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The Curative Treatment of Stammering.

A Paper read at a Meeting of the Medical Officers of Schools Association, May 11th, 1911.

BY

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A Paper on the Curative Treatment of Stammering.

CORTLANDT MACMAHON, B.A.Oxon.

Instructor for Speech Defects at St. Bartholomew's Hospital and Eton College.

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In making a few remarks on the curative treatment of stammering I do not wish to dwell upon the causes of it, as it is well known that they arise from an infirmity in the motor nervous power. However, in a tract written in 1850 by one Henry Munro, and which is in the library of the Royal College of Surgeons, are the following lines, which, if I may say so, are exceedingly interesting, clear and concise. They are as follows: "There exists in some individuals an idiosyncrasy amounting probably only to a great irritability or sensibility of fibre in that part of the brain or ganglia, as well as their efferent nerves, which control the motions requisite for speech, and this peculiarity exposes it to be most easily deranged, and driven into spasmodic action by the ordinary mental desire to speak. If there exists a tendency to local congestion about any of the motor fibres of the brain or spinal ganglia, it would itself cause irritable spasmodic action or paralysis (in proportion to the amount of pressure) of the muscles supplied by them. We cannot directly check such local congestions, yet we can indirectly, through control of the emotions of the mind by an effort of will."

I will now pass right away to the practical part of the curative treatment of stammering, only remarking that the cure of stammering must be as much moral as it is physical, and requires, of course, a dual method of treatment from both these standpoints.

In dealing with a stammerer, in the first place one is well advised in ascertaining whether he has been medically examined for any nasal obstruction or adenoid growths, and if he has not, one should see that such examination is made, otherwise one has to contend with difficulties which are unnecessary, and which may militate very strongly against a normal progress towards recovery.

It is interesting to know the history of the defect in each case, as to whether it has existed from a very early age, or whether it has been acquired later on in life. Sometimes one finds that there is a family history of stammering, so that, presumably, there has been a very strong predisposition to the acquirement of the defect; but one finds also very frequently that the defect has been acquired by the sufferer having been brought into contact with another stammerer, and has acquired it from him-possibly by thoughtless imitation or by the force of example—and in these cases again one also presumes there was a disposition to the defect in the individual, otherwise there would be very many more cases than there are.

One impresses on a stammerer from the start the very great necessity of his putting up a strenuous fight against his defect, never relaxing his efforts, or being discouraged by temporary relapses, which relapses do occur, but at increasingly long intervals, during the progress towards recovery, and which I like to compare to those of the golfer, who, in spite of all his efforts and care, is certain to have his off days before he gets to that state of excellence when he practically always plays a consistently good game.

Before one pays attention to anything else the breathing is taken in hand. The necessity of this I need not enlarge upon, seeing that the voice is simply air in vibration resounding in the resonating chambers of the body. lung breathing must be acquired to perfection, and in acquiring whole lung breathing I pay particular attention to inferior lateral costal breathing, and I develop this method of breathing with the greatest care, so that I get a very marked expansion in that region. The upper chest is not

neglected, and there are many efficacious and simple exercises which ensure there being an all-round excellence of thoracic development. When the stammerer has learnt how to inflate the lungs thoroughly, I then teach the strong and deliberate contraction of the abdominal muscles, first as a movement of its own, then following the full inflation of the lungs, so that finally one gets first the fully inflated lungs, then the strong contraction of the abdominal muscles, called the "abdominal press," then the spring back of the abdomen to its natural line, and then, of course, the repetition of the three movements. I must not dwell further upon the breathing, except to say that during inspiration the abdominal wall is never relaxed beyond its natural line, so that there is no undue descent of the diaphragm and abdominal viscera. The expulsion of the air, both in force and quantity, is practically entirely controlled by the action of the abdominal muscles, in the first place by their action in pulling downwards and inwards the lower ribs which had ascended and everted during inspiration; and in the second place, by their simultaneous action on the abdominal viscera causing the ascent of the diaphragm and a rapid diminution of the thoracic capacity. One easily sees that all real tone in voice depends primarily on this strong contraction of the abdominal muscles following a full inflation of the lungs, as by it the resonating chambers are given their proper chance of performing their functions to the best advantage, through being always supplied with a sufficient amount of vibrating air.

