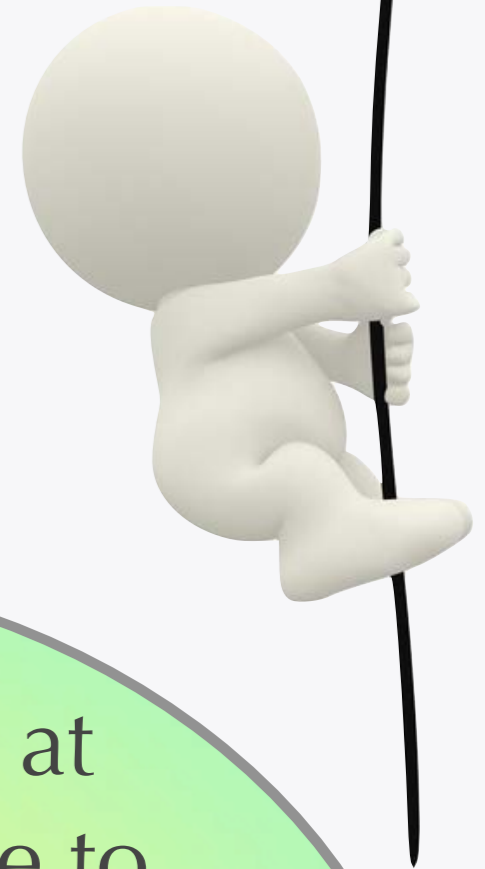


Changes and Reproduction

Learning Objective:

To understand the initial changes inside and outside of the body during puberty.

Babies have a growth spurt in the first year or so of their lives, doubling in size and doubling again!



After that, the rate at which they continue to grow slows down considerably. The next big growth spurt comes between the ages of around 10 and 13 for most children; this big change is called **puberty**.



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What do you already know about this stage in the life cycle of humans?

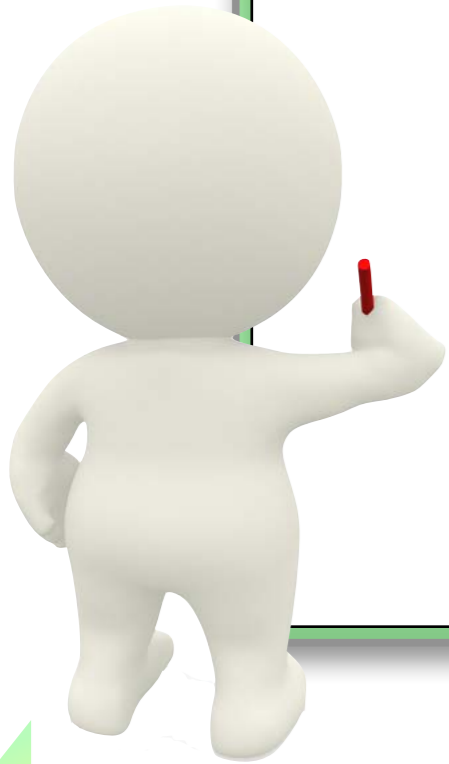


Discuss your ideas.

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What we know about puberty already:



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What do you remember about the function of hormones in the body?

