

Query ID: test1566

Query Text: where are most nutrients absorbed in the human digestive tract

Retrieved Documents:

- 0 doc710025 Carbohydrate digestion. Digestion of food continues while simplest elements are absorbed. The absorption of most digested food occurs in the small intestine through the brush border of the epithelium
- 1 doc55929 Small intestine. The small intestine or small bowel is the part of the gastrointestinal tract between the stomach and the large intestine, and is where most of the end absorption of food takes place.
- 0 doc243533 Large intestine. The large intestine absorbs water and any remaining absorbable nutrients from the food before sending the indigestible matter to the rectum. The colon absorbs vitamins that are create
- 0 doc58274 Human digestive system. The lower gastrointestinal tract (GI), includes the small intestine and all of the large intestine.[26] The intestine is also called the bowel or the gut. The lower GI starts a
- 0 doc2424416 Intestinal epithelium. This consists of specific transport of solutes across the epithelial cells. It is predominantly regulated by the activities of specialised transporters that translocate specific
- 0 doc58287 Human digestive system. The next branch from the abdominal aorta is the superior mesenteric artery, which supplies the regions of the digestive tract derived from the midgut, which includes the distal
- 0 doc1461198 Human nutrition. Any study done to determine nutritional status must take into account the state of the body before and after experiments, as well as the chemical composition of the whole diet and of
- 0 doc2577399 Extracellular digestion. Most mollusks have a complete digestive system with a separate mouth and anus. The mouth leads into a short esophagus which leads to a stomach. Associated with the stomach are
- 0 doc556862 Gastric bypass surgery. The small intestine is normally 610 m (2033 ft) in length. As the Y-connection is moved further down the gastrointestinal tract, the amount available to fully absorb nutrient
- 0 doc243578 Dietary fiber. Dietary fibers can change the nature of the contents of the gastrointestinal tract and can change how other nutrients and chemicals are absorbed through bulking and viscosity.[1][2] Som
- 0 doc193889 Stomach. Like the other parts of the gastrointestinal tract, the human stomach walls consist of an outer mucosa, inner submucosa, muscularis externa, and serosa.
- 0 doc1868524 Bile duct. Bile, required for the digestion of food, is secreted by the liver into passages that carry bile toward the hepatic duct, which joins with the cystic duct (carrying bile to and from the gal
- 0 doc1261729 Lipid metabolism. The second step in lipid metabolism is the absorption of fats. Absorption of fats occurs only in the small intestines. Once the triglycerides are broken down into individual fatty ac
- 0 doc1056198 Copper. Copper is an essential trace element in plants and animals, but not all microorganisms. The human body contains copper at a level of about 1.4 to 2.1 mg per kg of body mass.[132] Copper is abs
- 0 doc193902 Stomach. Other than gastrin, these hormones all act to turn off the stomach action. This is in response to food products in the liver and gall bladder, which have not yet been absorbed. The stomach ne
- 0 doc1569845 Ileocecal valve. The ileocecal valve is distinctive because it is the only site in the gastrointestinal tract that is used for Vitamin B12 and bile acid absorption.[3][4]
- 0 doc952908 Plant nutrition. There are three fundamental ways plants uptake nutrients through the root:
- 0 doc684061 Body water. In Netter's Atlas of Human Physiology, body water is broken down into the following compartments:[3]
- 0 doc58271 Human digestive system. It is divided into three sections, a fundus, body and neck. The neck tapers and connects to the biliary tract via the cystic duct, which then joins the common hepatic duct to f
- 0 doc2274788 Absorption (chemistry). In the case of gas absorption, one may calculate its concentration by using, e.g.,

