

On the ill effects of insufficient exercise, constrained positions, and tight stays on the health of young women.

Contributors

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giving utterance to some terrible denunciation; while the Apostles behind, with hands folded, or pointed towards Heaven, acknowledge, with devout astonishment, the manifest interposition of divine justice. The position of Ananias is a wonderful example of Raffaele's intuitive perception, or of his acute observation of actual fact, or more properly, perhaps, of both. It is evident that the figure has been struck with sudden death; the head has fallen on the shoulders, the eyes have lost their volition, the convulsions which contract the limbs are the spasms of mortal agony; but the fulness and roundness of the muscles show that the blow has fallen on the delinquent while in the full possession of health and vigour. The whole action is consecutive; he has been kneeling at the steps, has fallen backwards, and we perceive, notwithstanding his feeble and unconscious effort to sustain himself on his wrist, that in another moment he will be extended on the floor. So sudden has been the shock, that it has not been perceived except by the persons immediately adjacent to the spot. In these individuals of different sex and ages, the fear and astonishment, naturally excited by such an event, are finely portrayed; the young man on the left, recoiling in dismay, affords an effective contrast in the fine extension of his limbs to the foreshortened figure of Ananias. The two men on the right, in the midst of their amazement, appear to admit, by their gestures and expression, the justice of the infliction. It has been questioned whether the woman who is advancing from behind was meant for Sapphira, as it is stated in the sacred record that three hours had elapsed after the death of Ananias before she entered the place. Notwithstanding this objection, it is most probable that Raffaele intended this figure for the wife of Ananias; and the slight inaccuracy is more than atoned for by the sublime moral, which shows the woman approaching the spot where her husband had met his doom, and where her own death awaits her, but wholly unconscious of those judgments, and absorbed in counting that gold by which both she and her partner had been betrayed to their fate.

We have received several communications on the subject of the Cartoons, of which the following is the substance:—

One correspondent, remarking upon the cartoon entitled "Paul preaching at Athens," affirms that this title "is a misnomer. He was not preaching in our sense of the word, but pleading before a high court of justice. He was not brought before this court, like Socrates, on an actual charge of a breach of the law, but to give an account of his doctrines. The picture therefore fails, as it represents Paul addressing an indiscriminate audience, consisting of philosophers of the different sects then in high esteem, the women not being excluded." Our correspondent then proceeds to lament that in the descriptive account of the cartoon opportunity was not taken to point out an erroneous translation in the common version of the New Testament, which makes Paul speak of his auditors as superstitious; and that his conduct and address were not contrasted with those of Socrates in a somewhat similar situation. He then proceeds as follows:—

"Taking the picture as it is supposed to be, the representation of a fact in a certain place, it has always appeared to me as one of the absurdest productions of modern art, offending without cause both in costume and locality.

"Poets and painters have, as Horace says, a very extensive range allowed to them, but it has its limits. What can be more absurd than to see in the celebrated picture of the Lord's Supper (of which I hope to see a print in your Magazine) our Saviour blessing a modern loaf, a loaf of leavened bread, a species of bread particularly interdicted at that time to be in the house."

A second correspondent states that there are two other productions of Raffaele, denominated Cartoons, in the Duke of Buccleugh's collection at Boughton House, near Kettering in Northamptonshire. "These cartoons," he says, "are, I believe, very little known; nor have I ever seen any copies or prints of them. They are paintings in water, much of the colouring of which has faded, whilst all the outlines and bolder strokes are remaining. They are on paper, and, from the creases visible in the sheets, appear to have once been folded up for carriage, to be copied, like the other cartoons, in tapestry or upon glass. The subject of one of them is, I think, Ezekiel's Vision; in which the person of the Almighty is wonderfully portrayed: it has exactly the same expression as the representations of the same being on the compartments of the ceilings in the Vatican—judging from prints. Of the other I have but little recollection, except that it is a group, and very much in the style of those at Hampton Court—at least according to the copies in the Bodleian—never having seen the originals. The cartoons at Boughton are, I think, somewhat larger than the copies alluded to at Oxford, and are reversed in position, the shortest sides of the parallelograms forming the tops and bottoms." This correspondent wishes to know whether any other particulars are known respecting them, whether any prints or copies are known to exist of them, and by whom they were brought to England. A third correspondent informs us that he has repeatedly inspected these last-mentioned cartoons with great pleasure; and adds that the subject of the second is either the Nativity or the Adoration of the Magi, and that George III. wished to have added them to his collection. We shall endeavour to give a more precise account of these works in a future number.

