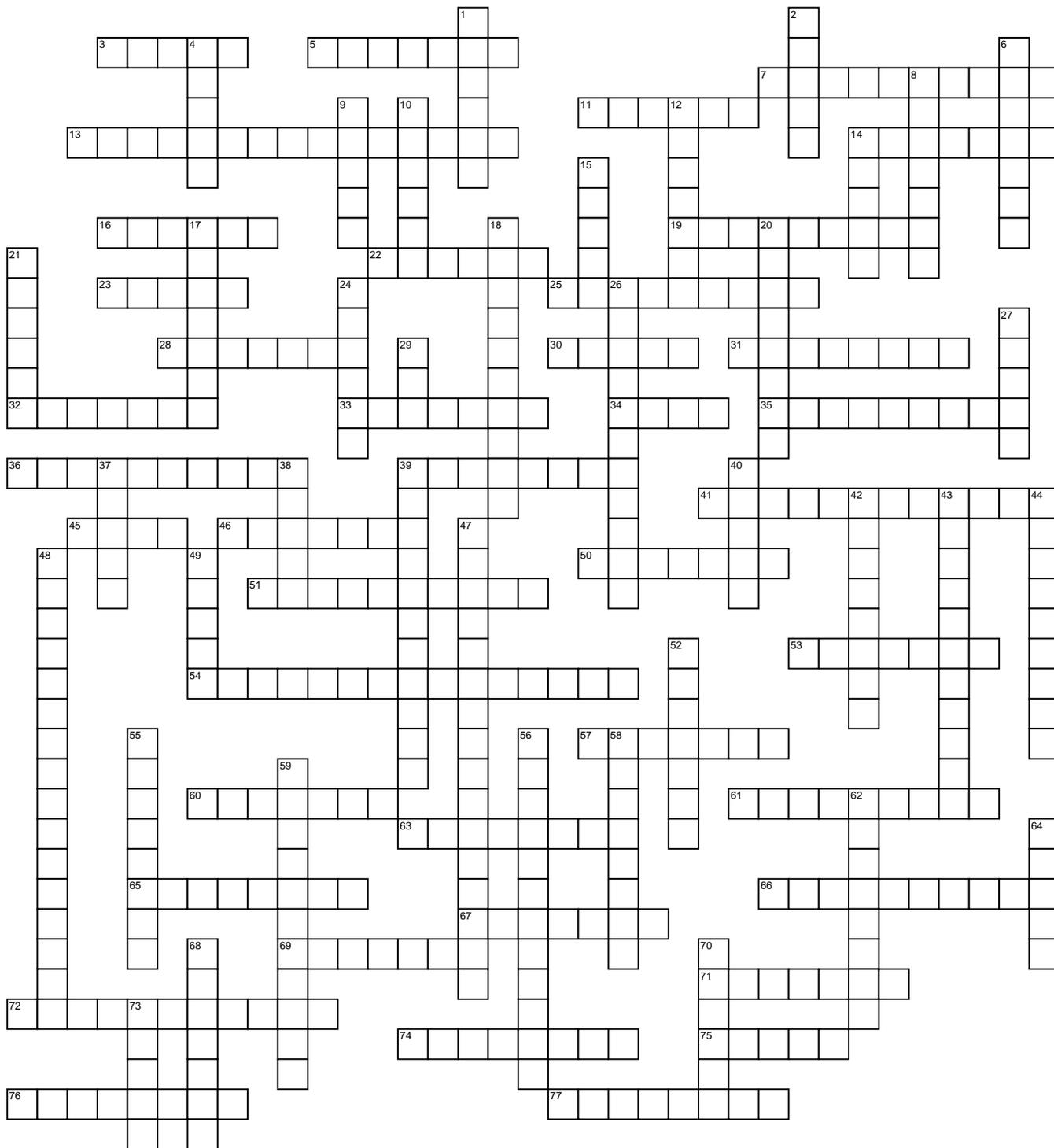


Digestive System



ACROSS

- 3 _____ is a milky fluid consisting of lymph and emulsified fats, or free fatty acids. It is formed in the small intestine during digestion of ingested fatty foods and taken up by lymph vessels specifically known as lacteals.
- 5 A _____ is a nutrient that is an organic compound required in tiny amounts for essential metabolic reactions in a living organism.
- 7 Also known as vitamin B2, _____ is the central component of the cofactors FAD and FMN. It is therefore required by all flavoproteins.
- 11 _____ is a deficiency disease that results from insufficient intake of vitamin C, which is required for correct collagen synthesis in humans.
- 13 _____ is a peptide hormone of the gastrointestinal system responsible for stimulating the digestion of fat and protein.
- 14 A _____ is a lymphatic capillary that absorbs dietary fats in the villi of the small intestine.
