

Food's travels through the body ^[1]

Dear Alice,

Some friends and I were debating how long it takes for food to digest within our bodies, and then the total time it stays until it is excreted. Please settle this issue for us.

Union of Uranus

Answer

Dear Union of Uranus,

It sounds like you've got two questions — one, the total time it takes to digest food, and two, the amount of time it takes for the food to go from the colon to “your anus.” Simply put, it varies based on your sex assigned at birth and what and how much you eat, among other factors. There's also been some research to suggest that those assigned male at birth may spend less time digesting in the large intestine than those assigned female at birth. All in all, it can take up to 53 hours for food to go from ingestion to excretion. To understand why it takes that long, it's helpful to start with an overview of what happens at each step of the digestive process:

1. The eater spots a delicious-looking bite to eat and the salivary glands kick into gear, priming the digestive system for any food to pass through.
2. Food is chewed, lubricated, and partially digested by saliva in the mouth, and then the tongue helps to move it to the back of the throat so it's ready to be swallowed.
3. Chewed and partially digested food is then moved to the esophagus. The muscles in the wall of the esophagus go through a process called peristalsis — waves of muscle contraction — that help move the food to the stomach.
4. Once in the stomach, the food is churned and mixed with bile (a fluid that helps with digestion) to help break it down into even smaller pieces. The time required for this process can vary based on the amount of food you've consumed.
5. The food processed in the stomach is then passed along to the small intestine where the pancreas, liver, and gallbladder break down the carbohydrates, proteins, and fats into chemical mixtures used by the body. The remaining nutrients are absorbed through the small intestine wall. Whatever is left — usually water, electrolytes, and waste — are transported to the large intestine.

6. The large intestine absorbs the water from the remaining food and helps form soft, structured stool. The muscles in the large intestine squeeze to separate the stool into smaller chunks that are then pushed to the lower part of the long intestine and rectum.
7. As the rectum gets full and the walls stretch, it signals to your body that the unuable remains of what was once delicious food you consumed needs to be excreted.

So, as you can see, the digestive system involves a long and complicated process that takes quite a bit of time. Exactly how long it takes is up to the individual's digestive system, not to mention what they eat. This process may also be sped up or slowed down due to a number of causes (such as illness or what food was eaten), which may result in diarrhea or constipation, respectively. All this to say, just as whatever comes out of your anus is unique to you, so too is the time it takes to gets there.

Bon appetit!

Alice!

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Published date:

Sep 25, 1998

Last reviewed on:

May 31, 2019

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