

SPUTUMS.

SPECIMENS FOR LABORATORY EXAMINATION.

By JOHN HATCHER.

Though specimens of sputum may be required for a number of investigations, there is no doubt that the most frequent is search for the tubercle bacillus. In fact the laboratory investigation of sputum is very largely a bacteriological one.

Macroscopical Examination.

The macroscopical examination or naked eye appearance of sputum specimens has long been regarded as a valuable aid to diagnosis. There are a large number of more or less characteristic sputums associated with definite pathological conditions and the more important and well-known ones include blood-stained, purulent, rusty as in pneumonia, and nummular as in pulmonary tuberculosis.

Collection of Specimens.

As has already been mentioned the laboratory investigation of sputums is very largely concerned with search for the presence of the tubercle bacillus. Now it will be recognised that the finding of tubercle bacilli is a very important matter; it means that the unfortunate individual concerned is almost certainly suffering from pulmonary tuberculosis and in due course will at the very least have to reorganise the whole of his life, with probable financial loss and consequent mental distress. Therefore it goes without saying that the greatest care must always be taken in the labelling of such specimens to completely eliminate any chance of the identity becoming mixed. It is highly important that proper specimens of sputum should be obtained, particularly so when search for the tubercle bacillus is required. Specimens of saliva are of no value and in the case of children where it is frequently quite impossible to obtain suitable specimens, faecal specimens should be sent as an alternative, the sputum having been swallowed any tubercle bacilli present being excreted in the faeces. Generally speaking morning specimens are preferable, though sometimes the whole of the sputum expectorated over 24 hours will be required. At least three specimens should be sent for examination before negative findings can be regarded as conclusive as absence of the tubercle bacillus.

Specimen Containers.

The burnable type of containers which in recent years has come into more general use are a great improvement on the glass pots previously used. Not only are they safer, there being no cleaning after use, the cups being burnt, the containers may be given to the patient to expectorate into directly, a much safer and more hygienic system than transferring part of the contents of a sputum mug into a tiny bottle. There is, however, one danger the burnable containers come into direct contact with the patient, and the outside may become fouled during use and this should be remembered when handling these containers.

Bacteriological Examination.

The bacteria flora of a normal sputum is extremely varied, but in two particular pathological conditions is

bacteriological examination extremely important. Firstly, the presence of tubercle bacilli is practically speaking diagnostic of pulmonary tuberculosis and in pneumonia investigation may be made to establish the causative organism. Incidentally, it should be remembered that the causative organism of pneumonia need not necessarily be the pneumococcus. Mention should also be made of the bacteriological diagnosis of whooping cough, which aims at the isolation of the bacillus pertussis some days before the child develops the characteristic whoop. The sputum is, however, collected in a special manner, a "plate" of suitable medium, usually chocolate agar is exposed about four inches from the child's mouth during a fit of coughing and some of the tiny pellets of sputum which are expelled allowed to fall on the surface of the medium.

EMERGENCY MEDICAL SERVICES INSTRUCTIONS.

MEDICAL TREATMENT AND SPECIAL CENTRES.

Whatever complaints may be justifiable on the organisation of the Civil Nursing Reserve, it is evident the Ministry of Health has tackled the Emergency Medical Services with vigour—and as the stream of instructions issued for the Medical Service has reached such proportions, it has become difficult for those responsible for executing them to keep abreast and to carry out the necessary action. In order, therefore, to clarify the arrangements, as they now stand, and to provide an easy form of reference, it has been decided to consolidate these instructions into booklets on particular subjects, and by so doing to cancel all previous E.M.S.I.'s and E.M.S. Gens.

The first of these booklets covers all the separate instructions on *medical treatment and special centres*.

Further booklets are being prepared on other subjects.

PART I.

Part I.—Medical Treatment and Special Centres cover innumerable sections (nurses will be wise to obtain a copy from the Ministry of Health if possible), and deal with Orthopaedic; Principles of Transfer; Surgical Operations on Feet and Knee Joints, and Peripheral Nerve Injuries.

Spine. Neurosis and Psychosis. Effort Syndrome. Chest. Head injuries. Eye. Facio-maxillary Injuries. Burns. Rheumatism. Tuberculosis. Dental Treatment. Children's Units. Prevention of Wound Infection and Cross-infection. Deodorising Cloth. Oxygen Administration. First-aid posts. Gas. Anti-toxins. Post-mortem Examination. Mobile Teams. Auxiliary Hospitals and Convalescent Homes. Disposal of Gastro-duodenal Service Patients. Privileged Treatment for Army Patients. Ministry of Pensions Hospitals. Domiciliary Medical Attendance. Artificial Limbs and other Surgical Appliances.

PART III.—APPENDICES.

Exceedingly valuable expert advice is given in Part III., notably on Gunshot Wounds. Cystitis. Bedsores or Pressure Sores. Treatment of Chest Casualties. Cardiac and Pericardial Wounds. On the Treatment of Burns and Burn Dressings and the Distribution of Tetanus and Gas Gangrene Anti-toxins.

A long list of eminent specialists as consultants and advisers, and their addresses, are inserted in the booklet, which is full of valuable information, the compilers of which are to be highly commended.

[previous page](#)

[next page](#)