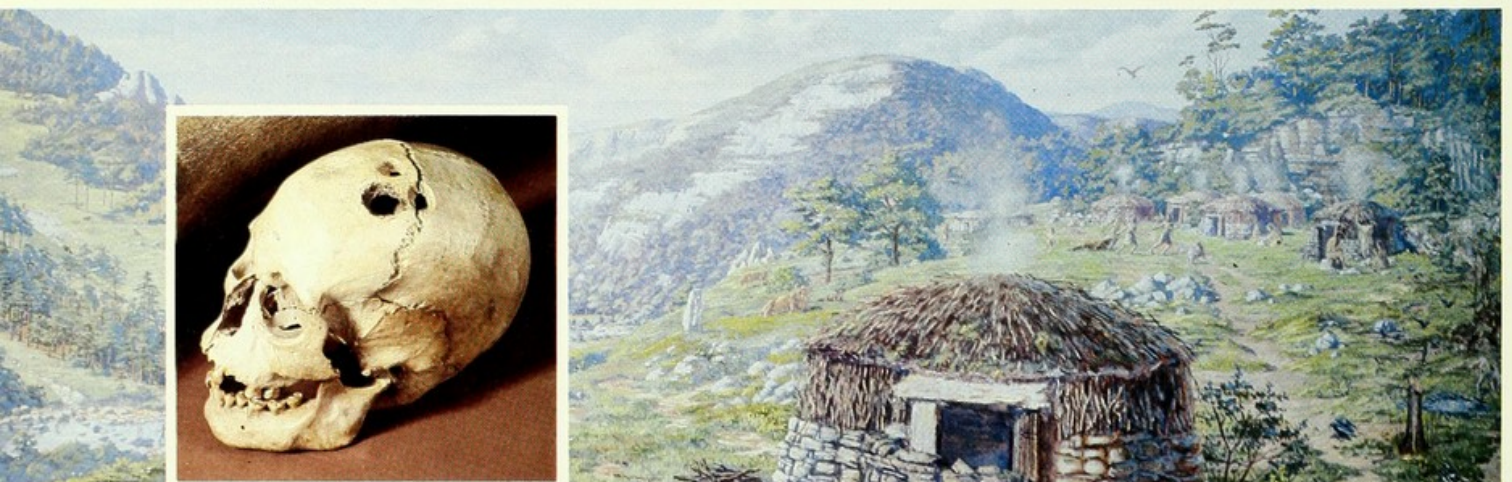
In addition to displaying what is already to hand, we actively collect additional objects to extend the range of artefacts and the topics covered. Much has happened in medicine in the last fifty years, and special attention is given to acquiring suitable objects from this period.

In the galleries we seek to illustrate medical history in its widest sense, with labels intended not only to identify the objects but also to set them into context. Special educational materials are available for use in the Wellcome Museum, and these and other publications are mentioned at the end of this guide.



2. Eye-couching in Persia, eleventh century AD (LG.5).

3. Trepanning in Neolithic times (LG.1) with a trepanned skull, Bronze Age, Jordan (case C.17).



A Panorama of Medical History

At the entrance to the lower gallery the first scene from medical history is from the seventeenth century. It shows a dislocated ankle being treated, using a Hippocratic Bench. Inside the gallery a corridor of models allows the visitor quickly to see many facets of medicine throughout the ages. The rest of the gallery contains full-scale reconstructions. A strictly chronological order has not been followed, as this would have reduced the number of exhibits provided.

Thousands of years ago our ancestors used sharpened flints to scrape a hole in the skull. This operation is seen taking place in the first model; close by, the figure of a wounded Roman soldier stands between a replica of a panel from Trajan's Column in Rome, and a model of a military hospital on the River Rhine in the second century AD.

In the fourteenth century human dissection began to be practised, in the University of Bologna, as illustrated by the model nearby. In the fifteenth century physicians regarded surgery as the business of a barber. Doctors believed that disease was the result of a disturbance to the balance of the four 'humours' of the body – blood, phlegm, black bile and yellow bile. They examined urine and prescribed emetics and purges as treatments for most diseases.

It has been known for more than 2,000 years that blindness due to cataract could be treated surgically. The scene of eye-couching in eleventh-century Persia shows the surgeon pushing a needle into the eye. This moves the clouded lens aside, restoring vision if all goes well. By the sixteenth century hospitals for the sick were found in many cities of Christian Europe, as they had been for many years in the Muslim world. The model shows the atmosphere in the hospital in Toledo as very churchlike; the patients were kept clean and comfortable, in a flow of fresh air which was



4. Smallpox eradication in Ethiopia in the 1970s (LG.34).

an important feature of the hospital. This century was an exciting time for medicine, as exploration of the New World provided new treatments. Many of the plants discovered in the Americas had healing properties, and it was no longer necessary to base remedies only on plants described by Greek and Roman authors 1,000 years before. Also in the sixteenth century knowledge of the body was much improved by the great attention then given to anatomical dissection. The accurate scale model of the Anatomical Theatre in Padua, built in 1594, shows that it could hold as many as 300 people. Among their number soon after it was built was William Harvey, famous for his discovery of the circulation of the blood. The work of Ambroise Paré, the most famous military surgeon of his time, is also illustrated. He proved that gunshot wounds did not need treatment with boiling oil, as had been done before his time. He also showed that it was better to tie off the ends of a blood vessel than to seal them using a hot iron cautery. His work brought about many improvements in surgery off the battlefield as well as on it.

In 1656 several engravings were made showing how the people of Rome dealt with the outbreak of plague, and the model nearby is based on these. Some houses were locked up because plague had affected the occupants, and fires were laid along the street to purify the air. Those who could move to the country did so, but unfortunately they often took the disease with them. Very large numbers of the population died from the frequent outbreaks of plague, which were thought to be a sign of God's displeasure.

The application of chemistry to medicine owes a great deal to Lavoisier and his experiments on breathing. The model of Lavoisier's laboratory is based on a drawing made by his wife, who helped him in his researches.

The challenge to medicine and surgery provided by war is exemplified by two further models. At about the time of Trafalgar those wounded in action were tended on the orlop deck of a warship. The wooden splinters which flew about in a gun battle often made quick amputation necessary. Neither anaesthetics nor antiseptics were known, and the mortality was severe. Another model shows the First World War trenches, where a vast sea of mud hindered both the fighting and the first aid which followed. Poison gas created a new kind of patient, while many of the 19 million wounded would have had to wait a long time for treatment. In spite of the conditions there was no major epidemic on the Western Front.

In 1816 Laënnec invented a most important new aid to diagnosis, the stethoscope, still the symbol of the physician. The introduction of anaesthesia took place in 1846, as we see in the model showing the first public operation using ether. Joseph Lister's use of carbolic acid to create antiseptic surgery helped to remove a final barrier to successful operations. In 1877, as we see, surgeons still wore their ordinary clothes when operating. The model of an English middle-class bedroom of the late 1860s shows a young woman about to have a baby; the midwife is using an Ellis Inhaler to give the mother a light anaesthetic, as had been given to Queen Victoria a few years before.

These glimpses of medical history using models are completed by one showing a scene in Ethiopia in the 1970s where the last cases of smallpox were traced and contacts inoculated. The eradication of smallpox is one of the greatest achievements of medicine.

Medical History Reconstructed

Dr Bruce's Electrotherapy Room in 1905 contains the equipment bought in that year and used by the doctor in Edinburgh to pass small electric currents through muscles to see if they would respond even though their nerves were damaged. Nearby we see a young boy at the dentist's in the 1890s. At this time the surgery looked just like a sitting room, and the practice of sterilising instruments in boiling water was only just beginning to gain ground.

By the beginning of the twentieth century although pharmacists like Mr Gibson still made up many medicines, they also sold ready-made pills and tablets, as well as toilet articles and photographic supplies. The interior of Gibson's shop, with its rows of bottles and many drawers is typical of chemists' shops until the middle of this century. Also typical of its period is the X-ray room from the 1930s. The use of X-rays has been important in diagnosing diseases such as tuberculosis in their early stages, making treatment more effective. The application of electronics to medicine has been one of the most important developments of the 1960s and 1970s. The intensive care unit of 1980 shows how heart and other bodily functions are continuously monitored. This has allowed precise treatment of many seriously ill people whose return to active life would otherwise have been impossible.

We have already seen the dentist in action in the 1890s; he is also to be seen here in the 1930s and a little further along in 1980. There is a big difference between the 1890s and 1930s: the importance of sterilisation had been

recognised and the surgery looks more like a hospital room. The anaesthetist has given a general anaesthetic, and the availability of electricity allows the mouth to be brightly lit, an effective dental drill to be used, and the dentist to take his own X-ray photographs. By 1980 the equipment allowed the patient to lie in a relaxed position, and dentist and dental nurse to work while seated. The design of the room places everything within easy reach and electronics has allowed equipment to be reduced in size – compare the size of the X-ray equipment with that of earlier versions.

