

4. The digestive system

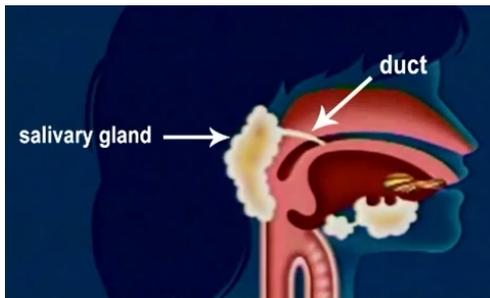
4.1 The organs in the digestive tract

4.1.3

The digestive glands

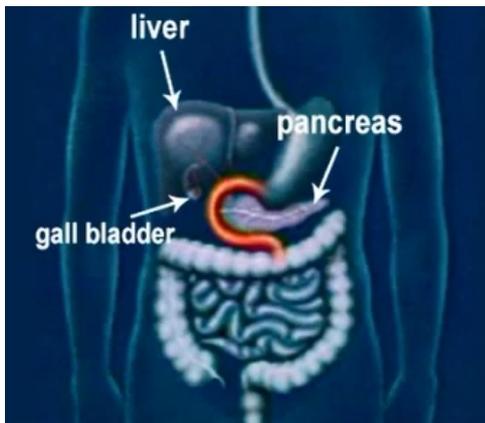
APPENDED DIGESTIVE GLANDS

Digestive glands produce the chemical substances found in the various organs of the digestive tract. The term **chemical substance** may seem vague, but there is one we all know well – **saliva**.



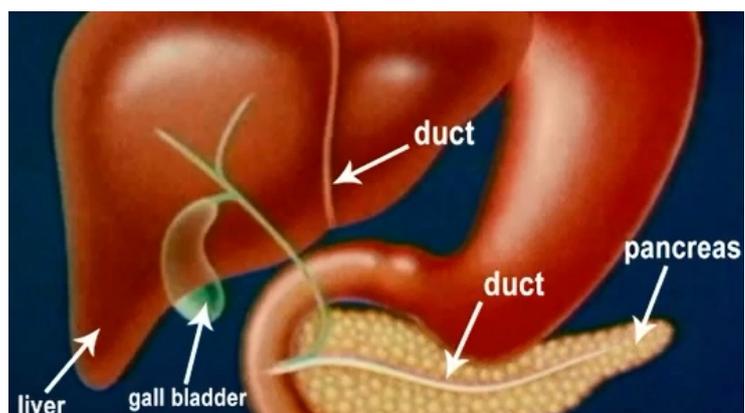
Saliva is secreted by digestive glands called **salivary glands**. The mouth is not the only organ in the digestive tract to have glands. Although some organs, such as the oesophagus and large intestine, do not have any glands at all.

Salivary glands are appended to the digestive tract by ducts.



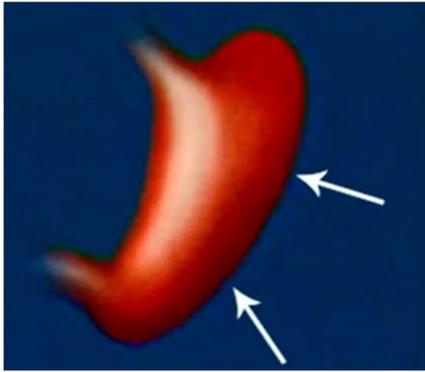
The **pancreas**, **liver** and **gall bladder** are examples of other 'appended' glands.

If we zoom in a bit, we can see that these glands are also appended to the digestive tract via ducts.

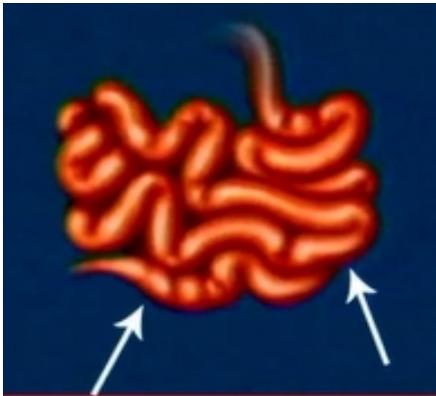


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INTEGRATED DIGESTIVE GLANDS



There are other digestive glands that are not depicted because they are directly integrated into the wall of the digestive tract. These do not have ducts. **Gastric glands**, for example, are integrated into the stomach wall.