- 16 Also known as nicotinic acid or vitamin B3, _____ is a water-soluble vitamin whose derivatives such as NADH, NAD, NADP play essential roles in energy metabolism and DNA repair.
- 19 The _____ or gullet is an organ in vertebrates which consists of a muscular tube through which food passes from the pharynx to the stomach.
- 22 _____ is a digestive protease released by the chief cells in the stomach that functions to degrade food proteins into peptides.
- 23 The _____ is another name for the large intestine.
- 25 _____ is the process of metabolism whereby a biological entity processes a substance in order to chemically and mechanically convert the substance for the body to use.
- 28 Dietary _____s are the chemical elements

- required by living organisms, other than the four elements carbon, hydrogen, nitrogen, and oxygen which are present in common organic molecules.
- 30 The B complex vitamin, _____ acid, is necessary for the production and maintenance of new cells.
- 31 _____ is a peptide hormone produced in the S cells of the duodenum for regulation of the pH of the duodenal contents via the control of gastric acid secretion and buffering with bicarbonate.
- 32 _____ is the name given to a number of enzymes that catalyse the hydrolysis of sucrose to fructose and glucose.
- 33 D _____ represents a group of fat-soluble prohormones, the two major forms of which are ergocalciferol and cholecalciferol.
- 34 _____ is a bitter, yellow or green alkaline fluid secreted by hepatocytes from the liver with components including cholesterol, lecithin, bilirubin, biliverdin, sodium glycocholate and sodium taurocholate.
- 35 In the gastrointestinal tract, the _____ is the layer of loose connective tissue that supports the mucosa, as well as joins the mucosa to the bulk of underlying smooth muscle.
- 36 The _____ duct is a duct joining the pancreas to the common bile duct.
- 39 _____ is a vitamin deficiency disease caused by dietary lack of niacin and protein.
- 41 _____s are proteins that contain a nucleic acid derivative of riboflavin: the flavin adenine dinucleotide or flavin mononucleotide.
- 45 Released from the gall bladder, _____ acids serve multiple functions including elimination of cholesterol from the body, elimination of catabolites from the liver, and emulsifying lipids and fat soluble vitamins in the intestine.
- 46 _____ is a serine protease found in the digestive system, where it breaks down proteins. It is also often used in the laboratory for numerous procedures.
- 50 The _____ is the central of the three divisions of the small intestine and lies between the duodenum and the ileum.
- 51 Making up 70-80% of the cytoplasmic mass of the liver, _____s are involved in protein synthesis, protein storage and transformation of carbohydrates, synthesis of cholesterol, bile salts and phospholipids, and detoxification.
- 53 K _____ denotes a group of lipophilic, and hydrophobic, vitamins that are needed for the posttranslational modification of certain proteins, mostly required for blood coagulation.
- 54 _____ or enterokinase is an enzyme which transforms trypsinogen into trypsin, indirectly activating a number of pancreatic digestive enzymes.
- 57 _____ acid is one of the main secretions of the stomach, an acid solution consisting mainly of hydrochloric acid, and small quantities of potassium chloride and sodium chloride.
- 60 The _____ portal vein is a portal vein in the human body that drains blood from the digestive system and its associated glands.
- 61 Gastrin _____ peptide is released by the post-ganglionic fibres of the vagus nerve which innervate the G cells of the stomach and stimulate them to release gastrin.
- 63 One of the B vitamins, _____ plays an important role in helping the body metabolize carbohydrates and fat to produce energy. It is essential for proper functioning of the heart, nervous and digestive systems.
- 65 _____ glands are glands that secrete their products into ducts.
- 66 _____, also known as vitamin E, actually describes a series of organic compounds consisting of a methylated phenols.
- 67 _____ is a hormone produced by cells lining the fundus of the human stomach that stimulate appetite.
- 69 _____ is the name given to glycoside hydrolase enzymes that break down starch into glucose molecules.
- 71 _____ is an enzyme that digests peptides which works only on the outside peptide bonds.
- 72 _____ is the rhythmic contraction of smooth muscles to propel contents through the digestive tract.
- 74 A _____ is a substance used in an organism's metabolism or physiology which must be taken in from the environment.
- 75 The gastrointestinal _____ is the system of organs within multicellular animals that takes in food, digests it to ex _____ energy and nutrients, and expels the remaining waste.
- 76 _____ tide refers to a condition, normally encountered after eating a meal, when stomach acid is released into the stomach that causes a temporary increase in pH of the blood.
- 77 The _____ is a hollow jointed tube about 25-30 cm long connecting the stomach to the jejunum.
- DOWN**
- 1 _____ is a water-soluble B-complex vitamin which is composed of an ureido ring fused with a tetrahydrothiophene ring. It is important for fatty acid synthesis, in gluconeogenesis, and to metabolize leucine.
