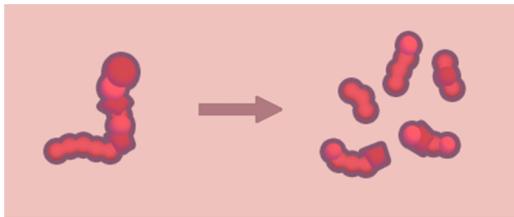


## The stomach

### THE GASTRIC GLANDS

The stomach has gastric glands integrated in its walls. These glands secrete highly acidic gastric juices that dissolve nutrients. Gastric juices contain **hydrochloric acid**, which acidifies food and destroys some of the bacteria in the stomach. They also contain many **enzymes** that trigger chemical reactions.



To give you an example, **pepsin** breaks down **proteins** into small **chains of amino acids** called **peptides**.

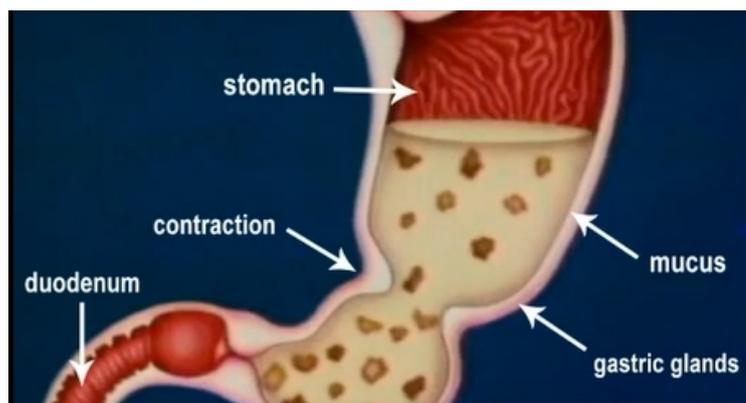


There is also **gastric lipase**, whose main role is to attack **complex lipids** and transform them into **simpler lipids**.

A gel-like substance called **mucus** covers the stomach wall. This mucus protects the stomach against the acidity of gastric juices, otherwise it would digest itself! The burning feeling in your throat after vomiting is due to the acidity of gastric juices.

### MIXING

The stomach wall can contract and this mechanical action is called **mixing**. These contractions ensure that the bolus of food is mixed thoroughly with the gastric juices.



The **bolus of food** is transformed in a semi-fluid mass called **chyme**. This is highly acidic and is where some of the complex nutrients are transformed into simpler ones. The content of the stomach is continuously emptied out into the duodenum. In certain cases, chyme can remain in the stomach for 3 or 4 hours.

## GASTRIC GLANDS IN DIGESTIX



In DIGESTIX, the 'gastric glands' and 'mixing' are both digestive pieces associated with the stomach. Gastric glands have two targets in the game. They transform proteins into small chains of amino acids, and complex lipids into simpler lipids.

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## The stomach

---

The stomach has gastric glands connected to each other by a duct.

- True
- False

---

What do gastric glands secrete?

- Gastric sugar
- Gastric juices
- Gastric garlic

---

Which characteristic enables gastric juices to dissolve food?

- Their bitterness
- Their acidity
- Their sweetness

---

What is the acid in gastric juices called?

- Chlorophyll acid
- Chaotic acid
- Hydrochloric acid

---

The enzymes in gastric juices trigger...

- physical reactions
- chemical reactions
- organic reactions

---

What lines the inside of the stomach?

- Mucus
- Mucosa
- Muscat

---

The stomach wall can contract to mix food together.

- True
- False

---

What do we call the mechanical process that combines food together?

- Churning
- Mixing
- Maxing

---

What do we call the pulp of partly digested food in the stomach?

- Chyme
- Karma

---

Chyme is...

- neutral
- alkaline
- acidic

## Answers

---

The stomach has gastric glands connected to each other by a duct.

- True**  
*Wrong! That's not the right answer.*
- False**  
*Well done! Your gastric glands are integrated into the wall of your stomach.*

---

What do gastric glands secrete?

- Gastric sugar**  
*Wrong! That's not quite right.*
- Gastric juices**  
*Well done! That's right.*
- Gastric garlic**  
*Wrong! Nice try, though.*

---

Which characteristic enables gastric juices to dissolve food?

- Their bitterness**  
*Wrong! That's not the right answer.*
- Their acidity**  
*Well done! This digestive fluid is very acidic.*
- Their sweetness**  
*Wrong! That is not the right answer.*

---

What is the acid in gastric juices called?

- Chlorophyll acid**  
*Wrong! Good try.*
- Chaotic acid**  
*Wrong! Try again!*
- Hydrochloric acid**  
*Well done! That's right.*

---

The enzymes in gastric juices trigger...

- physical reactions**  
*Wrong! That's not right.*
- chemical reactions**  
*Well done! That's right.*
- organic reactions**  
*Wrong! Try again!*

---

What lines the inside of the stomach?

- Mucus**  
*Well done! This mucus protects your stomach from attack by acidic substances.*
- Mucosa**  
*Wrong! That's not the right answer.*
- Muscat**  
*Wrong! Try again!*

---

The stomach wall can contract to mix food together.

- True**  
*Well done! That's right.*
- False**  
*Wrong! Try again!*

---

What do we call the mechanical process that combines food together?

- Churning**  
*Wrong! Try again!*
- Mixing**  
*Well done! Food is mixed to make breaking it down easier.*
- Maxing**  
*Wrong! That's not the right answer.*

---

What do we call the pulp of partly digested food in the stomach?

- Chyme**  
*Well done! That's right.*
- Karma**  
*Wrong! That's not the correct answer.*

---

Chyme is...

- neutral**  
*Wrong! Try again!*
- alkaline**  
*Wrong! That's not the right answer.*
- acidic**  
*Well done! Chyme contains food that has been transformed and is very acidic.*