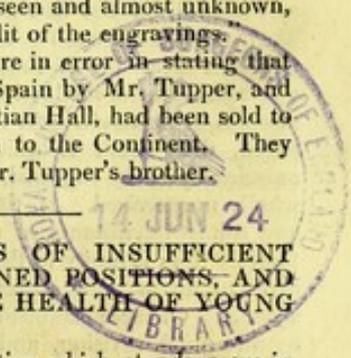
In the introductory remarks on the Cartoons, in No. 43, deserved praise was given to the engravings of those at Hampton Court by the late Mr. Holloway. But the praise, it appears, should not have been confined to that gentleman, and we readily accede to a request of making known the parties to whom any share is due:

"The fact is," says a correspondent, on whose correctness we can rely, "the engravings have been almost entirely executed by his partners, Messrs. Slann and Webb, who have given up all their time, property, and talents, in executing and supporting the work which must otherwise have long ago sunk from insufficient patronage, and who will even at great pecuniary loss complete the seven engravings. To Mr. Holloway fully belongs the credit of commencing the work, and he, with his eldest nephew, made the beautiful drawings from the originals, and was the public man of the party; but to his partners, who worked unseen and almost unknown, most justly appertains the credit of the engravings.

It appears also that we were in error in stating that the tapestries brought from Spain by Mr. Tupper, and recently exhibited at the Egyptian Hall, had been sold to a foreigner, and by him taken to the Continent. They are yet in the possession of Mr. Tupper's brother.

ON THE ILL EFFECTS OF INSUFFICIENT EXERCISE, CONSTRAINED POSITIONS, AND TIGHT STAYS ON THE HEALTH OF YOUNG WOMEN.

THERE is no branch of education which stands more in need of revision and improvement than that which relates to the bodily health and growth of children and young persons, and which is now commonly known by the name of *Physical Education*. This is more especially true of the education of girls, particularly such as are brought up at boarding-schools; boys being comparatively but little affected by the causes which act most injuriously on the young persons of the other sex.



The three grand sources of ill-health in female boarding-schools are, 1st, the want of sufficient bodily exercise; 2d, constrained postures; and, 3d, the use of stays; and they originate in the over-anxiety of parents, more particularly mothers, to obtain for their children the three following benefits, or supposed benefits; 1st, a great number of *accomplishments*, as they are termed; 2d, a genteel carriage; and, 3d, a fine shape. Never were objects more completely defeated through injudicious methods of attaining them; the actual results being, too often, in lieu of real substantial benefits, the following lamentable evils: 1st, a smattering of various kinds of knowledge, which are found of little practical utility in the actual business of life, with a great deficiency of those kinds of knowledge which would really be so; 2d, general impairment of the health; 3d, a bad carriage and figure, and, too often, actual deformity of body.

Although these evils are notorious to all who observe what is passing around them in society, and although they have often been the theme of invective in the writings of physicians and philosophic moralists, it cannot be imagined that those most interested in the subject, the fathers and mothers of the rising generation, are in reality aware of their causes, nature, or extent; were they so, they could never be brought to countenance the system in which they originate. It is for this reason, and because it is in a particular manner among the *middle classes* of society that the evils most prevail, that we do not think our pages can be better appropriated than in making them more generally known, and in endeavouring to impress them forcibly on the minds of parents. We are enabled to do this in a very compendious and most authentic form, by means of a few extracts from a valuable work, now in course of publication*, and which, as it is written chiefly for the members of the medical profession, will not be accused of exaggeration or misrepresentation for personal ends. The subjoined quotations are from the article *Physical Education*, written by Dr. Barlow, an eminent physician at Bath, and which has appended to it some important notes by Dr. Forbes, of Chichester, one of the editors.

I. Of Exercise, or rather of the want of Exercise, in Boarding Schools, and some of its consequences.

"Boys enjoy exercise freely, and of the best kind, in the unrestrained indulgence of their youthful sports. By means of these every muscle of the frame comes in for its share of active exercise, and free growth, vigour, and health are the result. It would be happy for girls if some portion of such latitude were allowed to them also. But it is far otherwise. Even under the more favourable circumstances of country life, they are too much restricted from the free exercise which health requires. Their very dress unfits them from taking it, and the alleged indecorum of those active movements to which youth and spirits instinctively incite, is a bar to even the attempt being made. At their age the measured, slow-paced, daily walk is quite insufficient even for the muscles—specially engaged, while it leaves many others wholly unexercised. If this be true of the more hale and robust inhabitants of the country, how much more forcibly does it apply to the delicate and attenuated residents of towns, and especially to the inmates of female schools. Of these establishments the systems and habits require much revision, and until some effective reformation takes place, of which there is yet but little prospect, they will not fail to excite our sympathy and regret for the blanched aspects, shadowy forms, and sickly constitutions so continually presented, and which it is so painful to witness. Such beings are as little fitted for encountering the toils or fulfilling the duties of life, as

* The 'Cyclopædia of Practical Medicine,' published in monthly parts, edited by John Forbes, M.D. F.R.S., A. Tweedie, M.D., and John Conolly, M.D.

are plants of a hothouse for being transferred to the open borders."

