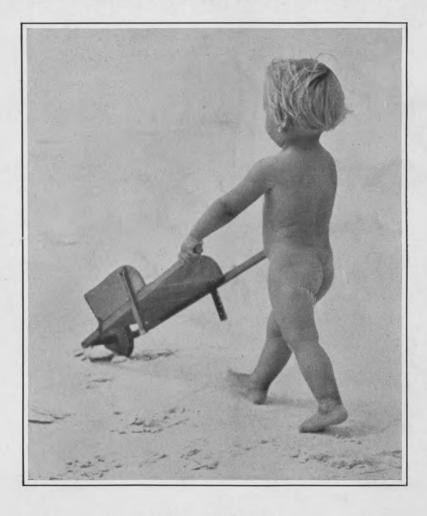
# GOOD POSTURE IN THE LITTLE GHILD



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# GOOD POSTURE IN THE LITTLE CHILD

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# Good Posture in the Little Child

# GOOD POSTURE AND HEALTH

THE CHILD who is well nourished and rosy cheeked, who is alert and vigorous in play, is likely to be the child who holds his body well poised or balanced.

The child who is thin, pale, listless, and "always tired" is likely to be the child who stands in a slouchy, drooping position

such as is commonly called the "fatigue posture."

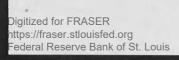
This does not mean that every child with good posture will be healthy, nor that every child who has an illness will have bad posture. But it does mean that there usually is a close relation between the child's health and the way he holds his body.

Good posture is much more than merely "standing straight"; it is the use of all parts of the body with proper balance, with ease and grace. This proper use of the body is called good body mechanics. The body is in some ways like a machine; its parts are accurately adjusted to one another, and if any part is out of correct position the machine does not work perfectly.

For example, if the feet are not in good position, the balance of

the whole body may be changed.

When the body is out of balance, some part is likely to be pushed or pulled out of its normal place or to work under a strain. When the body is in correct balance, all its parts, including the internal organs, are held in good position.



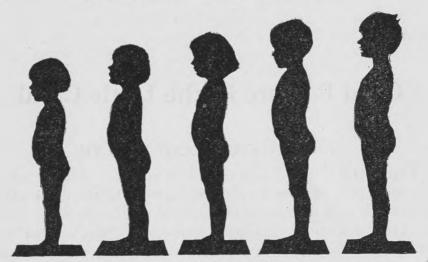


Fig. 1. GOOD POSTURE

Does your child stand like any of the children in figure 1? These children all are in good posture, but they do not all stand alike. They have various types of body build. Each one looks healthy, alert, and full of energy.

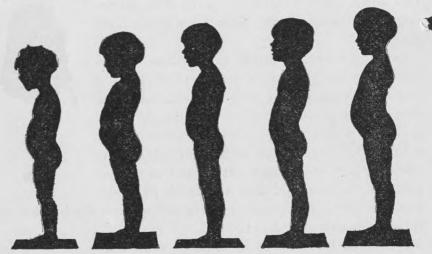


Fig. 2. POOR POSTURE

Does your child stand like any of the slouchy, tired-looking children in figure 2? These children all have poor posture. Note their drooping, weary look.

In order to realize more clearly the differences between good and poor posture, look at the diagrams below. (Each of these represents a child about 5 years old.) It must be remembered that few children, especially younger ones, hold their bodies exactly like the diagrams; some children, especially little ones, have more prominent abdomens; some have slightly more curve in their backs.



Fig. 3. GOOD POSTURE



Fig. 4. POOR POSTURE

This child stands at his full height, with his weight on the balls of his feet.

He holds his head high, with his chin in.

His chest is high, and his shoulder blades do not stick out in the back.

His abdomen is drawn in.

The curves of his back are slight.

His knees are straight.

This child stands in a slumped position, with his weight on his ankles and heels.

He holds his head forward, with his chin out.

His chest is flattened and sunken and his shoulder blades stick out in the back.

His abdomen is relaxed and sags.

The curves of his back are too great.

His knees are slightly bent.

The position of the feet cannot be shown in the side view given in these diagrams. For discussion of feet, see p. 7.

