Memoranda:
MEdICAL, SURGICAL, OBSTETRICAL.

ORAL ADMINISTRATION OF ANTITOXIN.

It has seemed to us that the recent correspondence in this Journal on the oral administration of antitoxin and vaccines may possibly lead some of your readers to believe that this method of administering the specific antitoxin in cases of diphtheria is permissible. With the alleged non-specific action of antitoxin serums, when given orally or otherwise, we are not now concerned, but we think it cannot be stated too clearly that to give the antitoxin orally in a case of diphtheria is to throw away a valuable remedy upon the correct administration of which life may depend.

It has been shown long ago by careful experiments, both in animals and in human beings, that antitoxin is not absorbed to any practical extent from the alimentary canal. Theoretically, perhaps, an exception must be made in the case of sucking animals; but this point has not been made quite clear; and it has been suggested that only the heterogenous antitoxin in the milk of the mother is absorbed from the alimentary tract of the infant. The question is succinctly treated by G. Dean in Nuttall and Graham Smith's Bacteriology of Diphtheria (1906, p. 567), to which we would refer the reader for further details.

Though not questioning the correctness of the orthodox opinion on the matter, we nevertheless felt curious enough about it to do some experiments for ourselves. In view of the interest taken in the subject at the present moment, we venture to submit the results, though they contain no element of novelty.

The experiments consisted in causing guinea-pigs to swallow diphtheria antitoxin of high potency, and, after an interval of three or six hours, injecting a small dose of the toxin subcutaneously. As a control two guinea-pigs were given a very much smaller quantity of antitoxin by intraperitoneal injection, and, after similar intervals, toxin was injected in the other animals.

The antitoxin given by the mouth was well taken. Intraperitoneal injection was chosen for administering the antitoxin to the control animals in order to avoid any possibility of the toxin and antitoxin getting mixed together; but there is no reason to think that it is more effective when given this way than when injected subcutaneously. Very young animals were chosen deliberately; the last three were only three days old when they were employed, and were kept all the time with their mother.

**The Lo dose of toxin is that quantity of filtered diphtheria broth culture which is exactly neutralised by one unit of antitoxin.**

It will be seen from the table that in one of the control animals, after a Lo dose of toxin, while in another animal a much larger quantity (No. 5) 3,000 units, given by the mouth, failed to protect the animal against a massive Lo dose of toxin.

**Diphtheria Broth Culture of Diphtheriae.**

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<tbody>
<tr>
<td>1200 units (1 e. c.)</td>
<td>3</td>
<td>3</td>
<td>1 Lo dose*</td>
<td>Dead in 88 hrs.</td>
<td></td>
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<tr>
<td>2000 units (2 e. c.)</td>
<td>3</td>
<td>3</td>
<td>1.0 dose*</td>
<td>Dead in 66 hrs.</td>
<td></td>
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<tr>
<td>50 units (0.01 e. c.)</td>
<td>3</td>
<td>3</td>
<td>1 Lo dose</td>
<td>Remaining well</td>
<td></td>
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<tr>
<td>1500 units (1.5 e. c.)</td>
<td>6</td>
<td>6</td>
<td>1 Lo dose</td>
<td>Dead within 48 hrs.</td>
<td></td>
</tr>
<tr>
<td>3000 units (3.3 e. c.)</td>
<td>6</td>
<td>6</td>
<td>1 Lo dose</td>
<td>Dead within 48 hrs.</td>
<td></td>
</tr>
<tr>
<td>10 units (0.006 e. c.)</td>
<td>6</td>
<td>6</td>
<td>1 Lo dose</td>
<td>Remaining well</td>
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*The Lo dose of antitoxin is the quantity of filtered diphtheria broth which is exactly neutralised by one unit of antitoxin.*
It is quite conceivable that the senior members of many staffs would answer all six questions in the negative. But as the future is with their junior colleagues, who are beginning to appreciate the present tendency to use the services of volunteer hospitals on a scale that it seems to them quite uncertain whether the cost of accommodation and maintenance, is not liable to assessment for the pupils of the hospital. But all other payments made for hospital staff and any of their services to the general public or to the members of the hospital could be pushed into a financial account with the hospital.
ROYAL COLLEGE OF SURGERS OF ENGLAND.

The following candidates were approved at the primary examination for the Fellowship which concluded on December 15th. Of the 122 candidates who presented themselves, 26 were approved and 96 were rejected.


ROYAL COLLEGE OF SURGERS OF EDINBURGH.

The following, having passed the requisite examinations between candidates for the years 1879 and 1880, have been admitted to the Edinburgh Royal Infirmary for the ensuing year.

Mr. C. W. Cawthorn, C.B.E., and Sir James Heselson have been appointed representatives on the board of the Edinburgh Royal Infirmary for the ensuing year.

COMMISSIONS IN THE ROYAL ARMY MEDICAL CORPS.

