

Physiology Homework 1: the Cardiovascular system

The Circulatory and Regulatory Systems: blood, veins and heart

1. Describe the difference between red and white blood cells
2. Describe the basic difference between arteries, arterioles, veins, venules and capillaries
3. Describe the function of the coronary arteries and veins
4. Describe the function of the pulmonary arteries and veins
5. Discuss the phenomenon of “blood pressure”. What is meant by “systole” and “diastole”. Explain the average, normal blood pressure reading of 120/80 mm Hg (i.e. what do the figures above and below the line stand for)?
6. Describe how the action of the diaphragm and the internal structure of the veins aided by skeletal muscle contractions, assists the return of venous blood to the right side of the heart.
7. If you put your hand over your bellybutton you will feel a very strong pulsing. What is that?

Respiratory system

1. Describe with the aid of drawings and words “the respiratory unit”, and the mechanism of gas (oxygen and carbon dioxide) exchange between the lung tissue and lung blood capillaries
2. Describe the location and function of the “breathing centres” which control respiration.