## HOW HABITS OF GOOD POSTURE DEVELOP

Parents must not expect the very little child to have the same type of posture as his older brother or sister. As the little child grows up his posture tends to change. For example, a little child who has just learned to walk is at an age when his abdomen is more prominent than it will be after he grows older. By the time he is 5 or 6 years old the muscles of the abdomen should be

strong enough to keep it nearly flat.

The habit of holding the body in balance—in good posture—is learned gradually as the child learns to control his body. First, as a baby, he learns to sit up, then to creep, then to take a few steps, and finally to walk. Throughout these stages he is learning slowly how to hold his body in balance. All through childhood he continues to learn this lesson. How well he learns it depends largely on the strength of the muscles that hold the body erect, and these muscles should be gradually growing stronger as he grows older and as he uses them more and more actively.

## FROM BABYHOOD INTO CHILDHOOD

The little baby gets his exercise by kicking, crying, waving his arms about, and squirming. He needs all this exercise, and he should be allowed to take it. Do not restrain him by dressing him in tight clothes, nor by wrapping him so that he can not move freely and turn over when he becomes able to do so. Change his position in the bed from time to time so that his body will not be cramped and so that it will develop evenly. Let the little baby lie on his stomach part of each day.

The baby gets some exercise when his mother holds him in various positions, as she feeds him, dresses and undresses him, bathes him, and plays with him. Twice a day, before bathing the baby in the morning and after undressing him for the night, let him kick and play on a firm, flat bed in a warm room. Ten to twenty minutes of such exercise morning and evening gives the baby added opportunity to develop his muscles.

By the time he is 5 or 6 months old the average baby is able to roll himself over and may try to sit up. He tries to sit up by

raising his head, by arching his back, by tightening his abdominal muscles, by pulling on the sides of the crib, by pushing with his arms and legs. When his abdominal and other trunk muscles are strong, he will be able to sit up easily and maintain a sitting position well.

Let him be free to try as much as he likes, but do not try to make him sit up until he shows by his own efforts that he is ready for it.

Watch him when he has no clothes on and you will see his abdominal muscles tighten each time he tries to sit up.

When a baby first sits up he should have his back well supported from the shoulders to the hips. If a strap is used to hold a baby safely in a chair or baby carriage, be sure that he has the proper support at his back, so that he will not have to depend upon the strap alone for support. He should not be left to sway unsteadily or to sit hanging over the strap.

When the baby is 7 or 8 months old he usually can sit up well by himself, and the muscles of his abdomen, back, arms, and legs should be strong enough to let him creep on hands and knees or on all fours. Creeping strengthens muscles that will later help him to walk



and stand in good position. By the time the baby can sit up well, he should be put into a play pen two or three times each day, so that he can get up on his hands and knees or hands and feet.

After a while the child learns to pull himself to his feet, and to stand up, holding on to the side of the play pen or the crib. Then he learns gradually to balance himself on his feet without holding on to anything. At last he takes a few steps. It is not wise for parents to urge the baby to walk until he is ready to try it himself. Too early walking may keep the natural bowing of his legs from straightening out or may actually make him bowlegged if his bones are not strong enough to bear his weight.

When the child finally learns to stand and walk, his muscles, though stronger than they were when he was a baby, have not yet learned to work well together. This makes his walk-

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ing unsteady, and he holds his feet far apart to help him to keep his balance. The unsteady gait should not last very long. With practice the average child quickly gains the ability to control his muscles and thus balance himself. A child who has rickets may be late in beginning to learn to walk, and when learning may walk unsteadily for several months. The average child gradually becomes more and more expert in walking and balancing, and before long likes to practice balancing himself by

walking along the curbstone or on a log.

## LEARNING THE HABIT OF GOOD POSTURE

All-around development, which is gained by strengthening all the muscles of the body through active play—climbing, throwing balls, running, jumping, skipping, shouting—lays the foundation for good posture. But if the child is to learn the habit of good posture he must not only gain all-around development but must also strengthen the muscles that have the most to do with holding the body in good balance. These are: (1) The muscles of the abdomen, (2) the muscles of the buttocks, (3) the muscles of the shoulders and of the upper trunk, and (4) certain leg muscles that hold the feet in good position.

