



Winter Newsletter

The International Study Group of Pediatric Pancreatitis: In search for a cuRE (INSPPIRE)

Issue 8 February 2024

Our Team: 25 Centers Worldwide

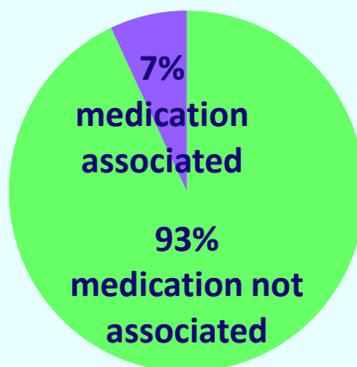
You are helping us to learn more about pancreatitis!

In 7% of INSPPIRE-2 subjects' pancreatitis was associated with taking a medication.

Pediatric Drug-Associated Pancreatitis Reveals Concomitant Risk Factors and Poor Reliability of Causality Scoring: Report from INSPPIRE Morinville et.al. (J Pediatr Gastroenterol Nutr. 2023 Oct 1 ;77(4):540-546. doi: 10.1097/MPG.0000000000003898. Epub 2023 Jul 17.)



The INSPPIRE-2 study looks for factors that cause or are associated with pancreatitis. In children, pancreatitis can occur after taking certain medications.



Percentage of INSPPIRE-2 subjects with medication associated pancreatitis

Types of medications associated with pancreatitis:

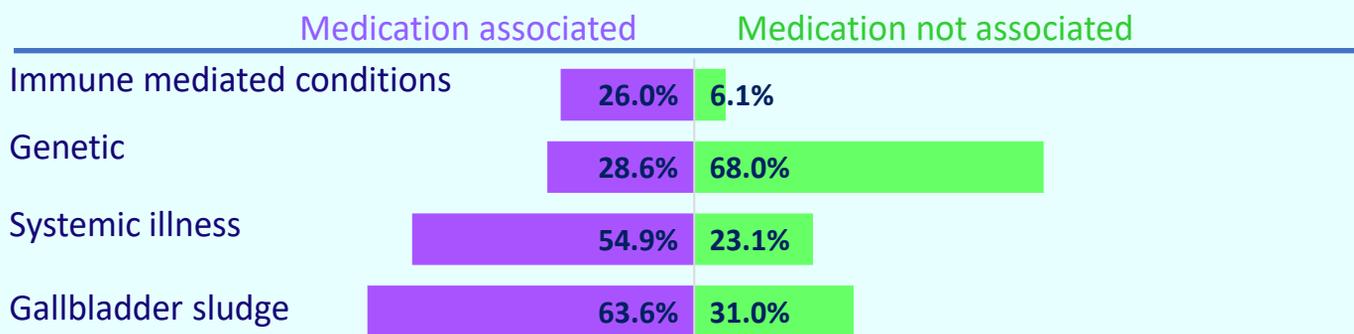
Immuno-suppressive and anti-cancer
Antimicrobials (antibiotics, antifungals)
Antiseizure

Antacids
Hormones



Talk to your doctor if you are concerned about any medications you take.

Other risk factors occur at a different rate in children with medication associated pancreatitis:



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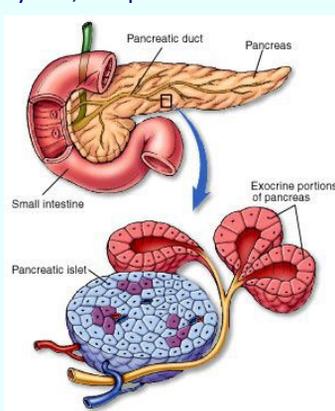
Professor
University of Minnesota



Why do children with pancreatitis get diabetes?

The pancreas is an organ that is important to make enzymes for the digestive system to help the body to digest food. In addition to these enzymes, the pancreas also

makes a hormone called insulin that comes from special clusters of cells in the pancreas called islets. Islet means small island, and these tiny islands of cells include the "beta cells" that makes insulin and are distributed throughout the pancreas. Insulin is an important hormone that helps us utilize the energy from our food by helping the body store glucose, or sugar. Every cell in the body needs glucose to keep the body energized and insulin is the key that allows the transfer of energy into the cells.



People who have pancreatitis can have irritation, scar tissue, and inflammation throughout the pancreas. When this occurs often, over time, this irritation and inflammation can also damage the cells that produce insulin and cause them to make less insulin. When there is not enough insulin around, glucose can't get into the cells of your body easily, and the glucose remains in the blood causing high blood sugar. High blood sugar is what defines diabetes.

There are different reasons people can develop diabetes. Some people have an autoimmune condition called Type 1 diabetes, where the immune system kills the insulin producing cells causing insulin insufficiency. Some people have a condition called Type 2 diabetes which is a problem of insulin resistance where the body makes insulin, but it does not work well to store the glucose. People with pancreatitis can get what's called Type 3c diabetes or what's also known as pancreatitis induced diabetes or

pancreatogenic diabetes. Sometimes even talking about this form of diabetes with your doctor is confusing because it does not have a single name, but we will call it Type 3c here. Type 3c happens when children or adults with pancreatitis can't make enough insulin because the islets (that produce insulin) are damaged by the scarring and inflammation that occurs from the pancreatitis. In some cases people with Type 3c diabetes can also have insulin resistance in combination with decreased insulin production.

What is the risk for my child with pancreatitis to get diabetes?

It can be challenging to predict or know which people with pancreatitis might go on to develop diabetes. About one in every 14 children with pancreatitis will also have diabetes, and the risk is greater in adults, with about 1 out of every 3 adults with chronic pancreatitis having diabetes. The risk in children can be higher if you have a surgery that removes part of your pancreas or a total pancreatectomy with islet autotransplantation.

Other factors that have been shown to increase risk for diabetes in adults with chronic pancreatitis are older age, obesity, male sex, non-white race and tobacco use. Less is known about the factors that influence the development of diabetes in children with chronic pancreatitis. Some children with chronic pancreatitis also have risk for type 1 diabetes, or have smaller pancreas size, or markers of high triglycerides (fat molecules in the blood).

What should I do to watch for diabetes?

Children with diabetes may have symptoms of thirst and frequent urination, particularly if blood sugars are very high (over about 180 mg/dL). This happens because the body tries to get rid of the high glucose in the blood by filtering it out through the kidney into the urine. People may also experience hunger, fatigue, blurry vision, or weight loss as a result of not being able to utilize the glucose or energy from their food. A simple blood or urine test can be done to detect elevated glucose in the body. It is important that if you notice these symptoms in your child, to see your primary care or urgent care doctor right away. In some cases, if the blood sugar is elevated for a long time without treatment, some people can get a condition called Diabetic Ketoacidosis which can cause vomiting, nausea, shortness of breath and confusion. This can be a life-threatening condition and if you are concerned about these symptoms in your child, please go to the Emergency Room.

Site name:

PI:

Research coordinator:

Tel:

How to collect a stool sample

It is really important to check how your pancreas is doing by looking for an enzyme in your poop

Don't worry. It's really easy.



1st you put this plastic hat in the back of the toilet.

Then you go to the bathroom. Make sure to catch the poop in the hat but no pee.



Next you fill half of the jar with stool. Put the jar in a bag.

It's important to take the sample to the lab on the same day that you collect it.

You can place it in the refrigerator until you take it there.



Then take the sample to the lab.

Great job! That's it. Your doctor will call you and let you know the results.

