

Zoology

4th semester

MUHAMMAD HABIB



Smithsonian

Question # 3 of 5 (Start time: 06:47:27 PM, 31 December 2021)

The structures which do not contribute to digestion are the:

Select the correct option

☐	c. Buccal cavity
☐	a. Esophagus
☐	d. Both Esophagus and Pharynx
☐	b. Pharynx



Type here to search



Question # 2 of 5 (Start time: 11:10:46 AM, 01 January 2022)

Which of the animals swallow pebbles to facilitate grinding of food:

Select the correct option

☐	All
☐	Sparrow
☐	Fowl
☐	Pigeon

ZOO302 - Animal Form & Function-II (Quiz 2)

Question # 4 of 5 (Start time: 06:48:44 PM, 31 December 2021)

Which of the following substances stimulate pancreatic juice production:

Select the correct option

- | | |
|-----------------------|-----------------|
| ☐ | d. HCl |
| ☐ | b. Secretin |
| ☐ | a. Gastrin |
| ☐ | c. Enterokinase |

ZOO302 - Animal Form & Function-II (Quiz 2)

Question # 5 of 5 (Start time: 06:50:11 PM, 31 December 2021)

Which of the following statements is incorrect?

Select the correct option

- | | |
|-----------------------|--|
| ☐ | c. Segmentation mainly occurs in small and large intestine |
| ☐ | b. Peristalsis is a voluntary activity |
| ☐ | d. Segmentation occurs due to rhythmic contraction of longitudinal muscles |
| ☐ | a. Peristalsis is one way motion |

ZOO302 – Animal Form & Function-II (Quiz 2)

Question # 5 of 5 (Start time: 11:13:28 AM, 01 January 2022)

Which of the following enzymes digests proteins into peptides and amino acids?

Select the correct option

☐	d. Nuclease
☐	c. Lipase
☐	b. Chymotrypsin
☐	a. Amylase

Which of the following is the hardest part of the tooth?

Select the correct option

☒	Enamel
☐	Cementum
☐	Pulp
☐	Dentine

12/31/21, 6:46 PM
Question # 2 of 5 (Start time: 06:46:16 PM, 31 December 2021)

The innermost layer of the GI tract is the:

Select the correct option

☐	Muscularis interna
☐	Muscularis externa
☐	Submucosa
☐	Mucosa



Type here to search



Select the correct option

☐	Pulp
☐	Enamel
☐	Dentine
☐	Cementum

Question # 1 of 5 (start time: 05:47:40 PM, 01 January 2022)

After bolus formation it is pushed back of the mouth by the action of:

Select the correct option

☐	a. Tongue
☐	c. Palate
☐	b. Muscles of the pharynx
☒	d. Tongue and Muscles of the pharynx

What of the following chemicals is released by the pancreas during and just after a meal?

Select the correct option

☐	Glucagon
☐	Pepsin
☐	Glycogen
☒	Insulin

Click to Show Answer & Move to Next Question



Sageer

Yesterday, 6:01 PM



The pancreatic duct opens into:

Select the correct option

☐	Ileum
☐	Duodenum
☐	Stomach
☐	Jejunum

Question # 2 of 5 (Start time: 06:11:35 PM, 01 January 2022)

All the following are ruminant mammals i.e. chew their cud, except:

Select the correct option

☐

Sheep

☐

Horse

☐

Deer

☐

Cows

Click to Save A

Question # 1 of 5 (start time: 06:07:08 PM, 01 January 2022)

The hormones that control the activity of GI tract are:

Select the correct option

☐	a. Gastrin
☒	d. Both Gastrin and Secretin
☐	b. Secretin
☐	c. Renin

Question # 5 of 5 (Start time: 06:18:31 PM, 01 January 2022)

Which of the following cells are found in the stomach that secretes pepsinogen?