The lower abdominal muscles should pull in and flatten the lower part of the abdomen. When a baby first begins to walk, his abdomen extends farther than his chest, but gradually, as he grows older, his abdominal muscles should become stronger and should pull in and flatten his lower abdomen more and more, until finally his abdomen extends no farther than his chest. Figure 3 (p. 3) shows in general how the abdomen should be held by a child about 5 years old.

When the buttock muscles are well developed, they help to straighten the lower spine and keep the child's back from becoming too hollow. As the child grows older he can learn to use them in this way and to strengthen them.

The muscles of the shoulders and neck and those of the upper trunk help to hold the chest high and the chin in. Many a child who has plenty of opportunity for free play does not use these muscles enough because of the lack of fences and trees to climb and bars to swing on. If these muscles are to be strong enough to hold the child's chest up in good position, they must get

plenty of exercise.

Proper use of the feet is necessary if the child's body is to be held in good balance. When the feet are used correctly, the child's weight is on the balls and outer sides of the feet, the toes point straight forward, and the inner sides of the feet are parallel with each other. Wearing the proper kind of shoes and keeping the feet parallel and pointing straight forward will help to throw the weight correctly, but how well the feet do their work depends largely on the strength of certain leg muscles that hold the feet in the proper position. If these muscles are strengthened as the child learns to stand and walk and as he becomes more and more active they will help to keep the whole body in good balance. If the muscles are not strong enough or if the child's weight falls on the inner sides of his feet so that he walks with his toes pointing outward, the ankles may be-

come turned inward and the long arch of the foot flattened and the body may be put in bad balance. This is what may happen to a child who has the habit of toeing out. This turning in of the ankle results in what is called "pronation of the feet" and when severe is described as "flatfoot" or "fallen arches." Knock-knees are often found in the child who has flat feet.



The muscles that keep the feet in good position are especially strengthened by skipping, running, dancing, and going on tiptoe.

Games and play that help the child to get the "feel" of good posture and to strengthen groups of muscles important in maintaining good posture are described on page 15.

## What Brings About Good Posture?

Good general health; good nutrition; freedom from fatigue; freedom from repeated or long-continued infections and from diseases that bring about deformities; good sight and hearing.

A well-balanced diet, including the foods that help to build bone and muscle—milk, fruit, green vegetables, eggs, and meat (and cod-liver oil for the child under 2).

Plenty of sleep and rest.

Varied exercise outdoors—running, jumping, skipping, climbing. Encouragement by parents to take part in games and play that lead to symmetrical development of the body.

Wearing well-planned, well-fitting clothes and shoes, which put no strain on the bones or muscles or soft tissues of the child but let them develop naturally.

Sitting in a chair that supports the lower part of the child's back and that is low enough to let him keep his feet flat on the floor.

Sleeping in a bed that does not sag, with a firm, comfortable mattress and a flat spring; using no pillow, or a very small one, so that the child's neck is straight.

## What Brings About Poor Posture?

Poor general health; malnutrition; fatigue; repeated and long-continued infections such as adenoid and tonsil infections; deformities, such as those caused by rickets, infantile paralysis, or tuberculosis of the bones and joints; bad sight or hearing, which tend to make a child lean forward or sideways in an effort to see or hear better and cause him to take other strained or awkward positions.

A poorly balanced diet made up largely of cereals, bread, or potatoes, without milk, fruit, green vegetables, eggs, meat, and cod-liver oil.

Too little rest and sleep, resulting in overfatigue.

Lack of vigorous exercise outdoors; or lack of variety in the exercise, so that the child develops one set of muscles rather than the whole body.

Wearing wrongly planned or badly fitting clothes and shoes, which press or pull the bones out of place and force the child into unnatural positions.

Sitting too long in chairs that are too large. A child who must sit in a chair too large for him sits in a strained position with his back and feet unsupported.

Sleeping in a sagging bed, on a mattress that is too soft; propping up the head with a large pillow, which forces the neck to bend forward.

# HOW PARENTS CAN HELP CHILDREN TO DEVELOP GOOD POSTURE

#### CARE OF THE GENERAL HEALTH

Since the child who is healthy is likely to have the best posture, parents who wish their child to have good posture should pay attention to the things that bring about general health. (See the Child from One to Six; his care and training, U.S. Children's Bureau Publication No. 30.) In their efforts to keep their child well and active they should have the advice of their doctor. A baby should be taken to the doctor once a month during the first year for advice regarding his health and hygiene and for a complete physical examination regularly at least every 4 months. During the second year he should be taken to the doctor at least every 3 or 4 months for advice and examination and from his second birthday to school age at least twice a year.