To the above passage, the following interesting statement and important remarks are appended in the form of a note by Dr. Forbes, one of the editors:—

"The amount of exercise, or rather the extent to which the *want of exercise* is carried, in many boarding-schools, will appear incredible to those who have not personally investigated the subject. The following is the *carte* of a young ladies' boarding-school, drawn up on the spot, a few years since, from the report of several of its inmates:—

At 6 in the morning the girls are called, and rise.
From 6 to 8, learning or saying lessons in school.
8 to 8½, at breakfast.
8½ to 9, preparing lessons out of school (some of the girls permitted to do so in the garden).
9 to 1, at various tasks, in school.
1 to 1½, out of school, but must not go out of doors; reading or working, and preparing for dinner.
1½ to 2, at dinner.
2 to 5, in school, various tasks.
5 to 5½, at tea.
5½ to 6, preparing to go out; dressing, or reading, or playing in school.
6 to 7, walking, generally arm-in-arm, on the high road, many with their books in their hands, and reading.

"Two days in the week they do not walk in the evening at all, being kept in for *dancing*; but, by way of amends, they go out on two other days, from 12 to 1, and then they miss *writing*. It is to be remarked that they *never go out unless the weather is quite fine at the particular hours allotted for walking*. They go to church, all the year round, twice every Sunday, on which day no other exercise is taken.

From 7 to 8, for the older girls, reading or working in school, (this is optional,) and then prayers; for the younger, play in school, and prayers.

At 8, the younger go to bed.
From 8 to 9, the older, reading or working, as before.
9, to bed.

"The twenty-four hours are, therefore, thus disposed of:—

	Hours.
In bed, (the older 9, the younger 10,)	9
In school, at their studies and tasks	9
In school, or in the house, the older at optional studies or work, the younger at play	3½*
At meals	1½
Exercise in the open air	1
	24

"The above account was taken from a second or third-rate school, and applies more particularly to the season most favourable for exercise,—*summer*. It is to be remarked that the confinement is generally greater in these than in schools of a higher order. That the practical results of such an astounding regimen are by no means overdrawn by Dr. Barlow, is sufficiently evinced by the following fact, a fact which we will venture to say may be verified by inspection of thousands of boarding-schools in this country. We lately visited, in a large town, a boarding-school containing forty girls; and we learnt, on close and accurate inquiry, that there was *not one* of the girls who had been at the school two years (and the majority had been as long) that was not more or less *crooked*! Our patient was in this predicament; and we could perceive (what all may perceive who meet that most melancholy of all processions—a boarding-school of young ladies in their walk) that *all* her companions were pallid, sallow, and listless. We can assert, on the same authority of personal observation, and on an extensive scale, that scarcely a single girl (more especially of the middle classes) that has been at a boarding-school for two or three years, returns home

* Younger only two hours and a half.

with unimpaired health; and, for the truth of the assertion, we may appeal to every candid *father* whose daughters have been placed in this situation. Happily, a portion of the ill health produced at school is in many cases only temporary, and vanishes after the return from it. In the schools in which the vacations are frequent or long, much mischief is often warded off by the periodical returns to the ordinary habits of healthful life; and some happy constitutions, unquestionably, bid defiance to all the systematic efforts made to undermine them. No further proof is needed of the enormous evil produced by the present system of school discipline than the fact, well known to all medical men, that the greater proportion of women in the middle and upper ranks of life do not enjoy even a *moderate* share of health; and persons, not of the medical profession, may have sufficient evidence of the truth, by comparing the relative powers of the young men and young women of any family in taking bodily exercise, more particularly in *walking*. The difference is altogether inexplicable on the ground of sex only.