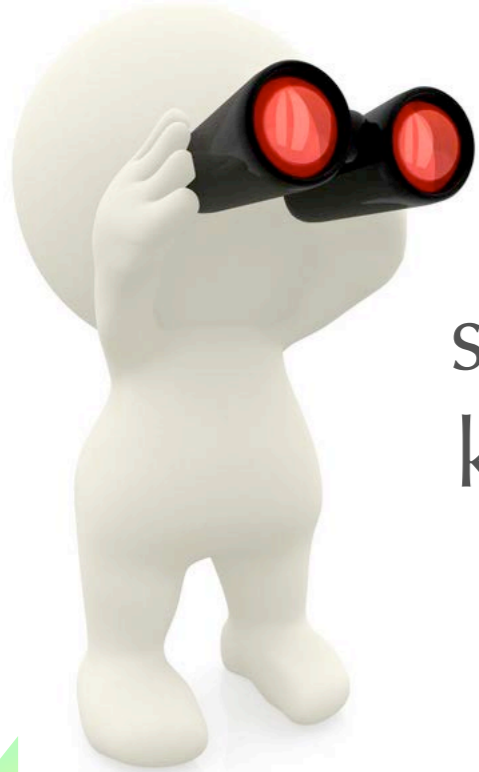
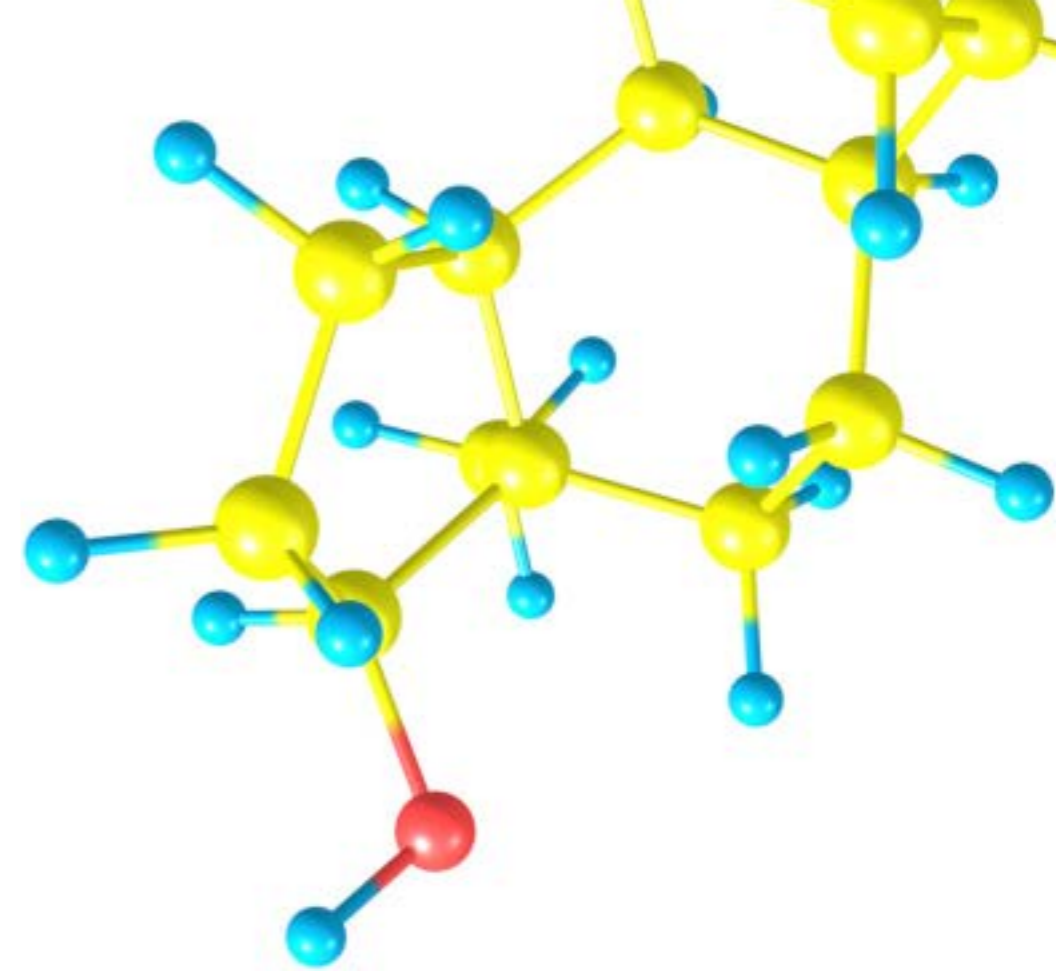


Discuss your ideas.

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Hormones
are special chemicals that
your body produces that control
loads of important functions in
your body such as growth
and digestion.