An examination for not less than fifteen commissions in the Royal Army Medical Corps will be held on January 31st, 1923. The presence of candidates will be required in London from January 29th. Intending candidates may obtain a full statement of the duties and emoluments of the service and written application to the Secretary (A.M.D.1), War Office, Whitehall, S.W.1, and applications to compete shall be made to the Secretary not later than January 31st.

DECORATIONS.

The following decorations were conferred for valuable services rendered in the field with the Waziristan Force, 1920-21:

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<th>Decoration</th>
<th>Description</th>
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<tr>
<td>O.B.E.</td>
<td>Military Service Medal, temporary major</td>
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<tr>
<td>M.B.E.</td>
<td>Military Service Medal, temporary captain</td>
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Foreign Decorations.

The following decorations have been awarded by the Allied Powers for service rendered during the war of 1914-19:

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<tr>
<td>Order of the French Republic, Chevalier of the Legion of Honour</td>
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Surgeon Captains William G. K. Barnes, M.D., and Edward J. Baldwin have been awarded the French Legion of Honour, the highest award of the French Republic, for their services in the war.

DEATHS IN THE SERVICES.

Fleet Surgeon William Bainbrigge Felbrigg, R.A. (retired), died at a hospital in London on October 1st, aged 75. He was a son of the late George Felbrigg, R.A., surgeon to the 2/29th Light Infantry, and was educated at the Ledwich School, Lambeth. He took the L.A.H. in 1866, and the M.R.C.S. L. and E. in 1867, and the F.R.C.S. in 1869. In 1832, entering the L.M.S. as assistant surgeon on October 1st, 1869, he became assistant surgeon lieutenant-colonel on October 1st, 1869, and retired on an invalided pension on April 1st, 1901. Most of his service was spent in civil
Captain R.A.M.C. (T.), and was attached to the 3rd Southern General Hospital, Oxford. He was also anaesthetist to the Ministry of Pensions orthopaedic hospital at Headington. For the last two years of his life, in Oxford and London, his varied talents and wide sympathies won him many friends. He was president of the Oxford University Chess Club, and had played against Cambridge and the American universities, and he was an active member of the University Lawa Tennis and Skating Clubs. He contributed many papers, particularly on literary and artistic subjects, to the Oxford Medical Society, and comparatively late in life he took up water-colour drawing, in which he attained considerable success.

Dr. William Doig, who was the oldest medical practitioner in Galashiels, died there on December 3rd. He received his medical education at the University of Edinburgh, graduating M.B., C.M. in 1881, and M.D. in 1892; he subsequently took the D.P.H. in 1918. After a few years as assistant with the late Dr. Thomas of Selkirk Dr. Doig started practice in Galashiels, where he soon became well known and highly respected. In 1899 he became surgeon lieutenant in the Galashiels detachment of the Border Rifle Volunteers, and on the organization of the Territorial Force he transferred to the 4th Volunteer Battalion (T.F.) of the King's Own Borderers, and attained the rank of major in 1912; he received the Territorial Decoration. During the war he served in several military hospitals in Edinburgh, Berwick-on-Tweed, and elsewhere in the east of Scotland.

Fleet Surgeon William Henry Putney, R.N. (retired), died at Southsea on December 29th, aged 79. He was educated at the London Hospital, and took the M.R.C.S. and L.S.A. in 1868. He then entered the navy, attaining the rank of fleet surgeon in 1888, retiring soon afterwards; he graduated M.D. Durham in 1892. As a student he worked in the London Hospital during the cholera epidemic in the sixties, the last serious outbreak of cholera in London. He served as staff surgeon of H.M.S. Condor, then commanded by Charles B. G. Earnest, R.N., in the Egyptian war of 1882, and was present at the bombardment of Alexandria, receiving the medal with a clasp, and the Khedive's bronze star. Admiral Sir Dowton Starke was under his care for malaria when serving as a midshipman in H.M.S. Undaunted at Bombay. After his retirement he practised for some time at Bournemouth, with Dr. Cory. He was a member of the British Medical Association, and took part in the first Annual Meeting of the Association there. He was unmarried. He was buried in the churchyard of St. John the Baptist's Church, Moordown, Bournemouth.

Medical News.

The second part of the fifth course of lectures for the diploma in psychological medicine at the Maidstone Hospital will begin on Monday, January 8th, when Sir Frederick Mott will give the first of six lectures on the pathology of mental diseases, including brain syphilis, its symptomatology and treatment. On the following day Dr. Mapother, the medical superintendent, will begin a course of eight lectures on morbid psychology, illustrated by demonstrations. On January 10th Dr. Shrubb will begin his course on the practical aspects of mental deficiency, and Dr. W. S. Sullivan, medical superintendent of Broadmoor Asylum, his course on crime and insanity. On Monday, February 5th, Dr. Bernard Hart will begin a course on the psychoneuroses, and later on Dr. D. E. G. Paton, F.R.C.P., his lectures on the pathology of insanity and treatment. Demonstrations will be given by Sir Frederick Mott and Dr. Golls, beginning on January 11th. The inclusive fee for all the lectures is 10 guineas; for a single course 2 guineas. The lectures and demonstrations will be given at various hours in the afternoon, mostly at 2.30 p.m., and all are made to the direction of the Pathological Laboratory, Maidstone Hospital, Denmark Hill, S.E.5, or to the Fellowship of Medicine, 1, Wimpole Street, London, W.1.

