depends on Ptolemaic cartography. Even the incubation period of tuberculosis is an unknown quantity, and it is impossible to say definitely whether, in any given case, the disease was contracted during service or re-activated by service. Prof. Cummins inclines to the latter explanation for the majority of cases, but there is the other view, supported by Colonel R. T. S. Simpson, that tuberculosis in the army is chiefly the result of infection after enlistment. Another problem to which Prof. Cummins addresses himself is the real or apparent susceptibility of certain British, French, and German guard regiments to tuberculosis. This observation raises the questions: Do tall men suffer more from tuberculosis than men of average height, and does standing motionless many hours a day promote tubercle? It cannot be a healthy occupation to stand by the hour bleeding into the most dependent veins, and waiters, it may be noted, are peculiarly susceptible to fatal tuberculosis. Though our knowledge is all too incomplete as to the genesis of tuberculosis, its end-results are sadly obvious. By the end of March, 1921, about 60,000 pensions (not only 6000 as stated in our issue of April 29th) had been granted for tuberculosis as the result of the war, and this number has subsequently been augmented. Were most of these cases re-activated by service or would the disease have broken out even if there had been no war? Till we can answer this and many other questions, we must dispense with the self-complacency of omniscience.

FIRST-AID PACKET OF THE U.S. ARMY.

IN the *Military Surgeon* for April, Major John P. Fletcher, Medical Corps, U.S. Army, Director of the Medical Equipment Laboratory at Washington, describes the proposed improved first-aid packet of the U.S. Army. As before it measures 4 in. by 2½ in. by 1½ in. (weight not stated), but contains more, and more useful, dressing material than did the old pattern, and it is much easier to open. A piece of gauze, 14 in. wide by 18 in. long, has laid on it 100 grains of non-absorbent cotton, and upon this 400 grains of absorbent cotton, each in one continuous layer. The gauze is folded round so that the absorbent cotton which goes next the wound is covered by a double fold of gauze; the folding is so done that the pad becomes 5 in. by 7 in. and it is then stitched firmly to the middle of a two-yard piece of 4½-inch gauze bandage, slipped between them being a bright red paper, 4 inches square, on which is boldly printed, on the side next the bandage, "Put other side next the wound." The ends of the bandage are torn down the middle for 15 inches; that this may be a four-tailed bandage. The pad and bandage are put together and folded into a W shape, wrapped in germ-proof paper, and then compressed so as to go into their place in the container. This has two shells of brass of which one at its edge fits into the other and is retained there by a non-corrosive steel tape clamped on, whose end is doubled back for half-an-inch, and through the doubled end a ¼ inch hole is pierced. The whole is carried in a pocket on the right side of the belt, from which thumb pressure on top will release the first-aid packet hung further to a hook by the ¼ inch hole in the steel tape mentioned. An extra small (10 lb.) pull will detach the tape from the packet, the clinching tape being left behind. The two shells are easily separated, and when the germ-proof paper is torn off, the first-aid dressing is immediately available. That the ingenuity of the device may be fully appreciated, reference must be made to the paper with its excellent illustrations. To any reader of the *Military Surgeon* who will be good enough to devise an improvement, and to describe that to the laboratory, gratitude is promised beforehand. It will be noted that the opened pad (5 in. by 7 in.) is about half the size of this page, and so is suitable for larger wounds than were provided for formerly. It is applied also very easily and with the minimum of handling, further good points.

STAMMERING—WHAT IS IT?

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No one will deny that stammering is the most painful of all nervous habits to the sufferers themselves, and no less to those who listen to their efforts to speak. In the majority of cases it is at first merely a careless habit, chiefly due to excessive speed, which gradually grows into a nervous habit. When a child is learning to walk, it is not surprising that he may stumble at any moment; if he hurries, he will be expected to fall down. It has for many years appeared to me that there is a close parallel between learning to walk and learning to speak. Both are learned slowly, gradually and consciously in the initial stages, but when the child has gained some proficiency, both actions become subconscious. This fact is capable of illustration: If when walking to catch a train we discover that we are behind time, we say to ourselves: "I must hurry," and we do so; since the lay person cannot say which muscles are stirred into increased activity, his walking is clearly subconscious. The same description applies to speech, but here the mechanism is much more complicated. In a short and simple sentence the lips, the lips and teeth, and the tongue—back, middle, and tip—all work in turn; while they are at work the voice itself is set going or shut off as may be necessary to produce vowels and voiced consonants, or silent—i.e., unvoiced—consonants. Take a simple instance: the words *back* (*bak*) and *bag*. In the former we use *voice and lips* to make the "b." (If we omitted the voice, we should say "p" instead of "b.") We then keep on the voice (with the mouth in the right position) to form the "a," but the voice must be shut off as the back of the tongue makes contact with the velum or soft palate, to produce the "k." In the word *bag* the method is identical except that the voice is continued through the last letter.

