

Physical changes During Puberty

Lesson 3

Grades
4th & 5th

Physical Maturation

In this lesson we will explore the changes that will happen to girls during puberty in more detail.

Materials needed: journals, 3x5 cards, mailbox, overhead transparency of breast developmental stages.

Today you will need your journals, question cards, and the packets previously handed out.

Side Note: Give them a bit of time to get out their things. Make sure you have a few extra copies of the Petite Amie pamphlet – Changes During Puberty – Physical, on hand in case someone forgot theirs.

I'd like you to open your journals to a new page. Put the date in the top right hand corner (or however you have your students head their papers). Write, "I'd like to learn more about..." I am going to give you 3 minutes to write about any questions that came up the last time we discussed the 5 stages of puberty. You won't have to read out loud today. Remember, I want you to keep writing for the entire 3 minutes. Go.

Side Note: Give the girls 3 minutes to write. At the end of 3 minutes, tell them to finish the sentence they are writing and put their pencils down.

If you have more to write, you can finish at the end of this session. Leave space in your journal if you think you'll need it.

Before we start, we need to go over the words we learned to say yesterday. So, repeat after me, and the louder and more clearly you say them, the less likely we'll have to do it again. Here we go. "Breast" "Vagina" "Pubic Hair" "Sexual Reproductive Organs" "Nipples" Great!

Side Note: Make sure all girls can say these words. Again, it will help them in their conversations about puberty in the future.

Today I am going to talk to you in more detail about the changes of puberty. I want you to take some notes, as you will have a quiz based on these changes. But, more importantly I want you to listen because these are changes that will happen to you and I want you to be prepared.

The first outward sign that you are going through puberty might be a growth spurt. A growth spurt is when your body grows a lot in a short period of time. You may notice your arms, legs, and feet growing really fast. Your feet may grow faster than any other part of your body, and



probably will finish growing before any other part of you. But don't worry, the rest of your body will catch up. You will likely be near your adult height by the time you start your period. If you do continue growing it will be at a much slower rate than before. Your bones will continue to get stronger after your initial growth spurt. Girls add 40% of their bone mass after puberty begins. Bone mass is the amount of bone, or weight of bone, present in your body. Your bones will continue to get stronger until you're around 18 or 20. This is why it is so important for you to make sure you get enough calcium (milk, yogurt, etc.) every day. It is recommended you have 4 to 5 servings of calcium every day. You want your bones to get as strong as possible while you are growing so you will have less of a chance of developing osteoporosis (weak bones) when you are older.

Can any of you name foods that are high in calcium?

Side Note: Answers could be:

- ◆ Milk
- ◆ Yogurt
- ◆ Cheese
- ◆ Pudding
- ◆ Ice cream
- ◆ Black beans
- ◆ Edamame – soy beans
- ◆ Spinach
- ◆ Salmon
- ◆ Almonds
- ◆ Tofu
- ◆ Dark green leafy vegetables



Do any of you have any questions about growth spurts?

Side Note: (Put up overhead transparency on breast development stages)

During puberty your breasts will develop. Breasts are milk-producing glands. The main reason we develop breasts is to feed babies. So, as your body is maturing, and getting ready to be an adult, your breasts will begin to grow. You can start growing breasts as early as 8 years old, or your body might wait until you are about 14. Anywhere in this range is normal. In general, it will take 4-5 years for your breasts to reach their full adult size.

Breast development happens in stages. The first stage of breast development encompasses all the years of your life when your breasts are not growing from 0 – around 8 years old. During this stage you won't notice any growth. This first stage is like the 'pre-growth' stage.

During the second stage of breast development, between the ages of 8 and fourteen, your breasts will begin to "bud," like a flower. You'll notice just a little swelling under the nipple at first. A breast bud is a small firm lump felt right under the areola (the area that surrounds the nipple) and is movable and sometimes tender. On average, you'll notice breast buds around 11 or 12. One side might bud before the other.

