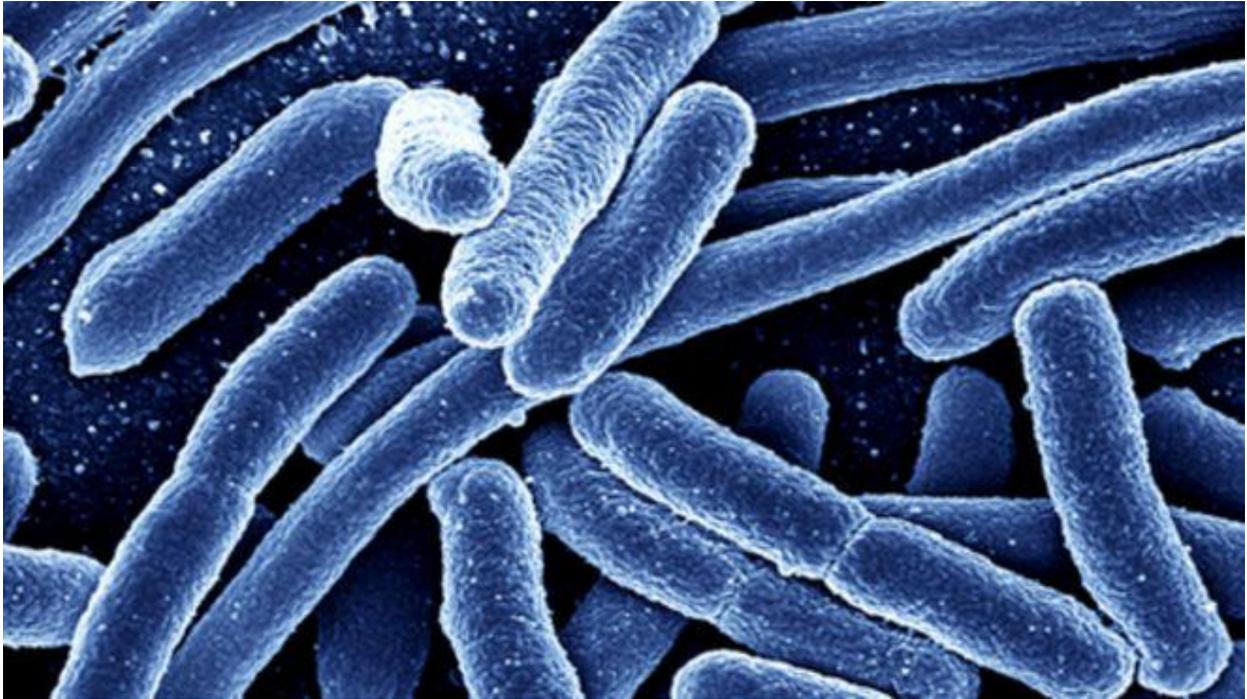


Ravenclaw1's Division B Disease Detectives Test



SSSS 2017

Section 1: Vocabulary

Write the correct vocabulary word next to the definition.

1. When studied, some subjects may more easily recall specific habits related to a disease or condition than subjects not affected with the disease or condition.
2. Cause of a disease
3. A widespread occurrence of an infectious disease in a community at a particular time
4. A measure of the frequency with which an event, such as a new case of illness occurs in a population over a period of time
5. The divergence due to chance alone, of an observation on sample from the true population value, leading to lack of precision in measurement of association.
6. Death rate
7. Birth rate
8. First case in an outbreak
9. Occurs when the effects of two risk factors are mixed in the occurrence of the health-related event under study - when an extraneous factor is related to both disease and exposure
10. A surface a pathogen can survive on, and then infect another host
11. The occurrence of cases of disease in excess of what would normally be expected

12. Disease that occurs infrequently and irregularly
13. Occurs when selection of participants for a study is affected by an unknown variable that is associated with the exposure and outcome being measure.
14. An aggregation of cases over a particular period closely group in time and space
15. An organism that carries a pathogen to a new host but doesn't develop the disease
16. Systematic collection, analysis, interpretation, & spreading of health data to gain knowledge of the pattern of disease occurrence in order to control & prevent disease
17. Any error other than random error.
18. A surveillance system in which a prearranged sample of reporting sources agrees to report all cases of one or more notifiable conditions
19. Site that harbors pathogenic organisms
20. Degree of pathogenicity
21. Short-term immunization by the injection of antibodies
22. Error in an epidemiologic study that results in an incorrect estimation of the association between exposure and health-related event

Section 2: Acronyms

State what the following acronyms stand for

1. YPLL
2. CFSAN
3. DALYS
4. EIS
5. HALE
6. WHO

Section 3: Famous Scientists/History

1. Who was the founder of the Red Cross?
2. Who's the director of the CDC?
3. Who proved smoking causes lung cancer?
4. Who developed the vaccine that eradicated polio?