Since poor posture is very often found in the child who is overfatigued and poorly nourished special attention must be given to all those aspects of the child's daily routine that insure good nutrition and prevent fatigue. The muscles of a poorly nourished, tired body cannot be expected to hold that body in the erect position of good posture. An adequate, well-balanced diet, long hours of sleep at night and a rest during the day, outdoor exercise (but not too much) and sunlight are all necessary to restore a poorly nourished, overfatigued child to normal. At the periodic visits to the doctor advice should be sought as to ways of avoiding overfatigue and maintaining the best nutritional condition possible for each individual child, for by improving the child's general health a better foundation for good posture will be laid.

#### Periodic health examination

At the regular health examinations the doctor will see whether the child's posture is good for his age and he will look for any conditions that might bring about poor posture, such as rickets, malnutrition, or apparent overfatigue. He will point out signs of the beginning of poor posture, which parents would not be likely to notice. If a habit of poor posture is developing, the doctor will try to find out the underlying

causes and eliminate them. He may recommend a change in the type of clothing—especially shoes—worn by the child. If he finds certain deformities, he will probably recommend that the child be taken to an orthopedic physician. He will advise the mother as to matters of the child's general hygiene, such as sleep and rest, diet, exercise, and sunshine, all of which have a direct bearing on posture.

#### CLOTHES AND SHOES

A child cannot develop good habits of posture unless his body is free to develop normally without being pressed or pulled into unnatural positions by wrong clothing. Clothing should be planned so as to allow freedom for growth and for muscle activity and should not exert too-great pressure on any of the child's bones or soft tissues.

A baby's diaper should not be pinned too tightly, and his legs should not be forced apart by too bulky a diaper. If a band is worn, one of the loose knitted type with supporting shoulder straps should be used. A tight abdominal band should not be worn after the first few days of life since it tends to limit the activity of the abdominal muscles and thus prevent them from growing strong.

The little child's shoulders are easily pulled forward into bad position by hose supporters that put weight upon the outer parts of them. For this reason the underwaist or whatever garment the hose supporters are fastened to should place the pull near the child's neck, where it can be borne satisfactorily. An underwaist with a "built-up neck" does this and is much more desirable than one with ordinary shoulder straps. A supporter with wide shoulder straps crossed high in the back also puts the weight near the neck and permits the child's shoulders to hold their natural position. Hose supporters should be fastened at the sides, not in front or toward the front, as the latter positions pull the shoulders forward and down. They should not be fastened so tightly as to cause strain at waistline or shoulders.

Night clothes should be loose, so as to allow the child to turn and stretch in his sleep.

If a child is to learn to stand well, his shoes and stockings must fit properly so as to permit his feet to develop normally. A child's feet are easily injured by poorly fitting or badly shaped shoes and by stockings that are too small.

Shoes should follow the natural shape of the feet. Before buying shoes for a child make a careful tracing of his foot on paper, with the child standing. Select shoes one-fourth inch wider than the tracing and one-half to three-quarters inch longer.

Laced shoes of the "blucher" type (having the tongue and the toe continuous) and straight along the inner side are best. Shoes with the moccasin type of upper are satisfactory if they have soles and are laced. Soles should be firm, flat, moderately flexible, and not slippery. Although heels are not advisable, the sole should be somewhat thicker at the heel and under the arch; a perfectly flat sole is undesirable. The shank of the shoe should be narrow, the heel close fitting, the upper full and soft over the child's toes, and the toe of the shoe broad so that his toes can move easily.

Great care must be taken that when shoes are repaired they are not made shorter or narrower or the shape changed. Careful watch should be kept to see where the wear comes on the child's shoe. A child who wears his shoes down very unevenly should have his feet examined by a doctor.

If a child has flatfoot, he must have his shoes specially adjusted. Ask your doctor about this.

