

The BSPED is one of the affiliated specialty groups of the Royal College of Paediatrics and Child Health.

The society aims to improve the care of children and young people with endocrine disorders and diabetes mellitus, by bringing together professionals from a range of disciplines.

Please contact your local nurse or hospital doctor if you need more advice about your child's condition.

Produced by members of the BSPED Growth Disorders Special Interest Group and reviewed by the BSPED Clinical Committee.

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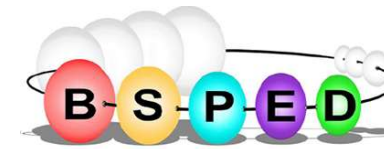
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**British Society for
Paediatric Endocrinology
and Diabetes**

BSPED Growth Disorders Special Interest group (GD-SIG)

Growth Hormone Treatment in Children – Understanding the Pros and Cons

**Information sheet for patients, families,
parents, and carers**



1 What is a hormone?

Hormones are chemical messengers. They are made in glands and travel around the body in the bloodstream. Hormones affect how other organs and systems in the body work.

2 What is growth hormone?

Growth hormone, also called somatropin, is produced in the pituitary gland just below the brain. In children this chemical messenger tells the bones in the spine and legs to grow, increasing height over time.

3 How is growth hormone treatment given?

Growth hormone (GH) is given as a daily or weekly injections into the skin. The best time to give GH is in the evening, as this mimics the body's natural pattern of producing more GH during sleep. However, it can be taken at any time of the day (or day of the week if it's a weekly dose) that suits you best, the most important thing is that it is given regularly, and doses are not missed. Children on GH supplementation are reviewed approximately twice a year with blood tests usually once or twice a year.

4 Which conditions might require growth hormone treatment in childhood?

In the UK six conditions that can be associated with poor growth are licensed for GH therapy. These are:

- Growth hormone deficiency
- Turner syndrome
- Children born small for gestational age with a height that has not caught up by 4 years of age
- Prader-Willi syndrome
- Chronic renal insufficiency
- SHOX deficiency
- Noonan Syndrome (not NICE approved)

5 What are the pros of growth hormone treatment?

- Helps a child achieve their full height potential
- Improves lean muscle mass and strength
- Regulates metabolism in children with GH deficiency
- Reduces excess fat under skin and around the abdominal organs
- Simple method of administration with minimal discomfort
- Choice between daily or weekly injections (weekly injections GHD patients only)
- A variety of devices for children and families to choose from
- Published evidence suggests that GH treatment is safe (SAGhE study):

- No evidence of GH increasing the risk of new cancers
- No other long-term risks in later life in children treated with GH

5 What are the cons of growth hormone treatment?

- Daily or weekly injections with no current needle-free option
- Does not work for everyone. Children on GH treatment are regularly monitored to see if they are responding. If there is no effect after a year, treatment may be discontinued
- Treatment is long-term until a child has reached their final height,
- In some cases, lifelong GH treatment may be needed
- Annual blood tests are required as part of monitoring
- Like all drugs there are some side effects. These are very rare, and it can be difficult to predict who gets them. These include irritation at the injection site, allergic reactions, diabetes, hypothyroidism, an abnormal curve of the spine (scoliosis), slipped upper femoral epiphysis (SUFE), joint pains and increased pressure in the brain. The child's specialist team should be informed if they experience:
 - Persistent headaches
 - Hip/groin/knee pain or limping
 - Excessive thirst or passing urine
 - Snoring/pauses in breathing

Resources

www.childgrowthfoundation.org

www.magicfoundation.org

www.yourhormones.info