

SYSTEMATIC PHYSICAL TRAINING IN SCHOOLS.

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It is not until recent years that Physical Training, as one phase of a child's development, has been given any consideration. The fact that a growing child needs exercise and recreation has been constantly overlooked, and the introduction of such systems into our schools is still comparatively new.

Many persons, highly educated intellectually, argue strongly against the need of Physical Training in the schools of today. They maintain that the child has sufficient exercise during recesses and the noon intermission to not necessitate the taking of valuable time in the school-room for regular gymnastic exercises. Others, however, who have given this subject careful study, agree that when a thoroughly systematized form of Physical Training is given in conjunction with the mental development, that a marked betterment of intellectual powers is the result.

Physical Training is, by no means intended merely to restore imperfect health, it is an institution intended to benefit both mind and body, and is a means of education and training, fully as important as any other branch. By developing the body to its highest degree of healthfulness, the brain-power is undoubtedly increased and strengthened, and the result is an increased power for learning in all branches.

For example, certain exercises and games introduced in the

course of the hour, in the gymnasium, will sharpen the senses of sight and hearing. Then the effect of this will bring about changes in the classroom as well. The execution of rapid commands too, will cause a quick response of the pupil, and render the performance of many tasks more simple.

Intention and decision are much more precise, mentally, when Physical Training is given, because exactness is one of the chief requirements of a systematic training.

The child must of necessity be interested in the work to derive benefit from it. A great deal of the responsibility of this falls on the teacher. Severity and military discipline usually fails, where love of exercise and confidence in the pupils would do much. The pupils dislike very much to be driven into somewhat difficult tasks, where, by means of a little tact they would be willing to do their best.

Taking the average pupils, it is discovered that they prefer, decidedly, in their daily exercises, those which require patience, endurance and courage. Right at this point must the teacher take the utmost precautions, that the pupils do not over-tax their rapidly developing bodies. She must understand thoroughly all the exercises given, as to physiological effect, so that there will be no injury to the individual.

The more difficult exercises are preferred by the pupils to continual playing or drill work. The latter is apt to become tiresome, and so will lessen the beneficial results to be gained from them. If there can be no apparatus work, and little of the more complex exercises, then the teacher must be careful to have all the variety possible

in the more simple school room exercises.

There is always the necessity of very careful planning and grading of the exercises given, that they may lead gradually from one into another, and that they may not be antagonistic in effect.

There is much discussion as to whether boys and girls should receive the same training or whether it should be of a different nature for each. The majority hold that for the first few years in school, the training may be[^] identical, but after that it, of necessity, tends to differentiate.

The different authorities agree on all the important questions as to what is required in a good system of Physical Training, differing only on minor points.

After having looked into a number of methods of gymnastics, I will attempt to enumerate a few important points in a number of methods in extensive use today.

In one discussion on the variety of exercise needed at different ages, the subject was dealt with only in a general way. Between the ages of six and nine is needed chiefly the stimulation of the secondary organs, viz., the organs of circulation and breathing, and exercises for increasing metabolism in the rapidly developing child body. For this, play is the most suitable. Such, of course, cannot be systematized thoroughly, as the children have many games outside of school, but those games which introduce running, hopping and skipping without over-taxation should be given daily under the teacher's direction. It is essential that during these first years the

the organs of breathing and circulation be given all the possible chances for strong development, so that in later exercise, which is more specialized the circulatory and respiratory systems may be in the best condition.

In the young child, avoid any form of taxation. All the nourishment is needed in building up the young tissues of the child, so that this daily exertion even local, should be eliminated. Another reason for avoiding these is the effect on the nervous system of the child. This over-taxation, such as in premature drill, is a constant strain on the nervous system and if continued is apt to result disastrously.

From the ages of nine to fourteen the same fundamental exercises are required, but in addition there should be observed, correctness of carriage and grace. These are both important points in the training of one's body, and should not be overlooked by the teacher. The body is not yet sufficiently developed to permit any muscular exertion, so these are to be left out of the exercises. They may be commenced with advantage at fifteen and continued to the twentieth year.

