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## Artificial Pancreas: UK Aims to Transform Diabetes Care



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England is set to introduce an innovative solution known as an artificial pancreas for tens of thousands of individuals with type 1 diabetes to better manage their condition. This technology combines a subcutaneous glucose sensor with an insulin pump to autonomously regulate insulin doses. Starting this month, the NHS plans to reach out to potential beneficiaries, though it may take up to five years for all eligible individuals to receive it due to device availability and the necessity for staff training.

### **Trials and Benefits of the Hybrid Closed-Loop System**

Trials of this hybrid closed-loop system have shown enhancements in quality of life and a decrease in potential long-term health issues. Last year, the National Institute of Health and Care Excellence (Nice) endorsed the NHS's adoption of this technology. In the UK, approximately 300,000 people, with 29,000 being children, grapple with type 1 diabetes, where the pancreas doesn't generate sufficient insulin, a critical hormone for converting food into energy. These individuals must meticulously monitor blood glucose levels and administer insulin regularly through injections or pumps. The artificial pancreas aims to automate this process, closely resembling the pancreas's function, albeit requiring mealtime food intake data for precise operation. This advancement seeks to mitigate life-threatening glucose fluctuations and improve overall blood sugar management, reducing the likelihood of complications such as heart disease, vision impairments, and kidney issues. Scotland has also embraced this technology, while Wales and Northern Ireland are considering its implementation.

### **Artificial organ brings life-changing impact**

Gemma Lavery, a 38-year-old from Plymouth who participated in an NHS trial, lauds the device for its life-altering impact. She notes its efficacy in managing stress-related glucose spikes and ensuring stable blood sugar levels, allowing her uninterrupted sleep and a more consistent diabetes management experience. Prof Partha Kar, an NHS specialist in diabetes, celebrates this technological breakthrough as a boon for the type 1 diabetes community, emphasising its dual benefits in medical care and enhancing life quality. Dr Clare Hambling, NHS England's diabetes clinical director, echoes this sentiment, stating the technology has the potential to revolutionise the lives of those with type 1 diabetes. She urges individuals experiencing symptoms like frequent urination, excessive thirst, fatigue, and unexplained weight loss to seek medical attention for potential diabetes diagnosis.

Colette Marshall, CEO of Diabetes UK, expresses enthusiasm for this significant advancement in diabetes care. Nice's approval of the NHS's five-year implementation plan targets specific groups, including children, pregnant women, and individuals with an HbA1c level of 58 mmol/mol (7.5%) or higher, recommending the technology's utilisation for these categories.

**Source:** [BBC](#)

**Image Credit:** [iStock](#)

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