Between the ages of around 10-13, the body
starts to produce and release sex hormones. These
kick-start the changes in the body during puberty!

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What's the point of puberty?

Discuss your ideas.



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During puberty, you start to change from being a child to becoming an adult.

Your body grows bigger and changes shape to be more like an adult's, but the main changes occur to your sex organs.

Your sex organs change during puberty and start to produce egg cells and sperm cells. Your body is getting ready for making babies!

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There's a **big difference** between *being able* to make babies and *being ready* to have babies. You've got a lot more growing up to do before you're ready to do that!

Let's find out more about some of the initial changes that happen to boys and girls during puberty...



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When does it start?

Puberty starts at different times for everyone but girls usually start before boys.

Girls usually start around the ages of 10-11.

Boys usually start around the ages of 11-13.

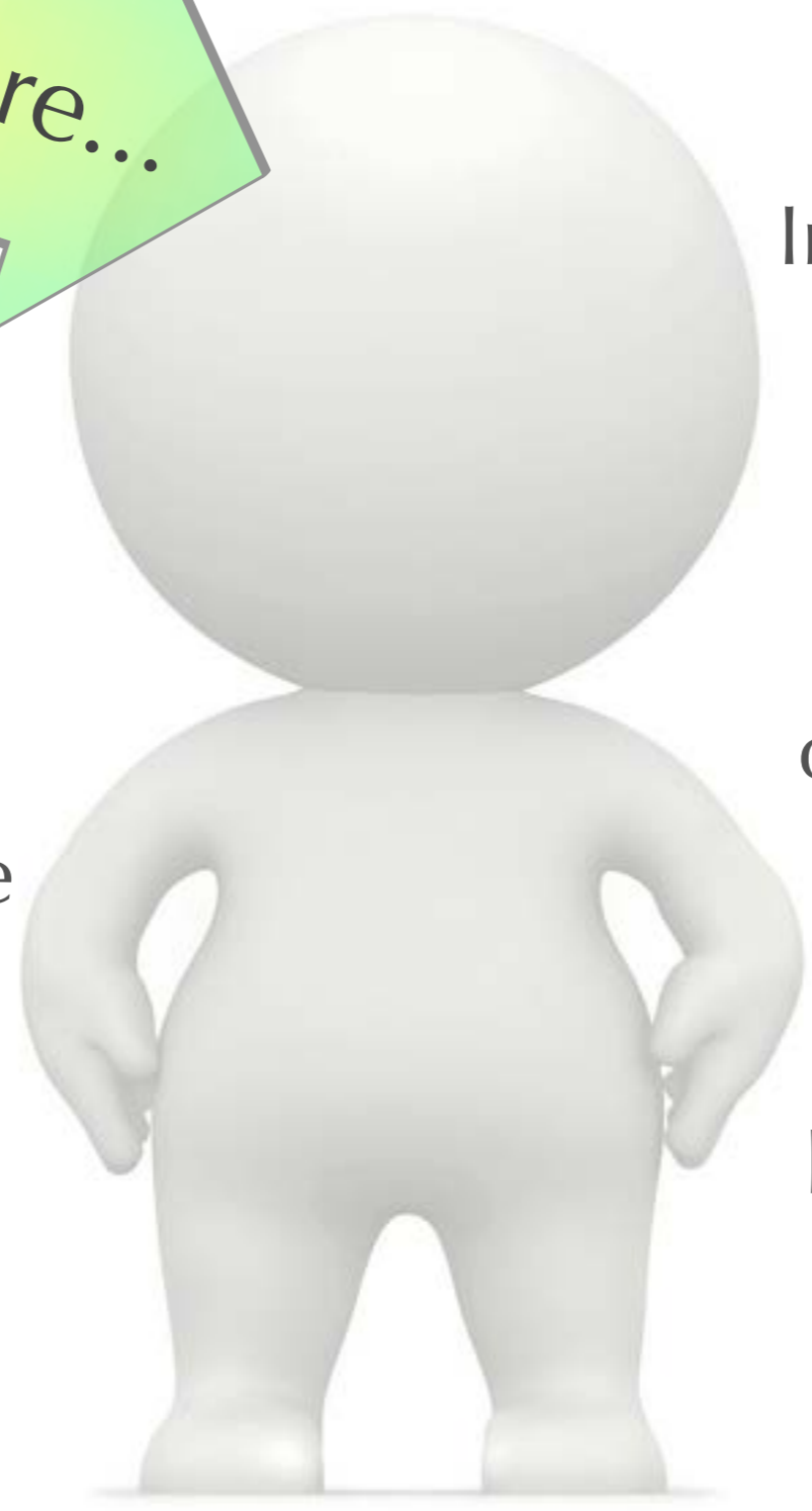


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It all starts up here...

Hormones get sent from a part of your brain down to the sex organs. These hormones tells the sex organs to start growing and changing.



In girls, these hormones tell the **ovaries** to start releasing egg cells.

In boys, the hormones tell the **testicles** to start producing sperm cells.

They also tell the sex organs to start producing more hormones.

Let's find out what *these* hormones tell your body to do...

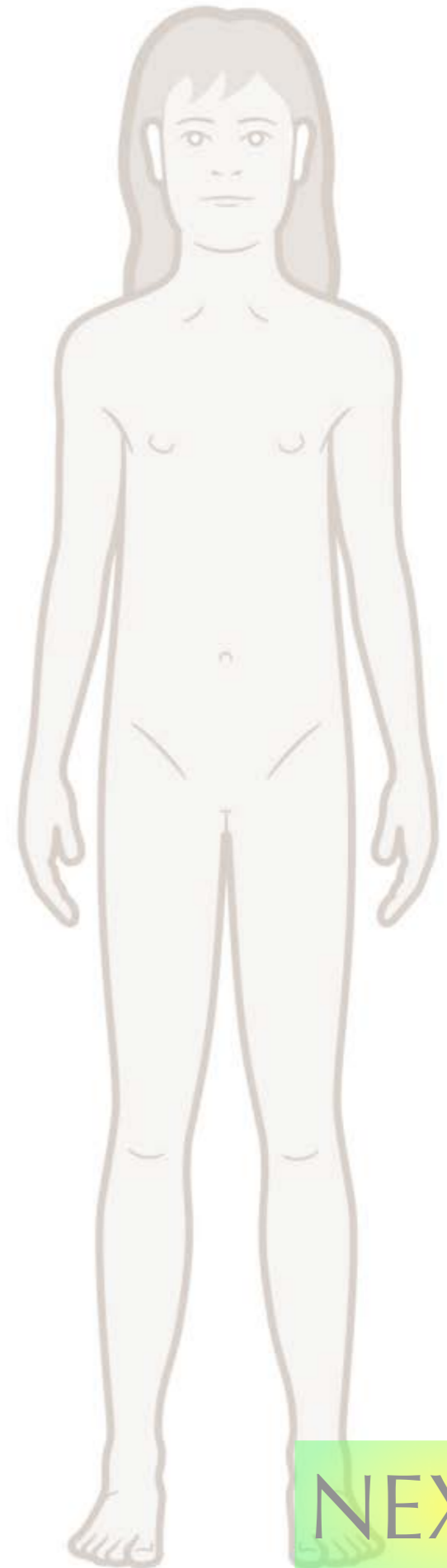
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What happens to girls' bodies?

Girls' and boys' bodies are very similar before puberty. In a few years, their bodies grow and change in quite different ways.

