

Notes / Answers for Review Questions on Winkelstein (1995)

1. The first cogent germ theory was proposed by Fracastorius in the 1500s. (It was largely ignored.)
2. Miasma
3. Miasma was explained in terms of “spontaneous generations,” atmospheric conditions, pollution and elevation above sea level.
4. Henle and Koch were German physiologists who believed in contagion.
5. No was an anesthetist.
6. This term is used to refer to the theory of the “morbid material” as summarized in the article on page S4.
7. *Propagated* means to reproduce.
8. “living contagion”
9. Yes, Snow believed most if not all the epidemic diseases were infectious.
10. “morbid material” (the term “morbid” means related to disease and disability). Snow described the morbid material as stable and self-replicating.
11. During the incubation period, the agent multiplies within the body.
12. See article and RQ sheet.
13. Epidemic = disease in region occurring in clear excess of normalcy. Endemic = disease is in a region occurring a more or less constant rate (or predictable rate).
14. No
15. No, Henle believed that some diseases were caused by miasma and others were not (and some were a combination of miasma and contagion).
16. Snow was a strict contagionist.
17. See article
18. 1849
19. Snow noticed that the first symptoms of disease were gastrointestinal. This led him to believe that the agent was taken in through the mouth.
20. Water supplier information
21. See article on specified page and paragraph.
22. Yes, and he suggested further study was needed.
23. Anesthesiology
24. 1853-4
25. ecological studies, cohort study, and case-control study of an outbreak
26. Districts that received their water from the Southwark and Vauxhall company had higher rates of cholera than districts that received their water from the Lambeth company. Districts with mixed water supplied had an intermediate rate of cholera.
27. . . . from downstream sources polluted with raw sewage . . .
28. The cohort studied identified the specific source of water for effected and non-effected individuals. The ecological study “measured” water exposure on the aggregate (by district).
29. See Figure 3.
30. Snow failed to find gross impurities in the pump water. He did, however, find a major sewer in close proximity to the pump.
31. The Broad Street pump investigation is a case-control study because Snow compared the water source of cases and control. He was thus *unable* to determine cholera mortality rates for exposed and non-exposed individuals, but *was* still able to find evidence of an association between these factors.
32. What would you rather drink, sewage-contaminated pump water or beer? ☺ (In addition, there was a different well on the premises of the brewery.)
33. No.
34. No, Snow was an outcast for his theories.
35. Snow did not use the microscope during his investigations.

36. Snow did use field investigations to support his theory.