		the Ideal gas law, $c = p/RT$. In alternative fashion, one may use partial pressures instead of
0	doc216964	Digestion. Digestion is a complex process controlled by several factors. pH plays a crucial role in a normally functioning digestive tract. In the mouth, pharynx and esophagus, pH is typically about 6
0	doc643530	Gastrointestinal tract. The gastrointestinal tract contains thousands of different bacteria in its gut flora, that play an important role in the immune system.[3][4]
0	doc2130387	Urine. The cellular metabolism generates many by-products which are rich in nitrogen and must be cleared from the bloodstream, such as urea, uric acid, and creatinine. These by-products are expelled f
0	doc20585	Absorption of water. 2.ROOT-HAIRS CONTAIN CELL SAP, OF A HIGHER CONCENTRATION THAN THAT OF THE SURROUNDING WATER. Root hairs are the extensions of the outer(epidermal cells) of the roots. They also c
0	doc193896	Stomach. In early human embryogenesis, the ventral part of the embryo abuts the yolk sac. During the second week of development, as the embryo grows, it begins to surround parts of the sac. The envelo
0	doc588982	Starfish. Primitive starfish, such as Astropecten and Luidia, swallow their prey whole, and start to digest it in their cardiac stomachs. Shell valves and other inedible materials are ejected through
0	doc2026221	Anaerobic digestion. In a typical scenario, three different operational parameters are associated with the solids content of the feedstock to the digesters:
0	doc2166708	Eutrophication. Nutrients from human activities tend to travel from land to either surface or ground water. Nitrogen in particular is removed through storm drains, sewage pipes, and other forms of sur
0	doc1867495	Glucose uptake. The secondary active transport of glucose in the kidney is Na^+ linked; therefore an Na^+ gradient must be established. This is achieved through the action of the Na^+/K^+ pump, the energy
0	doc2424408	Intestinal epithelium. The extracellular domains of the transmembrane proteins in adjacent cells cross connect to form a tight seal. These interactions include those between proteins in the same membr
0	doc2497725	Nonpoint source pollution. Nutrients are typically applied to farmland as commercial fertilizer; animal manure; or spraying of municipal or industrial wastewater (effluent) or sludge. Nutrients may al
0	doc1128844	Membrane transport. As the main characteristic of transport through a biological membrane is its selectivity and its subsequent behavior as a barrier for certain substances, the underlying physiology
0	doc643548	Gastrointestinal tract. The muscular layer consists of an inner circular layer and a longitudinal outer layer. The circular layer prevents food from traveling backward and the longitudinal layer short
0	doc1451866	Nutrient. The essential nutrient elements for humans, listed in order of Recommended Dietary Allowance (expressed as a mass), are potassium, chlorine, sodium, calcium, phosphorus, magnesium, iron, zin
0	doc1801431	Uric acid. In birds and reptiles, and in some desert dwelling mammals (e.g., the kangaroo rat), uric acid also is the end-product of purine metabolism, but it is excreted in feces as a dry mass. This
0	doc402898	Rabbit. Rabbits are herbivores that feed by grazing on grass, forbs, and leafy weeds. In consequence, their diet contains large amounts of cellulose, which is hard to digest. Rabbits solve this proble
0	doc1965847	Atwater system. In most studies on humans, losses in secretions and gases are ignored. The gross energy (GE) of a food, as measured by bomb calorimetry is equal to the sum of the heats of combustion o
0	doc2166706	Eutrophication. It has been shown that nitrogen transport is correlated with various indices of human activity in watersheds,[32][33] including the amount of development.[27] Ploughing in agriculture
0	doc1867497	Glucose uptake. There are two types of secondary active transporter found within the kidney tubule; close to the glomerulus, where glucose levels are high, SGLT2 has a low affinity yet high capacity f
0	doc2432290	Sawfish. Their small intestines contain an internal partition shaped like a corkscrew, called a spiral valve, which increases the surface area available for food absorption.[citation needed]
0	doc243517	Large intestine. The sigmoid colon is supplied with blood from several branches (usually between 2 and 6) of the sigmoid arteries, a branch of the IMA. The IMA terminates as the superior rectal artery

0	doc1451852	Nutrient. A nutrient is a substance used by an organism to survive, grow, and reproduce. The requirement for dietary nutrient intake applies to animals, plants, fungi, and protists. Nutrients can be i
0	doc1965839	Protein Digestibility Corrected Amino Acid Score. A more extreme example would be the combination of gelatine (which contains virtually no tryptophan and thus has a PDCAAS of 0) with isolated tryptoph
0	doc1781062	Ventral body cavity. The ventral body cavity is a human body cavity that is in the anterior (front) aspect of the human body.[1] It is made up of the thoracic cavity, and the abdominopelvic cavity. T
0	doc193894	Stomach. Human pyloric glands (at pylorus)
0	doc1242614	Insect. In the hindgut (element 16 in numbered diagram), or proctodaeum, undigested food particles are joined by uric acid to form fecal pellets. The rectum absorbs 90% of the water in these fecal pel
0	doc687432	Urinary system. The urinary system, also known as the renal system or urinary tract, consists of the kidneys, ureters, bladder, and the urethra. The purpose of the urinary system is to eliminate waste
0	doc61591	Gastric acid. The main constituent of gastric acid is hydrochloric acid which is produced by parietal cells (also called oxyntic cells) in the gastric glands in the stomach. Its secretion is a complex
0	doc97783	Gas exchange. In multicellular organisms therefore, specialised respiratory organs such as gills or lungs are often used to provide the additional surface area for the required rate of gas exchange wi
0	doc313697	Glycosuria. Blood is filtered by millions of nephrons, the functional units that comprise the kidneys. In each nephron, blood flows from the arteriole into the glomerulus, a tuft of leaky capillaries.
0	doc83967	Gut flora. Gut microbiome composition depends on the geographic origin of populations. Variations in trade off of Prevotella, the representation of the urease gene, and the representation of genes enc
0	doc40378	Human iron metabolism. Alternatively, iron can enter the cell directly via plasma membrane divalent cation importers such as DMT1 and ZIP14 (Zrt-Irt-like protein 14).[18] Again, iron enters the cytopl
0	doc1134473	Kidney. Urea is usually excreted as a waste product from the kidneys. However, when plasma blood volume is low and ADH is released the aquaporins that are opened are also permeable to urea. This allow
0	doc193919	Stomach. A more realistic image, showing the celiac artery and its branches in humans; the liver has been raised, and the lesser omentum and anterior layer of the greater omentum removed.
0	doc2140980	Animal source foods. Most humans eat an omnivorous diet (comprising animal source foods and plant source foods) though some civilisations have eaten only animal foods. Although a healthy diet containi
0	doc1908813	Blood lipids. After a meal, some of the fatty acids taken up by the liver is converted into very low density lipoproteins (VLDL) and again secreted into the blood.[1]
0	doc348988	Cellular waste product. CO ₂ is excreted from the cell via diffusion into the blood stream, where it is transported in three ways:
0	doc903881	Liver. In the widely used Couinaud system, the functional lobes are further divided into a total of eight subsegments based on a transverse plane through the bifurcation of the main portal vein.[25] T
0	doc524905	Renal protein reabsorption. Almost all reabsorption takes place in the proximal tubule. Only ~1%[1] is left in the final urine.
0	doc480565	Reptile. Most reptiles are insectivorous or carnivorous and have simple and comparatively short digestive tracts due to meat being fairly simple to break down and digest. Digestion is slower than in m

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