Select the correct option

☒	c. Chief cells
☐	a. Parietal cells
☐	d. Stomach cells
☐	b. Goblet cells

Question # 4 of 5 (Start time: 06:05:35 PM, 01 January 2022)

Non-ruminant herbivores, eat some of their own feces to cope up the deficiency of vitamins. Examples

Select the correct option

☐ Rabbit

☐ Mice

☒ Mice and Rabbit

☐ Horse

Click to See

Question # 1 of 5 (**Start time: 06:07:08 PM, 01 January 2022**)

The hormones that control the activity of GI tract are:

Select the correct option

☐	a. Gastrin
☐	d. Both Gastrin and Secretin
☐	b. Secretin
☐	c. Renin

Question # 4 of 5 (Start time: 06:16:20 PM, 01 January 2022)

During the process of swallowing the opening of the wind pipe is closed by:

Select the correct option



☒	b. Epiglottis
☐	d. Uvula
☐	a. Glottis
☐	c. Soft palate

Click to Save Answer &

Which of the following structures is the common passageway for both food and air?

Select the correct option

☐

a. Pharynx

☐

c. Nasals

☐

d. Both a and c

☐

b. Esophagus

Question # 1 of 5 (Start time: 06:26:51 PM, 01 January 2022)

The ruminant stomach provides an opportunity for large numbers of microorganisms to digest:

Select the correct option

☐	Fats
☐	Protein
☐	Starch
☐	Cellulose walls of grass

Click to Save Answer

Question # 3 of 5 (Start time: 06:12:39 PM, 01 January 2022)

Which of the following converts pepsinogen to pepsin in the stomach?

Select the correct option

- | | |
|-----------------------|----------------|
| ☐ | d. Chief cells |
| ☐ | a. Mucus |
| ☐ | c. HCL |
| ☐ | b. Gastrin |

Click to

Select the correct option

☐	Segmentation
☐	Antiperistalsis
☐	Peristalsis
☐	Peristalsis and Segmentation



Question # 4 of 5 (Start time: 06:13:22 PM, 01 January 2022)

Food is ground by means of _____ teeth into smaller pieces.

Select the correct option

☐	Premolars
☒	Molars
☐	Canine
☐	Incisors



+92 312 6322010

Yesterday, 8:49 PM



C200205400: DIL PAZEER AHMED

OO302 - Animal Form & Function-II (Quiz 2)

Question # 1 of 5 (Start time: 08:31:49 PM, 01 January 2022)

When chyme passes from the stomach into duodenum, its acidity stimulates the release of three secretions.

Select the correct option

- | | |
|-----------------------|-----------------------|
| ☐ | a. Digestive enzymes |
| ☐ | c. Bile |
| ☐ | b. Pancreatic enzymes |
| ☐ | d. All a, b, and c |

Click to S

Question # 4 of 5 (start time: 08:35:50 PM, 01 January 2022)

4. Human small intestine has a total surface area of approximately,

Select the correct option

☐	d. 400 m ²
☒	c. 300 m ²
☐	b. 200 m ²
☐	a. 100 m ²



vulms.vu.edu.pk/Qu



BC190408567: ALI HAIDER CHAND

ZOO302 - Animal Form & Function-II (Quiz 2)

Quiz Start Time: 08:2

Question # 4 of 5 (Start time: 08:29:14 PM, 01 January 2022)

Specialized goblet cells that secrete sticky mucus throughout the GI tract is contained in:

Select the correct option



Submucosa



Mucosa



Inner circular muscles



Serosa

Click to Save Answer & Move

Question # 3 of 5 (Start time: 07:51:37 PM, 01 January 2022)

All the following enzymes are produced by pancreas except:

Select the correct option

☐	c. Lipase
☐	a. Amylase
☐	b. Chymotrypsin
☐	d. Pepsin

Spleen, liver and red bone marrow phagocytized RBCs to form:

Select the correct option

☐

Bile

☐

Hemoglobin

☐

Digestive enzymes

☒

Bile Pigments

Click to Save Answer

Question # 4 of 5 (**start time: 08:05:33 PM, 01 January 2022**)

Where is the liver situated in the body?