It is the aim of the kindergarten to be the connecting link between the nursery and real school life. Here the children have games, and little tasks to perform, combined, in order that there is not too much exertion. It is the privilege, however, to attend kindergarten before entering public school, and consequently they change directly from the home atmosphere, to the usually strict discipline of the school room. Do not the majority of teachers expect

these little ones to sit as quietly during school, in the very first year, as do the High School students? If one will only consider the subject, he cannot but see what torture this must be to the small children accustomed to play from morning till night. Give them a few minutes of rest at intervals, let them play, and then note what a wonderful effect it has on both their bodies and brains.

For the first years in school the suggestion is made, as previously, that the children be given simple games, but this authority is in favor of introducing in addition a variety of very simple exercises, for this reason: while in play the body moves in unmeasured space, and there is very little exactness of movement; Physical Training teaches the body to measure the space and thus acquire exactness.

In all these first exercises it must be borne in mind that such regulated exercises should not tax the physical strength. They should begin by being in accordance with the strength and intellect of the child, and as the child develops, additional exercises of greater difficulty may be introduced.

Of the gymnastic systems in use today in the United States, there is no real American system. There are many combinations of exercises called systematized gymnastics, but upon close study it is found that there is no direct relation between successive exercises.

A real system of gymnastics must be based on the ascertained laws of physiology; it must aim at the attainment of a certain purpose through constantly progressive exercise; it must tend to the

establishment of equilibrium between physical and intellectual development.

There are but two systems possessing all these qualities, the Swedish and the German systems. All others are but portions, partial in foundation, purpose, or exercise.

The Swedish system has for its main purpose, precision, a more harmonious development of all parts of the body, more erect carriage, and readier command of all muscles. The one objection to the Swedish system for young children, is the requirement of precision. For the small ones there is apt to be a great tax, in effort to gain precision of movement.

The German system tends more toward the development of special muscles, strength, skill, and courage. The latter system would, then, of necessity require a more extensive use of apparatus.

Taking into consideration the fundamental principles of exercise as needed for children in schools, it is obvious that the Swedish system is preferable for at least the first few years of school life. In these years there should be, in every school a thorough course based on the Swedish free movements.

For a well advanced class where heavier work is permissible, the following is a good example of an hour's work:

1. Ten to fifteen minutes, Swedish free movements.
2. " " " " Exercise with arm apparatus.
3. Fifteen minutes, Jumping or vaulting.
4. Ten minutes, Club or wand work.
5. " " Relaxing movements.

Games should always accompany the exercises. This may seem a heavy hour's exercise, but for a well advanced class it would be no tax to the system.

In 1890 the Swedish system was introduced into the public schools of Boston. It was taken up with enthusiasm by both teachers and pupils. Fifteen to twenty minutes a day were devoted to the exercises and the result was a marked improvement of the children in discipline, precision, quickness, and carriage. If these systems are, in time, introduced into the schools throughout the country there will be a wonderful increase in the intellectual and physical capacities of the children.

The German System of Gymnastics is divided into three periods for school life. It assumes from the first that a gymnasium is to be used, which if available, this system ranks among the first. The periods are as follows:

1. Six to Nine Years.

The growing child needs above all, stimulation to growth, and motions exciting the circulation. Movements must be those such as exercise all the muscles to a certain extent. Localized exercises of strength weaken the undeveloped muscle of the child, and by taking material from the reserve tissue needed for growth, tend to retard general development.

The influence of school life on the development must be closely considered. Remaining in a sitting posture for hours, has a marked effect on the organs, especially of breathing and circulation. Poor ventilation of the school room also requires attention.

If all the phases of school life are considered and the special influence of different exercises closely weighed, we come to the conclusion that the exercises most beneficial at this age are those which promote the general growth and counteract the detrimental effects of the school room.