At a meeting of the Röntgen Society on Tuesday next (January 2d, 1923) at 8.15 p.m., at the Institution of Electrical Engineers, Dr. A. E. Barclay will read a paper on the organization and management of a roentgen-ray department, with special reference to the new department at the Manchester Royal Infirmary.

The Council of the London and Counties Medical Protection Society has been changed to Victory House, Leicester Square, London, W.C.2.

GUY'S HOSPITAL is one of the institutions at which combined research on insulin is being undertaken under the auspices of the Medical Research Council. In order to help the work Dr. H. C. Harris, the President of the Association, arranged to pay £400 a year for six years and a half to the President and Governors of Guy's Hospital as a contribution to the cost of research on diabetes. The funds raised by the diseases of metabolism to be carried on at Guy's Hospital Medical School. It is intended to use the money to establish a Farnons Fellowship.

The first annual dinner of the Association of County Medical Officers of Health for England and Wales was held on December 15th at Fagan's Rooms, London, with Dr. G. Reid, the President, in the chair. The toast of "The Guest," briefly surveyed the evolution of the Association and its relations to the Government public health departments, the British Medical Association, and the County Councils Association. Dr. Bostock Hill, who read the paper, expressed the hope that the Fellows would feel much encouraged by the fact that the word of Sir George Newman as a friend, adviser, and colleague. Sir George Newman, in reply, reviewed the work and the relationship to the public health branch of the medical profession. He felt amply rewarded, he said, by the friendship returned by the county medical officers of health. He pinned his faith to the coming cause of preventive medicine.

The Far Eastern Conference of representatives of Red Cross Societies was held at Bangkok, Siam, from November 29th to December 7th, and was attended by delegates from South India, China, the Philippines, the East Indies, the Federated Malay States, French Indo-China, Australia, and New Zealand. The chief purpose of the conference was to become acquainted with the peace programme of the Red Cross as adopted by the General Conference of the League last March, and discussion was round the best methods of preventing disease through popular health instruction.

The referee under the Safeguarding of Industries Act has determined that the use of organic acids in paint in the following list of articles chargeable with duty under Part I of the Act:

An interallied congress on cancer will be held at Strasbourg next spring, when the following subjects will be discussed: experimental proof of the presence of a provoked defensive reaction of the organism against cancer; irradiation treatment of mammmary cancer.

The number of schools for physically defective children certified in this country since April 1st, 1914, is 108. The total number is now 197.

The number of lepers in the United States, which twenty years ago was estimated at 278, is now between 1,000 and 1,500.

A PAMPHLET, entitled Shall the State throw away the Keia? has been published by the Association of British Chemical Manufacturers with the object of showing how wide and far-reaching are the ramifications of the fine chemical industry, and how much it means to the nation. Sir W. J. Pope, professor of chemistry at Cambridge, contributes a plenary support for the enterprise. Exactly what kind of support is expected is not stated, as compared to elsewhere in the pamphlet, but the reader is left to draw his own conclusions from the facts and the German competition; it is hinted that the goodwill felt towards a young enterprise should be coupled with a willingness to submit for a time to some inconvenience. Sir William Pope makes a reference to the trypanocidal drug "Bayer 205," has the constitution and uses of which were described in our columns of September 23rd last (p. 569). Upon this drug the Germans found pretensions for the restoration of their tropical colonies. In our issue of December 16th (p. 1185) we referred to another drug, obtained in America, and named "trypanuramide," having similar properties. Sir William Pope affirms that a well organized fine chemical industry in this country could undertake a scientific research, and carried out with a legal relationship with the Government, and would almost infallibly result in the discovery of a cure for sleeping sickness. The pamphlet deals briefly with fine chemicals as therapeutic agents in the treatment of tropical diseases, and as adjuncts to surgery and first aid, and then passes on to describe the various uses of fine chemicals in photography, in the making of solvents and varnishes, in the preparative of synthetic perfumes, and tobacco, and as analytical reagents in various industries. Thousands of different chemicals are now available as the result of the development of the fine chemical industry in this country, and the British chemist, academic or industrial, has proved himself in no way behind the chemist of any other country. The pamphlet goes on to say that the Government, without national assistance the enterprise will have to be abandoned because it cannot quickly become self-supporting. Copies of the pamphlet may be obtained from the Association of British Chemical Manufacturers (165, Piccadilly, W.1).