Select the correct option



Beside the pancreas



Below the diaphragm



Above stomach and Below the diaphragm



Above stomach

Click to See

Question # 5 of 5 (Start time: 07:46:04 PM, 01 January 2022)

The bird's gizzard develops from the

Select the correct option

- | | |
|-----------------------|---|
| ☐ | Posterior part of the stomach and Ventriculus |
| ☐ | Ventriculus |
| ☐ | Anterior part of the stomach |
| ☐ | Posterior part of the stomach |



vulms.vu.edu.pk

BC190408567: ALI HAIDER CHAND

ZOO302 - Animal Form & Function-II (Quiz 2)

Question # 3 of 5 (Start time: 08:28:39 PM, 01 January 2022)

Which of the following mammals is not an omnivore?

Select the correct option



Bears



Raccoons



Sheep



Pigs



Quiz

You

Yesterday, 11:20 AM



vulms.vu.edu.pk/Quiz/QuizQuestion.aspx?ver=4

ZOO302 – Animal Form & Function-II (Quiz 2)**Question # 5 of 5 (Start time: 11:20:26 AM, 01 January 2022)**

The slowest peristalsis occurs in:

Select the correct option



b. Small Intestine



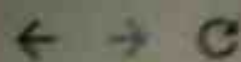
d. Rectum



a. Esophagus



c. Colon



ZOO302 - Animal Form & Function-II (Quiz 2)

Question # 4 of 5 (Start time: 11:19:44 AM, 01 January 2022)

Which of the following cells produces HCL in human stomach?

Select the correct option

☐	a. Beta cells
☐	a. Chief cells
☐	a. Mucous cells
☒	b. Parietal cells

Question # 3 of 5 (Start time: 11:12:08 AM, 01 January 2022)

Which of the following is the longest?

Select the correct option

☒	Small intestine
☐	Large intestine
☐	Esophagus
☐	Stomach

Question # 2 of 5 (Start time: 11:18:02 AM, 01 January 2022)

Pick the incorrect statement.

Select the correct option

☐	a. Most of the mammalian GI tract has the same anatomical structure.
☒	c. Serosa is the innermost layer of GI tract.
☐	b. The submucosa contains connective tissue, blood and lymph.
☐	d. Peristalsis and segmentation are brought about by visceral muscles.

ZOO302 - Animal Form & Function-II (Quiz 2)

Question # 3 of 5 (Start time: 11:19:07 AM, 01 January 2022)

Stomach secretes substances (enzymes, mucus, and hydrochloric acid (HCl) that start the digestion of

Select the correct option

☐	c. Fats
☐	d. Vitamins
☐	a. Carbs
☒	b. Proteins

ZOO302 - Animal Form & Function-II (Quiz 2)

Question # 1 of 5 (Start time: 11:10:02 AM, 01 January 2022)

Which of the following converts pepsinogen to pepsin in the stomach?

Select the correct option

☐	b. Gastrin
☐	d. Chief cells
☐	a. Mucosa
☒	c. HCL

ZOO302 - Animal Form & Function-II (Quiz 2)

Question # 4 of 5 (start time: 07:45:06 PM, 01 January 2022)

Pick the incorrect statement

Select the correct option

☒ c. Serosa is the innermost layer of GI tract.

☐ d. Peristalsis and segmentation are brought about by intestinal muscles.

☐ b. The submucosa contains connective tissue, blood, and lymphatic vessels.

☐ a. Most of the mammalian GI tract has the same anatomical structure along its entire length.

click

Vertebrates

- They emulsify dietary fat, breaking it into small globules (emulsification) on the surface of which the fat digesting enzyme lipase can function.
- RBCs are **phagocytized** to form Bile Pigments in the spleen, liver and red bone marrow.

Vertebrates

Pancreatic Enzymes

- **Pancreatic Amylase** Digests starch into maltos
- **Chymotrypsin**- Digests proteins into peptides and amino acids
- **Lipase**- Digests lipids into fatty acids and glycerol (requires bile salts).
- **Nuclease**- Digests nucleic acids into mononucleotides.

400 / 1320



Gizzard in Vertebrates

- Some fishes, some reptiles such as crocodile, and all birds have a gizzard for grinding up food.
- The bird's gizzard develops from the posterior part of the stomach called the ventriculus.

