

<b>Topic</b>	Health
<b>Phenomenon</b>	Digestion
<b>Experiment</b>	Gastrointestinal tract
<b>Available material</b>	1 balloon a few drinking straws illustration of the gastrointestinal tract (digestive system) tubular bandage
<b>Additional material</b>	chairs a few cups with a little drinking water some fruit/foods knife a few plates sand an old sock
<b>Preparation for experiment</b>	Prepare a few plates containing pieces of fruit or food snacks on your own or with the children. Fill the balloon with sand.

### Research question

What happens to the food that we eat?

### Description

This experiment should not be conducted in small groups, but together with the entire group of children.

What route does food follow through our body? Ask the children what they already know about it.

Have the children lie face-down on a chair; their upper bodies and heads should hang down relaxed. In this position, have them try to chew and swallow a piece of food. Does it work, or does the food slip back into their mouths? The children can also try to drink from a cup upside down using a straw.

How food passes through the esophagus into the stomach and then through the intestine can be shown in a model: The children push the stuffed balloon through the leg of the sock (= esophagus) into the foot of the sock (= stomach). Can the stuffed balloon simply slip backward? The long route through the intestine can be illustrated using the tubular bandage. The children take the stuffed balloon out of the sock (= stomach) and push it through the four-meter-long tubular bandage (= intestine). In addition, a child can lie down on his or her back, and a second child tries to place the entire four-meter-long tubular bandage on the first child's belly. This will give the children an impression of the length of the intestine and the digestive process.

To illustrate the gastrointestinal tract, you can also use the illustration of the gastrointestinal tract (digestive system).

## **Explanation**

Digestion starts in the mouth. Here, food is moistened, roughly chopped, and the digestion of carbohydrates starts. After this, the food does not simply fall into the esophagus; it is transported through it to the stomach through muscle movements. The stomach is an expanding “bag”, and is also the body's “mixer”. In the stomach, the puréed food is mixed with hydrochloric acid and kneaded into a pulp. The pulp passes through the intestine. The length of the intestine depends largely on the type of diet. Meat-eaters have a shorter intestine, while plant-eaters have a longer one. Humans are omnivores, and the ratio of the full length of the intestine to the length of the body is about 6:1. In children, the entire intestine is roughly four to five meters long. The intestine is made up of several sections, the most important of which are the large and the small intestines.