

Often girls with these two 'mosaic' karyotypes (a mixture of different karyotypes) go through the changes of puberty automatically so they do not need oestrogen treatment. However, because they still have some TS cells in their bodies, their periods might stop after a while. If you are in this group and this happens to you, it is important that you speak to your Consultant because you will need oestrogen treatment.

When will my breasts begin to develop?

In most girls it will take a few months after starting oestrogen treatment before you see any changes in breast development - but it will happen!

It is important that the dose of oestrogen is increased gradually because this is happens in girls who do not have TS, and it will give your breasts as 'natural' a shape as possible.

Why do i still develop pubic hair?

It can sometimes be confusing, when you have been told that you will not go through puberty without medicine, and you then start to develop pubic hair. This happens because the hormones that cause pubic hair to grow - called androgens - are not made in the ovaries but in another part of the body called the adrenal glands and these are not affected by TS.

Will I have periods like my friends?

When the oestrogen dose is high enough, your uterus will start to react by thickening its lining every month. If you just let the uterus thicken and thicken you may become unwell, so it is important that you 'shed' the lining of your uterus regularly, as your period. To do this you need to take another medicine called Progesterone. This will probably be a tablet that you take for a few days each month and then you will have a period and probably bleed for a few days.

Do periods hurt?

Sometimes, when you have your period, you might get a sore tummy. This is something that can happen to all women when they have a period, not just women who have TS. You can take a painkiller like paracetamol or ibuprofen that you buy from a pharmacist. A warm bath or holding a warm hot-water bottle over your tummy may also help. If none of these work, you should speak to your Doctor who can prescribe a stronger painkiller for you.

What happens after pubertal induction?

When all the changes to your body have taken place, you might think that you do not need to take oestrogen any more. But you do! It is important to keep taking oestrogen and progesterone for most of your adult life, probably until you are about 60 years old.

There are many different products available and you should discuss the options with your Consultant or your Endocrine Nurse Specialist. You might find that the first product you try suits you well but if not, you can always try different products until you find one that you are happy with. Whichever product you choose, you must keep taking it as instructed. If you stop taking it, you will not feel unwell but it could have a serious effect on your heart, bones and uterus, and the success of any future fertility treatment you might want to have.

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Pubertal Induction

FACTSHEET ONE

Pubertal Induction

You may have heard the phrase 'Pubertal Induction' and wondered what it means or wanted to ask questions about it. This leaflet answers some of the commonly asked questions. It should also help you have a discussion with your Consultant and/or Endocrine Nurse Specialist in order to decide what is best for you. You also might want to discuss it with someone that you are comfortable talking to, perhaps your Mum, Gran, aunt or sister.

What is puberty?

Puberty is the name given to the changes that occur in a young person's body and helps them develop from a girl to a woman, or from a boy to a man. In most girls and boys, the changes happen automatically, sometime between the ages of 8 and 13 years in girls and 9 and 14 years in boys.

Most females have two small organs deep inside their abdomen called ovaries which produce the hormone oestrogen. A hormone is a chemical that takes messages around the body and tells it how to work. As a girl gets older, the amount of oestrogen produced by her ovaries increases and makes her breasts and uterus (or womb) develop and gives her a womanly shape. An egg is released by the ovaries each month and travels into the uterus where it can be fertilised by a man's sperm. At the same time, the lining of the uterus gets thicker, so if the egg is fertilised it can attach itself to the uterus wall and develop into a baby. However, if the egg is not fertilised this thicker lining of the womb is not needed so it leaves the body as her monthly bleed or 'period'. This is also called 'menstruation'.

Why are girls with Turner syndrome different?

The ovaries in girls with Turner syndrome (TS) do not make oestrogen or produce eggs and so puberty does not occur automatically. Treatment with oestrogen is required to make the changes happen and this is called 'pubertal induction'.

Why is pubertal induction important?

It is important that you do not feel different from other girls your age and so the Consultant may prescribe oestrogen treatment to induce puberty. Although your ovaries might not work like other girls', you do have a uterus; oestrogen helps your uterus to grow and develop so if, at some point in the future, you decide that you want doctors to try and help you to have a baby with an egg donated by another woman, then your uterus will be ready.

Oestrogen also has a very important part to play in keeping your heart and bones healthy.

What is the best age to induce puberty?

It is not clear what is the best age to start oestrogen treatment. In the UK currently many doctors advise between 12 and 14 years of age.

You may prefer that your pubertal changes take place at a similar age to your friends who do not have TS. Those girls have ovaries that produce oestrogen in tiny amounts from an early age, but it is difficult to make an oestrogen tablet or patch in such tiny doses.

High doses of oestrogen can cause your bones to stop growing. If you are given oestrogen treatment at too young an age it could slow your growth too early. Oestrogen treatment should be given as early as possible so that you develop at the same time as your friends, your heart, bones and uterus get the benefit, and you grow as tall as possible. It is a balancing act! Talk to your Consultant and your family so you can decide what age is best for you.

How is oestrogen given?

Oestrogen is usually given as a tablet called Ethinylestradiol, starting with a very low dose every day and increasing to bigger doses over several years until you reach the dose that you will stay on as an adult. Different ways of giving the small doses of oestrogen have been developed including a patch that you stick onto your skin (a bit like a plaster). This may be a very interesting way of giving oestrogen but it is still a new method and more tests need to be done to see if it is suitable for young women with TS.

Do all girls with TS have oestrogen treatment?

Most girls with TS do not make oestrogen or release eggs, and they need pubertal induction.

A very small number (around 1 in every 10) of girls with TS have ovaries which do produce some oestrogen and might produce eggs. Usually, these girls have a 45,X/46,XX or a 45,X/47,XXX karyotype. If you are not sure what your karyotype is, your Consultant or Endocrine Nurse Specialist should be able to tell you.