Stockings should be bought large enough for free toe action and should be well shaped to fit the feet. After shrinking, the foot of the stocking should be one half to three fourths inch longer than the child's foot. When stockings are outgrown they must be discarded.

#### BED AND BEDCLOTHES

The child should sleep in a bed by himself, and the bed should be large enough for him to have plenty of room to turn and move in his sleep. The springs and mattress should be firm and flat, so as to enable the child to lie perfectly flat. A

sagging bed throws the body into poor position. No pillow, or a small flat one, should be used, as a large pillow forces the child's neck to bend instead of being straight. The bedclothes should be light in weight and not too tight.

#### CHAIRS AND TABLES



A little child needs a low chair, even if it is made at home out of a soap box. It should be of such a height that his feet can be placed flat on the floor. The seat of the chair should be shallow enough to allow the lower part of the child's back to touch the back of the chair while his feet are flat on the floor; that is, it should not be longer than the

child's thighs. A low table at which the child can sit comfortably in his chair should be provided, and he can use this for eating meals and for many kinds of play.

#### TOYS AND PLAY APPARATUS

Simple home-made apparatus that will help children develop their muscles can be had even in a small yard or on a porch. Climbing is one of the best exercises to develop shoulder and other muscles that hold the body in good position. A horizontal bar fastened securely to uprights and placed at a height that the child can grasp when standing on tiptoes, or a set of climbing bars with crosspieces at various heights gives children the opportunity to climb. A small ladder, securely fastened, can be used for climbing. To put up a ladder for swinging, place it in a horizontal position supported by uprights just high enough for children to grasp the rungs with their hands over their heads and swing from rung to rung. A slide not too high, built with a ladder leading up to the platform at the top, gives opportunity to learn sureness of step and balance. Boxes and boards that can be pushed and pulled around and used for building give children opportunity for good exercise. Such things should be examined carefully to see that no nails are sticking out of them.

A tricycle suited to the child's size, which he operates by the

use of pedals, exercises the feet correctly, for the child must keep his feet in good position in order to put the right pressure on the pedals. It is dangerous, however, to allow a little child to ride a tricycle in city streets. In a back yard, or even on the sidewalk, it is usually safe if some responsible person is watching the child.



Some kinds of toys and play apparatus, instead of helping to develop the child's body normally and symmetrically, either force him into wrong positions or lead him to use one side of his body while the other is neglected. A toy car that is pushed with one foot may cause one-sided development. A toy car that has too wide a seat may force the child's legs apart and bring about a deformity of the thighs.

"Jumpers", "baby walkers", and other such apparatus should not be used in teaching a baby to walk, as these force him to walk on the inner parts of his feet, with the legs spread apart. Such apparatus, besides, overtires the child, for it keeps him too long in one position.



When your child is of school age, which of the following pictures would you rather have him look like?



Fig. 5.
GOOD POSTURE



Fig. 6.
BAD POSTURE

# GAMES THAT HELP TO DEVELOP HABITS OF GOOD POSTURE

[For children about 2 to 6 years old]

THE FOLLOWING games are planned to strengthen the muscles that hold the body in an erect position and to give the child the "feel" of standing and sitting correctly, even though he is not yet conscious of how he does it. The games should help the child to form the habit of using his whole body well when he is doing the ordinary things of life such as sitting, standing, and walking. To teach a young child to use his body well is not difficult if appeal is made to his imagination and love of imitation.

If exercises are presented as games, the little child will take part eagerly, and he will take more interest in the games if several of his playmates—brothers and sisters or other children—join him in the games. Most children like to act a part or to "make believe." Pretending to be a paper doll or a giant is more interesting than doing an exercise. Also it is easy for a little child to understand that to be a paper doll he must flatten his back, and that to be a giant he must stretch himself up to his full height. By means of such imitative games he can learn how to stand well, to pull in his abdomen, to raise his chest, and to stand and walk with his feet parallel and toes pointing forward.

Games that have to do with the posture of the body as a whole and games that strengthen different groups of body muscles are given. Let the children play games of different types so as to use various sets of muscles. The games played standing and those played lying down, which teach the child the "feel" of good posture for the whole body should be alternated with the more active games, which tend to strengthen special groups of muscles. By such alternation of games the exercises can be kept from being too strenuous.