Digestive System

The Mammalian Digestive System

- The digestive system of an **omnivore** has the mechanical and chemical ability to process many kinds of foods.
- Humans, pigs, bears, raccoons, and a few other mammals are **omnivores**.

The mucosa is the innermost layer, and functions in absorption and secretion.

It is composed of epithelium cells and a thin connective tissue.

The mucosa contains specialized **goblet** cells that secrete sticky mucus throughout the GI tract.

arts and Structure)

- These minute projections are so dense that the inner wall of the human small intestine has a **total** surface area of approximately 300 m^2 —the size of a tennis court.



Vertebrates Part I

- **Parietal cells**, secrete a solution containing HCl.
- **Chief cells** secrete **pepsinogen**, the precursor of the enzyme pepsin.
- Both of the cells are in the pits of the gastric glands.



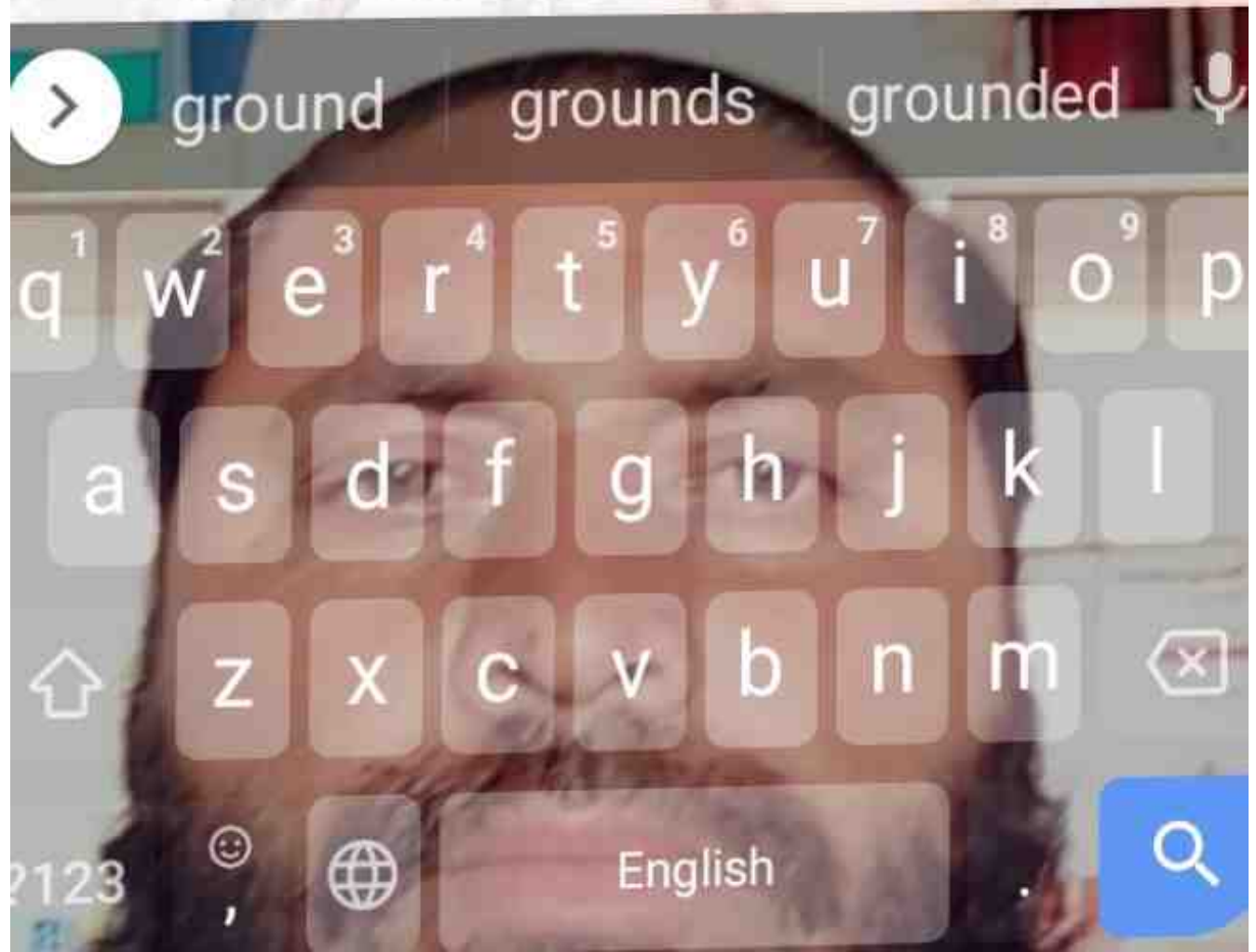
- **The muscularis**, or muscularis externa, consists of an inner circular muscular layer and a longitudinal outer muscular layer.
- The coordinated contractions of these layers is called **peristalsis**, which propels the food through the GI tract.