These exercises consist of exercises of quickness, in the simple games of motion:

1. Because they combine pleasure with the greatest variety of exercise.
2. Because they avoid a minimum as well as a maximum of exercise.
3. Because they give the child opportunity to use his own will, and render the exercise less of a mental strain.

2. Nine to Fourteen.

Exercises of quickness are not diminished at this age, but they may vary more, and in addition there may be exercises to cultivate alertness and agility. Light exercises of endurance, such as systematic running and others, which invigorate but do not tire are very beneficial.

As to apparatus work, it is apt to be injurious if attempted before the skeleton is quite strong, so it had better be eliminated until at least the twelfth year.

3. Fourteen to Twenty.

These years are of the greatest importance on account of the great development of the heart and lungs, and also these years are best adapted to acquire control over the muscular system by the

development of skill. Apparatus work, and localized exercises of strength are permissible, but they must be systematized and the pupils guarded against over-exertion.

The teacher must also take into consideration the condition of the pupil. If the brain is not tired, a great deal of mental training may be included, but if the hour follows, three or four of hard brain work, the lesson should be chiefly recreative.

A work entitled "Graded Physical Exercises", by Bertha Louise Colburn, is an excellent system to be used in the average school room of today. In her introduction are given a number of excellent points on the subject of systematic training.

The demand for exercises without apparatus, for use in the school room, with special reference to the needs of the children has brought forth these graded exercises from various systems. Psycho-physical ends should be aimed at but at the same time it must be remembered that exercise in school is principally for relaxation of the mind.

This system is arranged in eight groups, one for each school year, ten lessons per group, one for every four weeks. This affords the introduction of at least one new exercise for each day's lesson. In addition, each day, are lessons in fancy marching, new games and action poems.

It has been demonstrated that benefit is derived only from repetition. Consequently, only one or two new exercises are given each day, with repetition of former ones. The movements of each grade, too, include the essential ones of the preceeding years.

The arrangement of each day's lesson also follows the plan, "from gentle to strong, and from strong back to gentle". This method is the least tax on the body.

It is now generally conceded that, in the method of giving exercise, more benefit is derived from a short period twice a day, devoted to well arranged physical exercise, than to a longer period, twice a week in the gymnasium. A large amount of benefit is derived from exercises being rapidly repeated.

In concluding I will give merely the outline of the system as it is carried out through the eight grades. It is hoped that the time will soon come, when something similar may be introduced into all our schools.

Outline of Exercises.

GRADE I. - First Year in School.

Position Exercise - Arms stretching sidewise.

Poising - From forward to backward foot.

From side to side.

With feet together.

Leg - Feet crossing.

Leg stretching forward, sideward, backward.

Arm and Hand - Pendulum swing.

Stretching sidewise.

Hand clapping.

Finger bending under thumb.

Finger bending independently.

Trunk - Bending forward; backward; sideward.

Neck - Bending forward; backward; sideward.

Reaching - Picking up fruit.

Wood chopping

Reaching upward.

Mowing.

Respiratory - With hands on hips.

Pushing downward in front.

Pulling.

Arm Swinging - Sidewise up and down.

Sidewise.

Floating - Both arms above shoulder level.

Up and down in front.

GRADE II.

Position Exercise - Arms stretching upward.

Poising - Rising on toes and holding position.

Forward with heel raising.

Rocking from side to side.

Leg - Pawing.

Stepping forward; to side; backward.

Arm and Hand - Swinging across chest.

Stretching sidewise with palm up.

Ladder climbing.

Hand rubbing.

Finger bending.

Finger bending backward.

Trunk - Twisting.

Neck- Bending backward and forward, twisting to sides and bending forward.

Twisting to half side and bending.

Reaching - Upward and bending downward.

Rowing.

Snowballing.

Shoveling.

Respiratory - Pushing downward at sides.

Pulling from above.

Arm Swinging - Up and down.

Floating - At sides.

Upward in front, downward at sides; upward at sides, downward in front.

At sides and above shoulder level.

Grade III.

Position Exercise - Pushing downward in front.

Poising - Rising on toes, rocking, lowering heel.