- Ovaries start to grow
- Arms and legs grow longer at first
- Hands and feet get bigger
- The rest of your body has some catching up to do!
- Pubic hair starts growing around the vulva and hair grows under the armpits
- Breasts start to grow



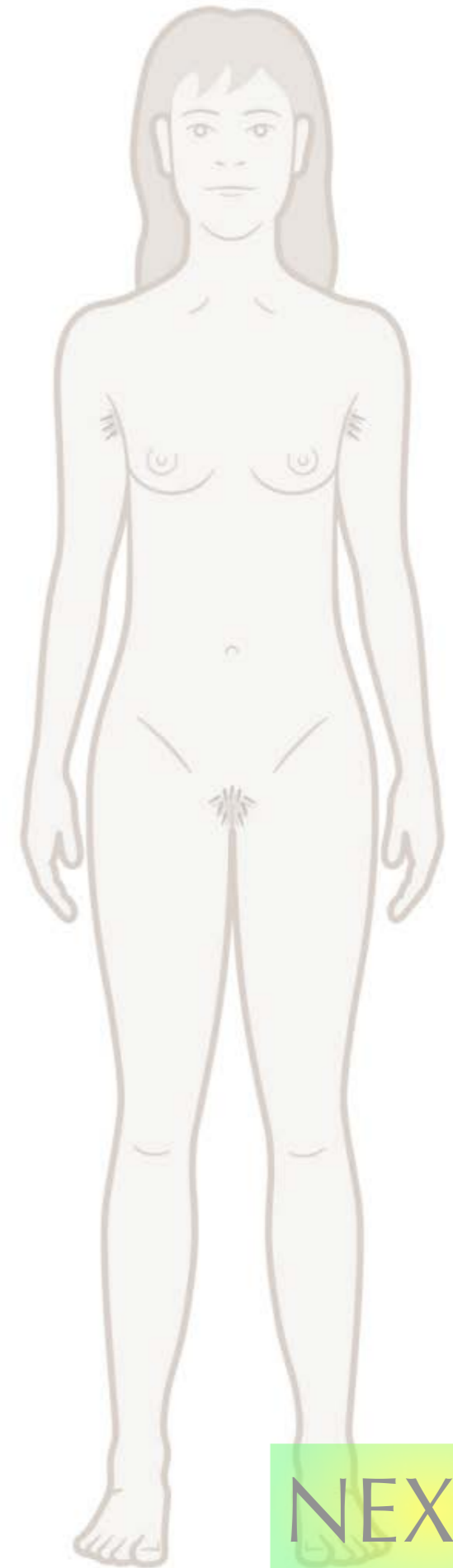
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What happens to girls' bodies?

After those initial changes, the rest of the body begins to catch up, usually around the ages of 12-13.

- The rest of the body grows longer and heavier
- Pubic hair thickens
- Breasts continue to grow
- Hips start to widen
- Ovaries start to release eggs; girls start to have periods (this can happen at any time after girls begin puberty)



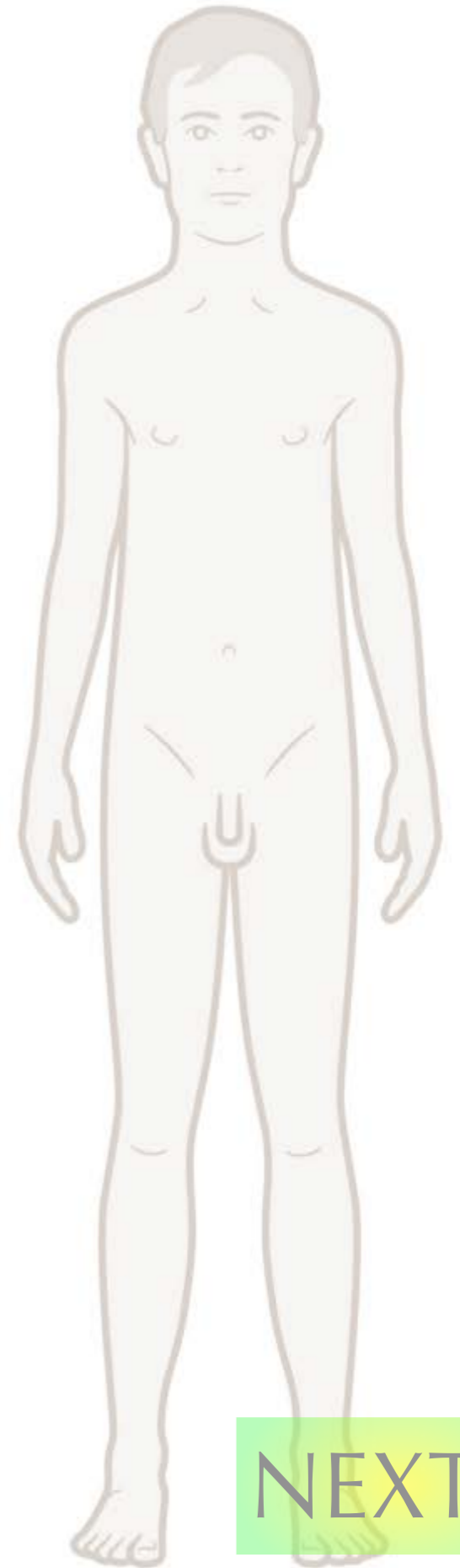
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What happens to boys' bodies?

