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Biomedical Engineering  
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Human anatomy  
ANA 226

## Question

Mrs Egbe Amanda was served fried rice, salad, fried chicken and water

Fried rice(carbohydrate) Salad(vegetable)

Fried chicken( protein) Water(

Enumerate in detail the digestive processes of the above food she ate during the celebration.

## Answers

### Fried Rice( carbohydrate)

The digestion of carbohydrates begins in the mouth. The salivary enzyme amylase begins the breakdown of food starches into maltose, a disaccharide. As the bolus of food travels through the esophagus to the stomach, no significant digestion of carbohydrates takes place. These molecules continue through the body to be used for anything from normal cell functioning to cell growth and repair.

### Salad(vegetable)

As the food is digested in the small intestine and dissolved into the juices from the pancreas, liver, and intestine, the contents of the intestine are mixed and pushed forward to allow further digestion. Finally, all of the digested nutrients are absorbed through the intestinal walls.

### Fried chicken(protein)

Protein digestion begins when you first start chewing. There are two enzymes in your saliva called amylase and lipase. They mostly break down carbohydrates and fats.

Once a protein source reaches your stomach, hydrochloric acid and enzymes called proteases break it down into smaller chains of amino acids. Amino acids are joined together by peptides, which are broken by proteases.

From your stomach, these smaller chains of amino acids move into your small intestine. As this happens, your pancreas releases enzymes and a bicarbonate buffer that reduces the acidity of digested food. This reduction allows more enzymes to work on further breaking down amino acid chains into individual amino acids.

### Water

Water and other fluids follow the same journey as other food articles, but in their case, the process involves absorption, rather than digestion so our body doesn't have to break it down into smaller, simpler molecules. Water molecules are so small that they have no problem diffusing through the phospholipid bilayer that forms the cell membrane of human tissues. This cell membrane (presumably) consists of small channels or pores through which water or water-soluble substances can enter, meaning that water is directly absorbed through the epithelial cells that cover humans' intestinal tract. In short, this means that the small intestine is responsible for the absorption of most of the water that we consume.