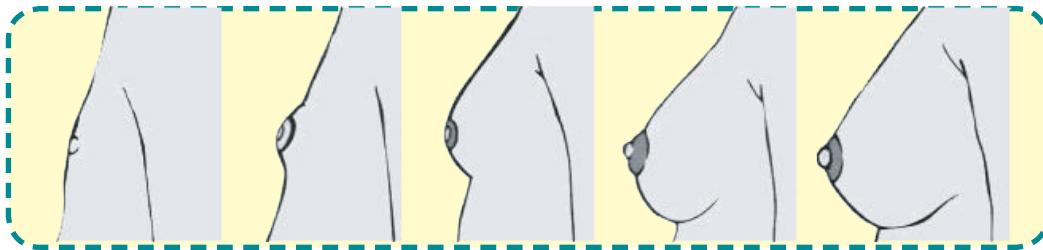
Do any of you have any questions about breast budding?

Next, between 9 and 15, the area around the nipple and the areola will begin to darken. During this stage you will also notice that your breasts are beginning to grow in size. Both the breast tissue and milk glands really begin to develop during this stage. On average, girls start to notice their breasts growing around 12 or 13.

During stage 4, between ages 10 and 16, the nipple and the areola will begin to form a secondary mound. The average age is 13 or 14. As your breasts are growing, they may seem kind of pointy for a while. This is totally normal. As you gain more body fat, they will round out more and take on their adult shape.

During the last stage of breast development, usually by age 19, but often around 17, your breasts will finally take on their adult shape. They will be as round and full as they will get. Remember, breasts come in all shapes and sizes. Take a look at your mom, grandma, aunts and sisters. Yours will probably look like an average of all those.

Diagram below show the 5 stages of breast development:



The thing to remember is that all girls will go through these stages at different rates. Some girls may have fully developed breasts at the age of 12 while others won't until they are in their early 20s. Anywhere within this range is normal, but the average girl will have reached full breast maturity by age 17. And, be aware that full maturity can mean anywhere from a small AA bra size to a very large EE or even G size bra. This is determined, for the most part, by genetics, what you have inherited from your parents.

Having different-sized breasts is also quite common and perfectly normal, especially as you begin breast development. One of your breasts may begin developing before the other or one may grow more quickly. Every girl is different, and most girls' breasts won't end up looking exactly the same. Many times this difference in breast size will even out once your breasts are fully developed, usually around age 17. But it's also perfectly normal for breasts to remain slightly different sizes even when they're fully developed.

I'm going to give you some time right now to write down any questions you have about growth spurts or breasts development in your journals. I want to make sure you remember them so you can write them down on question cards at the end of the lesson. If you feel comfortable enough to ask out loud, go ahead and raise your hand, and I'll take some questions now.

Side Note: You may get questions like:

- ◆ What's an AA bra?
- ◆ What's a G bra?
- ◆ Does it hurt when they grow?



One of the next things you'll notice happening to your body is growth of pubic hair. Hair will begin to grow slowly at first. You'll see a few fine hairs scattered around the area above your vagina. As you continue through puberty, you will grow a lot more hair down there and, in some girls, may even begin to creep down your inner, upper thighs or up toward your bellybutton. Eventually your pubic hair will cover the area above your vagina and be thick, dark, coarse, and possibly even curly! By the end of puberty, your pubic hair will form a densely covered triangle shape. Most girls find their pubic hair grows in sometime between the ages of 8 and 16.

Diagram below show the 5 stages of public hair development:



Another change is pimples. During puberty your hormones tell your bodies to begin producing more oil in your skin. And, of course, because this is puberty, it is once again, something you won't be able control. The oil can get stuck in your follicles, the pores in your skin from which hair grows. When this combines with bacteria and dead skin cells it can clog your pores – and that causes whiteheads, blackheads, and pimples. Many teenagers get pimples, or acne. But it doesn't mean you aren't clean if you have acne, it just means you have very active oil glands.

Have any of you noticed that your skin is becoming oilier? Or that you are beginning to get a few pimples here and there?

Some lucky girls only have the occasional breakout near the time of their period, but for others, acne can be a serious problem. For those girls that only get a few pimples, or very mild acne, there are a wide variety of over-the-counter acne medicines available at any local drugstore. But for those who have continual breakouts, or those that affect large areas of skin, including their back, neck and chest, a doctor can prescribe something stronger to combat those overworking oil glands. Your doctor may even refer you to a dermatologist, a doctor that specializes in caring for the skin.

