

GROWING

A Booklet for Boys

Fourth Grade



Changes

Let's talk about changes. Let's think back to the youngest age you can remember. What are changes that have happened since then? The years between 10 and 14 may be a lot of fun. But, physically they may be among the most puzzling years of your life. That's because you are turning from a child into a young adult. Changes are taking place, both in your mind and your body.

We call this change puberty. Puberty is the different changes that occur in your body and feelings. You grow new body hair. You may have new feelings that you don't always understand.

Starting at puberty your body begins to make special hormones that cause it to change. The pituitary gland sends a signal to your testicles (also called the "testes") to produce a hormone called testosterone. Testosterone is responsible for many of the changes that take place in your body during puberty. Boys change at different ages. Most boys change at the ages of 10 to 14. It is perfectly normal to start a little younger or a little older, even as late as sixteen. There's no one right age to begin puberty. Honest! Boys tend to begin puberty a little later than girls do. That's why you may feel like all the girls in your class are taller than you. Don't worry - you'll catch up!

Signs of Puberty

Testosterone triggers a number of physical changes. These changes take place over a period of four or five years and usually happen in about this order, although you may find that it's a little bit different for you:

- Your scrotum, testicles and penis will become larger.
- Pubic hair will begin to grow around the base of your penis.
- Your voice will deepen. (You may have the experience of your voice "cracking." That's because your larynx, or Adam's apple - which contains your vocal cords - is growing and changing just like the rest of you.

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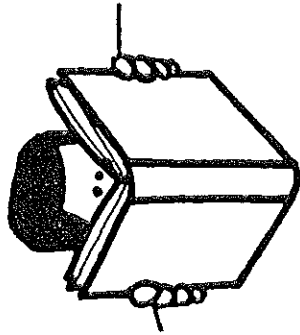
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■ You'll experience a rapid increase in height. (This is what's often known as the "growth spurt." You may shoot up several inches in a relatively short time and feel as though you're all arms and legs for a while. In addition, your muscles will develop, your chest will become broader, and you'll probably start to gain weight.)

■ Hair will begin growing under your arms and on your legs, and then on your upper lip and chin. You may also grow hair on your chest, although this may not happen to you until you're well into your twenties.

In addition to the changes listed above, some boys may notice swelling under their nipples, and worry that they are growing breasts. Breast enlargement and tenderness is actually a common and temporary condition among adolescent boys. It's usually caused by the increase of hormones in a boy's body during puberty. If you notice your breasts becoming larger, don't worry, you're not turning into a girl! It may make you feel better to check with a doctor for advice. And keep in mind this condition won't last forever!

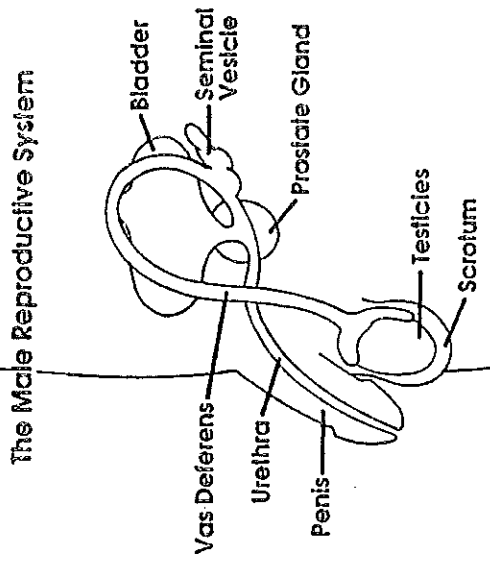


The Male Reproductive System and How It Works

The basic function of the male reproductive system is to produce sperm. During puberty, testosterone enables the testicles to start producing mature sperm for the first time. When a sperm joins with a female egg (this is called fertilization), a baby will begin to develop from the fertilized egg in a woman's body.

Your two testicles hang in a sack called the scrotum. The scrotum is located outside your body just underneath your penis. Sperm leave the testicles through tubes called the vas deferens.

There, they are mixed with fluid from the prostate gland, the seminal vesicles, and other glands. This mixture of sperm and other fluids is called semen. It leaves your body through the urethra, a tube in the center of your penis. Urine also passes through the urethra, but never at the same time as semen.



The blood vessels in the penis get larger and more blood enters them. The penis stiffens and gets hard. This is called an erection. Semen can be pushed out of the body by squeezing of the prostate gland and the seminal vesicles. This is called an ejaculation.

