

Nate Warner

Professor Barrett

Nutrition 201

29 September 2025

### Reflection Paper – Chapters 5 and 6

This module covers digestion, absorption, and roles of fats and proteins in the human body.

These nutrients are not only essential to energy metabolism but also to growth, repair, and the regulation of many physiological processes.

One of the most important takeaways for me was how differently fats and proteins are processed in the body. For fats I learned how bile and pancreatic lipase break triglycerides into fatty acids and glycerol before they are absorbed. I had always assumed fats were simply “burned” like carbohydrates, but I now understand the complex workings of micelle formation and transportation through the lymphatic system, which I find very interesting. Proteins, on the other hand, experience denaturation in the stomach and are broken into amino acids by enzymes like pepsin and trypsin before they are absorbed in the small intestine. If I were teaching this, I would emphasize the different enzymatic steps and transport pathways, since I believe that these details make the topic more memorable.

What was new information for me was that proteins are not an energy source unless necessary. Instead, their structural and regulatory functions like enzyme production and immune system support take priority. I was also surprised by the efficiency of fat absorption in adults compared

to infants, where enzymes in the mouth and stomach play a bigger role due to the fact that the small intestine is still maturing.

I would say that the most challenging aspect of these chapters was understanding the terminology and how the steps connect. For example, understanding the differences between emulsification, hydrolysis, and absorption required me to reread many times. In mathematics (my minor) or computer science (my major), we often times find ourselves working with abstract models, so translating biological processes into a sequence of physical and chemical changes took extra effort.

In terms of application to my major, I found interesting connections between nutrition and computing. For example, the breakdown of macronutrients into smaller building blocks reminded me of how algorithms are split into smaller functions.

Overall, these chapters gave me a better appreciation for the complexity of the human body.