

# The Gut Detective:

## Billy's Journey with Inflammatory Bowel Disease

Hi, I'm Billy!

One day, my tummy started to hurt really badly. I also lost some weight and had diarrhea

My mum and dad took me to the GP...

The GP suspected that there was a problem with my gut...

So I was sent to the Hospital.

There, I had a special procedure called an endoscopy

During an Endoscopy, a tiny Camera, which is attached to a tube, is used to look inside the digestive system. The endoscope can also take biopsies, which are small samples that can later be analyzed in a lab. For the endoscopy I got special medicine which made me sleep so I didn't feel a thing

The gut is a part of our digestive system, which absorbs the nutrients from the food we eat

Mouth

Esophagus

Stomach

Small intestine

Large intestine

Macrophages (immune cells)

Using a microscope, the doctors can look at the samples. In my samples there were lots of angry immune cells. Usually they are the calm policemen of the gut and get rid of bad bacteria, but in my gut they are damaging my healthy cells as well! This is called inflammatory bowel disease, also known as IBD

Because I had problems as a very young boy, the scientists also looked at my DNA

DNA is the tiny set of instructions for our bodies that makes us unique. It looks kind of like a spiral staircase. DNA is in every cell of our bodies, and tells it what to do. Sometimes, there are mistakes in our DNA, and even one tiny mistake can make you very sick. These mistakes are called mutations.

Once they knew what was wrong, the doctors could find treatment to help me!

Now I feel so much better!