

Digestion

Digestion is presented as a means of transforming complex food substances into smaller molecules prior to absorption into the body. The functions of the human digestive systems are examined, as well as the role of enzymes as catalysts.

Digestion is the breaking down of large molecules of food into smaller ones, eventually going into the blood. Mechanical Digestion Chemical Digestion
Enzymes Salivary glands make amylase Glands in stomach (Gastric Glands) make Pepsin (Protease) Pancreas make amylase, lipase, trypsin (Protease) Enzyme Functions Amylase breaks down starch into maltose Protease (pepsin, trypsin) breaks down protein into polypeptides Lipase breaks down fat into glycerol and free fatty acids Test for starch: Iodine turns from brown to black Test for glucose: heat substance in water bath with benedicts solution, will turn orange if glucose is present How absorption is increased in small intestine Vili: folds, increase surface area Each villus: has many blood capillaries Factors which affect enzyme activity pH, there is an optimum pH, above or below this results in denaturation Temperature, there is an optimum temperature. In body 37 C is optimum Low temperature slows down enzymes High temperature permanantly denatures enzymes What is an enzyme A protein which acts as a catalyst, which speeds up the rate of reaction. When enzymes are used Washing up powder. Protease breaks down protein stains. Teeth Incisor x 4 - cutting and biting Canine x 2 - piercing, tearing, grasping Premolar x 4 - grinding and chewing Molar x 6 - grinding and chewing Note: You must know the structure of the tooth Function of large intestine absorb - water, vitamins, and minerals colon produces vitamin K

About the Author

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