Mammalian GI Tract

n Oral Cavity

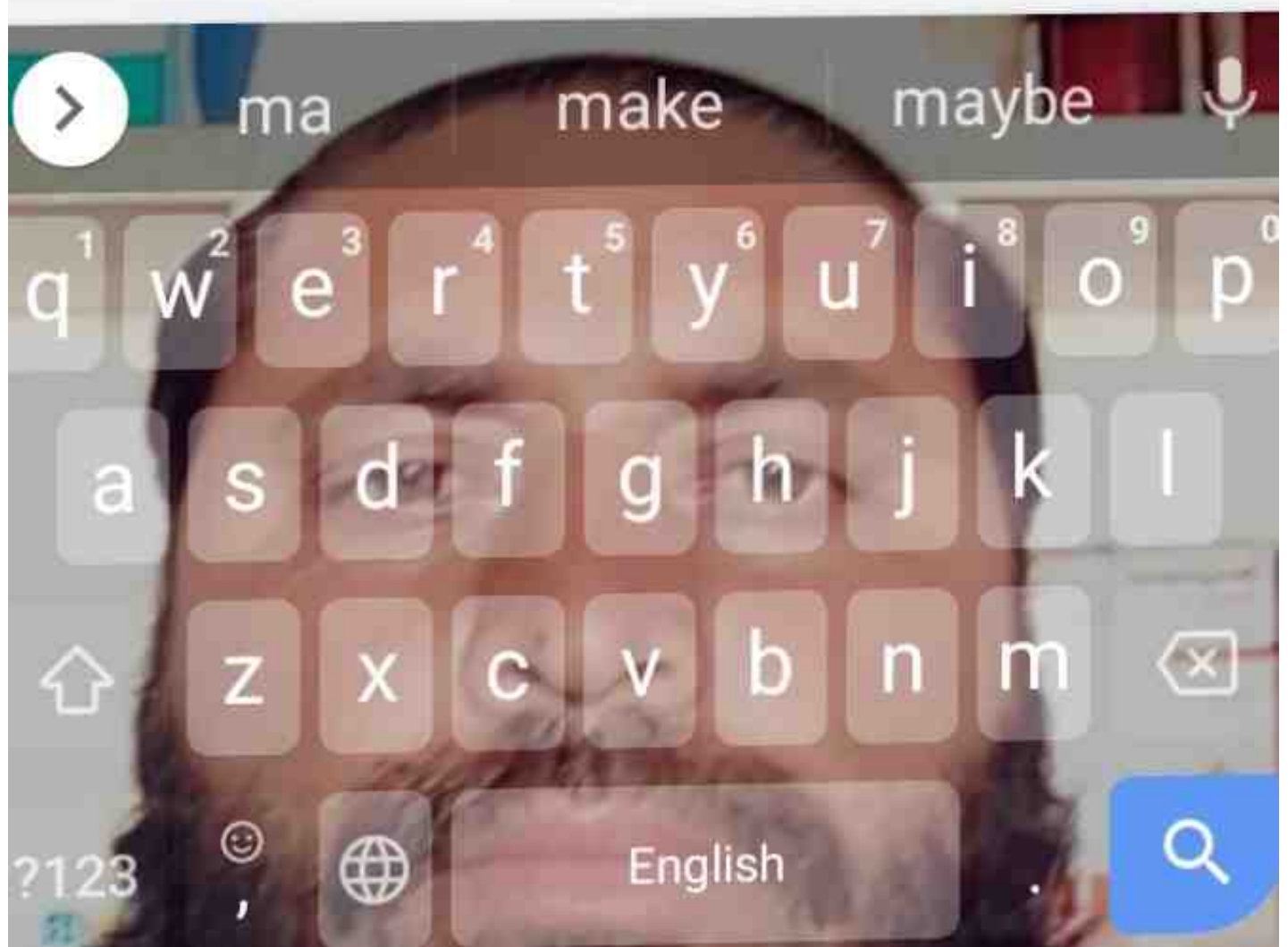
Grinding of food:

