

WHY "DEEP BREATHING" AND
PHYSICAL CULTURE EXERCISES
DO MORE HARM THAN GOOD.

By F. MATTHIAS ALEXANDER.

In March a letter under the heading, "The Dangers of Deep Breathing," appeared over my name in the "PALL MALL GAZETTE."

In that letter I wrote: "I will merely point out that in our Schools and in the Army human beings are actually being developed into deformities by breathing and physical exercises. . . . The truth is that all exercises involving 'Deep Breathing' cause an exaggeration of the defective muscular co-ordination already present, so that even if one bad habit is eradicated, many others, often more harmful, are cultivated."

Since the foregoing was written I have been afforded the opportunity of examining several pupils connected with one of the first public schools in England. These pupils have been trained for a considerable time in accordance with the Swedish and other physical culture and breathing systems. The harm that has already been done in their case, and the impossibility of eradicating, by a continuance of such training, defects which are on the contrary cultivated thereby, lead me, in the interests of countless victims in need of re-education who are being similarly injured, to call attention to this deplorable state of affairs and to point out a few of the erroneous ideas and incorrect principles upon which the above systems are based.

To this end I will deal with four of the primary ideas or principles upon which teachers of physical culture and "deep breathing" obviously base their methods. They instruct the pupil—

- (a) "To assume a proper standing position, to be adopted in their exercises and in everyday life."
- (b) "To draw in a 'deep breath'."
- (c) "To hold the breath for a certain time, say, while they count 5, 10 or 20."
- (d) "To expel the air retained by forcing in some part of the chest or abdominal wall."

These instructions are to be found in every book on the subject—I have one, recently published, before me which contains a photograph of a person in an attitude described as showing the "Finish of a deep breath (illustrating the method of breathing taught in this book)." The abdominal region is unduly and harmfully protruded, and the different parts of the thorax imperfectly and injuriously employed, the whole position being one which must cause displacement not only of the abdominal viscera but of the vital organs within the thorax.

It cannot, in short, fail to bring about—

- (1) Undue accumulation of blood in the splanchnic area.
- (2) Those conditions conducive to hernia.
- (3) That undue hollowing of the spine known as lordosis.

(It must not be forgotten that such undue protrusion of the abdominal wall cannot be brought about without a corresponding hollowing of the back. Moreover, looking at the photograph before referred to, one would naturally conclude that the writer is of opinion that the lungs are situated mainly in that part of the torso which is in front of the arms—when they are in a vertical position—instead of behind them.)

Now to examine these instructions in order: (a) In the first place, to allow a pupil to assume, of himself, a certain standing position, means that his own perceptions and sensations are given the sole onus of bringing about the co-ordination upon which such standing position depends—an onus which they are quite unable to bear. The perceptions and sensations of all who need respiratory and physical re-education are, as I shall show later, absolutely unreliable. It is the teacher who should have the responsibility of certain detailed orders, the literal carrying out of which will ensure for the pupil *what is then the correct standing position for him*. I emphasise this last, because no one stereotyped position can be correct for each and every pupil. When a person so employs the different parts of his body that one can speak of his "harmful position in standing or walking," it is only by causing the physical machinery to resume correct and harmonious working gradually, thus changing the position from *time to time*, that serious harm can be averted and satisfactory results secured. I may point out, moreover, that in trying to assume the "proper standing position" at the outset, the pupil unavoidably puts severe strain upon the throat, thereby paving the way for throat, ear, and eye disorders.

This strain is only increased by: (b) The endeavour to obey the instruction to draw in a "deep breath."

To obey such an instruction literally the pupil must suck in air, and so cause an injurious crowding down of the structures of the throat. But why suck in the air?—*i.e.*, “draw a deep breath”—when the law of atmospheric pressure insures the instant filling of any cavity to which there is an entrance, *e.g.*, the lungs. As a matter of fact, if one wishes to correct a pupil's errors in breathing, the first thing to do is to tell him *not to breathe*, simply because his mental conception of breathing is sucking in air—it is his habit of life! Tell him, therefore, *not to breathe*, but enable him to obtain those mechanical advantages which give atmospheric pressure its opportunity—*i.e.*, such relaxation of certain parts, tensing the muscles of others, and ordering the head upwards as will cause the spine to assume a more normal position. He will then breathe as perfectly as his condition permits, and as that condition improves, his breathing will improve correspondingly.

Many books have been written which point out that there is nasal obstruction other than organic, but none of them show any real grasp of the cause or offer any practical remedy. The cause lies in the imperfect working of the respiratory physical mechanisms, which limits the thoracic mobility and induces a narrowing of parts of the nasal passages at a time that they should be widened to their fullest extent, such narrowing making it impossible to breathe adequately through the nostrils for such purposes as speaking, singing, running, etc.

All these evil conditions, and particularly the physical tension in the region of the throat, are still further increased by the order: (c) *to hold the breath a certain time.*

This simply involves the firm closing of the vocal cords—probably of the ventricular bands—instead of their being apart and adequately relaxed, ready to be properly approximated in use; the breath being retained in the body by the maintenance of that thoracic capacity secured at the end of inspiration—a condition much more easily obtained by non-interference with the co-ordinated muscular movements which secured such capacity and consequent inrush of air. “Breath is kept in, not by the lips, but by the vocal cords in the larynx,” says the writer of the book on breathing to which I have referred above. If a more striking example of ignorance were needed he furnishes it in the statement that “it is practically impossible to fill the lungs *in less than eight seconds.*” As a matter of fact, if the proper controlling powers are employed, full inflation occurs in an infinitesimal part of a second.

Instruction (d). “To expel the air by forcing in some part of the chest or abdominal wall” or as it is usually put “drive out the air in expiration” is another result of ignorance regarding the act of inspiration. Why “drive” the air out of the body? Provided that position of the spine which is present at the end of the correct inspiration is maintained, the elasticity of the parts concerned will cause the exhalation just as the inspiration results from such elasticity being overcome by mechanical advantage. In other words, the act of exhalation should be a controlled movement which *allows* the air to escape, not a special effort to “drive” it out. Furthermore, the instruction to “drive out the air” means that the vocal cords will be so closely and firmly approximated that undue effort must be made to force the air through them. This is a most unnecessary waste of energy and places harmful strain upon the delicate ligaments involved.

Here we have one of the most forcible examples of the not co-ordinated condition—the parts of the “human machine” warring one against the other instead of co-operating to bring about that condition in which “all the functions of living begin to become an intelligent harmony.”

I think I have said sufficient to convince the thinking individual of dangers attendant upon due adherence to the above principles.

I should like, in addition, to point out an initial difficulty generally overlooked, *i.e.*, that the perceptions or sensations of every person needing respiratory and physical re-education are quite unreliable—a fact only too well understood by anyone who has undertaken the task of “re-educating” others. Ask any friend to open the mouth. The head will at once be thrown back, the neck unduly stiffened, the tongue drawn back into the throat, whereas opening of the mouth is simply the act of dropping the jaw. Delusions in the practise of vocal, respiratory and physical exercises are legion, and those interested in the subject can readily acquire practical demonstration of the fact.

I am prepared to give absolute proof of the statements I have made to the Authorities of our Schools and Colleges, or to a representative body of Gentlemen connected with the Press and Medical Profession.

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