With such complicated mechanism to be controlled, first consciously as infants, and later subconsciously, it is not at all surprising that children stumble and trip in speaking. As time goes on and the thoughts run ahead of the powers of fluent speech, the stumbling increases. If at this point nothing is done to correct the child, he will probably grow nervous, and anticipate in his mind failure to speak; and so a merely careless habit has grown into a nervous habit, which may now be termed a nervous stammer.

Uncoordinated Mechanisms of Voice and Articulation.

In three cases out of every four a nervous stammer is due to lack of coördination between the vocal and articulating mechanisms, which usually takes the form of a delay in setting the vocal mechanism to work. In such a case the stammerer when wishing to say the word "enter" is observed with his mouth open, waiting for his voice to sound, but, unless he realises to what the silence is due, he cannot possibly know what to do in order to produce the word. On the other hand, if he wishes to say the word "king," he will probably say "k-k-k-k-king," because the voice which was required for the letter "i" has failed him, and he continues to say the "k" hoping that the "i" will start itself somehow or other. Thus we find that silence on a vowel and repetition of a consonant are very often both the result of delayed vocal mechanism.

Method of Correction.

The method of correcting this delayed vocal sound, which has caused a nervous stammer, must be studied now. Although the mere realisation of what is really wrong will help, we must go into details. Breathing must be mentioned first, for without a firm and even supply of breath the vocal cords will not vibrate properly. Many useful books have been written to explain and teach full and deep breathing, intercostal and diaphragmatic; furthermore, in most

schools breathing exercises are carefully taught and practised every day. Taking it for granted, then, that the system of deep breathing has been mastered, we pass on to the more technical question of *vocal tone*.

Vocal Sound and Anticipation of Difficulty.

We often hear of the stammerer who can sing fluently but cannot speak a sentence. The explanation is simple. When singing, the primary idea in the mind is the firm vocal tone, and—what is far more important, and incidentally far more helpful to the stammerer—that firm vocal tone is going to be made on a definite note. So a very clear mental picture of the sound has been made; the singer knows what is going to happen and for this reason the vocal sound is made as desired, and the word finds itself. With the speaker the case is very different. Here the mind is *occupied with the word rather than with the voice*. In the case of a nervous stammerer, the mind is already anticipating probable failure over the consonant as in the word “king.” As we saw above, the result of the effort will be “k-k-k-k-king.” The mind is occupied with the difficulty of making the “k,” while all the time the “k” is presenting no difficulty at all. This is proved by the fact that the “k” has been made four times before the word “king” is finally said. The real difficulty lies in the letter “i” because the vocal tone was not ready and mentally anticipated. If the stammerer will think clearly of the vocal sound in the word “king” and say it slowly, firmly, and as evenly as possible, mentally anticipating the *vocal sound* in the “ing”—the initial “k” will nearly always find itself, as it does in the case of the singer.

Another important point to remember about the speaking voice is that we have only got one voice. Whether we sing or speak, the vocal tone should be the same—firm, open, and resonant. When a trained singer speaks we all look round at the unaccustomed sound of a fully produced vocal tone in a spoken sentence, and we generally say: “He must be a singer.” The singing and speaking voices should be identical in tone, only differing in *pitch*. In singing we move from one definite note to another; in speaking we slide up or down. There are numberless books to teach open voice production and resonance. All that applies to the production of the singing voice applies equally to the speaking voice.

Need of Expert Assistance.

