

Digestion of cheeseburger



**ASSIGN
BUSTER**

Cheeseburger contains different food types: bun, lettuce, slice of pineapple, cheese, mayonnaise, and an 80% lean ground beef patty. The digestion of these different food types takes place as the food passes from the mouth to the anus. By definition, digestion is the chemical or mechanical process through which food undergo breakdown into smaller particles absorbable to the body.

Digestion of food starts in the mouth. Teeth break down large food particles into small particles easy for swallowing. The digestion of bun in the cheeseburger starts in the mouth. Salivary amylase turns carbohydrates into glucose. Apart from amylase, salivary lipase breaks down the fats used in making cheeseburger into fatty acids and glycerol. The food passes through the esophagus into the stomach through esophageal sphincter (Debruyne, 2011).

The arrival of food in the stomach triggers production of a hormone gastrin. Gastrin triggers the production of Hydrochloric acids, which kills germs and creates a favorable environment for other enzymes. Gastric juice produced in the stomach contains pepsin enzyme, which digests proteins into peptides. The digestion of proteinous beef and mayonnaise starts in the stomach. It is significant to highlight the muscular walls of the stomach that churns food into a semi-liquid form, chyme.

The next stop of food is the duodenum for the digestion of virtually all food types. Carbohydrates not digested by salivary amylase in the mouth meets the pancreatic amylase from the pancreas. Bile salts from gallbladder pour into the duodenum and play their significant role in reducing fats size

(emulsification). This process makes the work of enzyme pancreatic lipase effective. Two enzymes, trypsin and chymotrypsin into peptides digest the proteins not digested in the mouth. These enzymes come from the pancreas too together with carboxypeptidase, which cleaves the peptide bond of amino acid residue at the carboxyl-terminal end. It is necessary to acknowledge that vitamins attach to either water or fats at this point.

Lettuce contains water-soluble vitamins thus passes into the body with water as other fat-soluble vitamins passes with fats: opportunistic process.

Small intestine marks the end of digestion for all food types and serious work on absorption. Intestinal peptidase further degrades peptides into amino acids; intestinal lipase degrades fats into fatty acids and glycerol (Parker, 2004). Different enzymes act on different categories of carbohydrates.

Sucrase cleaves sucrose to fructose and glucose, lactase splits disaccharide maltose to glucose, and finally lactase hydrolysis (cleaves) lactose to galactose and glucose. Intestinal peptidase completes the digestion of proteins by converting peptides to amino acids.

Absorption

The adaptation of small intestine enhances absorption of digested and absorbable food particles. The blood capillaries lining the small intestine receive food through active transport, diffusion, and osmosis. Lenticels beneath the walls also take fats before transport to adipose tissues (Insel et al, 2010). Other food types transported by blood go various parts of the body as required. Carbohydrates enters the body in the form of glucose,

galactose, fructose or sucrose, proteins as amino acids, fats (lipids) as fatty acids and glycerol.

Different food types have different functions in the body. A carbohydrate is an energy-giving food. Proteins repairs damaged cells as well as manufacture of new ones.

Conclusion

Cheeseburger is nutritious because as discussed, it contains carbohydrates, fats, proteins, and vitamins. Eating a balanced diet is essential for proper health.