Boys usually start puberty a little later than girls, but they do catch up! To begin with, the only changes are inside the body.

- Testicles start to develop and mature; after a while, they gradually start to grow larger
- Arms and legs grow longer first, then the body grows longer and heavier
- Pubic hair starts to grow around the penis
- Existing body hair may start to grow thicker



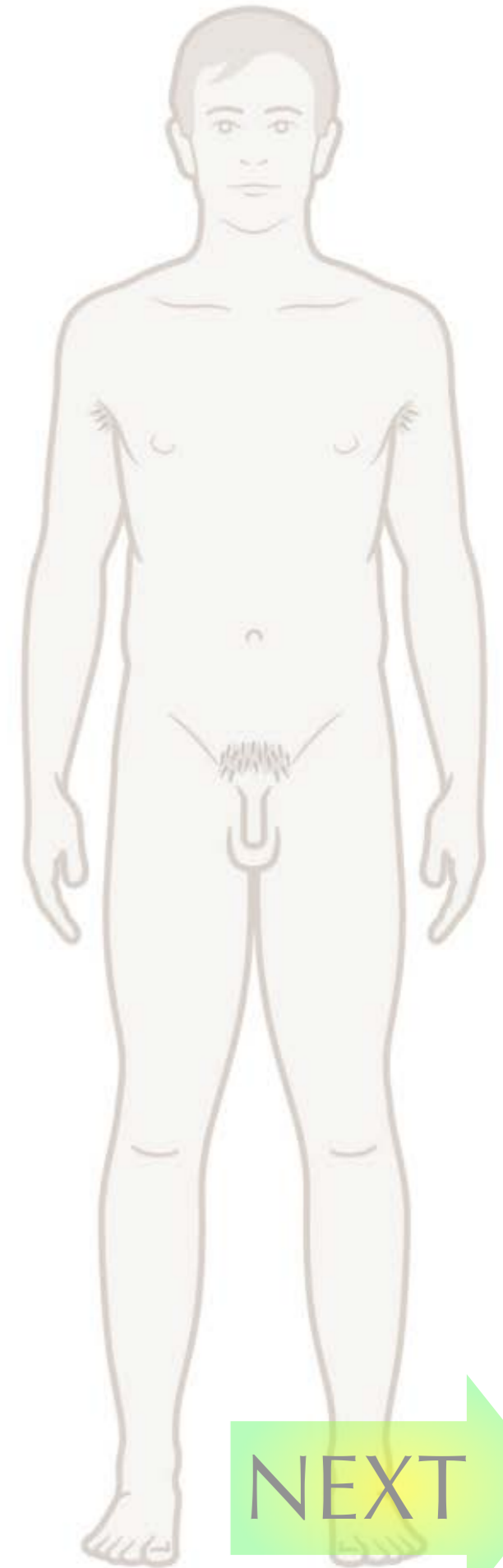
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What happens to boys' bodies?

Gradually, boys' bodies change to become more like men's bodies. The physical changes that can be seen usually take longer than in girls.