- After selection, food is **ground** by means of molar teeth into smaller pieces.
- *This is useful because:*
- Esophagus allows only smaller pieces to pass through
- Smaller pieces have much more surface for the enzymes



Stomach in Ruminants

- **Ruminant mammals** are the animals that “chew their cud,” such as cows, sheep, and deer—show some of the most unusual modifications of the stomach.
- This method of digestion has evolved in animals that need to eat large amounts of food relatively quickly, but can chew the food at a more comfortable or safer location.



Control of GI Tract Motility

Endocrine Control

- The endocrine cells of the gastrointestinal tract also produce **hormones** that help regulate secretion, digestion, and absorption. (Gastrin, Secretin)

Caece in Vertebrates

Caece

- The caecum is a short, pouch-like part of the large intestine between the ascending colon and vermiform appendix.
- In **ruminants** microorganisms attack the food before gastric digestion. but In typical non **ruminant** herbivores microbial action on cellulose occurs after digestion.

Caece in Vertebrates

- Rabbits, horses, and rats digest cellulose by maintaining a population of microorganisms in their unusually large caecum
- Adding to this efficiency, a few non-**ruminant** herbivores, such as mice and rabbits.

Caece in Vertebrates

Role of Pancreas in Digestion

- **The pancreas** is an organ that lies just ventral to the stomach and has both endocrine and exocrine functions.
- Exocrine cells secrete digestive enzymes into the **pancreatic duct**, which merges with the hepatic duct to form a common bile duct that enters the duodenum.

Role of Pancreas in Digestion

- The pancreas also secretes bicarbonate (HCO_3) ions that help neutralize the acidic food residue coming from the stomach.
- Bicarbonate raises the pH from 2 to 7 for optimal digestion.

All

Images

News

Videos

Maps

The dentine forms the main bulk, or core of each tooth and extends almost the entire length of the tooth, being covered by enamel on the crown portion and by cementum on the roots. Dentine is nourished by the pulp, which is the innermost portion of the tooth.



<https://www.britannica.com> › science

dentin | anatomy | Britannica



❓ About featured snippets



 Feedback



<https://www.toppr.com> › question

Pulp cavity is covered by

...the main body of tooth

Intestinal Enzymes:

- **Enterokinase** Converts inactive trypsinogen into active trypsin.
- **Lactase** Digests lactose into glucose and galactose.
- **Maltase** Digests maltose into glucose.
- **Peptidase** Digests polypeptides into amino acids.
- **Sucrase** digests sucrose into glucose and fructose.

