

In down food from
large molecules to
small



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In the digestive system the carbohydrates and protein and fats get broken down throughout the whole of the system.

The food in our body gets broken down with a chemical reaction which then it can be absorbed. The enzymes job is to break down food from large molecules to small ones so it can be digested easily. There are many types of enzymes but the three main ones are amylase, protease and lipase, amylase breaks down the starch into sugar, protease breaks down proteins into amino acids and at the end lipase breaks down lipids into fatty acids and glycerol.

Carbohydrates in the digestive system is digested from the mouth to the stomach and then into small intestine, the carbohydrate enzyme breaks down starch into sugar. Our saliva in our mouth contains amylase which is a starch for example, when we chew a piece of bread for long enough that piece of bread begins to taste sweet and that is because of the starch that is digested. Proteins in the digestive system are digested into the stomach and small intestine the enzyme that breaks down is called protease and it breaks down into amino acids. The digestion of the proteins in our stomach is helped by the stomach acids which it also kills harmful and dangerous microorganisms that may be in our everyday food which it may damage our organs so the acids help killing those microorganisms. At last there is lipids which are fats and oils and the enzyme that breaks those down is called lipase and they break those into fatty acids and glycerol.

The digestion of the fat is in the small intestine which is afterwards helped by bile which is in the liver. The bile helps breaking down the food into small parts that are easier to digest for the lipase to work on to it to digest

properly. There are 6 enzyme equations for each of the

enzymes: amylase1) Carbohydrates

Glucose lipase2) Lipids

glycerol

maltose3) Disaccharide

glucose lactose4)

Carbohydrates

monosaccharide sucrose5)

Glucose fructose

peptidase6)

Protein peptides The digestion/absorption

happens in the digestive system and it begins at the mouth and it ends at the anus. When we swallow our food it passes through few organs and these are oesophagus, stomach, small intestine and large intestine.

The food is digested in our mouth and then to the stomach and then in the small intestine, our digested food is then absorbed into the bloodstream of our small intestine and then the excess water afterwards is absorbed back into our large intestine. The undigested food goes out of the anus as excrement when we have to go to the toilet. The process of the digestion in the digestive system happens when we chew our food and it goes into our oesophagus the pieces are still too big to be absorbed by our body so the food gets broken down chemically so they become small particles which are easy to be digested and the way they are broken down is by enzymes which are not living things they are just proteins. Reference: <https://www.bbc.co>.

uk/education/guides/z9pv34j/revision Nutrient Role in the body Food examples Carbohydrate Carbohydrates are macro nutrients. The carbohydrates job is to provide energy in our body and that is one the main source which is helpful for our brain to function properly and we also need carbohydrate to do physical activity. All the cells and tissues in our body needs carbohydrates as they are important for our intestinal health. Few examples of carbohydrates food are: milk, yogurt, ice cream, fruits, bread, beans, potatoes, rice and crackers there also many others but these are the main ones. Proteins Proteins are macro nutrient. The proteins job in our body is to make enzymes and hormones in our body. Its main job is to repair cells and make new ones.

This is important in our body because it builds up block of bones muscles, skin, blood and cartilage which means that our body needs proteins. Few examples of proteins food are: milk, cheese, eggs, beans and yogurt and there are loads of others but these are few mains. Vitamin A Vitamin A is a micro nutrient. The vitamin A's job is to maintain our skin healthy, teeth, mucus membranes, skeletal and soft tissues. Vitamin A's is also really good for your vision especially when the light is low for example at night we all see black at first when the light is off but then slowly our vison gets better and we can see things again even though is dark thanks to the vitamin A. Few examples of vitamin A food are: carrots, sweet potato, spinach, broccoli, butter and eggs these are just few of them there many others.

Vitamin B Vitamin B is a micro nutrient. The job of the vitamin B in our body is to keep our nerve and blood healthy it also helps to prevent any type of anaemia which it makes people weak and tired. Few examples of vitamin B

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food are: fish, meat, cereals, rice milk and poultry these are just few there are obviously others. Vitamin C Vitamin C is a micro nutrient. The job of the vitamin C is to repair and maintain bones and teeth. Vitamin C is also used to make blood vessels, skin, tendons and cartilage. Its main job is to protect cells from damaging.

Few examples of vitamin C food are: kiwi fruit, oranges, broccoli, peppers, strawberries, papayas and tomatoes these are just few there are many others. Vitamin D Vitamin D is a micro nutrient. The job of vitamin D is to absorb calcium and it also helps the growth of the bones. The main role of the vitamin D in our body is to maintain our blood vessel at a normal level of calcium and phosphorus which it makes your bones really strong. Usually children have soft bones and that is because they don't have much vitamin D on them so the bones are really fragile. Vitamin D can be received by the sun light too. Few examples of vitamin D food are: egg yolks, orange juice, soy milk, cheese these are just few foods of vitamin D there are many others. Vitamin D can also be received by sun light.