Another glimpse of 1980 shows the hoist which moves a disabled passenger from his wheelchair to the car seat. Other aids are mentioned as an indication of the effort being made to help those permanently or temporarily disabled to lead a fuller life.

In modern times the laboratory has become the focal point of medicine. The Bacteriology Laboratory in 1955 shows an electron microscope in use for research, and the role of the laboratory in diagnosis. Many tests must be carried out to discover which bacteria are responsible for disease in numerous patients each day. By identifying the bacteria responsible treatment can be made specific and more effective.

The Sight Testing Room of the 1930s shows the optician at work trying a variety of lenses to improve his patient's reading of the test card. The same principles are still followed, but modern electronic instruments allow additional tests to be made rapidly and accurately.

Modern biochemical knowledge reveals that diseases such as gout arise as a direct consequence of slight failures in body chemistry. Our patient of the 1870s knows only that his joints are exquisitely painful, and he is looking in an angry manner at his nurse. The Victorian practitioner could seek only to minimise discomfort, for medical

5. An operation in 1895 (LG.40).





6. Lister's ward, Glasgow, 1868 (LG.31).

knowledge at that time was inadequate to explain the underlying causes of most diseases.

The 1980 Open Heart Operation shows an artificial valve being sewn into position. The heart itself is stopped to allow this delicate operation to proceed, and the patient is kept alive by the heart-lung machine in the foreground. The complicated anaesthetic equipment incorporates sensors to monitor the patient's circulation and breathing. Great attention is paid to sterilising the many small instruments required. The whole procedure relies on teamwork in the theatre and also in the wards where the patient is prepared and recovers.

Contrast this with the operation in 1895. The surgeons are using instruments which have been treated with carbolic acid to kill germs on them. They have washed their hands and wear special coats, but students in ordinary clothes watch from close by. The range of operations which could be undertaken was still restricted, and it was not then possible to give blood transfusions. However, a wider range of diagnostic instruments was becoming available for the general practitioner in his consulting room. Blood pressure began to be regularly taken after 1900, and instruments for looking into the back of the eye and into other parts of the body could also be used. The Pharmaceutical Laboratory of 1840 shows something of the processes by which plants were powdered or made into extracts. It was not until the end of the nineteenth century that methods were adopted to ensure that medicines from different suppliers could be relied upon to have similar effects when administered in similar doses.

Three hospital scenes of the nineteenth and twentieth centuries provide some sharp contrasts. Lister's Ward in Glasgow in 1868 contains some of his original furniture. The ward was of modern design for its time but many of the patients still suffered from 'hospital disease'. To overcome this Lister tried out different dressings and found that carbolic acid helped the wound to heal quickly without infection. He began to use carbolic acid also during surgical operations, and suddenly surgery became much safer for the patient. The model entitled The King's Fund Hospital of 1933 was made to help raise money for the London Voluntary Hospitals. The model is one-sixteenth full size, and the makers of real hospital equipment gave accurate models of their products. The bedspreads in the adult ward are lace handkerchiefs presented by Queen Mary and other members of the Royal Family. The 1950s Iron Lung shows how paralysed patients were helped to breathe, perhaps while recovering from poliomyelitis. Nowadays polio has become much less common in Western

countries and the need for iron lungs has been dramatically reduced.

African medicine men practice a different kind of medicine from Western doctors. The Ibibio medicine man of the 1930s and the Chokwe Masquerader represent tribes which believed that illness is caused by evil spirits. The medicine man goes through a special ritual to ask a good spirit to help to eject the evil one and thus cure the disease.

In the corridor outside this gallery a collage shows the celebrations following a birth in a high-ranking family in medieval Persia. Mother and baby are inside the house while the father is outside, receiving gifts. An astrolabe is being used to determine the position of the sun at the moment of birth. This information was used to cast the child's horoscope which would be of great significance throughout its life. Such a belief in astrology was prevalent in most societies until the eighteenth century, and exists to some extent all over the world to the present day.

Further along the corridor a case contains a number of objects chosen to illustrate the many materials from which objects in the Museum are made. These include glass, ceramics, metals, wood, cork, ivory, and even human tissues. There are shrunken heads from South America, and artistic objects connected with medical history. Of special interest are items associated with such people as Lord Lister, the Emperor Napoleon, Dr Livingstone and Florence Nightingale. At the foot of the stairs a case shows a selection of medals, commemorative plaques, and other artefacts, many of precious metal.



7. Consulting the doctor in 1900 (LG.41).

Medicine of Other Cultures

The Upper Wellcome Gallery is entitled 'The Science and Art of Medicine'. An essentially chronological arrangement of the history of medicine is divided into approximately equal parts – pre-1800 and post-1800. Medicine is presented in its social and scientific settings.

Immediately inside the gallery there is a general introduction, followed by a series of cases containing objects connected with tribal medicine in Africa. In tribal societies there are no written records to pass on medical knowledge and beliefs. The Nail Man reminds us that where magic and spirits are believed to cause affliction, it is thought possible to inflict a disease as well as to cure it. As a nail is driven into the figure so a disease is caused to a designated person. Vivid dance masks for use in various rituals are eye-catching items of the displays. Diagnosis by divination (the summoning of supernatural powers) is practised in such societies, and several divining objects and a number of charms used for treatment demonstrate the wide range of things which are used for these purposes. In such treatment no distinction is made between organic, functional and mental diseases: the patient as a whole is dealt with. Similar beliefs that evil spirits cause diseases, and similar kinds of diagnosis, have probably existed all over the world at various times in history. The Aboriginal pointing sticks and the Maori tattooed head of the last century are further examples of tribal artefacts.

From the Americas the Peruvian mummy, probably from the sixteenth century, lies in the foetal position. In parts of Central and South America the living feel great affinity

with the spirits of their ancestors, who are thought to look after them when diseased. North American Indian tribes are represented by their medicine man's masks, pipes and head dresses. The use of tobacco was a distinctive feature of their rituals.

The next section deals with those ancient cultures which left written records, and of which our knowledge is more precise. The considerable antiquity of Chinese culture is emphasised by a bronze ritual vessel dating from 1000 BC. There is a selection from the large range of drugs used in China. The importance of opium is attested by some fine opium pipes. A late nineteenth-century model pharmacy conveys something of the atmosphere of a shop where medicaments such as powdered rhinoceros horn might be dispensed. Many medical writings from ancient China exist from about 2900 BC onwards. The formal philosophy they put forward focused attention on the prevention of illness rather than its cure. Diagnosis required the answering by the patient of many questions, and attention by the doctor to minute differences in the feel of the pulse and the appearance of the tongue. Acupuncture developed from about 2700 BC; an excellent seventeenth-century AD acupuncture figure together with charts and needles attest to its importance which continues today. Medical etiquette forbade the examination of women by men doctors. To overcome this difficulty ivory diagnostic figurines were used. The lady pointed to the spot on the figure where her own symptoms were centred and the doctor performed his diagnosis on this basis. A few surgical instruments are also on display but the shedding of blood was frowned upon in China, and neither surgery nor dentistry flourished. One of the main attributes of beauty in Chinese women was thought to be the possession of tiny feet. The practice of foot binding was widely applied for several centuries.

8. Doctor's bag, twentieth century, Tibet (case B.19). Cosmetic dish, silver, nineteenth century, India (case B.31). Ritual vessel (Cheuh), bronze, c. 1000 BC, China (case B.4).





9. Shrunken heads, nineteenth century, South America (case in lower gallery corridor).

Examples of the results show that it would have been virtually impossible for women treated in this way from childhood to walk. An account is given of the development in modern times of the system of barefoot doctors, as a means of bringing basic medical care to a very large population spread over a very large country.

In Tibet, traditional practices were quite similar to those in China. A modern medicine bag is shown, like the one which may be seen in the video programme showing a modern doctor in Tibet treating his patients. This is an interesting glimpse of a system of medicine very different from that of the West, but nonetheless effective. Close by is a selection of Japanese netsukes, many of them showing finely carved medical scenes.

The foundation of medicine in ancient India rested on the teachings of Hinduism. An earlier tradition is exemplified by a superb Nicobar Island winged protective figure from pre-Vedic times. Some typical surgical instruments are displayed. In India surgery developed especially to repair judicially mutilated ears and noses in some of the earliest plastic-surgery operations. In addition bladder stones were removed, cataract was treated and Caesarian section performed. Some classics on medicine written at about the time of Christ and later may be based on much earlier material. Indian remedies have sometimes proved to be pharmacologically useful when investigated in recent years in the West. Spectacular masks from Ceylon for use in exorcism dances complete the display on medicine from the East.