Digestion in Small Intestine

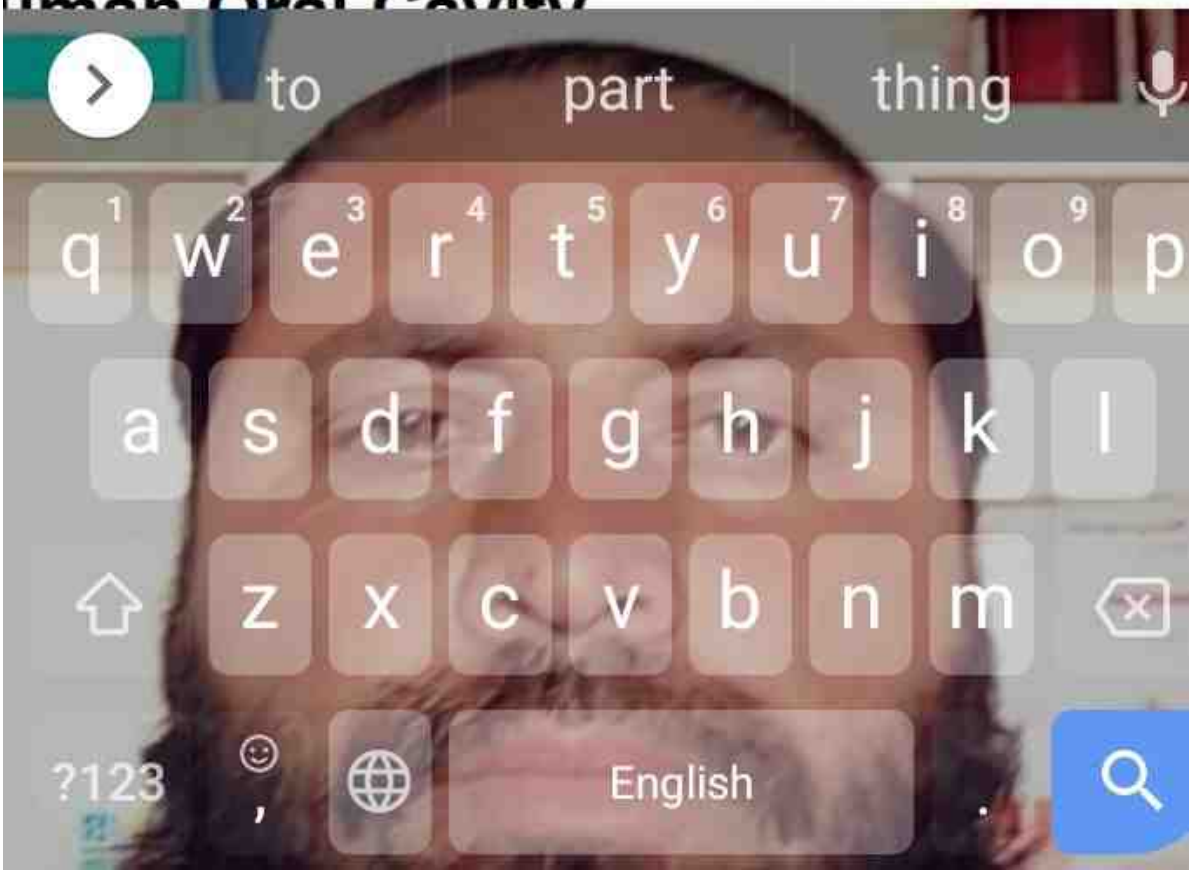
Pancreatic Enzymes

- **Pancreatic Amylase**- Digests starch into maltose
- **Chymotrypsin**- Digests proteins into peptides and amino acids
- **Lipase**- Digests lipids into fatty acids and glycerol (requires bile salts).
- **Nuclease**- Digests nucleic acids into mononucleotides.

Human Oral Cavity

- Mammals can mechanically process a wide range of foods because of their teeth.
- Teeth are covered with enamel (the **hardest** material in the body).
- In mammals there are four types of teeth:
- Incisors, Canine, Premolars and Molars.

Human Oral Cavity





innermost layer of the gastro



All

Images

News

Videos

Maps

Books

The mucosa, or mucous membrane layer, is the innermost tunic of the wall. It lines the lumen of the digestive tract. The mucosa consists of epithelium, an underlying loose connective tissue layer called lamina propria, and a thin layer of smooth muscle called the muscularis mucosa.

 <https://training.seer.cancer.gov/str...>



General Structure of the Digestive System - SEER Training



About featured snippets



Feedback

People also ask



What are the layers of gastrointestinal tract?



- Some fishes, some reptiles such as crocodile, and all birds have a gizzard for grinding up food.
- The bird's gizzard develops from the posterior part of the stomach called the ventriculus.

Gizzard in Vertebrates

- Grain-eating birds **swallow pebbles** (grit) which are often retained in the gizzard to facilitate the grinding process grains.