II. *Of the Effects of the Attempts to produce "a good Carriage."*

"The first error is that of restraining the free motions of the body and limbs, so natural at this period of life, and in which the young of both sexes so much delight. The young lady is now to cultivate manners, to practise a certain demureness supposed to be becoming, to attend to her carriage, keeping her head erect, and her shoulders drawn back; and if from inability to continue the muscular efforts necessary for this end, she fail to do what nature does not empower her to accomplish, negligence or obstinacy is imputed, reproach is cast, which, being felt as unjust, irritates the moral feelings; and thus a slight error in physical discipline becomes a fruitful source not only of bodily injury but of moral depravation. It is a well established fact with respect to muscular energy, that the contractions of muscular fibres on which their actions depend, require intervals of relaxation; that, if the contractions be prolonged without this relief, they in a certain time fail, so that no effort of the will can continue them. In other words, the muscles tire, and an interval of repose is necessary to fit them for renewed effort. This is familiarly instanced by the experiment of holding the arm extended, when, even though no weight be held in the hand, the continued muscular action required for maintaining this position cannot be sustained for many minutes. If this be true of the firm and robust muscles of adults, how much more forcibly does the principle apply to the tender and immature muscles of early life. To preserve a good carriage, to keep the head and shoulders continually in that position which the dancing-master approves, require considerable muscular powers, such as no girl can exercise without long, painful, and injurious training, nor even by this, unless other measures to be hereafter noticed, be resorted to in aid of her direct endeavours. We would not here be understood as undervaluing a good carriage, which is not only pleasing to the eye, but is, when natural, absolutely conducive itself to health, as resulting from that relative position of the several parts connected exteriorly with the chest, which allows greatest freedom to the internal organs. To ensure a good carriage, the only rational way is to give the necessary power, especially in the muscles chiefly concerned; and this is to be done, not by wearying those muscles by continual and unrelieved exertion, but by invigorating the frame generally, and more especially by strengthening the particular muscles through varied exercise alternated with due repose.

"Direct endeavours to enforce what is called a good carriage necessarily fail of their effect, and instead of strengthening they enfeeble the muscular powers necessary for

maintaining it. This fact soon becomes perceptible; weakness is noticed, and instead of correcting this by the only rational mode, that of invigorating the weakened muscles, mechanical aid is called in to support them, and laced waistcoats are resorted to. These undoubtedly give support,—nay, they may be so used as almost wholly to supersede the muscular efforts, with the advantage of not tiring, however long or continuously employed. Improvement of carriage is manifested, the child is sensible of relief from a painful exertion, the mother is pleased with the success of her management, and this success appears to superficial observation fully to confirm the judgment which superintends it. In the present ignorance that prevails on all points of animal physiology, it would be quite impossible to convince any mother so impressed that she was doing otherwise than ministering to her child's welfare. Yet what are the consequences to which her measures tend, and which such measures are daily and hourly producing? The muscles of the back and chest, restrained in their natural and healthful exercise by the waistcoats called in to aid them, and more signally in after-life by the tightly laced stays or corsets, become attenuated, and still further enfeebled, until at length they are wholly dependent on the mechanical aid, being quite incapable of dispensing with it for any continuance.

"At first, laced waistcoats are used rather for the convenience of suspending other parts of the dress than with any view of giving support to weak muscles, or of influencing the shape; and confined to such use they would be perfectly harmless. In time, when weakness becomes inferred, not from any evidences of actual debility, but merely from the girls not being able to maintain the unnatural and constrained posture which fashion and false taste enjoin, the advantage of compressing the chest by means of the waistcoat, so as to give support to the muscles of the back, becomes discovered, and the mechanical power supplied by the lace affords but too effective means of accomplishing this compression. The effect pleases the mother, promoting, as it does, her dearly-prized object—a good carriage; it is endured by the girl as the lesser of two evils, for though at first irksome, it releases her from the pain of endeavours which she has not power to continue to the extent required.

III. *Of the Operation and Effects of Stays.*

"As years advance, various causes combine to render this practice more inveterate and more pernicious; and still the potent instrument, the lace, lends its ready and effectual aid. Now a taper waist becomes an object of ambition, and the stays are to be laced more closely. This is still done gradually, and, at first, imperceptibly to the parties. The effect, however, though slow, is sure, and the powers of endurance thus exercised come in time to bear almost unconsciously what, if suddenly or quickly attempted, no heroism could possibly sustain.