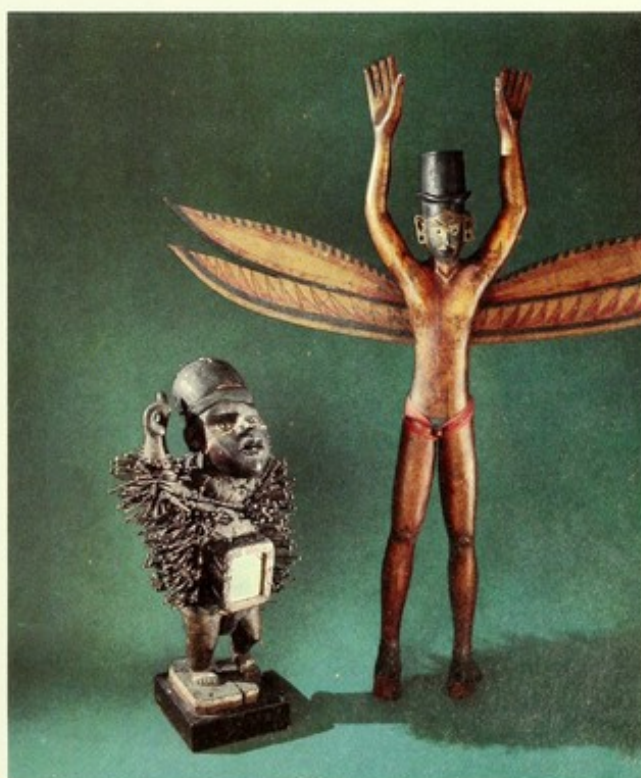
The section on palaeopathology demonstrates that diseases existed long before man appeared on earth. The dinosaur bone showing a well-developed carcinoma, and abscesses on mammoth bones are examples which happen to have been preserved for millions of years. Coming closer to our own time we may look down on to a Neolithic burial. The bones are left as they were discovered, in something of a jumble, but the huge bladder stones in the middle show only too clearly that the person when alive would have felt unwell for much of the time. A number of skulls which have been trepanned are on display. Circles of bone were removed from them during life in what was probably quite a widespread operation, possibly to allow the escape of evil spirits thought to have been causing headaches or epilepsy. When we consider that such circles of bone in the Stone Age could have been removed only by scraping with a sharpened flint, it is surely remarkable that on some of the skulls at least the sharp edges have healed over showing that the patient survived the operation.

Medicine in every country develops as part of the culture of its people. We can only understand medical practices that differ from our own if we have knowledge of the cultures from which they came. Many objects which are both colourful and enigmatic are displayed in this part of the gallery. An attempt has been made to demonstrate their significance in terms of the very different societies from which they came.

11. Nailed effigy, twentieth century, Congo (case A.4). Winged figure, nineteenth century, Nicobar Islands (case B.27).



10. Acupuncture figure, wood, seventeenth century, China (case B.12).



The Ancient World

The sections of the gallery which deal with medicine in Mesopotamia and Ancient Egypt contain some spectacular exhibits. Written records of medical practice have survived which indicate that the gods played an important part in the causation of disease, and that divination was practised to discover the nature of illnesses. Near the entrance is exhibited a replica of the Stele of Hammurabi, of about 1760 BC. The original comes from Mesopotamia, and gives details of payments to be given to physicians, and penalties to be exacted in case of mistake. Other records from Mesopotamia are also exhibited. Plagues and fevers are vividly described.

Round the corner the section on Ancient Egypt begins. The amulets on show include delightful representations of pregnant hippopotami, worn to protect women in childbirth. Nearby, the copy of the head of Nefertiti illustrates something of the lavish use of cosmetics in Ancient Egypt. A cast of a lavatory seat of 1370 BC from El Armarna is evidence of the Ancient Egyptian concern with cleanliness of body and home. Round the walls of this end of the gallery are casts of five panels from Dendera, of about AD 140. These are from the outside of the birth house, and show representations of the god of the rising sun, Horus. In the middle of the gallery is a mummy of about 200 BC. The coffin lid is raised to allow the wrapped body to be seen. Preservation of the body by embalming was connected with the Ancient Egyptian beliefs regarding the afterlife. A number of smaller mummies, including some of cats and crocodiles, can also be seen. One of the flint knives traditionally used for making the first incision is exhibited with other small knives. In Ancient Egypt intestinal diseases and those of the eye occurred frequently. Other conditions are exhibited by three statues, including those of a hunchback and a dwarf. Nearby a fractured skull, a femur and an arthritic foot may be seen. Treatment involved those gods which were thought to be associated with health and illness. Numerous drugs were available. Most of them were used to induce purging or vomiting, but some numbing drugs were also known.

The medical practices and traditions of Egypt and Mesopotamia played a part in the development of medicine in ancient Greece and later in Rome, as we see a little further along. A number of figures of medical gods fashioned from various materials introduce this part of the gallery. Notable among them are an ivory Apollo, Hygiea in silver and in marble, Telesphorus in amber and Asclepius in bronze and in marble.

Many amulets and votive offerings have survived from ancient Greece and Rome, and a selection is exhibited, depicting most of the parts of the body that might be afflicted. The splendid copy of a bust of Marcus Modius Asiaticus, a Greek physician of the second century AD, epitomises the Greek influence on Roman medicine. The next island case contains a magnificent crater, once used for mixing wine. This one is Attic red-figure of the fifth century BC, decorated with satyrs and maenads. Other domestic items from ancient Greece include a rare fourth century BC Cretan matt green glass ointment pot, other Attic red-figure pottery, small sixth century BC perfume flasks, an oil bottle showing women washing their hair, a drinking cup and measuring cups. Opium bottles from Cyprus of about 900 BC were probably used to import into Greece extracts of opium in wine. Some bronze objects are also displayed – cupping vessels, a small probe, a strigil and a lancet, together with a bone spatula.



12. Head of Nefertiti (copy), fifteenth century BC, Egypt (case D.11).

The large model of the Temple of Asclepius at Epidaurus illustrates one of more than 200 such sanctuaries which flourished from the sixth century BC. This model is of the site as it was in the second or third century AD. All was arranged so that carefully prepared sleeping patients could receive a dream from the god to explain and perhaps cure their illness.

A great deal of Greek medical thought and practice was taken over by ancient Rome, much of it via Alexandria, especially from about 140 BC. Examples of instruments used in Roman medicine include a fine vaginal speculum, and what may be a bronze tourniquet to fasten round the thigh. A copy of an artificial leg is also exhibited with a number of smaller items such as knives, scissors, probes, spatulas, forceps and strigils. An anal speculum and several uterine pessaries may be seen near an especially interesting exhibit. This is a block of instruments from Pompeii, fused together by the heat of the volcanic ash. The marble bath by the window is of the kind which a rich family would have had in their house. Opposite to it is an object found near Seville, which is believed to be a votive head.

Roman achievements in public health are well known. They paid particular attention to water supply and sanitation. The drain cover is typical of its kind. Near to it is a very rare 'larva convivialis', a model bronze skeleton carried round at a feast as a reminder of mortality. The glass cinerary urn, complete with lid and bones, dates from the second century AD. Other glass objects displayed include a spoon and unguent bottles. At the other side of the model of the temple at Epidaurus are two funeral reliefs in



