Lesson Two

Title: Puberty For Boys

Theme: Male Anatomy and Physical Changes During Puberty

Time: 70 minutes

Materials:
- Preparing To Teach About Puberty - Teacher Guide
- Anatomy Review - Teacher Guide
- Bernie (male poster model)
- Male Reproductive Anatomy Image
- Male Reproductive Anatomy - Answer Sheet

Objectives

- to review the definition of puberty with the students
- to inform students of the role of the pituitary gland in boys (and girls)
- to identify the internal physical changes that occur in boys during puberty
- to identify the external changes boys experience during puberty
- to provide students with accurate information concerning male anatomy
- to stimulate discussion among students and with their teacher

Curriculum Expectations

4p2 – identify the physical ... aspects of healthy human beings

5p7 – describe the physical ... changes associated with puberty

5p11 – describe the secondary physical changes at puberty

6p2 – identify the major parts of the reproductive system and their functions and relate them to puberty
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Procedure

Before this lesson, you may want to read about the physical changes boys experience at puberty. You may reference the Teacher Guides entitled, “Preparing To Teach About Puberty” and “Anatomy Review”. Prior to this lesson, you will need to hang the magnetic male model (“Bernie”) in a central location in the classroom such as on a white board or side of a metal filing cabinet and set up document arm.

Activity One: Define Puberty and Explain Its Onset - 10 minutes

Ask students to help you define puberty using the information they learned yesterday or in the most recent class.

- Puberty is a developmental stage that begins from ages six to eight and continues until ages fifteen to seventeen, when anatomical sexual maturity is complete. Puberty is a slow process during which secondary sex characteristics appear in girls and boys.

