

Australian boy, 4, gets 'world first' artificial pancreas

January 22 2015

A four-year-old Australian boy has been fitted with an artificial pancreas in what researchers said was a world first treatment for managing type 1 diabetes.

Xavier Hames became the first patient following [clinical trials](#) to use the new device, which looks like an mp3 player and is attached to his body using several tubes inserted under the skin.

The [insulin pump](#) system is meant to replace the need to closely manage the impact of the disease—which occurs when people do not produce insulin, a hormone that regulates blood sugar—such as through daily injections.

"The technology mimics the biological function of the pancreas to predict low [glucose levels](#) and stop [insulin delivery](#)," Western Australia's health department said in a statement issued late Wednesday.

"This in turn avoids the serious consequences of low glucose such as coma, seizure and potential death."

It was not clear when the procedure was carried out.

The Juvenile Diabetes Research Foundation (JDRF), a non-profit organisation which funded the research that led to the procedure, said the technology tracks glucose levels and stops insulin delivery up to 30 minutes before a predicted hypoglycaemic attack happens.

The attacks are sparked by low glucose levels and mostly take place at night when patients may not be able to react or recognise the potentially fatal episode, said Professor Tim Jones of Perth's Princess Margaret Hospital for Children, where Hames was fitted with the system.

"This device can predict hypoglycaemia before it happens and stop insulin delivery before a predicted event," Jones, one of the lead doctors involved in the research, said in a statement.

"This coupled with the fact that the pump automatically resumes insulin (delivery) when glucose levels recover is a real medical breakthrough."

Hames's mother Naomi said the device had already improved the life of her son, who has been suffering from the disease since he was 22 months old.

"Having the pump gives us the reassurance that Xavier is safe when we are all asleep at night, and during the day," she said.

"It is also waterproof meaning that he can enjoy water sports and activities as much as his friends and family."

The device was developed after five years of clinical trials at the Princess Margaret Hospital for Children and at other Australian hospitals. It is reported to cost about Aus\$10,000 (US\$8,100).

© 2015 AFP

Citation: Australian boy, 4, gets 'world first' artificial pancreas (2015, January 22) retrieved 15 May 2024 from <https://medicalxpress.com/news/2015-01-australian-boy-world-artificial-pancreas.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private

study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.