"The derangements to which this increased pressure gives rise must now be considered. The first is the obvious impediment to the motions of the ribs which this constriction of the chest occasions. For perfect respiration these motions should be free and unrestrained. In proportion as respiration is impeded, is the blood imperfectly vitalised; and in the same ratio are the nutrient and other functions dependent on the blood inadequately performed. Here, then, is one source of debility which affects the whole frame, reducing every part below the standard of healthful vigour. According, also, as each inspiration of air becomes less full, the wants of the system require, as a compensation, increased frequency; and thus quickened respiration commences, disturbing the lungs, and creating in them a tendency to inflammatory action. The heart, too, becomes excited, the pulse

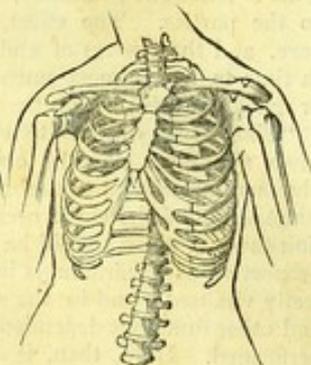
accelerated, and palpitation is in time superadded. All these effects are capable of resulting from mere constriction of the chest; they become fearfully aggravated when, at a more advanced stage, additional sources of irritation arise in flexure of the spine, and in derangements of the stomach, liver, and other organs subservient to digestion. The foregoing disturbances are formidable enough, and sufficiently destructive of health, yet they are not the only lesions (injuries) which tight lacing induces. The pressure, which is chiefly made on the lower part of the chest, and to which this part most readily yields, extends its malign influence to the abdominal viscera also. By it the stomach and liver are compressed, and, in time, partially detruded from the concavity of the diaphragm, to the great disturbance of their functions; and being pressed downwards too, these trespass on that space which the other abdominal viscera require, superinducing still further derangements. Thus, almost every function of the body becomes more or less depraved. Nothing could have prevented the source of all this mischief and misery from being fully detected and universally understood, but the slow and insidious process by which the aberration from sound principle effects its ravages.

"The mere weakness of back, so often adverted to, becomes in its turn an aggravating cause of visceral lesion. The body cannot be always cased in tightly-laced stays their pressure may be endured to any extent under the excitement of the evening display, but during the day some relaxation must take place. Under it, the muscles of the back, deprived of their accustomed support, and incapable of themselves to sustain the incumbent weight, yield, and the column of the spine bends, at first anteriorly, causing round shoulders and an arched back; but eventually inclines to one or other side, giving rise to the well-known and too frequently occurring state of lateral curvature. This last change most frequently commences in the sitting posture, such females being, through general debility, much disposed to sedentary habits. As soon as lateral curvature commences, the lungs and heart become still more disturbed; anhelation (difficulty of breathing) from slight exertion, short cough, and palpitation ensue; and at this time, chiefly in consequence of the pulmonary derangement, alarm begins to be entertained, and the approach of phthisis apprehended."

The following figures, taken from a valuable work in German, by the late professor *Soemmering*, on the *Effects of Stays*, cannot fail to make an impression on the mind of every parent and guardian of youth:--



[Fig. 1.]



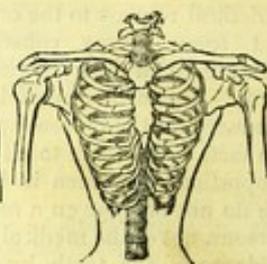
[Fig. 2.]

Fig. 1. is an outline of the famous statue of the Venus de Medici, and may be considered as the *beau ideal* of a fine female figure.

Fig. 2. is the skeleton of a similar figure, with the bones in their natural position.



[Fig. 3.]



[Fig. 4.]

Fig. 3. is an outline of the figure of a modern "boarding-school miss," after it has been permanently remodelled by stays.

Fig. 4. is the skeleton belonging to such a figure as No. 3.

We are assured by medical men of the first authority that there is no exaggeration in these outlines. Such melancholy specimens are daily to be met with, both living and dead.

Advantages of high Civilization.—We northern people are so much accustomed to the innumerable conveniences peculiar to a highly civilized state of society, and of which rich and poor all partake, more or less, as of the air they breathe, that we are apt to undervalue or overlook them altogether; and it is well that we now and then should be made to feel the value of what is thus thanklessly enjoyed. We think too little of good and safe roads, lighted streets, public markets, where necessaries and luxuries of all sorts and at all prices are found collected; of cheap and speedy means of conveyance for persons and property; and, above all, that happy division of labour by which the wants of each individual and those of the aggregate mass are supplied with far more ease, in greater abundance, and at infinitely less expense than when each individual is thrown on his own exertions for all he wants, yet has nobody to think on but himself. It is cheaper to travel in England in a post-chaise, accommodated each night with a good bed and supper, and thanked too by the landlord, than in Sicily on mules, carrying your own beds and cooking utensils, and at the end of each fatiguing day's journey reduced to beg for a night's lodging at the door of a stranger.—*Simond's Travels in Sicily.*

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