After the rudiments of breathing are grasped the voice itself is worked upon. One starts upon the well-known M or humming sound, which gets heavy vibrations everywhere, and more particularly in the nasal cavities. When M is produced properly then come the big vowel sounds "oo," "oh," "aw," "ah," "a," and "ee." The mouth opens by degrees from "oo" to "ah," and closes down for "a" and "ee." The great importance of these sounds lies in the fact that each has its shape at the lips, its proper distance between the teeth, and its tongue position. The lip shape and the position of the tip of the tongue are voluntary movements and can soon be taught; but the position for the tongue, as a whole, is a very different matter, and in some cases a very difficult one. I find that once one can get the tongue to lie

flat in the mouth for the big "ah" sound, it will by degrees set itself accurately for the other vowel positions. By getting the sterno-thyroid muscles to contract strongly one soon gets the proper position for the "ah," but the muscles are only deliberately contracted when the voice is not in use, and they are left to act involuntarily during vocalisation, otherwise you would immediately get constriction of the throat, palate, and tongue muscles. I nearly always find that the larynx is very high in the throat with stammerers, and its lower position must be acquired as soon as possible, otherwise the oral resonator for each vowel will be imperfectly formed owing to interference from the tongue. When the resonator for each vowel is correctly shaped for, the voice immediately is supplemented and enriched by the overtones and harmonics which always accompany a pure vowel sound.

These main vowels must be made perfectly familiar to the stammerer, otherwise, in my opinion, a permanent cure is almost impossible—certainly in bad cases. In every word a main vowel position occurs; it may occur alone in words, like "ah" in "hart," "aw" in "saw," "ee" in "sleep," and so on; or it may occur in combination with another main vowel such as, for instance, in a word like "boat," where we get "oh" and "oo," in "light" "ah" and "ee," in "boy" "aw" and "ee," and in words like "town" and "round," etc. (some of the stumbling-blocks of the Cockney, by the way), we get "ah" and "oo," in "dew," "ee" and "oo," and so These are all rapidly learnt and shaped for, but the very real difficulty comes when the main vowel position has to be discovered in words containing subordinate vowels. This is simply a matter of skilled instruction and practice. In words like "never" we get the "ee" position; in the word "love" we get "ah"; "brother" also has "ah." is remarkable how often "ah" occurs in words made up of subordinate vowels; it is an excellent thing that this is so, as, whenever it is met with, the jaw drops by its own weight to its most open position, thereby affording every chance for a very powerful tone to be produced. When once this perfect vowel production is grasped it is never forgotten, and the correct vowel position for every main or subordinate vowel or combination of vowels is recognised in any word, and the

best possible result is at once attained by the purity of the vowel production.

Leaving the vowels for a moment and coming to the consonants a very interesting study is entered upon, but with regard to them I must only say that they can be classified in various ways and assigned to their various stop positions; but for practical purposes, especially in the case of children, they can be divided into two classes—the voice and the breath consonants, the voice consonants being, of course, produced with the vocal cords approximated. The tongue position for the consonants is a very important matter, and the strength with which it leaves the palate for the linguo palatals must be made particular note of, especially in the case of the stutterers. Perfect knowledge of the consonants is absolutely essential, as if they are given their wrong qualities checking at once occurs.