Do not tire nor bore the child by having him play the games too long. Ten to fifteen minutes of supervised and interesting play is better than a longer period of half-hearted play; and a daily short period is better than an occasional long period.

#### GAMES PLAYED LYING DOWN

(These games teach the children how it feels to pull in their abdomens and flatten their backs while lying on the floor.)

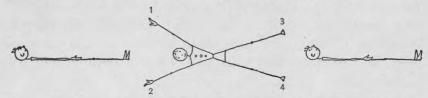
## PAPER DOLLS PASTED ON THE FLOOR

Each child lies flat, with arms stretched outwards and legs held straight, pretending to be a paper doll lying on the floor. By pulling in his abdominal muscles the child can make the lower part of his back touch the floor. He may pretend to need more paste in the hollow of the back to fasten this part to the floor.

#### THE BOOK

The children lie on the floor with arms at their sides and legs close together, each pretending to be a closed book. Each tries to lie as flat as a book, pulling in the abdomen and pressing the back flat against the floor. The following lines are said:

Jack laid his book upon the floor. He opened the leaves, One, two, three, four. He closed the leaves, Four, three, two, one. When the book was closed, he said, "That's done."

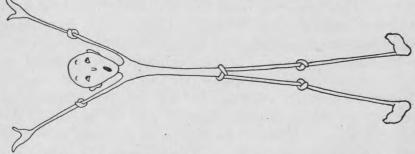


While the words "One, two" are being said the child raises his arms shoulder high, one at a time. While the words "Three, four" are being said he moves his legs outward, one at a time. When both arms and both legs have been stretched out, the "book" is open.

While the words "Four, three, two, one" are being said, each child returns his legs and arms to their original position, one at a time. When the child's arms are close to his sides and his legs are close together, the "book" is closed. Throughout the game the abdomen should be held in.

#### THE RUBBER MAN

Lying on the floor with arms raised above his head, chin in, and back flat against the floor, each child pretends he is made of rubber, and stretches himself out so as to be as



long as possible. Keeping their backs against the floor, the children expand their chests and stretch their arms and legs while the following lines are being said:

Watch this funny long rubber man. See him stretch as far as he can. Up go hands and down go feet. Now relax and then repeat.

#### THE BICYCLE MAN

Each child lies on the floor, his hands over his head and his chin drawn in. The children move their feet as though pedaling a bicycle, while the following lines are said:



Riding, riding, pushing his feet, The bicycle man comes up the street, Sometimes fast and sometimes slow, It's really a pleasant way to go. Sometimes slow and sometimes fast Then he stops to rest at last.

#### **ROLY-POLY**



The roly-poly is a tumbling man who cannot be upset, and to imitate him the children lie on the floor with hands clasping their ankles. Their knees are drawn up over their chests. Each roly-

poly rolls back and forth from lying to sitting position and from side to side. Finally he brings himself up to the sitting position again. This game tends to make the spine flexible.

#### GAMES PLAYED STANDING IN GOOD POSTURE

(These games help the children to hold their chins in, to raise their chests and stretch their trunk muscles, and to pull in their abdomens and flatten their backs while standing.)

During these games it is easy for the mother to show each child now and then how to pull in his abdomen, by placing one of her hands on the lower part of his abdomen and one on his buttocks and then pressing upward with the hand on his lower abdomen and downward with the hand on his buttocks. The child will respond by pulling his abdomen in and his buttocks downward. Touching the lower part of the abdomen may make the child draw it in and thus show him how to contract these muscles. Little emphasis need be put on this, but if it is repeated from time to time the child will learn to do it by himself.

#### PAPER DOLLS PASTED ON THE WALL

This game lasts only a minute or two. The children join hands and stand against the wall with heels 3 or 4 inches away from the wall. With head, shoulders, and hips against the wall and chin in, each child tries to flatten his back by pulling in his abdomen until the lower part of his back touches the wall. The object of the game is to see who can be the flattest paper doll.

#### TREES

Each child tells what tree he would like to be, and then each one plays that he is that tree, standing in the best possible position with his head and chest high, his chin in, the lower part of his abdomen drawn in, and arms raised to represent the branches. Different kinds of trees may be imitated. All the trees together are a forest. The wind blows and sets the trees swaying. When the wind stops and the branches are quiet, the trees all stand still again in good position.