Needless to say, the best results cannot be obtained without the advice and supervision of an expert who can give the stammerer the benefit of a varied experience in speech disorders. It would be futile to try to learn Latin, mathematics, or singing from books alone. The chance of success without assistance in the case of a stammerer would be very small, since everything depends upon minute differences of tone, only audible to a specially trained and experienced ear. The stammerers’ rule is this: Speak firmly and slowly, carrying the vocal tone as evenly and smoothly as possible through the whole sentence or phrase. Read aloud for a quarter of an hour twice or thrice a day, *thinking all the time about the vocal tone*. This is the best practice and it must be absolutely regular. As I said at first, stammering is a habit, which can best be broken down by replacing it by a new and stronger habit. Space only allows me to speak of the commonest form of stammering—that is, delayed vocal mechanism; but three out of every four cases are due to this defect and will yield to systematic and persevering practice on these lines.

ROYAL SOCIETY OF MEDICINE.—An interesting ceremony took place at the annual dinner of the Society on May 5th, when the Section of Laryngology was presented with a badge by Sir William Milligan, President of the section. The badge, which is the work of the Goldsmiths and Silversmiths Company, is in gold and enamel with a centre medallion representing the profile of Signor Manuel Garcia, the “Father of Laryngoscopy,” whose epoch-making discovery was communicated to the Royal Society of London in the year 1855.

CONTROL OF VENEREAL DISEASE.

THE RETENTION UNDER TREATMENT OF INFECTED PERSONS.

ON May 3rd a conference was held at the Guildhall, under the auspices of the National Council for Combating Venereal Diseases, and the chairmanship of Lord Gorell. The subject for discussion was How Persons Infected with Venereal Disease can Best be Retained under Treatment until a Non-infective Condition has been Attained.

The Lord Mayor said that of 1391 persons under treatment in the City of London, 831 discontinued attending while still in an infective state. Inquiry showed that this condition of things was prevalent throughout the country, hence this conference, at which he invited a full and free discussion.

Education v. Compulsion.

Lady Barrett put forward a plea for more and clearer education on the subject. The sufferers needed to be assured that the early cessation of symptoms of syphilis did not mean the cure of the disease, the salvarsan injections requiring to be supplemented by a prolonged course of mercury; also that those in whom the W.R. quickly became negative were liable to suffer from serious sequelæ. Gonorrhœa was still regarded much too lightly, and there was need to teach that such conditions as gonorrhœal ophthalmia, rheumatism, stricture, and sterility ensued. The clinics were the best places in which to impart this education. Private doctors did not find the same difficulty in inducing sufferers to continue the treatment as did those in charge of clinics, possibly because the private patient asked more exact questions, and received a fuller assurance of what was required, possibly because people valued more what they paid for. As to compelling people to go to a doctor when they had venereal disease, the presumption of the ability of the patient to diagnose the disease could not be admitted. Moreover, attempts to introduce compulsion would uproot the essential confidence between doctor and patient. Some relaxation of etiquette might be tried, enabling a doctor to prevent an infected person marrying if his warning were disregarded.

Dr. Nabarro said that at the clinic in connexion with Great Ormond-street Children’s Hospital during the last five and a half years 340 cases of these diseases had come under his notice. He had found that the mercurial treatment in conjunction with salvarsan or other similar compounds needed to be even more prolonged for congenitally syphilitic children than for adults. He suggested that a family known to be syphilitic should be marked, and every effort made to bring the mother up for treatment, especially if and when she again became pregnant.

The Mayor of Fulham said that the Association of Approved Societies concluded that notification was not desirable, education being considered preferable.

The Need for Fresh Legislation.

Dr. C. J. Macalister (Liverpool) said that in order to guard the general community against infection legislation should be on the lines of notification, but under the direction of the public health authorities. The present state of matters meant a great waste of energy, time, and money. Dr. Margaret Rorke, from her experience at the Royal Free Hospital, spoke of the discouraging results of education, persuasion, and cajoling in inducing patients to continue treatment until the infective stage had passed. Dr. Louis Parkes claimed that sufficient powers were vested in the Ministry of Health to make further legislation unnecessary. He praised the law in Western Australia, where it was required that every person, within three days of becoming aware, or even suspecting, that he or she was suffering from venereal disease, should consult a medical practitioner, and should continue treatment until uninfected.

Mr. G. Johnson said the Association for Moral and Social Hygiene opposed notification, and objected