Anatomy of the blood and blood pressure

Health & Medicine

Anatomy

1. In your own words, describe how blood flows through veins and how blood flow relates to blood pressure. Then, give an example of a time when one might have irregular blood pressure and how this affects blood flow.

We learn from our biology class that blood flows through the veins due to the pumping action of the heart. So, when the heart performs its function of pumping blood through the arteries which uses pressure , there is a certain amount of resistance that small arterioles exert when receiving blood from the bigger arteries . This tension between the pressure of blood flow and the resistance of the arteries determines the blood pressure. Certain qualities of the arteries (such as elasticity) that carry the blood can influence blood pressure. The arteries can constrict (due to clogs caused by fatty deposits) which increases the risk for high blood pressure, or it can simply dilate allow blood to flow normally . An irregular blood pressure can be caused by many factors such as : stress, lack of exercise, posture , and straining. Lack of sleep can contribute to low blood pressure which means that blood is not flowing as expected thereby reducing the energy of the body. On the contrary, high blood pressure causes too strain on other organs of the body that can result to injury or damage and produce metabolic disorders. Blood flow is critical since the blood is important in the distribution of oxygen as well as nutrients to the whole body, however, the key to a healthy living is moderation.

2. There are several special areas in the body where blood flows. Choose one special area and explain how this area could have an imbalance or irregularity.

Think about a time when you or someone you know experienced an

imbalance in one of the special areas identified. What were the results of the imbalance and how did it affect the body’s overall function?

The left heart chamber is an important part of the circulatory system. This is where the blood is transported back after it has circulated all over the body. When blood pressure increases, there is a high probability that this organ would thicken. When the heart cannot accommodate the pressure , its ability to squeeze is impaired resulting to heart failure. According to the American Heart Organization, when Congestive Heart Failure (CHF) happens, the heart cannot pump enough blood to the other organs of the body. One of the major organs affected by this situation are the kidneys. As we all know, Kidneys play an important role in maintaining water and sodium balance in the body. When CHF happens, blood flows slowly to the kidneys thereby causing blood to back up in the veins, moreover, a high amount of sodium is retained in the body. This results to swelling or edema in certain parts of the body such as legs and ankles. However, this can also happen to the lungs when it accumulates fluids thereby causing shortness of breath especially when a person is lying down. The American Heart Association defined this condition as pulmonary edema which can be life threatening.