#### GIANTS

A giant is very tall and strong and stands very straight. The children all pretend to be giants and walk on tiptoe standing just as well as they know how.

#### FAIRY WISHES

The children all lie flat, listening for fairies. All at once they hear a fairy call. (The fairy may be an older child or the mother.) Then they get up and gather around, and the fairy promises to change each one into something very straight and tall. Each child chooses what person or thing he wishes to be. One would like to be a mountain, another a tower, and others a big tree or a tall Indian or a giraffe. Perhaps all pretend to be the same thing. The fairy waves her wand and gives each his wish. Then each acts his part, standing on tiptoe in the best position he knows, each one trying to be the straightest and tallest.

#### **BEAN-BAG TAG**

The children all stand in a circle. One is chosen to be the runner and another the chaser. Each of these two has a bean bag on his head and must keep it there while he runs, without using his hands. The two children run around the circle. If the chaser tags the runner, they change places. Whenever the runner wishes to, he puts his bean bag on the head of another child standing in the circle and then that one becomes the runner. If the bean bag falls off, the game stops until it is replaced and then the game begins again. The child who is the runner must try to keep the bean bag from falling off his head.

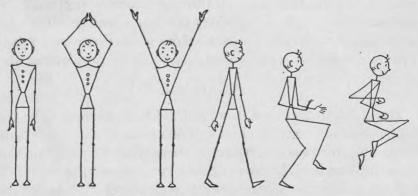
#### BALLOONS

Each child first blows up his own toy balloon. Then all toss the balloons high overhead. The object of the game is to see how long the balloons can be kept in the air. To keep the balloons up the children must reach and stretch up over and over again, sometimes using the right hand, sometimes the left. Children enjoy playing with balloons and usually can keep them overhead for long periods.



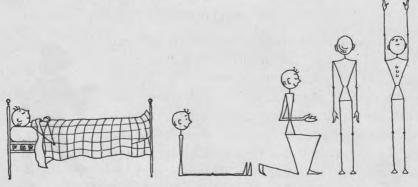
#### THE VERY STRAIGHT MAN

Each child tries to be just like the very straight man described in the lines below. Each one should hold his chin in and his chest high, pull in his abdomen, and be as straight as he can. An older child or the mother reads or recites the verses and the children may join in saying them. The children try to do what the very straight man does.



We all know a very straight man Who lives in a very straight house Right under a very straight tree.

This man takes a very straight walk, This man takes a very straight skip, And a straight jump, one, two, three.



He is straight when he lies on the bed, He is straight when he sits on the floor, He is straight when he kneels on his knee.

He stands up straight by the wall, He reaches up straight toward the sky, Do you know what is straight? Look at me.

#### THE JUMPING JACK

The children face the wall, and some one quickly passes along the line with a piece of chalk making a mark on the wall at the level of each child's head. Next they all stand on

tiptoe, with chins in, chests high, and abdomens drawn in, and a new chalk mark is made. Then each child is given a piece of chalk, and, standing on tiptoe a little distance away from the wall, he stretches first the right arm upward and then the left, to see how high a mark he can make with each hand. Finally all the children become jumping jacks, and each child jumps to see how high a mark he can make, first with his right hand and then with his left. The children may be shown that by pulling in their abdomens when reaching upward they may be able to make a higher mark on the wall. When the child is reaching high his abdomen may sag and his back may arch, unless some effort is made to prevent it.



# GAMES THAT HELP TO KEEP THE SHOULDERS FLAT THE WINDMILL

The children stand very straight, with abdomens in, chests high, and chins in, and play that they are windmills. They rotate both arms toward the right for a few minutes. Then the wind is supposed to change, and the children rotate their arms toward the left for a few minutes. The speed at which the "windmills" move may be varied as the wind blows harder or slackens.

#### THE DUCK



"Let's play duck." Each child squats down, buttocks resting on heels, head held high with chin drawn in, chest high, fingers touching the tips of the shoulders, elbows held back and close to the sides, "just the way a duck holds his wings." Then the mother calls, "Let's all waddle across the barnyard." While the child is holding the position of a duck his shoulders are very flat.