Vitamin K Vitamin K is a micro nutrient. Its job in our body is to help blood clot or it helps to coagulate the blood properly in our body. Its main job is when we get an injury this vitamin clots the blood and it tries to stop the blood from coming out more it creates like a crust.

This vitamin is also helpful for our bone health it reduces the loss and also decreases the risk of any type of fractures. Few examples of vitamin K food are: leafy vegetable, prunes, cabbage, brussels, spring onions and broccoli there are many others. Iron Iron is a micro nutrient in our body. Its job is to

metabolize proteins in our body and it produces hemoglobin and red blood cells. Without iron our body wouldn't be able to make oxygen and carrying out proteins which it would lead us to death there is high chance that's why our body contains 70% of iron. Few examples of iron food are: dark chocolate, squash seeds, dried fruit, cereals and there are many others these are just few examples. Calcium Calcium is a macro nutrient. Calcium's job in our body is to keep our teeth strong and our bones and that is 90% of it the rest 10% of calcium in our body their job is to signal the cell, muscle contraction and blood clotting.

Few examples of calcium food are: milk, yogurt and cheese are the main types and then there are also seafood leafy greens and legumes there are many others. Potassium Potassium is a macro nutrient. Potassium's job in our body is to maintain a balances health of fluids in our body.

Another job of the potassium in our body is to transmit electrical pulses to our muscle and nerve to function properly. Few examples of potassium food are: sweet potato, white beans, winter squash and yogurt and there are many others these are just few. Sodium Sodium is a micro nutrient and is a mineral. Sodium's job in our body is to maintain and control our blood pressure and it also regulates the functions of our nerves and muscle. Few example of sodium food are: salted nuts, fish, sardines, caviar, bacon, ham and there are many others.

Fibre Fibre is a macro nutrient. Fibre job in our body is to reduce the amount of cholesterol in our blood. The main role of the fibre is to keep our digestive

system healthy. Few examples of fibre food are: beans, nuts, dried fruit, wholegrain rice these are just few.

Water Water is a macro nutrient. The water's job in our body is to regulate the temperature of cells, tissues and organs. Our body usually loses a lot of water when we for example when we sweat or through breathing so it's important to rehydrate by drinking water.

Few examples of water food are: vegetable contains 92% of water for example spinach, cauliflower, eggplant, red cabbage and peppers. TASK3: Ourbody have different types of system for example there is the circulatory systemand the respiratory system this two system works together to make everythingwork. The way it works is that our body's oxygen goes inside the circulatorysystem which it takes the oxygen to give It to the muscle to work properly andthis happens when the circulatory system and the respiratory system workstogether.

The organs that they share are the heart, lungs and blood all threeof them works together to make a cycle the repeats every time. There are twotypes of blood deoxygenated blood and oxygenated the way it works is that whenwe breath the oxygen goes inside the lungs and then oxygen is absorbed into ourblood stream. Afterwards our heart pumps the oxygenated blood into our workingmuscle so the muscle can make movement. While the muscle uses the oxygen thecarbon dioxide is produced and then absorbed into the blood and thedeoxygenated blood is then pumped back to our heart and then to our lungs. Afterwards the lungs get rid of the carbon dioxide cause is harmful for ourbody and breath in more oxygen so we breath. The

relationship between the two systems is that they are connected at our lungs.

Reference: http://www.bbc.co.uk/bitesize/standard/pe/the_body/structure_and_function/revision/5/

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The relationship between and the way that our digestive system and respiratory system works together is that the digestive system provides our body with nutrient molecules and through the process of digestion it lets it go down through the stomach while in the meantime the respiratory system provides the oxygen we need to live. The organ that they share is the pharynx. Our digestive system depends on the respiratory system and it works the other way too both of them need each other to work and this is because our digestive tract works by muscular contraction so the food can be broken up and move along inside the tract. The muscle churns the food into liquid where the contraction of our intestine moves the food we are digesting into the system and the respiratory system wouldn't be able to function properly if the food are not digested as our exhalation doesn't need muscular contraction our respiratory muscle instead it contracts to inhale the respiratory muscle includes diaphragm and our intercostal muscle.

The hard work of the digestive tract provides the cell which is needed for the respiratory system with fuel. Reference: <https://www.livestrong.com/article/302607-how-do-the-digestive-respiratory-systems-work-together/>

The relationship and the way that our digestive and circulatory system work together is that they work really close together to absorb the nutrients which are all around our body. Our circulatory system carries around some chemicals from our endocrine system which it controls the speed of the <https://assignbuster.com/in-down-food-from-large-molecules-to-small/>

digestion which happens on our digestive system. The organs on the digestive system wouldn't be able to work out by themselves if the circulatory system wasn't there so the digestive system needs the circulatory system to be able to continue to digest the food. The way it works is that the digestive system gets the nutrients by the liver food and then the pancreas sends those to the bloodstream afterwards the circulatory system starts the whole process by giving those nutrients to the heart so then the heart sends them to other vessels so they can bring the nutrients to all the other organs to function.

Reference: <https://prezi.com/eyzgvv4jo9zp/relation-between-the-circulatory-and-digestive-systems/>