

# Anatomy and Physiology Lab Report

## I. Formatting and General Instructions

1. In general, we are more interested in **QUALITY**, not quantity. More is rarely better in scientific writing.
2. In general, it should take no more than 2-3 hours to write up a laboratory report.
3. The reports are individual projects, and no two students should have duplicate of their reports or data (unless the experiment was done with a partner and the instructor approves).
4. It is the student's responsibility to be familiar with the schools policies on Academic Misconduct and Plagiarism.
5. The report is a formal description of your account of the experiment. As such, it must be written in a formal style using proper English. No slang or unacceptable abbreviations should be used (xs is not allowed, but e.g. is). If you are in any doubt about which abbreviations are acceptable, consult a dictionary.
6. In general, the report is written in the third person neutral (or passive) past tense, you are writing about something you have already done. For example, "At the point of adding the subjects arm to the ice water, the subjects arm was normal color and the muscles relaxed but responsive. There was no pain or discomfort prior to the experimentation".
7. The report must be written using proper sentences and paragraphs; point form (bullets) is not acceptable in a formal report.
8. A report is a form of technical writing and the rules are somewhat different to writing an essay for an English course.
  - **First**, the report is being written for a very limited audience, as only another chemist or scientist would read it. It is not necessary to give detailed explanations or descriptions of experimental setups.
  - **Second**; all scientific disciplines have a certain amount of technical "jargon" or terminology associated with that discipline, you need to learn and **use these technical terms**.
  - **Third**; wherever possible, make it simple for your audience to read the report and find information they may be looking for. There are standard formats to writing reports and they should be adhered to (see below). This includes:
    - being neat,
    - organizing the report (*i.e.* think about what you want to say before you start writing).
  - **Fourth**; in general, technical writing is best accomplished by producing the shortest document possible. Do not include irrelevant comments, especially personal ones, in the report. Be brief and to the point.

If you follow these points, it will help keep the report brief and aid in developing a good writing style.

## II. Lab Report Guidelines

Points given in the laboratory portion of Anatomy and Physiology are basically split into 2 categories:

1. Accuracy of data (**Qualitative and Quantitative**) and correct calculation and interpretation of results.
2. Writing a thorough lab report complete with all of the required elements.

Many students pay a great deal of attention to the lab work itself (which is a good thing), but then neglect the lab report - which costs them a bunch of points! While we will always stress the importance of excellent lab work and data collection, you should also be aware of how important writing an excellent lab report is.

This guide will assist you in writing your lab report. By including all of the required elements, you are well on your way to a better lab grade!

### III. Short Lab Report Required Elements:

- **Report Sheets** - these are the pages in your lab manual where you transfer your data and results.
  - You always record your data in your lab notebook during the experiment, and then transfer to your report sheet later.
  - The report sheet should be torn out of your lab manual - NO COPIES ARE ALLOWED.
  - If you make a mistake on your report sheet, DO NOT SCRIBBLE OVER IT & DO NOT USE WHITE-OUT!!! Draw a single line through the error, and write the correction beside it.
  - Questions/Analysis/Conclusion as necessary to answer and analyze the lab.

### IV. Full Lab Report Required Elements:

- **Title Page** - include your name, experiment number & title, course name, due date and your instructors name.
- **Purpose** - a sentence or two describing the purpose of the lab.
- **Procedure** - refer to the lab manual or directions only.  
Ex: Please see pgs. 4-6 of *Anatomy and Physiology, Holes 6<sup>th</sup> ed.* Or.  
Please see pgs. 2-4 of lab provided by Mr. McKinney.
- **Report Sheets** - these are the pages in your lab manual where you transfer your data and results.
  - You always record your data in your lab notebook during the experiment, and then transfer to your report sheet later.
  - The report sheet should be torn out of your lab manual - NO COPIES ARE ALLOWED.
  - If you make a mistake on your report sheet, DO NOT SCRIBBLE OVER IT & DO NOT USE WHITE-OUT!!! Draw a single line through the error, and write the correction beside it.
- **Graphs/Charts**
  - All axes should be labeled (including units).
  - Each graph/chart should have a descriptive title.
  - Use an entire sheet of graph paper for each graph/chart (makes it easy to read).
  - Choose appropriate scales for your axes. The data should not be squeezed into a corner; it should be spread over the entire graph.
  - NEVER use the "connect-the-dots" method for a linear graph; draw a "best-fit" line instead. (Some graphs are meant to be a curve and would not be a "best-fit" line.)
  - Slope calculations cannot be based upon data points. Take two points that are far apart on the "best-fit" line that you can clearly read. (Two points that fall on intersecting grid lines is best.)
  - If you use **Excel** to determine the slope of the line (using a "trendline"), be sure to include the equation of the line and the R<sup>2</sup> value on the graph, and that the graph is a full page when printed.
- **Report Questions** - these are assigned **in** the lab session/handout.

- Write down the assigned questions before you leave lab.
- Questions found at the END of each lab in the manual on board or within the directions.
- You may tear out the report questions page and write directly on it, or you may type/write the answers directly into your report. Either method is fine.
- **Conclusion** - this is the summary of the entire lab. This should include a brief description of the lab, your results (actual numbers), any problems you had during the lab or after, and any possible sources of error (be specific). This should be long as necessary to describe results, the questions posed and come to a conclusion. Talk about the facts, don't over dramatize with "fluff".

Although typing your report is not required, it is **preferred**. It looks **professional** and makes grading easier so your instructor can read it! Learn how to do graphs on the computer for the same reasons. Exceptions are the report sheets, calculations, and any chemical reactions included. Typing vs. writing your report will not affect your grade in any way. However, if your instructor can't understand what you've written, that certainly will! (Double space, 14 and very basic font)

## V. Due Dates

Lab reports are due ONE WEEK after you finish the lab. If you don't finish a lab during the normal session, your lab report will not be due until a week after you actually finish it. Exceptions to this are due dates assigned by the instructor other than one week.

## VI. Lab Report Examples

<http://owl.english.purdue.edu/owl/resource/747/02/>

<http://undergrad-ed.chemistry.ohio-state.edu/labreports/>

<http://www.easybib.com/>