A wet dream, also called a "nocturnal emission," is nothing to worry about. It's when you ejaculate in your sleep without knowing about it. You may find wet semen on your pajamas or sheets when you wake up. Wet dreams can be embarrassing, but they are also perfectly normal for boys your age.

Involuntary erections are also perfectly normal. An involuntary erection is when you have an erection for no apparent reason. You don't have to be thinking about anything in particular. They often happen without warning after a boy reaches puberty, but they're not as noticeable as you think and they will go away. And you won't ejaculate every time you have an erection.

As for size, penises come in all shapes and sizes. Some are smaller, some are larger. A bigger penis doesn't make you more manly, and a smaller one doesn't make you less manly. Being "manly" is a state of mind.

Part of Growing Up is Learning to Respect Your Body

Now that you're growing up and going through puberty, you have to start taking care of your body differently. When you were a little kid, you could get away with not taking a bath every day. But not any more. Now it's essential!

Your glands are more active than ever. The sweat glands under your arms and in your genital area start producing more sweat during puberty. When sweat comes into contact with bacteria on your skin, it can create an unpleasant odor.

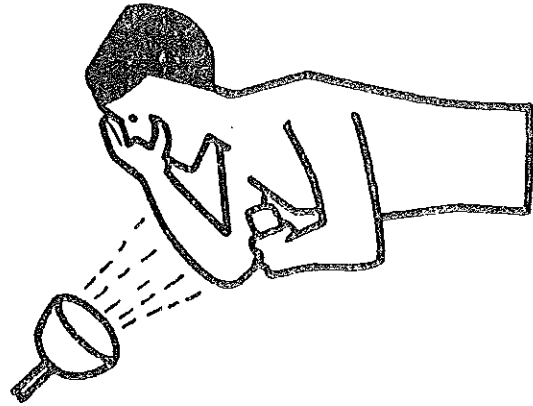
To wash sweat and bacteria away, you need to take a shower or bath every day and after any strenuous physical activity, such as gym or football practice. After you bathe, it's a good idea to use a deodorant or an antiperspirant. And, of course, put on clean clothes.

Another good reason to bathe every day is that your oil glands - especially those on your face, back, shoulders, and chest - are more active now as well. The oil glands (also called the "sebaceous glands") produce an oily substance called "sebum." If sebum blocks the pores of your skin and combines with bacteria, you can develop pimples.

Pimples

For many boys and girls going through puberty, pimples are a fact of life. Sometimes they get them no matter what they do. People used to think that pimples were caused by eating too much chocolate or greasy food, but that doesn't seem to be the case - although you should avoid eating too much of those kinds of foods for nutritional reasons.

Still, there are some things you can do to keep pimples from becoming a big problem. Keeping clean is the most important, so make sure you wash your face (gently - don't rub it raw!) at least twice a day. Also, try to keep your hands away from your face,



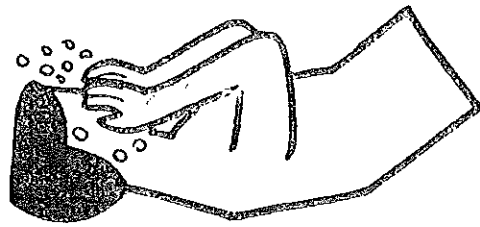
and don't pick at pimples. You might cause an infection or leave a scar.

If the problem persists, you can use an anti-acne cream, lotion, or cleansing pad. If none of this works and acne is still a problem, you should talk to your doctor.

The sebaceous glands on your scalp also work overtime during puberty. This can give your hair a greasy, dull look, and you may develop dandruff. Chances are, you'll need to shampoo your hair more often - maybe even every day.

There will come a time when you will want to start shaving the hair that grows on your face. When you should begin to shave and the kind of shaving equipment to use are things to discuss with your parents.

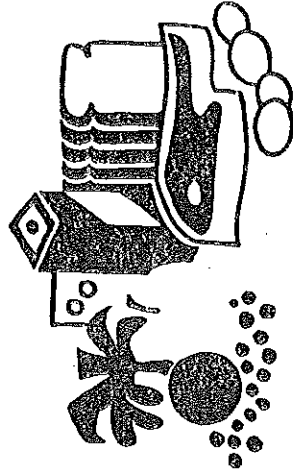
Finally, your body's not really clean unless your mouth is clean, too. To have healthy teeth and gums, and fresh breath, you need to brush your teeth, gums and tongue regularly. And remember to floss!