Write this question on the chalkboard, “How does puberty happen?”. Ask students to volunteer ideas. Some may already know how puberty begins. Clarify the issue by drawing this chart and by providing the following information.

```
\[\text{Pituitary Gland} \Downarrow \\
\text{Chemical Messages - Hormones} \Downarrow \\
\text{Ovaries} \Downarrow \\
\text{Production Of New Hormones} \Downarrow \\
estrogen and progesterone \Downarrow \\
\text{Testicles} \Downarrow \\
\text{Production Of New Hormones} \Downarrow \\
te testosterone\]
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- The pituitary gland is the master gland located in the brain. It sends out chemical messages to the body through the blood stream. These messages are sent in the form of hormones. Puberty begins because the pituitary gland sends out chemical messages through the hormones to ovaries (in girls) and testicles (in boys). The ovaries and testicles then begin to produce their own hormones. In girls, the ovaries produce estrogen and progesterone. In boys, the testicles produce testosterone.

It is important to remind students that both girls and boys have both female and male hormones. Girls have more female hormones and boys have more male hormones.

Activity Two: “Bernie” - Male Anatomy - 25 minutes

Begin the exercise by explaining that today’s lesson will focus on changes that occur for boys while tomorrow’s lesson will address changes for girls. Tell students that you will be talking about the male reproductive system and how boys’ bodies change during puberty to make reproduction possible.

Describe how boys generally experience an overall growth spurt during puberty as they grow taller, bigger and their weight increases. Stress the need for proper nutrition and exercise during this time, and into adulthood.

As the teacher, you will have to decide whether or not it is appropriate for your students to assist you in placing the proper body parts on the models. You may choose to perform this task yourself.

Start with the male figure and explain the external physical changes, from head to toe. The third activity follows with a description of the male internal reproductive system.

External Physical Changes for Male (Changes You Can See)

<table>
<thead>
<tr>
<th>Face/neck area:</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) the face changes in shape - including the definition of a noticeable jaw</td>
</tr>
<tr>
<td>b) a ‘blush patch’ often develops on cheeks</td>
</tr>
<tr>
<td>c) the size of the larynx increases - including the vocal cords which causes the voice to deepen</td>
</tr>
</tbody>
</table>
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Explain to the students that when a boy’s larynx grows, so does his thyroid cartilage. This results in the growth of their “Adam’s Apple”. All girls also have an “Adam’s Apple”. However, in girls and women, it is often smaller in size.

d) pimples appear - discuss why acne occurs and provide options for managing it successfully

e) facial hair growth - including beard and moustache

Chest:

f) growth of underarm hair

g) growth of chest hair

h) breast growth - discuss gynecomastia (a temporary increase in the size of the male breasts that occurs for approximately half of all boys and normally disappears in a year or two)

i) broadening shoulders - due to increased muscle in the shoulder area

Genitals:

j) increase in size of penis, testicles and scrotum

k) growth of pubic hair

l) erections and wet dreams occur - see Activity Four for more information

Legs:

m) hair growth on legs

Be sure to explain that hair growth during puberty is related to hormonal changes. However, genetics, ethnicity and racial background also influence hair growth patterns in people. All human bodies are covered in hair follicles. We cannot control our body’s hair growth.

Once the physical changes have been examined, review the major characteristics by using the Bernie model. Please note: that the model and body parts are magnetic and must be placed on a magnetic surface (such as a white board or chalkboard) for the
models and body parts to stick. Attach the facial hair (goatee), as well as the chest, underarm and pubic hair. Place the larger shoulders on top of the original model. Finally, cover the smaller penis from Bernie with the larger penis.

**Activity Three: Male Reproductive Anatomy (internal) - 15 minutes**

The third part of this lesson illustrates the male internal reproductive system. To illustrate this, show the anatomy image that portrays the male reproductive system. Place image on the under the document arm. Walk through the anatomical parts in this order: penis, scrotum, testicles, epididymis, vas deferens, seminal vesicle, prostate gland and urethra. The function of each of these parts is clearly described in Lesson One’s Anatomy Review - Teacher Guide.

While the Anatomy Review and Teacher Guides in this unit are helpful to you in their description of the physical changes children experience, they are probably too academic for children to understand. For this reason, you will need to provide just enough information to teach your students about their bodies, while making sure they can clearly comprehend the explanation. The following list provides a brief outline of information you might share with your class.

- **penis**: external male reproductive organ, provides males with sexual pleasure and allows release of urine and semen separately
- **scrotum**: sac located under the penis that holds and protects the testicles
- **testicles**: make sperm and testosterone
- **epididymis**: long tube where sperm travel from the testicles to the vas deferens
- **vas deferens**: where sperm is stored on its way to the urethra
- **seminal vesicle**: produces fluids that mix with sperm to create semen
- **prostate gland**: also produces fluids that mix with sperm to create semen
- **urethra**: where the semen travels to exit the penis (also where urine leaves the body at a separate time)

You may also want to introduce the anus as the outlet of the rectum which can be found in-between the buttocks. It is the opening at the end of digestive system where the body gets rid of solid waste (feces) at the end of the digestive system. The anus is part of the diagram that accompanies this lesson.

Remind students that they will have the opportunity to review this information when they watch the video entitled, “You, Your Body & Puberty”.

Changes In Me: A Puberty and Adolescent Development Resource for Educators
Junior Grade Level, Second Edition
Peel Public Health, Healthy Sexuality Program, 905-799-7700
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Activity Four: Erections, Ejaculations and Wet Dreams - 10 minutes

As you write the terms on the chalkboard, tell your class you are about to discuss erections, ejaculations and wet dreams. Your talk can be based on the following ideas:

An erection occurs when a male’s penis fills with blood. When this occurs, the penis temporarily expands to a larger size. A baby boy will experience his first erection when he is still developing in his mother’s uterus. Erections are natural and normal. Erections occur during all stages of a male’s life - from the time boys are babies all the way through adulthood. There are many reasons males experience erections. Erections might occur when the penis is touched or rubbed, or when a male thinks about sexually arousing thoughts. Erections could happen when a male needs to urinate, or even when they are nervous about something. Many boys have an erection when they wake up in the morning. Sometimes, erections occur for no apparent reason at all.

Ejaculation is the term used to describe the process of the release of semen from a male’s penis via the urethra. During puberty, ejaculations normally occur in two different ways - first, if a boy touches or rubs his penis, he may ejaculate - this is called masturbation. Some boys masturbate, while others do not. Either way, masturbation is a common, normal activity. Second, a boy might ejaculate in his sleep, which is called a no"wet dream". Wet dreams occur when semen is released from the penis involuntarily. Since boys ejaculate outside their bodies, the semen frequently wets their bedding during a wet dream. Boys can be encouraged to change and wash their own sheets, should they wish. The most important thing to remember is that ejaculations, either by masturbation or as wet dreams, are very common and a normal part of puberty as young people develop sexual thoughts and feelings.

Activity Five: Male Anatomy Review - 10 minutes

After this lesson on male anatomy, distribute the anatomy diagram that includes the labels for each body part. (It is entitled, “Male Reproductive Anatomy - Answer Sheet”.) Review each of the body parts - their names and their purpose. Write terms on the chalkboard in large letters. Ask your students to study this handout. Inform them that there will be a quiz at the beginning of the following class.
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Possible Extensions

You might consider using the question box after this lesson as there may be many questions children feel embarrassed about asking in the classroom setting.

If you have space in your classroom, you might leave the models displayed for your students.

Possible Assessment

Since many of the terms presented today may be new or difficult for young children to learn, avoid testing on the same day you present the information. Instead, give your students the evening to study for the quiz on male anatomy. If you are able, develop some strategies that will help them to remember the terms and share them with your students. You may want to provide a few extra minutes of study time at the beginning of the next lesson before you ask students to complete the quiz.
Male Reproductive Anatomy

Note: colours do not represent actual colours of organs

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Male Reproductive Anatomy

- seminal vesicle
- rectum
- bladder
- vas deferens
- urethra
- epididymis
- prostate gland
- testicle
- scrotum
- circumcised penis

Side View