

And with her new teeth, she can take on more solid foods. Digestion starts in the mouth. Teeth grind up the food. Then special glands under the tongue pump out saliva to help break down and lubricate the food on its 12-hour, 13-foot journey through the gut. It'll pass from the stomach into the coils of the small intestine before finally passing into the large intestine. Waves of contracting muscle keep the food moving, a process called peristalsis. These contractions are so powerful we can even eat upside down. For the first time, a new camera shows a high-definition view of how food travels through our bodies and into our stomachs. Food enters the stomach through a hole at the top. The stomach is a bag of muscle that churns, squashes and squeezes food into liquid. At the same time, acids break the food down. The stomach walls protect themselves with a lining of mucus. Without it, the acids could digest parts of the stomach itself, causing stomach ulcers. About an hour later, the stomach squeezes the broken-down food out through a tiny hole called the pyloric sphincter. The food enters the small intestine - an 11-foot coil of tube where we absorb most of the nutrients. The interior wall of the small intestine is lined with millions of microscopic projections called villi. These increase the surface area of the gut, making it easier to absorb nutrients. First, the pancreas pumps out a juice that neutralizes stomach acid. Then bile from the liver breaks down the fats into tiny droplets. Smaller droplets are easier for the intestine to absorb. After an hour and a half, the small intestine has absorbed most of the nutrients from the food. It's time for what remains to move on. It enters the large intestine through this - the ileocecal sphincter - a valve that keeps our food from going back where it came from. What's left is a mix of waste food and dead cells from the walls of the gut. The large intestine's main job is to extract water from it. Lots of bacteria live here, too, but it isn't because of an infection. We actually need them. They produce enzymes that break down complex carbohydrates in our food - carbohydrates we couldn't otherwise digest. Finally, after about twelve hours, we expel what's left of our first meal.