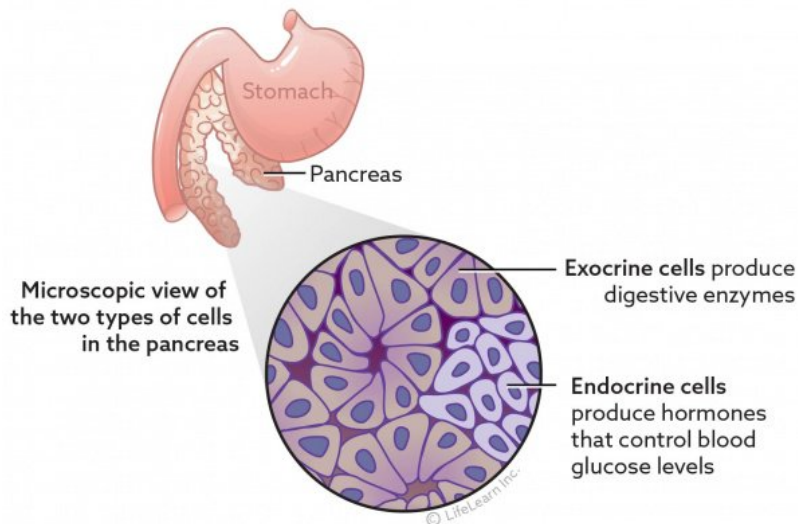


## Research update: Pancreas function in young children before diabetes develops

There are two parts of the pancreas. One group of cells makes insulin which is affected in type 1 diabetes. The other group of cells makes enzymes that digest our food that we eat every day.



We are discovering that these cells are also affected in type 1 diabetes – this does not affect the digestion of food in any way for the person with diabetes but it may be an important change to understand why diabetes develops and how to stop it progressing.

The Australian ENDIA study [www.endia.org.au](http://www.endia.org.au) is led from our unit at WCH in Adelaide and follows 1500 babies who have a mother, father, sister or brother with type 1 diabetes. In this study we followed 28 children who had developed the very first stage of type 1 diabetes in the first 3 years of their lives and compared them with 57 children of the same age who had not developed type 1 diabetes.

We showed for the first time that the pancreas made less of the digestive enzymes in the young children who developed type 1 diabetes, before they had started to make less insulin<sup>1</sup>. This did not affect their health in any way but gives us more understanding of changes in the pancreas before type 1 diabetes develops. This gives us more clues in very young children who progress to type 1 diabetes to try to find ways to slow down its development.



Toby watches a virtual reality video while he has a blood test in the ENDIA study

1) Penno M and ENDIA Study Group. Changes in pancreatic exocrine function in young at-risk children followed to islet autoimmunity and type 1 diabetes in the ENDIA study; *Pediatric Diabetes*, 2020.