

BIOS 255 Week 8 Discussion: Reflection and Looking Ahead

Over the past 8 weeks you've learned the anatomy and physiology of the cardiovascular, immune, lymphatic, and respiratory systems. As much as we like to partition the body into discrete units, it is often the case that systems are interdependent and their function is intimately tied to other organ systems.

For the Week 8 discussion of 255, I would like you to think back on the session and choose one organ or organ system covered in 256 (digestive, metabolism and nutrition, renal, reproductive, or development) that you are the most excited to study next session. After that, discuss how that organ/organ system is connected to the material we have covered in BIOS 255.

For example, we talked about the importance of intrinsic factor in making red blood cells in Week 1. You could discuss the connection between dietary absorption of intrinsic factor, vitamin B12, and the maintenance of a healthy hematocrit.

Answer & Explanation:

Digestive system plays an important role in breakdown of the food molecules into simple substance which can be absorbed easily. The different components of food like carbohydrates, proteins, fats, etc are produced down into simpler forms and absorbed in the small intestine. These nutrients are required by all the cells of the body to carry out cellular respiration.

Respiratory system is also one of the important systems of the body which provides oxygen to all the cells of the body and removes carbon dioxide from the body by carrying out inhalation and exhalation.

So, both the respiratory and the digestive system depend on each other and work in a coordinated manner. The organ systems can't work independently. Respiratory system allow the digestive system to work properly as it provides oxygen to all the cells of the digestive system and the digestive system provides nutrients to all the cells of the respiratory system.

Step-by-step explanation:

Homeostasis is the ability of the body to make the stable internal environment. For example, the concentration of glucose, level of pH, optimum temperature are controlled when the different body systems work together. The different organ systems work together and are thus connected with each other. So, if we take digestive system and respiratory system are two different organ system then these organ systems work together and maintain the balance of the body. The digestive system helps in breakdown of complex nutrients into simpler form that can be absorbed by the body cells. The respiratory system helps in exchange of gases. The oxygen is supplied to all the cells of the body so that cellular respiration is achieved.