13. Amulets, faience, Egypt (case D.9).

14. Vaginal speculum, bronze, first/second century AD, Lebanon (case E.8).

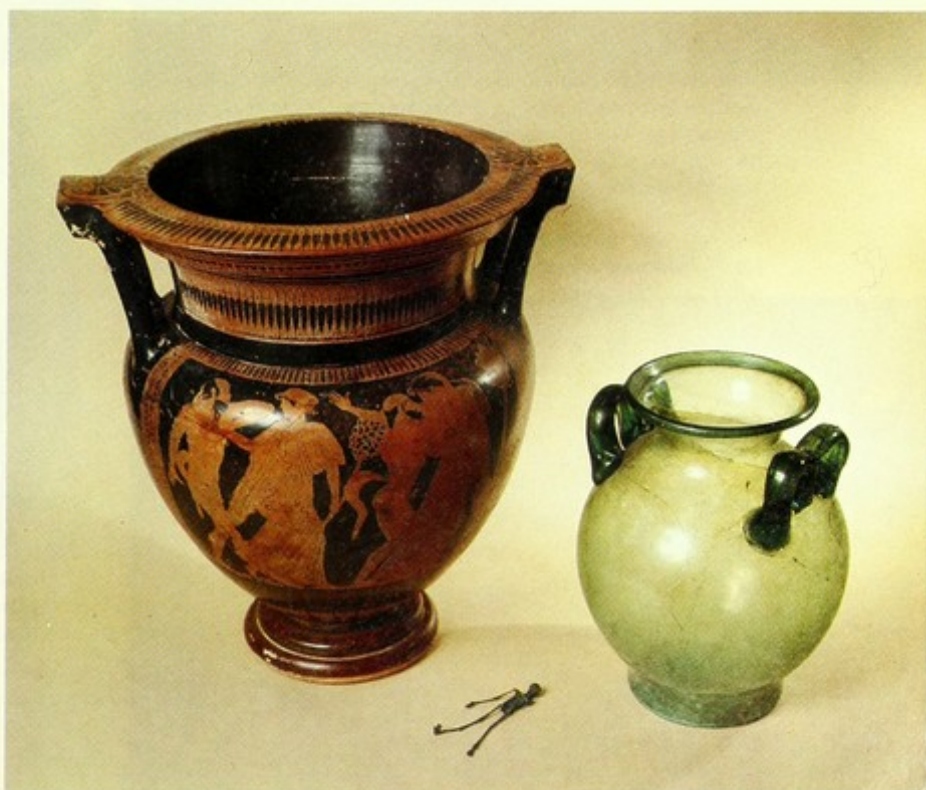


marble, one of them for a Roman physician. Representations of many who influenced medical thought, such as Plato, Aristotle and Hippocrates are arranged next to a case on Dioscorides, who described large numbers of drugs.

From about AD 500 in Europe, barbarian tribes invaded countries which had become fairly civilised under Roman rule. At the same time in the Arab world the legacy of the Greeks was modified by the spread of Islam which by about 720 had reached Arabia, the Near East, North Africa and Spain. By the eleventh century many Greek medical texts had been translated into Arabic in centres of learning such as Damascus. In this way Islam was a vital link in the transmission of Greek medical and scientific knowledge. Our Islamic collection contains some excellent examples of glassware. Bowls, jars, jugs and flasks dating from the sixth to the thirteenth century are on display, with several small mirrors from the seventh to tenth centuries. Divination bowls of tinned copper are also to be seen. The large machine in the centre case is a reconstruction based on a description given by Al Jazari about 1203. It was intended to measure the amount of liquid poured into its upper part, and was used in blood-letting which was an important element of treatment. Nearby are some good examples of eighteenth-century Persian surgical instruments, and a group of Persian mortars dating from the fourteenth to the seventeenth centuries. The drug jars which vary in date from the ninth to the fifteenth century are also good examples of their kind.

Exhibits in this gallery from Mesopotamia, Egypt, Greece, Rome and the Islamic world, span the period 3000 BC to about AD 1100. In Europe, from about AD 500, Christianity spread widely. Many monasteries were founded in which monks studied and copied ancient manuscripts including medical texts. From about AD 1100 manuscripts, originally from ancient Greek sources, became available through Islamic scholars. These sources were to prove a great stimulus to medical thought in following years.

15. Crater, ceramic, fifth century BC, Attica (case E.22). Larva convivialis, bronze, Rome (case E.12). Cinerary urn, glass, second/third century AD, Rome (case E.12).



Medicine 1100–1800

In the later part of the Middle Ages in Western Europe medical activities and religious practices were closely linked. The monks treated the sick by laying-on of hands and anointings. Sacred relics were venerated and saints were called upon to intercede for the sick. Statues of saints in this area of the gallery include Saint Benignus; we see that he was the patron saint of those afflicted with chilblains. The incidence of leprosy reached a peak in the thirteenth century, many cases occurring among those returning from the Crusades. On display are skeletons recovered from a fourteenth-century leper cemetery in Denmark. With these are seventeenth-century clappers which lepers were obliged to sound as they walked along to warn others to keep clear. A begging bowl made of maplewood is another interesting object; the amber jewel set into its base is said to have come from the shoe of Thomas à Becket. In the corner, there are reproductions of a herbal by Dioscorides, with Greek and Arabic annotations.

In 1348–9 the Black Death killed large numbers of people in Europe. It proved to be a powerful agent of social and economic change. Objects shown here that were associated with the plague include pomanders, one of them made from gold and studded with diamonds. These held sweet-smelling herbs which were believed to provide protection against infection. The long-handled lance (for piercing the painful underarm swellings) and long-handled spoon for administering extreme unction, testify to the general desire to keep well away from plague victims. There were so many of these that coffins were unobtainable; the lead plague crosses were all that could be provided for the bodies of the victims. A limewood figure from South Germany is of Saint Sebastian, the patron saint of those afflicted by the plague.

The Black Death was only one of the factors which altered the character of the later Middle Ages. By about 1500 gunpowder had come into widespread use, printing was established as a means of communication, sea routes to India and America had been discovered, and new universities had been established. Scholars from Constantinople, which had been taken by the Turks in 1453, spread their learning to Europe. These and other factors brought about the Renaissance.

As the Renaissance came to Europe detailed anatomical studies provided a new basis for the development of medical knowledge. The epoch-making book on the structure of the human body by Vesalius, published in 1543, is shown in facsimile; the quality of the anatomical drawings is

breath-takingly good. The Renaissance emphasis on direct observation led to a reform in medical education from the seventeenth century. In the adjacent cases a beautifully made ivory eye, wooden anatomical figures, and the group based on Rembrandt's famous picture of Dr Tulp's Anatomy Lesson symbolise this reform. One of the major advances of all time in medicine was the demonstration of the circulation of the blood by William Harvey; a copy of his book of 1628 is on display.

Important scientific instruments were invented during and after the Renaissance period. A Campani telescope, the Marshall microscope, and the pendulum clock are all excellent examples of this new interest in measurement and observation. The iron manikin is based upon an illustration in the book on surgery by Fabricius. Practical surgery was still preoccupied with blood-letting, as witness the porcelain blood bowls, the phlebotomy stand, and the surgical scenes on the goblet made from a mounted coconut. Dental instruments of the period are on show. They were brutally effective in wrenching out teeth, but likely to cause much damage to the mouth. War surgery developed as a direct result of the virtually ceaseless conflicts of the sixteenth and seventeenth centuries in much of Europe; the artificial limbs, amputation saws and bullet extractors are mute testimony of what was endured.

A renewed interest in drugs was awakened during the seventeenth century. New drugs included materials such as mercury and antimony, together with herbal remedies such as tobacco, which had been brought back by the ocean



17. Medicine chest, sixteenth century, Genoa (case H.35).

16. The plague in seventeenth century Rome (LG.11).



voyagers. Pharmacy jars, pill tiles and pestles and mortars symbolise this interest. They are aesthetically pleasing as well as scientifically interesting. Other drugs continued to be used. The use of new remedies alongside the old is illustrated by the display of a theriac jar of 1641 and a copy of Gerard's Herbal. Theriac had been in use for at least 1,500 years. The Genoese medicine chest is a sumptuous example of the provision made for a noble family. Alchemy and the supernatural was important: the alchemical furnace and John Dee's crystal are interesting survivors of this age.

