Basic Human Physiology
Introduction to Lab Papers

Introduction

In the first lab session, you will be introduced to the writing and research component of the course. With the help of your AI, you’ll be informed about the purpose of the papers, how they are organized, formatted and submitted.

Purpose of the Lab Papers

The purpose of the paper assignments is to solidify your understanding of one topic in physiology. You will revisit the topic several times throughout the semester and come to a more complete and detailed understanding of it with each visit. Writing about the topic will enable you to demonstrate what you have learned about the physiology of your topic.

The Three Lab Assignments

Assignment #1

Choose a topic that interests you. Come up with a topic in which physiology is affected by a factor such as disease, injury, change in a fundamental factor (such as pH, temperature, oxygen or osmolarity), drugs, aging or athletic training. If you have trouble coming up with a reasonable topic, talk with your instructors. They can help you.

Second, let your AI know what your topic is. Some topics are more reasonable than others for this assignment. However, even a difficult and complex topic may be done well when approached in the right way. This assignment is worth 5 points.

Due date: your lab period on _____________________________

Assignment #2

Describe the normal physiology for your topic. Provide the background that will make a reader better able to understand your second paper on this same topic. You may need to add details such as anatomy or facts and figure to fully explain the physiology of your topic, but it’s the PHYSIOLOGY IN YOUR OWN WORDS that’s important.

Due date: your lab period on _____________________________

Page Length: a maximum of 600 words; there is no minimum length

Note: Your paper will be graded on how accurately, clearly and thoroughly it recounts the physiology of your topic. It may help to imagine that you’re explaining physiology to a friend who’s interested but knows nothing about it.

An original figure or drawing (of your own design) with appropriate labels may be included.

Quotes: none should be used

References: listed near the end of the paper

Your AI will let you know what references are allowed and how they should be noted.

Line Spacing: 1.5 or double-spaced (do not single space)

Turnitin: Submit a copy of your paper to Turnitin.com before turning your paper in during lab. This copy must be the same as the version given to your AI. Details concerning submission of the paper to Turnitin are given later in this lab.

A paper with a “similarity index” higher than 15% on Turnitin.com’s originality report for the entire paper will be reviewed and may receive a score of zero.

A paper with a “similarity index” higher than 3% on Turnitin.com’s originality report for the an individual source will be reviewed and may receive a score of zero.
**Assignment #3**

Using the normal physiology that you described in Assignment #2, describe first, the changes in that physiology that occur as a result of a disease or training or some other stimulus that causes a deviation away from the “normal” physiology. Then, describe the mechanisms of how an intervention or process can return the system back to the original baseline.

Here are a few examples:

1) normal physiology: breathing and gas exchange in the lungs
   change: how breathing mineral dust (often as a part of a job) affects the lungs?
   treatment - how do broncodilators work to enhance airflow?

2) normal physiology: heart pumping blood to supply body tissues, including the heart’s own muscle
   change: the effects of a heart attack on the circulatory system
   medication - how do nitroglycerine tablets ease chest pain?

3) normal physiology: early development of the nervous system
   change: failure of neural tube formation leading to a serious birth defect
   biochemistry - how might folic acid reduce the number of neural tube defects?

As always, the central focus is PHYSIOLOGY IN YOUR OWN WORDS.

Due date: your lab period on ________________________________

Page Length: a maximum of 1200 words; no minimum length
   clarity, accuracy and thoroughness count more than ever

Format: clearly state each of your two changes in the normal physiology (away from and then back to)
   in boldface type before beginning their discussion.

An original figure or drawing (of your own design) with appropriate labels may be included

Quotes: none should be used

References: listed near the end of the paper
   Your AI will let you know what references are allowed and how they should be noted.

Turnitin: submit a copy of your paper to Turnitin.com before turning your paper in during lab.
   This copy is the same as the version given to your AI.
   Details concerning submission to Turnitin are given later in this lab.

   A paper with a “similarity index” **higher than 15%** on Turnitin.com’s originality report for the **entire paper** will be reviewed and may receive a score of zero.
   A paper with a “similarity index” **higher than 3%** on Turnitin.com’s originality report for the an **individual source** will be reviewed and may receive a score of zero.

Score: a maximum of 60 points
   The level of explanation is higher on this assignment because you’ve had practice and have learned more in lecture about physiology. So, instead of thinking about explaining your topics to a friend with no background in physiology, now you should approach it as if you were explaining it to your AI.