Gizzard in Vertebrates

n Vertebrates Part I

- **Parietal cells**, secrete a solution containing **HCl**.
- **Chief cells** secrete pepsinogen, the precursor of the enzyme pepsin.
- Both of the cells are in the pits of the gastric glands.

to

me

is

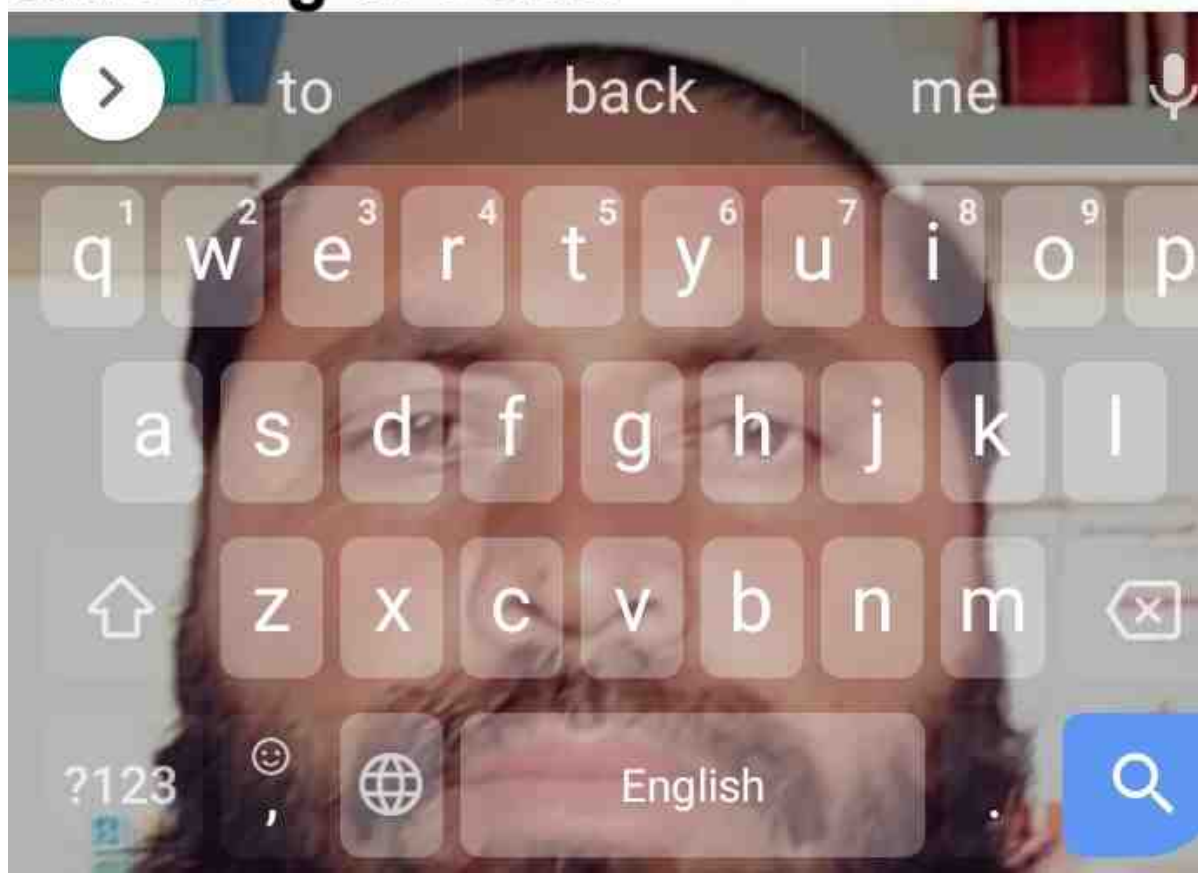


Swallowing of Food

Swallowing of Food:

- Masticated, softened, partly digested and slimy food mass is rolled into bolus.
- Bolus is then **pushed** back of the mouth by the action of tongue and muscles of the pharynx.

Swallowing of Food



rs in Vertebrates

- They emulsify dietary fat, breaking it into small globules (emulsification) on the surface of which the fat-digesting enzyme lipase can function.
- RBCs are **phagocytized** to form Bile Pigments in the spleen, liver and red bone marrow.

s in Vertebrates