Nutrition

Because your body is going through so many changes during puberty, eating right is more important than ever before. And eating right means choosing a variety of foods from the four basic food groups, especially foods that are rich in calcium (like milk, yogurt and cheese) and iron (like beef, turkey, and beans).

Some weight gain is normal during puberty. There's nothing to worry about unless you are substantially overweight. If this is the case, a well-supervised diet may be a good idea. But you and your parents should consult a doctor first.

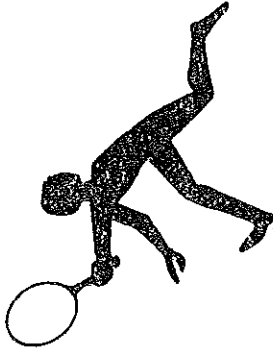


Exercise

The best way to stay in terrific shape is to exercise. Exercise also gives you more stamina and flexibility and strengthens your heart, lungs and bones.

You don't have to be a basketball or football star to get good exercise (although team sports can be a great way to stay fit). There are lots of physical activities you can do with a friend are all by yourself, including:

- Running
- Swimming
- Tennis
- Racquetball
- Ice skating
- Fast walking
- Bicycling
- Skiing
- Climbing stairs
- Fast dancing

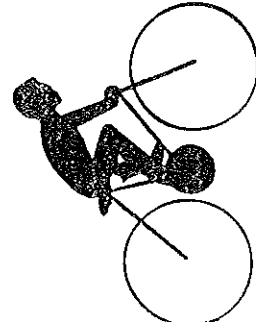


These are all forms of aerobic exercise, exercise that strengthens your heart and lungs - which is the best kind of exercise for general fitness.

Before you start your exercise routine, you should do some warm-up exercises. They help prevent sore muscles and can keep you from hurting yourself.

Exercise should feel good. If it doesn't - if you start to feel any discomfort or if any part of your body starts to hurt - stop. Check with your coach, physical education teacher, school nurse, or doctor.

You will experience many changes in your life. Taking care of yourself and knowing what to expect can make growing up feel pretty good.



Glossary

Here are the words we mentioned in this booklet and a few others that you may have heard and want to know the meaning.

Adolescence

(ad-oh-LESS-ens) - The period of physical and psychological development from the beginning of puberty to maturity.

Ejaculation

(ee-JACK-you-lay-shun) - The release of sperm-containing semen from the penis.

Erection (ee-RECK-shun) - The stiffening of the penis when blood fills the tissue inside it.

Fertilization (fur-fill-ih-ZAY-shun) - The joining of a female egg and a male sperm to form an embryo.

Genitals (JEN-ih-talz) - The external reproductive organs.

Hormones (HOR-moans) - Chemical substances - produced by organs called glands - that regulate the growth and activity of body tissues and organs.

Nocturnal emission (nok-TUR-nal eh-MISH-un) - Also called a wet dream. Ejaculation that occurs while you are asleep.

Penis (PEE-niss) - Male sex organ; also used to evacuate urine.

Pituitary gland (pilh-TOO-ih-ferry) - The gland at the base of the brain which is responsible for producing hormones that regulate growth and development at puberty.

Prostate gland (PRAH-state gland) - Gland next to the bottom of the bladder; it forms a fluid that combines with sperm and a fluid from the seminal vesicles to make semen.

Puberty (PEW-bur-tee) - The stage of life during which human males and females become sexually mature.



Pubic area (PEW-bik) – The area where the legs join the body and pubic hair appears during puberty.

Scrotum (SKROH-tum) – The sack of skin that holds the testicles, just underneath the penis.

Semen (SEA-men) – Also called seminal fluid, it's a white, milky liquid that carries sperm out of the penis during ejaculation.

Seminal vesicles (SEM-in-nal VEH-sih-cahls) – Area where sperm is stored; it also creates a fluid that combines with sperm and a fluid from the prostate to make semen.

Sperm – The male reproductive cell.

Testicles (TES-tih-culs) – Also called the testes (TES-teez), the two oval-shaped organs contained in the scrotum.

Testosterone (tes-TAH-stuh-rone) – The male hormone, produced in the testicles, that causes many of the changes that take place in a boy's body during puberty.

Urethra (you-REE-thrah) – The tube that carries urine from the bladder out of the body. Semen also exits the body through a male's urethra.

Vas deferens (vas DEF-a-renz) – Tubes in which sperm is combined with other fluids to make semen.