- 2 Gastric _____ is a strong acidic liquid, pH 1 to 3 in humans, released by gastric glands in the lining of the stomach. Its main components are digestive enzymes pepsin and rennin, hydrochloric acid, and mucus.
- 4 In addition to being the largest gland in the human body, producing bile for example, the _____ plays a major role in metabolism.
- 6 A _____ is an essential human nutrient. In foods of animal origin, the major form of this vitamin is retinol, but all forms have a beta-ionone ring to which an isoprenoid chain is attached.
- 8 _____, a member of the beta-galactosidase family of enzymes, is a glycoside hydrolase involved in the hydrolysis of the disaccharide lactose into constituent galactose and glucose monomers
- 9 The _____, also known as the buccal cavity or the oral cavity, is the orifice through which an organism takes in food and water.
- 10 A _____ is a water-soluble enzyme that catalyzes the hydrolysis of ester bonds in water-insoluble, lipid substrates.
- 12 _____ is a softening of the bones in children potentially leading to fractures and deformity. The predominant cause is a vitamin D deficiency.
- 14 The _____ intestine, commonly referred to by its Greek name, the colon, is the last part of the digestive system: the final stage of the alimentary canal in vertebrate animals.
- 15 Intestinal _____ are tiny, finger-like structures that protrude from the wall of the intestine.
- 17 Classified as an essential nutrient, _____ is usually grouped with the B vitamins. This natural amine is found in the lipids that make up cell membranes as well as within many other physiologically important substances.
- 18 The _____ are structures that increase the surface area of cells by approximately 600 fold, thus facilitating absorption and secretion.
- 20 Serine _____s or serine endopeptidases are a class of peptidases that are characterised by the presence of a serine residue in the active site of the enzyme.
- 21 The _____ is the rounded part of the upper stomach which allows for an accumulation of gases produced by chemical digestion.
- 24 _____ is the watery and usually frothy substance produced in the mouths of humans and some animals.
- 26 The _____, or cholecyst, is a pear-shaped organ that stores about 50 ml of bile until the body needs it for digestion.
- 27 _____ is a term used in anatomy that refers to a series of ridges produced by folding of the wall of an organ, most commonly applied to the internal surface of the stomach.
- 29 Gastric _____s are indentations in the stomach which denote entrances to the glands.
- 37 A gastric _____ cell is a cell in the stomach that releases pepsinogen and rennin.
- 38 _____ is the liquid substance found in the stomach before passing through the pyloric valve and entering the duodenum.
- 39 Also called vitamin B5, pantoic acid is a water-soluble vitamin needed to form coenzyme-A.
- 40 The _____ is the final section of the small intestine.
- 42 _____ cells are the stomach epithelium cells which secrete gastric acid and intrinsic factor.
- 43 _____ is the precursor form of the pancreatic enzyme trypsin.
- 44 _____ is a science that examines the relationship between diet and health.
- 47 _____ is a precursor of the digestive enzyme chymotrypsin.
- 48 _____ is an enzyme that hydrolyzes the carboxy-terminal (C-terminal) peptide bond of proteins and peptides thus releasing the last amino acid of the chain.
- 49 Pancreatic _____ is produced by the pancreas, containing a variety of enzymes including trypsinogen, chymotrypsinogen, elastase, carboxypeptidase, pancreatic lipase, and amylase.
- 52 _____ is an enzyme produced by the cells lining the small intestine which specifically breaks down the disaccharide maltose.
- 55 _____ is a nervous system ailment caused by thiamine deficiency.
- 56 _____ is a digestive enzyme that can perform proteolysis which cleaves peptides favorably at the carboxyl side of tyrosine, tryptophan, and phenylalanine because those three amino acids contain phenyl rings.
- 58 The vermiform _____ is a blind ended tube connected to the cecum, from which it develops embryologically.
- 59 _____ or chewing is the process by which food is mashed and crushed by teeth.
- 62 Vitamin C or _____ acid is a highly effective antioxidant. It acts to lessen oxidative stress, as a substrate for ascorbate peroxidase, as well as an enzyme cofactor in biosynthesis.
- 64 A _____ is a round mass of organic matter moving through the digestive tract.
- 68 The _____ is the part of the neck and throat situated immediately posterior to the mouth and nasal cavity, and cranial, or superior, to the esophagus, larynx, and trachea.
- 70 _____ is a protein hormone produced by adipose tissue that plays a key role in regulating energy intake and energy expenditure, including the regulation of appetite and metabolism.
- 73 The _____ intestine is where the majority of digestion takes place, the part of the gastrointestinal tract (gut) between the stomach and the large intestine which includes the duodenum, jejunum, and ileum.