Luckily, your body will eventually regulate its oil glands and you will figure out what you need to do to manage the amount of oil your skin produces. So by the time you finish puberty, (around age 17-19) you will most likely also be finished with acne. But, in the meantime, there are many things you can do to prevent acne outbreaks.

There are many things you can do to prevent acne outbreaks. The number one thing is to wash your face twice daily with a mild soap or cleanser. If you wear foundation makeup, use only a water-based product that is non-comedogenic (which means it won't clog your follicles) and always remove it completely at the end of the day. Too much of anything can be a bad thing. This is even true when it comes to scrubbing your skin. Scrubbing too much can cause your skin to produce even more oil, which means even more pimples.

And you don't want that. Things you shouldn't do include picking and squeezing pimples. This can make the pimples more inflamed, plus, you can cause a permanent scar on your skin. Again, it doesn't mean you aren't clean if you have pimples, because there is no way to reduce the amount of oil your skin produces.

Okay, can anyone tell me some things that can help keep your face free from pimples?

Side Note: Listen for these answers:

- ◆ Wash your face
- ◆ Avoid oily make-up or other products
- ◆ Over the counter acne cleansers
- ◆ See a dermatologist



Along with your oil glands, glands that produce sweat are also stimulated during puberty. So, although it may be new and a bit embarrassing, sweating a lot more once you start puberty is totally normal. You may only notice it in your armpits, or feet, but some people sweat all over their bodies. Again, this is totally normal.

The one thing that might make you worry about sweating is the odor. Sweat actually doesn't smell. It is when it mixes with bacteria on your skin that it begins to have an odor. So again, just like with acne, keeping your body clean is one way you can keep body odor away.

An over-the-counter deodorant or antiperspirant is another good option for reducing odor. Deodorants eliminate bad smells but not the amount of sweat. Deodorants usually use perfumes that hide the odor of sweat. They can be used on your feet, and other parts of your body, as well the underarm area.

Antiperspirants work by reducing the amount of sweat that reaches your skin by blocking the sweat gland ducts. Follow the directions for use on the bottle. Antiperspirants can cause irritation to sensitive skin so discontinue their use if redness, itching or swelling occurs. Antiperspirants are not usually recommended for young girls. You don't want to be blocking up your pores or ducts when they are just starting to work.

All right, can anyone tell me what pimples and body odor have in common?

Side Note: Listen for these answers:

- ◆ They are both due to hormone surges
- ◆ They both start working overtime during puberty
- ◆ Both occur when bacteria are present
- ◆ Both are normal

I want you to take 5 minutes and write in your journal. Write about what you learned, how you felt, or if you want, finish up writing what you started this morning. I am also going to come around and pass out 3 x 5 cards. If you have a question you don't want to ask out loud, write it down, and put it in the box, if you don't, put a blank card in. And if you have any questions you wrote down in your journal yesterday, write that on a card and put it in the box.

Side Note: Make sure everyone puts a card in the mailbox. There will be peeking to see who put something in and

who didn't. When it reaches the last student, ask her to bring you the box. Look through the questions and choose any that you think are relevant to today's discussion.

It's been 5 minutes, finish up what you are writing. Does anyone want to share with the class what you wrote?

Side Note: Make sure everyone puts a card in the mailbox. There will be peeking to see who put something in and who didn't. When it reaches the last student, ask her to bring you the box. Look through the questions and choose any that you think are relevant to today's discussion.

It's been 5 minutes, finish up what you are writing. Does anyone want to share with the class what you wrote?

Side Note: Let 3 or 4 girls speak. Then move on to their questions.

Make sure you give basic answers to all of the questions. Let the girls know that you will be talking more in depth about these topics in the next few days. If you feel comfortable answering questions about yourself, do so. But if you don't, just shuffle them in with the 'no question' cards.

The girls may begin to raise their hands to get other questions answered that have been raised by those from the mailbox. Answer a few of them if you have time.

I see that some of you have more questions to ask. Write these questions down in your journal or on your question cards. You can put them in the mailbox on my desk after class today, or tomorrow when we discuss this subject again. I hope today made you think about growing up. Next time we'll talk about all the things that will happen to your body during puberty. So be prepared.

Developed by: Valerie Sabbag, Health Educator and curriculum developer.

This lesson was developed in consultation with Dr. Michelle Bourke.

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