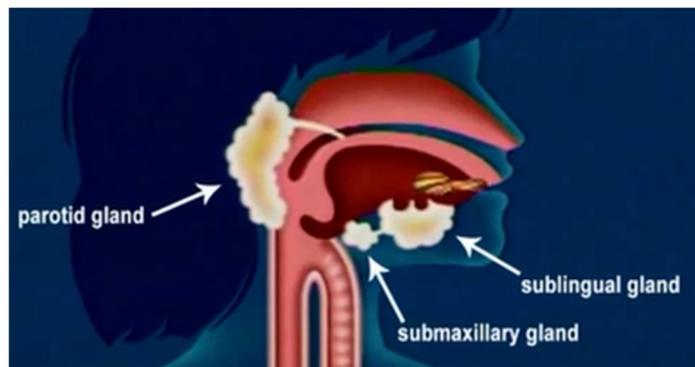


Likewise, **intestinal glands** are integrated into the wall of the small intestine.

GLANDS IN DIGESTIX

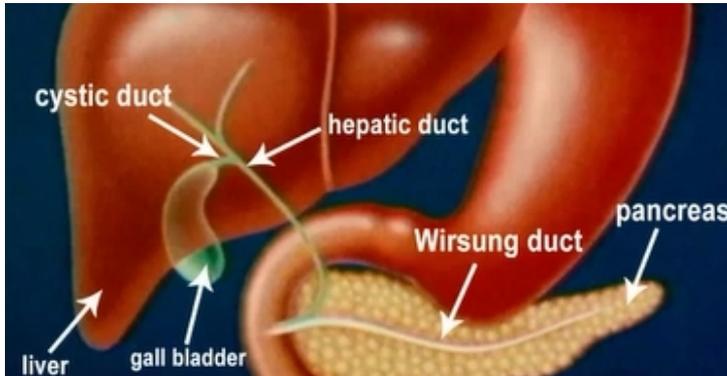
DIGESTIX has several kinds of game pieces, including digestive glands. The game differentiates between appended glands and integrated glands by asking you to place the pieces either at a distant slot connected by a duct or directly on the wall.

We could go into much more detail. For example, a dentist will have extensive knowledge of the anatomy of the mouth and its salivary glands, along with the classification and composition of teeth. There are three salivary glands called the **parotid gland**, the **sublingual gland** and the **submaxillary gland**.



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The ducts also have specific names. The pancreatic duct is called the **Wirsung duct**, after the German anatomist who discovered it. The duct that leaves the liver is the **hepatic duct**.



The body's anatomy is quite complex. Although the human body is well organised, researchers continue to study it because we do not yet know all its secrets!

The digestive glands

The oral cavity plays a part in the digestive process.

- True
- False

Which of the following does not play a role in digestion?

- Saliva
- Lips
- Teeth

What is the name of the organ that produces saliva?

- A salivary pocket
- A salivary gland
- A salivary vein

The body has only one gland.

- True
- False

Which organ does not have any accessory glands?

- The stomach
- The mouth
- The large intestine

Which of the following is not an accessory gland?

- The pancreas
- The liver
- The oesophagus

Accessory glands play no part in digestion.

- True
- False

With which organ is the gallbladder associated?

- The liver
- The mouth
- The large intestine

We now know everything there is to know about the human body.

- True
- False

Answers

The oral cavity plays a part in the digestive process.

True

Well done! That's right. Most of the action in your mouth is mechanical (using your teeth), but it is also chemical, when your saliva comes into play.

False

Wrong! That's not the right answer.

Which of the following does not play a role in digestion?

Saliva

Wrong! Your saliva moistens food and helps digest the starch.

Lips

Well done! That's right.

Teeth

Wrong! The mechanical action of your teeth ensures the first step in transforming food.

What is the name of the organ that produces saliva?

A salivary pocket

Wrong! That's not quite right.

A salivary gland

Well done! That's right.

A salivary vein

Wrong! Try again!

The body has only one gland.

True

Wrong! Try again!

False

Well done! Your body has many glands, such as your salivary glands, your pancreas, your liver...

Which organ does not have any accessory glands?

The stomach

Wrong! Your gastric glands are integrated into the wall of your stomach.

The mouth

Wrong! Don't forget your salivary glands!

The large intestine

Well done! That's right.

Which of the following is not an accessory gland?

The pancreas

Wrong! The pancreas is an accessory gland.

The liver

Wrong! The liver is an accessory gland.

The oesophagus

Well done! Your oesophagus is an organ of your digestive tract.

Accessory glands play no part in digestion.

True

Wrong! That's not right.

False

Well done! Your accessory glands produce chemical substances which help digestion.

With which organ is the gallbladder associated?

The liver

Well done! That's right.

The mouth

Wrong! Your salivary glands are associated with your mouth.

The large intestine

Wrong! Your large intestine does not have any accessory glands.

We now know everything there is to know about the human body.

True

Wrong! That is not correct.

False

Well done! There is still a lot to be discovered.