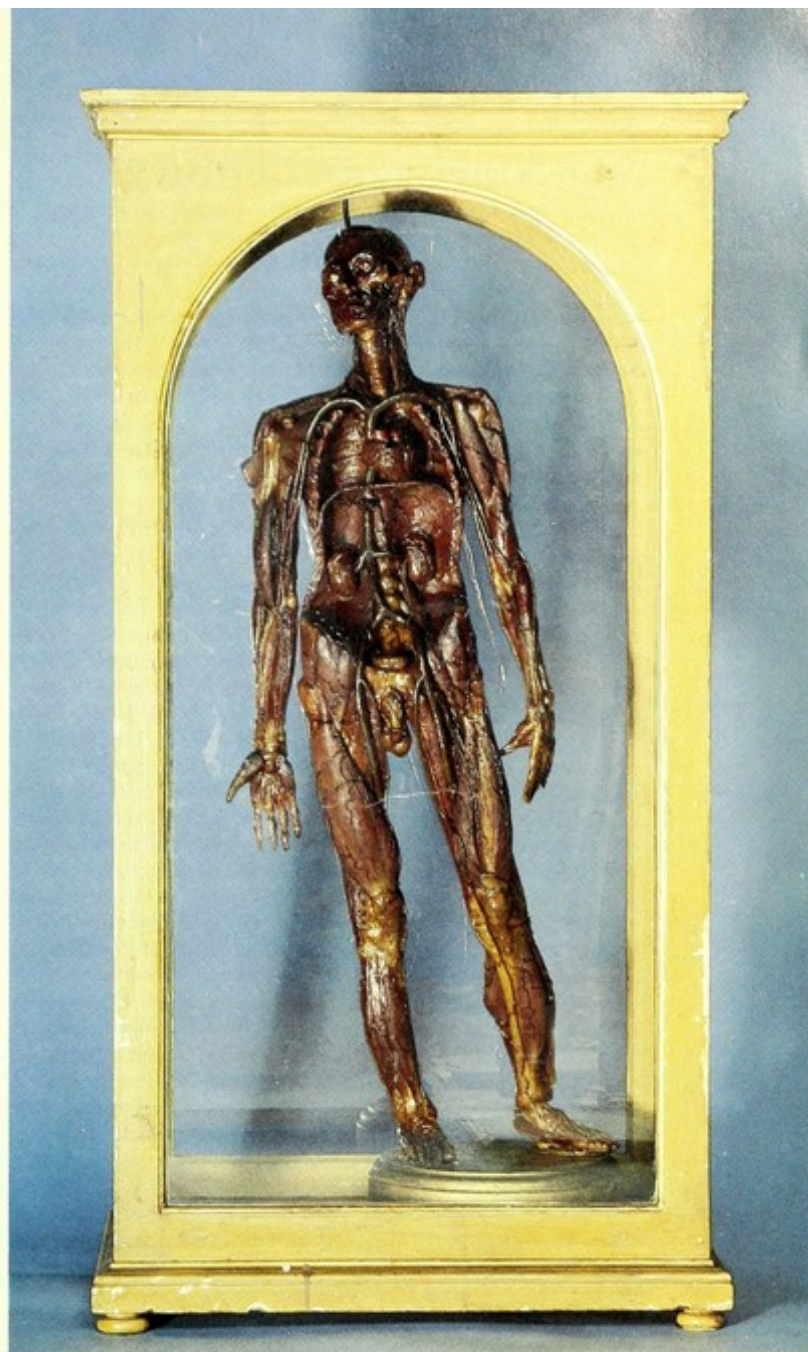
During the eighteenth century there was increasing concern about health matters, and great improvements in the teaching of medicine in the medical schools. Anatomic-

cal work became more detailed and the wax preparations made by the Hunters are good examples of their kind. The upright wax models and the remarkable reclining dissectable wax model of a woman were probably made in Florence in the middle of the eighteenth century. The wax panels designed for teaching the sequence of childbirth are complemented by the obstetric phantom, the parturition chairs and obstetric instruments associated with the names of Chamberlen and Smellie. A vivid reminder of the need to procure bodies for anatomical teaching, and the practice of doing so by unorthodox means, is provided by the mortsafe. As it was by no means unusual at the end of the eighteenth century for bodies to be dug up shortly after the burial party had gone away, those who could afford to do so buried the coffins of their loved ones inside enormously heavy cast-iron mortsafes such as this, to frustrate the grave robbers. The work of the Hunters at the end of the century is illustrated by the superb book on the gravid (pregnant) uterus, which did much to clarify knowledge of the anatomy of childbearing.

For the wealthy in the eighteenth century 'taking the waters' for medicinal purposes afforded the opportunity for an extensive social life. The scene at Bath with sedan chair, wheelchair and bath chair shows something of this. The diagnostic medicine chest, food warmers, eye baths and the like represent domestic medicine. Quack doctors abounded, the more bizarre their therapies, especially if they included electrical machines, the more readily they seem to have been accepted. The dental extraction instruments – keys and pelicans – of the time show that little progress had been made in technique. A set of false teeth belonging to George Washington, together with a letter from him to his



18. Tin-glazed earthenware jug, possibly seventeenth century, Spain (case I.36).



19. Anatomical figure, wax, c. 1780, Florence (case I.15).

dentist, typify the quality of denture that was available by the end of the century.

An interest in mental health was stimulated by the constitutional crisis provoked by the madness of King George III. The alms figures from Bedlam remind us of the large part played by charity in looking after the unfortunate. During the eighteenth century Withering discovered the action of digitalis in controlling dropsy. The triumph of Jenner in discovering safe protection against smallpox is illustrated by a case of his own inoculation points. Surgical instruments such as lithotomes were widely used throughout the century and the treatise by Brambilla represents a landmark in surgical textbooks. To say the least therapy tended to be somewhat fierce, being still confined to bleeding, enemas, and a few effective drugs. However, the work of Priestley and Lavoisier had begun to establish the scientific basis of medicine which was to prove so important in following years.

The Nineteenth Century

During the nineteenth century, concepts of illness, methods of treatment and knowledge of public health altered out of all recognition. To a large extent this progress came about because natural science was promoted and applied during the century as never before. Until the 1830s progress in the sciences was in the hands of only a few workers, who tended to investigate whatever took their fancy. After about 1830 the evolution of the full-time 'pure' scientist, often working in a university, established the pursuit of scientific knowledge as a definite career. Eventually, many worked on research and much was discovered.

However, in the first decades of the century developments in hospital medicine, centred on Paris, were important, as we see at the beginning of the part of the gallery devoted to the nineteenth century. The new big hospitals allowed thousands of patients to be examined and Laënnec's introduction in 1816 of the stethoscope, of which an original example is on show, made possible a new concept of diseases of the chest. Instead of the whole body being thought to be involved in all diseases, a particular organ could now be seen to be the site of the trouble. Other instruments were invented and applied as the century went by, especially in German medicine; thermometers and endoscopes illustrate the kind of progress being made. By the end of the century work in physiology had provided a more precise understanding of the body's functions as workers applied new and improved techniques. The Helmholtz pendulum (our example is dated 1901) allowed the speed of the nerve impulse to be accurately measured. Some indication of the delicacy of the experiments devised is shown in the reconstruction of A. V. Hill's apparatus to measure the amount of heat produced when a muscle contracts. Another important exhibit is Henry Dale's kymograph linked to a double perfusion pump and oxygenator to enable him to study isolated organs. This is a mechanical life-support system, the precursor of the modern heart-lung machine.

Throughout the century work on the nature of the body's tissues progressed. In 1826 J. J. Lister (father of the famous Lord Lister) discovered how to make a microscope with lenses which showed histological detail properly for the first time in history: this instrument is on display. By about 1840 Schwann had shown that all living structures were composed of cells and in 1854 Virchow proved that all cells develop only from other cells. By 1885 Abbe's work had developed the microscope to a peak of perfection, and preparation of tissues for examination had also developed apace. Examples of the key instruments concerned in this work are on display, as are photographs made through contemporary microscopes, showing what was to be seen.

Possibly the most important advance in medical science in the nineteenth century was the development of the germ theory of disease. Work on parasitic worms found in meat preceded knowledge of bacteria. This rested on the work of Pasteur developed by Koch. Two microscopes and other apparatus actually used by Pasteur can be seen in this part of the gallery. The importance of his later work in developing a vaccine effective against rabies made him one of the most respected figures of the century. A pipette used by him to remove saliva from an infected dog is on display. The work of Joseph (later Lord) Lister in applying Pasteur's discoveries to surgery, using carbolic acid to create antiseptic conditions, is well known. Many of the sherry glasses and other utensils used by Lister



20. Edward Jenner's vaccine points, ivory, and piece of horn from the cow used by him in his experiments, early nineteenth century, England (case I.34).

in his work on germs are on display to illustrate the scientific background to the understanding and control of bacteria as disease-producing organisms. Photographs of various micro-organisms including those from muscle and from blood, are on display. They were made using microscopes and preparations of the time to give some idea of what could be seen in the nineteenth century.

Close to the orthopaedic model in its island case, is the section dealing with individual and public health. Individual drug treatment with a wide range of proprietary medicines is described. Homoeopathic and conventional medicine chests are on display together with such typical products as Holloway's ointment jars (note the high price); the preoccupation with opium-based medicines can clearly be seen. The belief in miasmas as a source of infection is discussed. Nineteenth-century techniques of contraception are illustrated and early condoms are on display. Items related to childbirth and domestic hygiene are included and midwifery and obstetric sets of the period make an interesting comparison with more modern ones seen elsewhere in the gallery. Food warmers and part of the extensive collection of infant feeding bottles are also shown. The anti-cholera kit looks impressive but might not have been very effective. The model lavatory by Jennings of London and the full-size nineteenth-century drain are examples of the increasing attention given to public health later in the century. The development of public health measures was important in preventing disease. Lack of proper sanitation allowed four great cholera epidemics to sweep the world during the century, and the slums of the big cities were ever-threatening reservoirs of diseases such as typhoid. Eventually, legislation was enacted, medical officers of health were appointed, and clean water supplies and proper sanitation were provided. Laws controlling the purity of food also reduced infection. Some occupational

diseases were recognised and laws passed to provide protection against them.