#### THE SEAL

Each child lies flat on his stomach like a seal with head and shoulders raised from the floor (chin held in); his feet also are



raised from the floor and are held close together. The arms are rolled outward and held close to the body, with palms toward the floor and

thumbs outstretched, so as to imitate a seal's flippers.

The "seal" then flaps his flippers by lifting his arms up from the floor and lowering them again. As he does this he tries to move from side to side. An energetic child may actually succeed in making a little progress across the floor, but this is not necessary for the game.

#### THE CRAB

The children first lie flat on their backs on the floor. Then they raise themselves up on hands and feet, with abdomens up and backs toward the floor. Last of all, they try to walk sidewise "just like crabs."



## GAMES TO STRENGTHEN THE ABDOMINAL MUSCLES

#### THE BICYCLE MAN

This game has already been described among "Games played lying down."



#### THE RABBIT

To play rabbit, each child gets down on all fours and then hops and leaps forward.

#### THE MULE

The "mule" lowers his head, and, supporting himself entirely upon his front legs, lashes out with his hind legs.



#### THE SCISSORS

Each child sits against the wall with his legs straight out in front, keeping his knees straight. His legs are supposed to be the blades of scissors. His hips, back, shoulders, and head all touch the wall. First the child raises the left leg and lowers it. Then he raises the right leg and lowers it. His head and the lower part of his back must touch the wall all through the game.



The following lines are said, at first slowly, later faster and faster:

Here are great big scissors,
They go snip, snip, snip.
Here are great big scissors,
They go clip, clip, clip.
I'll cut the cloth before I sew it,
I'll make a coat before you know it.

# GAMES TO STRENGTHEN THE LEG AND TRUNK MUSCLES

#### SEE-SAW

See-saw is a game for pairs of children of about equal height. They sit down on the floor facing each other, with the feet



of one between the legs of the other, just far enough apart so that they can easily clasp hands. As one child leans forward the other pulls back with a long, strong pull that carries his body back to the floor. They con-

tinue these see-saw motions, one child saying "Up" while the other says "Down." Head, chest, and abdomen should be held in good position throughout the game.

#### THE ELEPHANT

The children walk on hands and feet, keeping their legs straight, imitating elephants. The knees must not be bent. The head should be held high and the chin in. The head may be swayed from side to side in imitation of the way an elephant swings his trunk.



#### THE CRANE



The youngster who patterns himself upon the crane faces a chair and stands on one leg, while the heel of the other foot rests upon the seat of the chair. Bending his head forward, he tries to touch the knee of the raised leg with his forehead. He should then stand on his other leg and repeat the game.

# GAMES TO STRENGTHEN THE MUSCLES THAT SUPPORT THE FEET

[These games should be played barefoot]

#### THE TIGHT-ROPE WALKER

Use a chalk-line on the floor or a crack between two boards to represent a tight rope. The game is to walk this line with great care and exactness. The "tight-rope walker" walks on tiptoe, with toes turned in and heels turned out, and tries to grasp the floor with his toes.



#### WALKING THE RIDGEPOLE



Nail together three smooth planks, each about 10 feet long, to form a triangle resembling the ridge of a roof, the peak being about 6 inches from the floor. The children practice walking along the ridge with one foot on each sloping side. Their toes are pointed forward. If this game is played barefoot, the child's feet will cling to the sloping sides.

#### SAND PILE

The child stands in the sand pile or sand box, dabbles his feet in the sand, and scrapes up piles of sand with his toes.

#### PICKING UP MARBLES

Sitting in a low chair, each child tries to pick up a marble under his bare toes and put it down again, using first one foot and then the other. Then he tries to pick up two marbles at a time, first with one foot, then with the other, then two marbles with each foot, using both feet at the same time.

A more difficult stunt is walking across the floor holding a marble under the toes. Later the child may try to walk across the floor holding two marbles with each foot.

#### MARBLE RACE

Each child sits in a low chair with several marbles in front of him. At the word of command, each child picks up a marble under his toes. He then crosses his foot over the opposite leg in such a way that he can see the marble he holds in his toes. He then uncrosses his foot and without using his hands puts the marble into a basket. Each child tries to be first in picking up a certain number of marbles,



looking at them, and putting them into the basket. The feet should be used alternately.

