

Paediatric Diabetes

Puberty

During puberty, when you are growing and developing into a young person, you release more hormones into your body. These hormones prevent your insulin doing its job properly and you will experience high blood glucose results. You may also eat and sleep more which helps you to grow, but also affects your blood glucose results.

Insulin is a hormone and therefore if you did not have diabetes, you would release more insulin into your body. Do not be worried if you must increase your insulin doses by double or more while you are going through puberty.

It is very important to monitor your blood glucose closely while going through puberty. This is to check when you need to increase your insulin, and that you have increased it enough. Without the extra insulin, you will not grow and develop to your full potential, as insulin is needed to give you the energy required to grow properly.

Watch your blood glucose patterns and trends and adjust your insulin doses accordingly. Ask your diabetes team for help and advice and obtain a copy of the information on adjusting insulin for your regimen.

High blood glucose is normal during puberty so do not worry, but you will need to adjust your insulin doses to manage it well.

When puberty ends, you will notice your blood glucose decreasing and you will have to decrease your insulin doses accordingly. Ask your diabetes team for help and advice about this.

Because hormones are released during menstruation and pregnancy,



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young women will have to adjust their insulin due to fluctuating blood glucose more frequently than young men.

Puberty in girls

The first sign that puberty is underway in girls is when breast buds appear. The average age for this to occur is 10 to 11 years of age but can be as early as 8 years or as late as 13 years.

As soon as breasts begin to develop, girls begin to grow much more rapidly (this is why girls are often taller than boys at 11 to 12 years of age). It is at this time that you might notice your insulin requirements increasing. The hormones that make you grow quickly at this time make your body more resistant to insulin and therefore your doses may go up quite quickly.

Over the next year or so your breasts will gradually increase in size and may be sore at times. You will also develop more pubic hair and hair under your arms and the smell of your body sweat may change.

Periods usually start when you have quite a lot of breast development. The average age is 12.5 years, but some girls start as early as 9 years and others not until they are 16 or 17 years. If we think you are developing too early or too late, we will discuss this with you at clinic and may organise some further tests to check all is well.

Girls usually grow for a further 12 to 18 months after they start their periods, but not as fast as before starting them. Once you have had regular periods for two years, it is unlikely you are going to grow any more and you may notice your insulin requirements falling.

Periods are often irregular in the first year or two after you start. They may also be quite heavy or uncomfortable. Please tell us if you are having any problems with them as there is help available for period problems.

It is very important that your diabetic control is as good as possible during puberty to make sure you have the best growth during this time.

Puberty in boys

The first sign that puberty is underway in boys is when their testicles begin to enlarge. This usually begins at the age of 11 to 12 years but can be as early as 10 years or as late as 14 years. (If puberty begins at 9 years or less, it is unusual, and we will do further investigations to make sure there is no serious cause for it happening so early)

However, unlike girls, boys do not begin to grow more quickly when puberty starts - they need to be moderately far into their development before they reach their growth spurt (usually at 13-14 years of age).

As puberty progresses testicles gradually enlarge, genitalia become more developed and pubic and underarm hair develop along with a change in body odour. Boys have a bigger growth spurt than girls and continue growing for longer, which is why men end up taller than women. However, if your diabetic control is poor, you will not have such a good growth spurt.

The voice breaking and the need to shave happen towards the end of puberty. Also, at this time you will notice more muscle development, for example broadening of your shoulders.

All the hormones that make you grow quickly in puberty make your body more resistant to insulin, and your insulin doses may need to increase significantly.

If you do not have any signs that puberty is happening by the age of 13 in girls or 14 years in boys, we will arrange some tests to check that the hormones that control puberty are being made adequately, and if necessary, we can help with your development. Please tell us if you have any queries or concerns about your development as we will be able to help or reassure you.

Contact your diabetes nurse specialist on 024 7696 7230 if you have any questions.

The Trust has access to interpreting and translation services. If you need this information in another language or format, please contact 024 7696 7230 and we will do our best to meet your needs.

Patient Information

The Trust operates a smoke free policy.

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