Nearby is the section dealing with nineteenth-century hospital medicine. Early in the century surgery was still concerned largely with amputation and lithotomy; fine examples of instruments illustrate this work. It was possible to amputate a limb or cut into the bladder for stone in less than one minute, and while it might just be possible to tolerate the shock and pain, the infection which followed was even worse. Lister's development of antiseptics in surgery allowed wounds to heal without becoming infected. Eventually, it was possible for surgeons to operate on areas of the body previously inaccessible. Examples of the new surgical instruments of the last thirty years of the century, such as those concerned with abdominal surgery, illustrated the far-reaching importance of this work. Opposite the cases on surgery, Lister's work is described in more detail, the display including original examples of his antiseptic spray, his personal chemical cabinet and a replica of the donkey engine used during operations. The story is taken further in the cases dealing with the development of aseptic surgery, for which instruments were designed so that they could be sterilised by boiling. The excellent ophthalmic set shows clearly how this progress in technique affected the design of surgical instruments.

The other great surgical discovery of the nineteenth century was the development of inhalation anaesthesia. A good range of early equipment used to administer gases and vapours is on display, and early syringes for the injection of local anaesthetics are also shown. Obstetrics also developed apace during the century. Early pelvimeters and some rather horrific instruments to be used in case of obstructed labour may be seen. Obstetric forceps and other instruments are shown in conjunction with equipment for

use in improved techniques devised later in the century for the administration of anaesthetics, and for early attempts at blood transfusion. Nearby, an extensive range of stethoscopes illustrates work on respiratory medicine, and the cases on dentistry illustrate the application of new materials such as vulcanite to the manufacture of dentures. Other important dental exhibits include the silver-gilt toothbrush of the Emperor Napoleon, a very early clockwork drill for cavity preparation, and a superb exhibition case of dental instruments, of most impressive workmanship.

Some space is devoted to showing how surgical and medical instruments are made. A dividing engine for thermometers, and the steps in making some instruments are illustrated. In addition a 1570 case of instruments for the hunting field of exquisite craftsmanship is displayed close to an 1871 amputation set by Arnold, apparently designed especially for exhibition. Each is an impressive example of the best craftsmanship, and a reflection of the possibilities of surgery, of its time.

Other showcases display something of the popular preoccupation with phrenology. There is also a replica straitjacket used to restrain lunatics in an asylum in the last century.

Scientific advances allied to medicine in the nineteenth century produced astonishing results, and also laid the foundations for the work which was to follow in the twentieth century. We have to remember, however, that many people in industrialised countries lived in wretched conditions, and that wars took their toll in many parts of the world. In spite of the medical advances which were achieved most people in the world probably experienced little practical benefit from them. This was to require a massive input of resources into medicine and this kind of social progress had only barely commenced by 1900.

21. Objects used by Louis Pasteur, mid-nineteenth century, France. Silkworm cocoons, microscope (case M.38). 'Ballon' bottle, culture slide and microscope (case M.40). Inkstand, rabies pipette (case M.43).



Modern Medicine

Medicine in the 1980s presents remarkable contrasts with earlier centuries and even with the first half of this century. Epidemic diseases such as cholera and plague are now rare in the Western world. Many formerly fatal infections can now be successfully treated and remarkable diagnostic methods allow most parts of the body to be visualised. The inner workings of the cell have been explored. Surgeons can operate inside the cranium and the heart and sometimes replace diseased organs with healthy ones or with mechanical devices. It is now the laboratory which is the focus of medicine, rather than the hospital as in the nineteenth century.

The exhibits of medicine from 1900 to the present day occupy well over one-quarter of the entire gallery space, and the subdivision into specialities is itself some indication of the way in which medicine has developed since 1900. At the beginning of the twentieth-century area of the gallery, a series of illustrations provides an introduction to the development of British Health Services. In the section on hospital medicine there is an early anaesthetic machine contrasted with a modern one. The trend towards a hospital stay for childbirth is illustrated by items such as an infant labelling kit, a Trilene inhaler, a foetal monitor and an epidural kit. An ultrasound picture of the foetus in the uterus is displayed. A range of modern gynaecological instruments illustrating the increased importance of surgical procedures in the treatment of ovarian cysts and in hysterectomy is on display. The management of infertility is another important aspect of the displays. Early laryngoscopes and auriscopes and an extensive selection of tonsil guillotines, together with hearing tests, hearing aids and surgical implants shows the progress in ear, nose and throat work.

The development of specialised anaesthetics for dentistry is illustrated, and modern instruments for cavity preparation, including high-speed water-cooled drills, form an interesting contrast with Thew's 1932 electric chisel elevator, possibly one of the most fearsome instruments for extraction ever devised. Close by there are objects used in nursing before the last war - pulse timers, disinfectants, uniforms and bedpans.

The next group of showcases continues the story of domestic medicine and public health. A midwife's bag of the 1950s and scales used in infant welfare clinics are

exhibited, as are examples of contraceptives, some from the collection made by Marie Stopes. Anti-rheumatic drugs and special utensils for use by the elderly are on view. In the cases on occupational diseases, monitoring equipment and protective clothing are displayed.

Showcases illustrating twentieth-century laboratory medicine begin with a group on drugs. An early synthetic drug, aspirin, and salvarsan kits developed by Ehrlich, the first example of chemotherapy, are included, as are later chemotherapeutic agents such as sulphonamides. The story of the discovery and development of penicillin and later antibiotics is outlined, and a specimen of the antiviral agent interferon is on display. Some details of drug research are provided and a large reaction vessel is a prominent feature of this section. Work on bacteria centring on accurate methods of identification is displayed as well as details of twentieth-century work on viruses. Modern microscopes may be viewed together with examples of what can be seen through them when studying bacteria and body tissues. The place of the electron microscope in such work is outlined, and vaccines resulting from work in immunology are displayed.



23. Midwifery set, mid-twentieth century, England (case V.9).

24. Water-cooled space undergarment, as used in Apollo missions, mid-twentieth century, United States (case U.24).

22. A bacteriology laboratory, 1955 (LG.24).





25. An open-heart operation in 1980 (LG.26).

The role of the hospital is further explored in the next section. An early heart-lung machine and the first brain scanner to be installed in a British hospital are prominent, as is an early electrocardiograph and one of the first kidney machines. A selection of pacemakers may be inspected and some of the special modern instruments for gastroscopy and for nuclear medicine are nearby. Early instruments for open-heart surgery are also included. The increasing importance of orthopaedics is attested to by a range of artificial limbs, internal joints and equipment for rehabilitation. An interesting exhibit is the powered arm designed for thalidomide victims. Other parts of this section on twentieth-century hospital medicine exhibit X-ray equipment and a Finsen Lamp presented to the London Hospital by Queen Alexandra when she was Princess of Wales in 1900. Ophthalmological instruments include a teaching ophthalmoscope with a painted representation of the retina as it would be seen by the student, an electromagnet to remove metal from the eye, and a cryosurgical machine for the removal of cataracts.

At the far end of the gallery two other sections deal with special topics. The first of them compares the provision of health services in five different countries, and also illustrates various campaigns of the World Health Organisation concerned with the prevention of disease. Special reference is made to Third World countries and the role of traditional healers.

The section which illustrates military and expeditionary

medicine begins with some evocative reminders of nineteenth-century wars, such as surgical instruments from the Peninsular Campaign, a Scutari sash from the Crimea, and a water filter from the Boer War. First World War exhibits include gas masks and excellent examples of English and German field surgical panniers.

The particular difficulties encountered required ingenious solutions such as the stretcher designed to go easily round corners in the trenches. The Second World War exhibits include a portable anaesthetic apparatus designed to be carried by a paratrooper, and a portable blood transfusion set. An improvised wooden leg is shown near to a skull with a carefully fitted titanium plate developed as a result of recent work in Belfast. The good display of first-aid kits includes Dr Livingstone's medicine chest, one used by the 1953 Everest expedition and various items taken on Apollo missions.

A considerable part of the world's resources are devoted to health care in the widest sense. In some countries the general level of health is good but in others this is still far from being so. Although science as applied to medicine has allowed many diseases to be understood, it is clear that the final control of endemic disease is as much a social matter as a scientific one. This has always been true and much of what is on show in these galleries will remind visitors of this important fact.