Swinging leg forward and back.

Leg - Stretching front, half side, side, back.

Stretching and touching toe.

Stretching and circling.

Arm and Hand - Pushing downward and upward with clasped hands.

Trunk - Twisting with bending to side.

Neck - Head circling.

Reaching - Downward at side.

Downward at side with arm over head.

Respiratory - Arms stretching upward and pushing downward.

Arm Swinging - Outward circling.

Floating - Front and above shoulder level.

From front to sides at shoulder level.

GRADE IV.

Position Exercise - Pushing downward at back.

Poising - Rising on toes of one foot, rocking forward and back
without lowering heels.

Leg - Heel and toe raising.

Heel and toe raising with stepping.

Arm and Hand - Arm twisting with alternate fist closing and
opening.

Arm twisting at shoulder level with alternate fist closing
and opening.

Trunk - Twisting with bending backward.

Neck - Twisting with bending backward at half side.

Reaching - Both hands to floor without bending knees.

Respiratory - Arms stretching upward and pushing downward
at sides.

Arm Swinging - Inward circling.

Floating - Upward and downward in front; above shoulder level
at sides; at shoulder level from front to
sides.

GRADE V.

Position Exercise - Arms stretching at sides, palms up.

Poising - Rising on toes of one foot and holding position.

Leg circling.

Leg - Foot turning to side.

Arm and Hand - Arm floating and stretching; fist closing
and arm twisting.

Trunk - Bending backward at half side.

Twisting with bending backward at half side.

Neck - Bending forward with twisting.

Reaching - Both hands to floor at half side.

Respiratory - Arms stretching upward in front, downward at
sides.

Arm Swinging - Raising with swinging up and down.

Floating - At shoulder level with one arm.

Low outward curves with both arms.

GRADE VI.

Position Exercise - Arms stretching, clasping hands behind
head.

Poising - Leg swinging in circle and poising forward and
back.

Leg swinging forward with heel raising backward with
sinking.

Leg - Stepping and knee bending.

Arm and Hand - Arm floating and stretching, with alternate fist closing and opening.

Trunk - Bending forward, backward and to sides with hands clasped behind head.

Neck - Bending backward with twisting.

Reaching - At sides; trunk twisting; bending; reaching downward.

Respiratory - Arm circling.

Arm Swinging - Raising with swinging in circles.

Floating - Above shoulder level

Above shoulder level with opposite movements.

Upward in front to waist-line; turning downward.

GRADE VII.

Position Exercise - Arms stretching and pushing upward.

Poising - Swinging free leg in circle, poising and rising on strong foot.

Swinging free leg forward and back with heel of strong foot raised.

Leg - Knee bending and leg circling or stretching.

Arm and Hand - Pushing forward with clasped hands and arms stretching to sides.

Chest - Expanding and contracting.

Trunk - Bending and circling.

Neck - Bending forward, twisting to one side, bending backward.

Reaching - Upward, outward at side.

Respiratory - Arms stretching forward, outward and downward.

Arm Swinging - Twirling hands outward and inward.

Floating - Upward at half front; turning and floating downward at sides. At sides, touching fingers on shoulders.

GRADE VIII.

Position Exercise - Arms stretching and pushing downward at back.

Poising - Swinging free leg in a circle, poising, rising and holding on strong foot.

Swinging free leg in a circle with rising on toes and lowering heels.

Swinging free leg in a circle while standing on toes.

Leg - Foot circling.

Arm and Hand - Pushing forward with clasped hands; arm stretching; fist closing and arm twisting.

Chest - Lifting and sinking.

Trunk - Bending and circling with hands clasped behind head.

Neck - Bending forward; twisting to one side; bending backward; twisting.

Reaching - Upward backward.

Upward forward.

Respiratory - Arms stretching upward front, hands clasping behind head, arms stretching downward at sides.

Arm Swinging - Twirling outward and inward and carrying upward and downward.

Floating - At sides, touching fingers to shoulders with opposite movements.

Up to head at half side.