

Understanding NICE guidance

Information for people who use NHS services

Insulin pump therapy for diabetes

NICE 'technology appraisal guidance' advises on when and how drugs and other treatments should be used in the NHS.

This leaflet is about when **continuous subcutaneous insulin infusion** or **'insulin pump' therapy** should be used to treat people with diabetes mellitus in the NHS in England and Wales. It explains guidance (advice) from NICE (the National Institute for Health and Clinical Excellence). It is written for people with diabetes but it may also be useful for their families or carers or anyone with an interest in the condition.

It does not describe diabetes or the treatments in detail – a member of your healthcare team should discuss these with you. Some sources of further information and support are on the back page.



This may not be the only possible treatment for diabetes. Your healthcare team should talk to you about whether it is suitable for you and about other treatment options available.

What has NICE said?

Continuous subcutaneous insulin infusion or 'insulin pump' therapy is recommended as a possible treatment for adults and children 12 years and over with type 1 diabetes mellitus if:

- attempts to reach target haemoglobin A1c (HbA1c) levels with multiple daily injections result in the person having 'disabling hypoglycaemia', or
- HbA1c levels have remained high (8.5% or above) with multiple daily injections (including using long-acting insulin analogues if appropriate) despite the person and/or their carer carefully trying to manage their diabetes.

Insulin pump therapy is recommended as a possible treatment for children under 12 years with type 1 diabetes mellitus if treatment with multiple daily injections is not practical or is not considered appropriate. Children who use insulin pump therapy should have a trial of multiple daily injections when they are between the age of 12 and 18 years.

'Disabling hypoglycaemia' is when hypoglycaemic episodes occur frequently or without warning so that the person is constantly anxious about another episode occurring, which has a negative impact on their quality of life.

Insulin pump therapy should only be started by a trained specialist team. This team should include a doctor who specialises in insulin pump therapy, a diabetes nurse and a dietitian (someone who can give specialist advice on diet). This team should provide structured education programmes and advice on diet, lifestyle and exercise that is suitable for people using insulin pumps.

Insulin pump therapy should only be continued in adults and children 12 years and over if there has been a sustained improvement in the control of their blood glucose levels. This should be shown by a decrease in the person's HbA1c levels or by the person having fewer hypoglycaemic episodes. Such goals should be set by the doctor through discussion with the person or their carer.

Insulin pump therapy is not recommended for people with type 2 diabetes mellitus.

Diabetes mellitus

Diabetes mellitus (or more commonly known as diabetes) is a condition in which the amount of glucose (sugar) in the blood is too high because the body cannot use it properly. Insulin is a hormone that the body produces to control the level of glucose in the blood.

There are two types of diabetes. Type 1 diabetes occurs when there is not enough insulin produced by the body. Type 2 diabetes occurs when the body cannot use the insulin it produces properly (also known as insulin resistance) and is often associated with obesity.

Both types of diabetes cause a person's blood glucose levels to rise above what is considered normal (known as hyperglycaemia) and can have harmful effects. In the long term, hyperglycaemia can cause damage to a person's eyes, kidneys or nerves, and can also cause heart disease, stroke or circulation problems in the legs or feet.

Treatment for diabetes can also cause blood glucose levels to become too low (known as hypoglycaemia), causing the person to become anxious, dizzy or disoriented, have convulsions or become unconscious.

Continuous subcutaneous insulin infusion or 'insulin pump' therapy

Continuous subcutaneous insulin infusion is often called 'insulin pump' therapy. The pump is a small device worn outside the body, which continuously delivers insulin into the body through a very thin tube or needle inserted under the skin. The insulin can be delivered at a set rate throughout the day, which can be increased when it's needed, for example, at meal times.

What does this mean for me?

When NICE recommends a treatment, the NHS must ensure it is available to those people it could help, normally within 3 months of the guidance being issued. So, if you have type 1 diabetes, and your doctor thinks that continuous subcutaneous insulin infusion or insulin pump therapy is the right treatment for you, you should be able to have the treatment on the NHS. Please see www.nice.org.uk/aboutguidance if you appear to be eligible for the treatment but it is not available.

Insulin pump therapy was not shown to be more effective than existing treatments for type 2 diabetes and therefore it was not shown to represent value for money. This means that for the time being it should not be prescribed routinely on the NHS. Your doctor should talk to you about other treatment options available to you.

More information

The organisations below can provide more information and support for people with diabetes. Please note that NICE is not responsible for the quality or accuracy of any information or advice provided by these organisations.

- Diabetes UK, Careline 0845 120 2960
www.diabetes.org.uk
- INPUT, 01590 677911
www.input.me.uk
- Insulin Dependent Diabetes Trust, 01604 622837
www.iddtinternational.org
- Insulin Pumpers UK, editor@insulin-pumpers.org.uk
www.insulin-pumpers.org.uk
- Juvenile Diabetes Research Foundation, 020 7713 2030
www.jdrf.org.uk

NHS Direct online (www.nhsdirect.nhs.uk) may be a good starting point for finding out more. Your local Patient Advice and Liaison Service (PALS) may also be able to give you further advice and support.

About NICE

NICE produces guidance (advice) for the NHS about preventing, diagnosing and treating different medical conditions. The guidance is written by independent experts including healthcare professionals and people representing patients and carers. They consider all the research on the disease or treatment, talk to people affected by it, and consider the costs involved. Staff working in the NHS are expected to follow this guidance.

To find out more about NICE, its work and how it reaches decisions, see www.nice.org.uk/aboutguidance

This leaflet and other versions of the guidance aimed at healthcare professionals are available at www.nice.org.uk/TA151

You can order printed copies of this leaflet from NICE publications (phone 0845 003 7783 or email publications@nice.org.uk and quote reference N1635).

We encourage NHS and voluntary sector organisations to use text from this leaflet in their own information about diabetes.