Section 4: Descriptions

Describe the listed terms

1. Classical Epidemiology

2. Clinical Epidemiology

a. What two types can clinical epidemiology be divided into?

3. Frequency

4. Pattern

5. Incidence

6. Prevalence

7. Duration

Section 5: Scenario

1,200 people attend an astronomy convention. Of the 1,200 guests, 839 people came down with a case of staphylococcal food poisoning. The foods served were...

Foods	Symptoms	No Symptoms
Egg Salad	236	628
Potato Salad	240	135
Salad	290	460
Chicken	764	170
Hamburger	428	396
Pizza	532	419
Cream Pastries	69	53
Ice Cream	280	74

1. What are the symptoms of staphylococcal food poisoning?
2. What is the duration of staphylococcal food poisoning?
3. What organism causes staphylococcal food poisoning?

9. What are the steps to investigating an outbreak?

10. What is the attack rate formula for people who are exposed?

11. Calculate the attack rate for the potato salad.

12. What food item likely caused the staphylococcal food poisoning?

13. What is the attack rate for this item (round to the nearest tenth)?

14. What are three ways to reduce the risk of foodborne illness?

Section 6: Short Answer

Thoroughly answer all the questions.

1. What are the three components to an epidemiology component?
2. Describe the types of descriptive studies.
3. Describe the chain of infection using the words agent, host, reservoir, portal of exit, portal of entry, and mode of transmission.
4. Name and describe the three characteristics of agents.

5. Name the lines of defense in the body and describe what they do.

Section 7: Calculations/Math

Answer all the questions below. Show all work!

500 people attend a dinner party. Soon afterwards, many of the attendants became sick with salmonella. The egg salad was the suspected culprit. Out of the 500 attendees, 379 ate the egg salad. Out of these 379, 334 became sick. Out of those people who didn't eat the egg salad, 13 became sick.

1. What is the relative risk formula?
2. Based on this information, calculate the relative risk.
3. What does a relative risk greater than one indicate?
4. What type of study design is relative risk used in?

5. What is the formula for odds ratio?

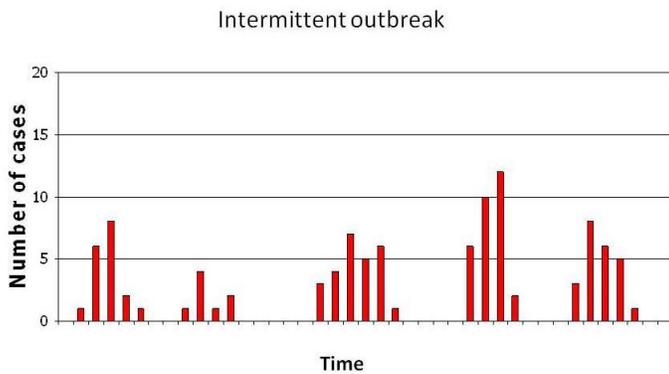
6. What study design uses odds ratio?

7. Describe the different study designs.

Study Design	Description	Strengths	Weaknesses
Case-Control			
Cohort			
Cross-Sectional			

8. What is the following called?

Id #	Initials	Onset Date	Confirmed	How	Age	Sex	County	Physician	At Party
1	JD	3/17	Salmonella	Blood test	28	M	Banks	Johnson	Yes
2	VS	3/16	Salmonella	Stool test	34	F	Banks	Stevens	Yes
3	PQ	3/17	Probable Salmonella	Not Done	51	F	Dixon	Jackson	Yes
4	AR	3/18	Salmonella	Blood Test	31	M	Horace	Johnson	Yes



9. What do epidemiologists call this graph?

10. What are the three types of this graph?