The next step is the combination of the vowels and the consonants, and it is at this point that the most unremitting care and attention of the instructor are required, and it is at this point also that one is able to detect if the groundwork has been properly grasped. I mean by the "groundwork" the breathing, the production of the vowel sounds, and the management of the varying qualities of the consonants. Let all this preliminary training be performed on the singing voice, then, when words and sentences can be perfectly produced and phrased for on the singing voice, lift the singing voice into the speaking voice. In this lies the greatest chance of a complete cure. The sufferer must learn to produce his speaking voice in exactly the same way as that in which he produces his singing voice, except that the volume of air from the lungs is not so great, nor can the vowel sounds be held so long; but the voice can be produced full of music and resonance, and sentences properly phrased for as in song. I am most emphatic in saying that not only stammerers—although for them it is absolutely essential but we all should speak on the singing voice, and I do not mean by this that we must use a silly sing-song voice-I mean that we must acquire a voice full of resonance and music, which depend on perfect breath control, perfect vowel production, and perfect articulation.

One finds beyond doubt that the painful spasms and con-

tortions of the bad stammerer are more often than not largely brought about by his vain endeavour to get voice with no air in his lungs; he is striving for the impossible, and when, after being nearly asphyxiated, he gets his breath, the voice comes with a rush. This of itself proves, if proof were necessary, the enormous value of proper breathing. Instead of trying to speak with collapsed lungs, the sufferer must, as I have said already, be taught to fully inflate the lungs whenever he is going to use his voice, and to put a big volume of air through the vocal cords which will set them in strong vibration, and which will very often drive past several of the obstacles raised by nervous action where a feeble expiration would be checked.

Before passing on, perhaps I may give a definite instance of the stammerer's difficulty in producing a word which he does not know how to treat. For instance, in a word like "Dorothy" the stammerer may be speechless, and one may think that it is the "D" that is stopping him, but possibly he can put all the main vowels behind the "D" without any difficulty. As a matter of fact, it is probably the lack of knowledge as to what is the main vowel sound and position contained in the subordinate vowel which is preventing speech. In the word "Dorothy," "ah" is the main vowel sound; let the jaw fall to the full "ah" position at the moment when the tongue leaves the palate with considerable force for the "D," and the word will come out without the slightest trouble. This is only one instance, and, of course, one could give a great many others. It is most remarkable how quickly the stammerer learns to recognise the main vowel sounds in even difficult words, and the way in which he improves as a result is extremely gratifying.

I have said that one must give the stammerer as good a voice as possible, and a good voice is the most refined outcome of perfect physical movement, and therefore the greatest care must be taken to keep the body in a good state of training and fitness to ensure it being strong and fully elastic. The body must be perfectly balanced, and the head correctly poised, and there must be a complete absence of constriction everywhere. The lips should be made great use of in producing the voice, and the orbicular muscle carefully trained so that the lips become exceedingly mobile.

One impresses upon the stammerer that the voice must, so to speak, be lifted right into the lips, and that the throat muscles must be completely relaxed, and he must be reminded continually that the abdominal muscles are, in contraction, the motive power of voice.

My ideas about teaching children in schools to overcome their infirmity are these. They could, I think, be classed together in classes of ten to fifteen, and be taught the right way to breathe, and during the lesson each child could be examined individually to see whether it had acquired the movements properly. They could in class be taught the main vowel sounds and their combinations, first on the singing voice and then on the speaking voice. They could also be taught the varying qualities of the consonants. words and easy sentences could be attempted, but at this stage weeding out would, I think, be necessary. Some of the milder cases might proceed together, but the more severe ones would require individual tuition from the trained expert. Whoever has charge of the children should be a person of unlimited kindness, patience, and forbearance. Any rebuke to a stammerer is most injurious, and even a look of disappointment is a mistake; the sufferer, who is nearly always tremendously sensitive, must be always helped and encouraged and never blamed, except, perhaps, for laziness in not practising simple physical exercises. One must gain the complete confidence of the stammerer, and be able to understand his varying troubles and moods absolutely, and be able to explain every phase of his infirmity and demonstrate to him how to overcome it. By this knowledge his emotions will be the more easily controlled, and his progress towards recovery will be distinctly and rapidly noticed by himself and those about him. Once he has got rid of his defect, and will give a few minutes each day to his breathing, physical, and vocal exercises, he need have no fear of there being any return of his trouble.

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