**ADTA 5770: MIDTERM**

**Prompts & Responses Summary**

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**IMPORTANT NOTES:**

*--) Prompts must be closely relevant to the student’s selected domain expertise field.*

*--) The LLM must be* ***Google Gemini 2.0 Flash Thinking Experimental.***

* *For the consistency and accuracy of the prompt response evaluation, the student can* ***only use one******LLM****, Google Gemini 2.0 Flash Thinking Experimental*

**IMPORTANT NOTES:**

*--) The student* ***must use the template*** *posted on Canvas to submit their prompts & responses summary*

*--) The template file name:* ***ADTA\_5770\_prompts\_responses\_summary\_template\_MIDTERM****.docx*

*--) The student must* ***rename*** *the file by* ***replacing*** *the text of “****ADTA\_5770****” with the* ***student’s name*** *and remove “template.”*

* ***For example:*** *John Smith\_ prompts\_responses\_summary\_MIDTERM.docx*

Student Name: …

Domain Expertise Field: …

**LLM**: **Google Gemini 2.0 Flash Thinking Experimental**

# SUMMARY I: Confirm Prompt Domain

The student must answer the following question to confirm that the prompts they designed, created, and used to prompt the LLM to get responses are in the medical domain.

Are the questions or prompts did you design, create, and use to prompt the LLM are in the **medical** domain? (YES/NO)

ANSWER: …Yes

# SUMMARY II: Medical Questions Created Following Provided Examples

List of **10 medical questions** that the student has created as required in the **MIDTERM: PART I & II** following provided examples listed in the provided list of medical questions.

1. Discuss the importance of sleep for overall health and well-being, highlighting its impact on physical, mental, and cognitive functions.
2. Can you describe the genetic factors involved in allergies and how hereditary traits influence the likelihood of developing allergic conditions.
3. Provide natural ways to boost the immune system, including lifestyle, dietary, and environmental factors.
4. Explain the difference between side effects and an allergic reaction, providing examples for each.
5. List some common women's health issues, including reproductive health, breast health, pregnancy-related conditions, bone and joint health, cardiovascular health, mental health, urinary and pelvic floor health, and autoimmune disorders.
6. Provide effective strategies and reliable resources for staying informed about drugs, including their uses, side effects, regulatory updates, and the latest research.
7. Provide a list of healthy snacks that are filling and can help maintain satiety between meals.
8. What is sleep apnea, and how does it affect an individual's health and well-being? Provide an explanation of its types, symptoms, causes, and potential treatment options.
9. Explain the difference between an HMO (Health Maintenance Organization) and a PPO (Preferred Provider Organization), focusing on aspects such as cost, flexibility, provider network, and the need for referrals.
10. What is the difference between a psychiatrist and a psychologist, focusing on their education, qualifications, treatment approaches, and the types of conditions they handle. Provide real-world examples to illustrate their roles.

# SUMMARY III: Medical Prompts Created Based on Medical Questions

List of **10 medical prompts** that the student has designed, created, and used to prompt the LLM to get responses as required in the **MIDTERM: PART I & II**.

## Medical Prompt 1

As a health and wellness expert, discuss the critical role of sleep in overall health and well-being. Explain its impact on physical, mental, and cognitive functions. Use examples to illustrate the effects of sleep deprivation and the benefits of proper sleep hygiene.

## Medical Prompt 2

As a medical researcher specializing in genetics and immunology, analyze the hereditary nature of allergies. Consider how genetic predisposition influences the likelihood of developing allergic conditions. For example, if both parents have allergies, how does this affect their child's risk? Additionally, discuss cases where environmental factors interact with genetic susceptibility to trigger allergic reactions.

## Medical Prompt 3

As a health and wellness expert, provide evidence-based natural strategies to boost the immune system. Include lifestyle habits, dietary recommendations, and environmental factors. For example, discuss how nutrition, exercise, sleep, and stress management contribute to immune health.

## Medical Prompt 4

Explain the difference between side effects and allergic reactions. A side effect is typically an unintended and often mild outcome of a medication or treatment, such as drowsiness from an antihistamine, while an allergic reaction occurs when the immune system overreacts to a substance, leading to symptoms like swelling, rash, or difficulty breathing. Can you provide further clarification on these differences, using examples of common medications and their associated side effects and allergic reactions?

## Medical Prompt 5

You are a healthcare professional with expertise in women's health. Based on your knowledge and experience, list some common women's health issues, including those related to reproductive health, breast health, pregnancy-related conditions, bone and joint health, cardiovascular health, mental health, urinary and pelvic floor health, and autoimmune disorders. Provide a brief description of each issue, emphasizing its impact on overall well-being.

Example:

Reproductive Health: Issues like menstrual disorders (e.g., PCOS) or endometriosis.

Breast Health: Breast cancer and benign breast conditions like fibrocystic breasts.

Pregnancy-related Conditions: Gestational diabetes or pre-eclampsia.

Bone and Joint Health: Osteoporosis and arthritis.

## Medical Prompt 6

As a healthcare professional, provide strategies and recommend reliable resources like the FDA, PubMed, and trusted medical journals to stay informed about drugs, including their uses, side effects, regulatory updates, and the latest research.

## Medical Prompt 7

You are a nutrition expert. Your task is to provide helpful suggestions for snacks that are both healthy and filling.

**Example:** List healthy snacks like nuts, Greek yogurt, and hummus with veggies that can keep someone full for longer periods.

**Example:** Suggest nutritious snacks that provide sustained energy and help control hunger, such as whole grain crackers with cheese or avocado toast.

## Medical Prompt 8

You are a knowledgeable healthcare professional tasked with explaining medical conditions in a simple, accessible way. Please provide a clear and concise explanation of sleep apnea, including the following elements:

1. **Definition**: What is sleep apnea, and how does it affect an individual's health and well-being?
2. **Types**: Explain the different types of sleep apnea (e.g., obstructive, central, and complex).
3. **Symptoms**: What are the common symptoms individuals may experience?
4. **Causes**: Describe the potential causes or risk factors associated with sleep apnea.
5. **Treatment Options**: What are the most common treatment options available, and how do they work?

**Example**:

* **Sleep Apnea Definition**: Sleep apnea is a condition where breathing stops and starts during sleep, leading to reduced sleep quality and daytime fatigue.
* **Symptoms**: Common symptoms include loud snoring, gasping for air during sleep, excessive daytime sleepiness, and difficulty concentrating.

## Medical Prompt 9

You are a knowledgeable healthcare advisor helping individuals choose the right health insurance plan. Your goal is to clearly explain the differences between an HMO (Health Maintenance Organization) and a PPO (Preferred Provider Organization), focusing on cost, flexibility, provider network, and referral requirements.

**Example:** Lisa is looking for a low-cost health plan and is okay with needing referrals to see specialists. Which plan would you recommend, and why?

## Medical Prompt 10

As a mental health expert, explain the difference between a psychiatrist and a psychologist. Focus on their education, qualifications, treatment approaches, and the types of conditions they handle. Provide real-world examples to illustrate their roles.

Example: Dr. Smith, a psychiatrist, prescribes medication to a patient with severe depression, while Dr. Jones, a psychologist, provides cognitive-behavioral therapy to help the same patient manage their thoughts and emotions.