

Week 2. Viral Infections, Host Responses, and the Immune System

We will answer each of these questions this week.

- a. How does a virus enter the body? What is a mucosa? Why are the lungs particularly susceptible to infection?
- b. What is the host response to a viral infection and what are the consequences of viral replication in a host cell and tissue?
- c. What are the symptoms of COVID-19? What causes these symptoms?
- d. What is the innate immune response to a virus? What is the adaptive immune response? What are antigens; what are antibodies? What is a “cytokine storm”?
- e. What is pneumoniae? What causes pneumoniae? What is the most common cause of disability and death due to COVID-19?
- f. What other organs, besides the lungs, could be involved in viral infections?

PowerPoint Presentations: Presentations are listed under Session/Presentation and named with a number_Title , e.g. 1_COVID-19 Overview.

6_COVID-19 Virus continued

7_Infection of Respiratory Mucosa

8_Host Response to Viral Infection

9_Cases of COVID-19

Assignments: Upload all assignments by 9AM, CTZ, (due date in parentheses).

2A: Gregg and the Pandemic of COVID-19 (due Friday, May 1)

| Date | Session | Concepts covered | Activities to be completed by the next day: |
|----------|--|--|--|
| April 27 | 6_COVID-19 virus (continued) 7_ Infection of the Respiratory Mucosa | a. How does a virus enter the body? What is a mucosa? Why are the lungs particularly susceptible to infection? Asymptomatic Transmission, the Achilles’ Heel of Current Strategies to Control Covid-19 | Remember that Assignment 2A is due this Friday You should have read this article and examined this website over the weekend. We will discuss these today. article from New York Times website: Visualizing What COVID-19 Does to Your Body Examine this website and the associated videos/slide shows by tomorrow. (https://onlinelearning.hms.harvard.edu/hmx/immunity/) |

Week 2 Schedule

| Date | Session | Concepts covered | Activities to be completed by the next day: |
|------|------------------------------------|---|---|
| | | | Meet with your Research Paper group and your TA to discuss and outline the paper. |
| 28 | 8_Host response to viral infection | <p>b. What is the host response to a viral infection and what are the consequences of viral replication in a host cell and tissue?</p> <p>c. What is the innate immune response to a virus? What is the adaptive immune response? What are antigens; what are antibodies? What is a “cytokine storm”?</p> | <p>To be completed by Tuesday, April 28, 9AM, CTZ Assignment 1D: Gregg and the Pandemic of COVID-19</p> <p>Watch this video on COVID-19. We will discuss on the body’s response to the virus and how this response causes the disease tomorrow. The first 9 minutes review how the pandemic started which you can skip if you want. The rest focusses on how the body responds to infection; pay attention to this section. (https://www.youtube.com/watch?v=DD_wdvwN9rg)</p> |
| 29 | 9_Cases of COVID-19 | <p>d. What are the symptoms of COVID-19? What causes these symptoms?</p> <p>e. What is pneumoniae? What causes pneumoniae? What is the most common cause of disability and death due to COVID-19?</p> <p>f. What other organs, besides the lungs, could be involved in viral infections?</p> | <p>Use this evening to work on your Research Paper with your team and to complete your individual essay, Assignment 2A.</p> <p>REMEMBER THESE DATES FOR NEXT WEEK: Draft, first two pages of Research-Based Essay, Monday, May 4 3A Gregg and the Pandemic of COVID-19, Wednesday, May 6, Draft of complete Research-Based Essay, Friday, May 8</p> |
| 30 | 9_continued (if necessary) | | |

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|-------|---|---|---|
| May 1 | On the Front Lines of the Pandemic: Conversations with healthcare providers | Elizabeth Mytty, MPH Syndromic Surveillance Epidemiologist Louisiana Office of Public Health Infectious Disease Section | Assignment 2A due. Upload to Moodle by 9AM, CTZ. |