- The body thickens and broadens
- Pubic hair thickens and hair grows under the armpits
- Voice gets deeper
- Testicles grow larger and start to produce sperm
- Penis starts to grow longer and thicker



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Those are some big changes!
Here's what else you need to know.

The body starts to produce more sweat.

Boys might start to ejaculate sperm and semen from their penis.

Girls might discharge clear or whitish fluid from their vagina.

Skin and hair gets greasier - this can cause spots.

All those changes can make girls and boys feel a bit confused and emotional.

Girls can start having periods at any time after they start puberty.

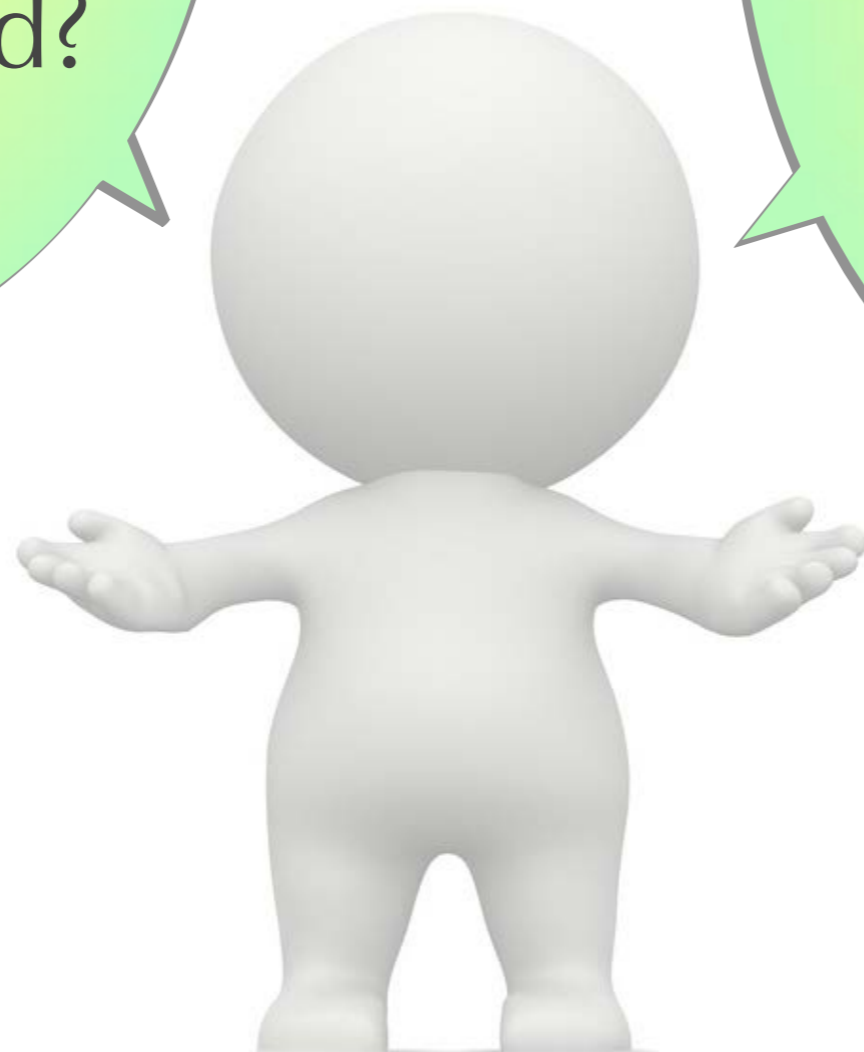
Puberty is a normal part of growing up and it happens to everyone. It can start and finish at different times for different people. This is normal too.

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Phew! What a lot of information! How much have you remembered?

Today we will be labelling the parts of the body that start to change in boys and girls as well as describing what those changes are.



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Plenary

It's not just your body that changes during puberty - your brain has a growth spurt too!

During puberty, some amazing changes happen in your brain. New connections grow as your brain 're-wires' itself in preparation for adulthood.



By the time it has finished growing, your ability to make sense of the world around you, make decisions and learn new things will be better than ever!

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