UPPER WELLCOME GALLERY The Science and Art of



PRE 1800

- **A Medicine in Tribal Societies.** Magic, ritual and religion.
- **B Oriental Medicine.** India, China, Sri Lanka, Tibet.
- **C Disease and Medicine in Pre-history.** The continuity of disease from the earliest times.
- **D Mesopotamia and Egypt.** The rise of medicine in the river valley civilisations.

- **E Classical Greek and Roman Medicine.** The origins of medicine in western Europe.
- **F Islam.** The development and transmission of Greek ideas.
- **G Mediaeval Medicine.** Religion and philosophical medicine.
- **H The Scientific Revolution.** Medicine in the Renaissance.
- **I The Eighteenth Century.** Medical teaching. New attitudes to health.

POST 1800

- **J and N Nineteenth Century Medicine.** Disinfection, anaesthetics, surgery.
- **L Nineteenth Century Medicine.** Public health.
- **M Nineteenth Century Medicine.** biochemistry, bacteriology.
- **O British History.**



Twentieth-Century Hospital Medicine. Specialised areas of medicine such as radiology, ophthalmology, paediatrics, gynaecology, cardiology, orthopaedics, and psychiatry. Nursing and medical technology.

Twentieth-Century Public Health. Childbirth and medicines.

Twentieth-Century Laboratory Medicine. Drugs, immunology, blood transfusion, microbiology and other specialities.

Health Service from 1900

P and T Twentieth-Century Hospital Medicine. Specialised areas of medicine such as radiology, ophthalmology, paediatrics, gynaecology, cardiology, orthopaedics, and psychiatry. Nursing and medical technology.

R Twentieth-Century Health and the Community. Occupational medicine, infant welfare, contraception.

S Twentieth-Century Laboratory Medicine. Drugs, immunology, blood transfusion, microbiology and other specialities.

U War and Expeditions. The influences of conflict and exploration on medicine.

V World Health. Medicine in the Third World. Organisation of health services.

Private Areas



26. Bourdalon, or female urinal, Spode china, early nineteenth century, England (case I.31).

27. Mr Gibson's Pharmacy in 1905 (LG.18).





28. Childbirth in the 1860s (LG.17).

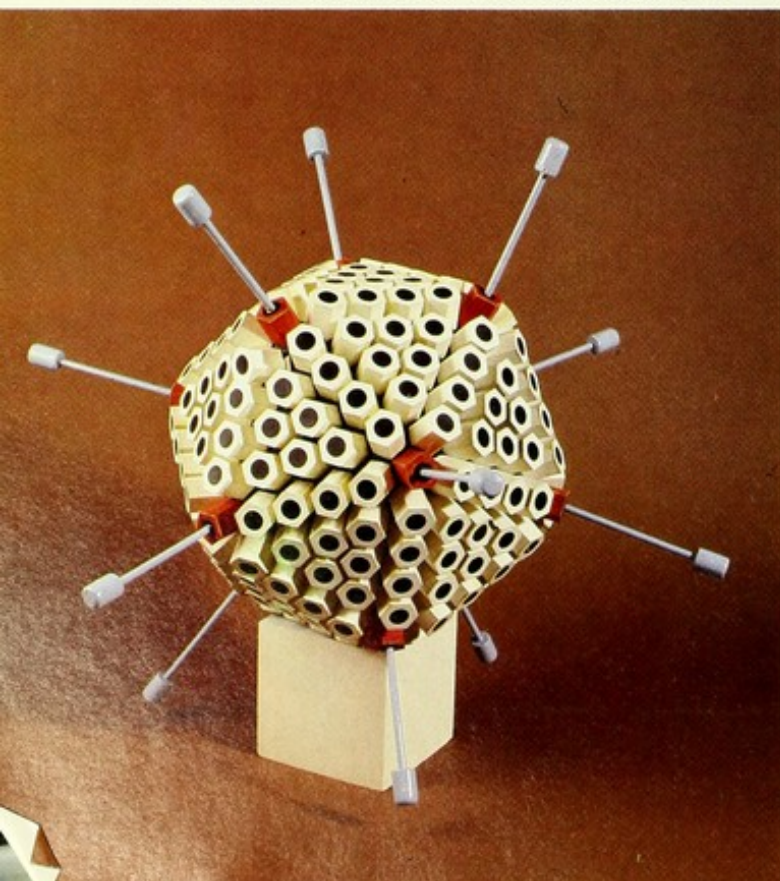


29. Medicine chest from
Reece's Medical Hall,
Piccadilly, early
nineteenth century,
England (case I.32).



30. A Chokwe medicine man (LG.33).

31. Model of adenovirus, mid-twentieth century, England (case S.17).



33. At the dentist in the 1930s (LG.22).

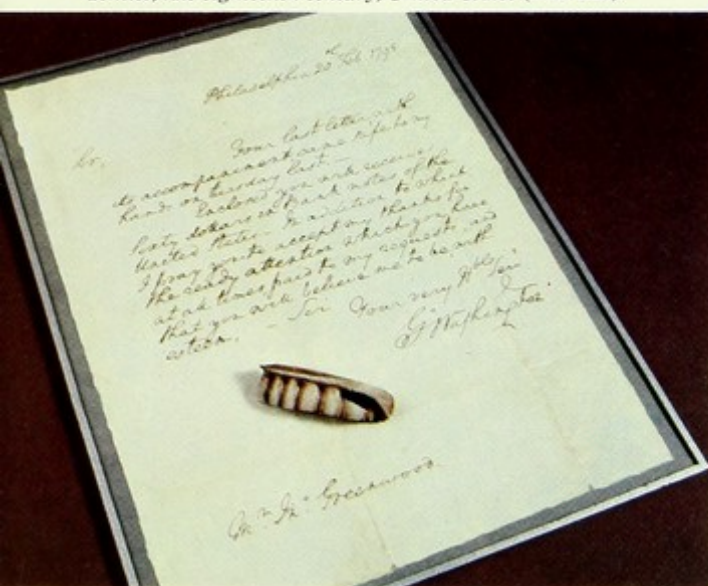


32. Ointment jars, creamware, mid-nineteenth century, England (case L.7).





34. George Washington's denture and a letter from him to his dentist, late eighteenth century, United States (case I.23).



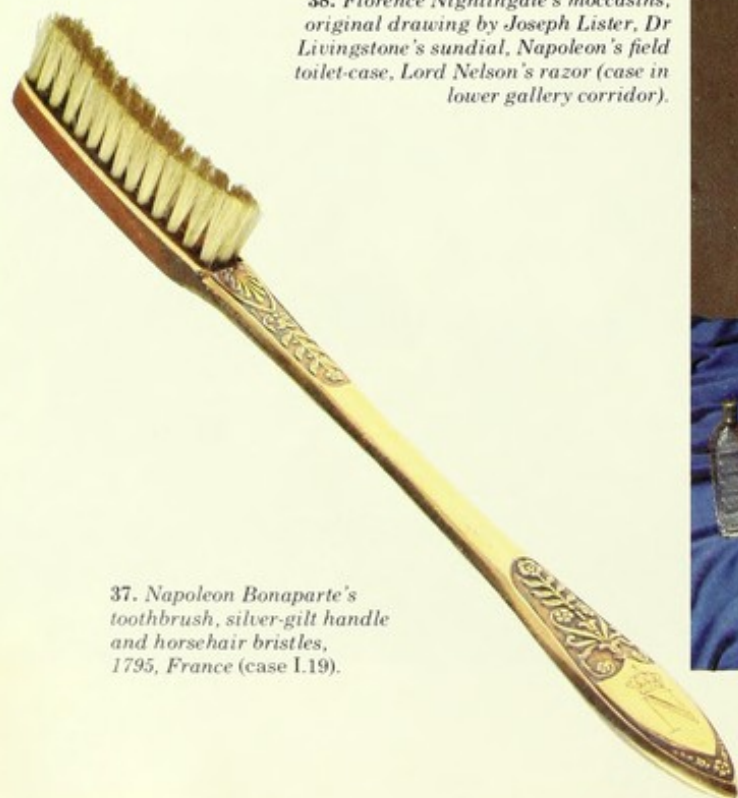
35. Dr Tulp's anatomy lesson, wood and ivory, eighteenth century, Holland (case H.17).





36. At the dentist in 1980 (LG.28).

38. Florence Nightingale's moccasins, original drawing by Joseph Lister, Dr Livingstone's sundial, Napoleon's field toilet-case, Lord Nelson's razor (case in lower gallery corridor).



37. Napoleon Bonaparte's toothbrush, silver-gilt handle and horsehair bristles, 1795, France (case I.19).

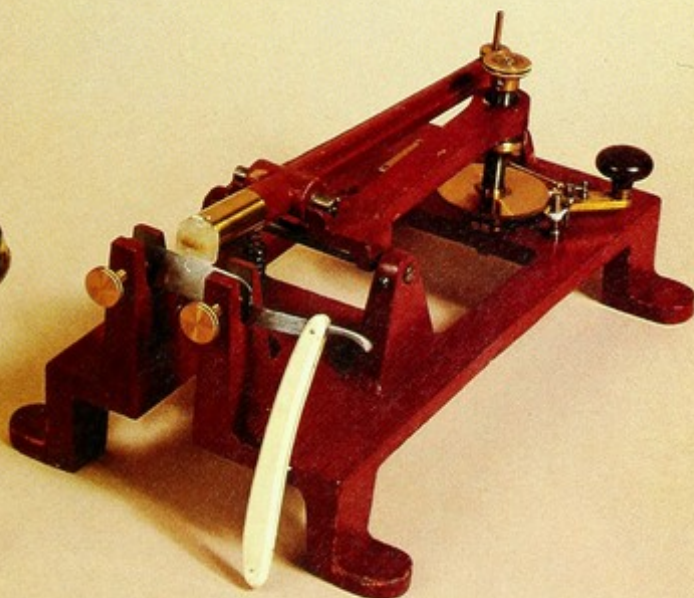


40. Microscope made for J. J. Lister, 1826, England (case M.20).
Cambridge rocking microtome, 1885, England (case M.33).

39. Stethoscope once belonging to Laënnec, wood, 1820, France (case J.1).



41. Dr Livingstone's medicine chest, used on his last journey, c. 1860, England (case U.22).





42. Parturition chair ('The miraculous chair of Palermo'), painted wood, eighteenth century, Sicily (case I.10).

43. An Ibibio medicine man in the 1930s (LG.32).



44. Pair of almsbox figures from Bedlam, plaster and metal, eighteenth century, London (case I.27).

45. St Anthony, terracotta, sixteenth century, Spain (case G.2).



46. At the dentist in the 1890s (LG.38).





47. Drug-jar, tin-glazed, 1641, Italy. Gerard's Herball, 1633, England (case H.10).

48. Upper gallery: seventeenth-century section showing mortsafe.



49. Upper gallery: section on 19th-century laboratory medicine.

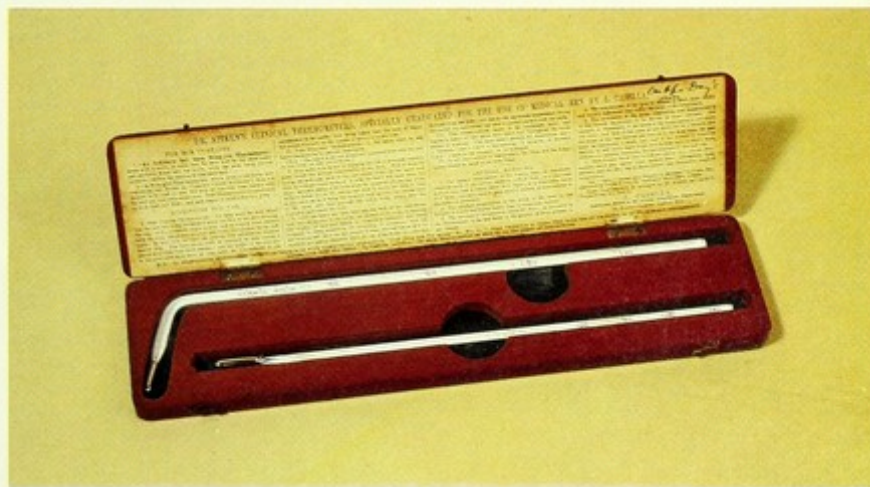




50. Intensive care in 1980 (LG.21).



51. Alchemist's furnace, stoneware, sixteenth/seventeenth century, Germany (case H.28). Articulated manikin, iron, sixteenth/seventeenth century, possibly Italy (case H.2).



52. Aitken's clinical thermometers, 1865, London (case L.13).



53. First World War dressing station (L.G.14).



54. Strait-jacket (copy), early nineteenth century, England (case N.28).

56. A sickroom of the 1870s (L.G.39).

57. Pomanders, silver, silver-gilt, gold, seventeenth century (case G.5).



55. Instrument case, silver, seventeenth century, England (case H.19).





58. Brambilla's textbook of military surgery, 1782 (case I.35). Military surgeon's instruments, early nineteenth century, France (case U.3).

59. Cupping set, 1878, London (case J.11).



60. Dental instrument set, 1840, London (case N.11).





61. Dr Bruce's electrotherapy room in 1905 (LG.36).

62. Naval surgery in 1800 (LG.12).





63. An iron lung in the 1950s (LG.30).



64. Exhibition set of dental instruments, c. 1840, assembled in United States (case N.10).

SPECIAL NOTE: From time to time, because of the rearrangement of the collection, visitors may find exhibits no longer shown in the order listed in this publication. Any inconvenience is regretted.



The Science Museum

Exhibition Road, London SW7 2DD, England. Telephone 01-589 3456

History

The Science Museum had its origin in the scientific and educational collections of the South Kensington Museum, opened in 1857, itself an outcome of the Great Exhibition of 1851. In 1864 the science collections were squeezed out by the expanding art collections, into buildings already in existence on the Science Museum's present site. In 1899 the South Kensington Museum was re-named the Victoria and Albert Museum. In 1909 the Science Division was administratively separated from the Art Division, which thereafter had the title Victoria and Albert Museum all to itself. The construction of the present Science Museum buildings took place by stages from 1913.

Opening hours

Weekdays 10.00-18.00. Sundays 14.30-18.00. Closed all day New Year's Day, Good Friday, May Day Monday, Christmas Day, Boxing Day. (For other Christmas and Easter arrangements please see press for details.)

Admission

Admission to the Museum is free during normal opening hours.

Animals

No animals except guide-dogs are allowed on Museum premises.

Facilities for the disabled

A ramp gives easy access for invalid chairs to the ground floor. Other floors may be reached by the lifts. Notice of arrival for parties of disabled people is appreciated.

Refreshments

Light refreshments are available from the Tea Bar, which is situated at the far end of the third floor of the Museum through the aircraft gallery. It is open weekdays from 10.30-17.00 and on Sundays from 14.30-17.00.

Car parking

There is no public car park at the Science Museum. Some parking meters may be found in Exhibition Road.

Photography

Photography with hand-held equipment is permitted for private purposes only. Flash may be used. Photography for commercial purposes and that requiring ancillary equipment is permitted only by prior arrangement with the Museum and may take place only during the Museum's closed periods. A fee is payable for such facilities. Application for access must be made in writing to the Museum's Information Office.

Education service

Schools and other groups are invited to apply to the Education Department for details of the facilities provided. A leaflet giving details of other collections of medical interest in the Greater London area is available.

Information Office

The public Information Office is situated on the ground floor of the Museum. It is open daily.

Library

The Science Museum Library is housed in a separate building in Imperial College Road not far from the main Museum. The Library is open to the public on weekdays 10.00-17.30. It is closed on Sundays and Bank Holiday weekends. Admission free.

The Wellcome Museum of the History of Medicine

This department of the Science Museum has galleries on the fourth and fifth floors of the Museum, reached directly by lift from the ground floor, or by stairs at each end of gallery 64 on the third floor of the Museum.

Lavatories

The nearest lavatories are on the second floor of the Science Museum off gallery 46. Others are available on the ground floor.

Museum Shop

The Science Museum Shop is situated immediately within the main entrance to the Museum. The Shop is open daily and sells a range of publications and souvenirs. These include a small book giving details of Henry Wellcome and of the Museum and a series of activity sheets suitable for younger visitors to increase their enjoyment and understanding of the galleries.

The Wellcome Institute for the History of Medicine

183 Euston Road, London NW1 2BP. Telephone 01-387 4477
The Institute has a magnificent collection of books, manuscripts and illustrations relating to the history of medicine. These are not normally available for consultation in the Science Museum.

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Text by Brian Bracegirdle. Photographs by the Science Museum and Jarrold Colour Publications, Norwich. Designed and printed in Great Britain by Jarrold Colour Publications, Norwich. 181.

A photograph of the storefront of Chemists Gibson & Son. The shop has a dark, ornate facade with large, gold-colored lettering that reads "CHEMISTS GIBSON & SON". Below the main sign, there is a decorative red band with intricate patterns. The entrance is framed by dark wood and glass. Inside the shop, a man in a dark suit is visible behind the counter. The display window features various items, including a large blue glass bottle, several jars, and a sign that reads "WINE MERCHANTS". The overall appearance is that of a traditional, well-established pharmacy or chemist's shop.