

HISTORY OF THE GERM THEORY OF DISEASE

rvsd 20July92, 6/28/93, 8July94, 5 July95, 8July96, 8July 98, 5July00, 3 July 01, 3 July 02, 9July04, 08July05, 6July08, 9July11, 5Sept12
 Black 6th: p 8-21, Bauman 2nd: 11-22



Man first thought disease to be punishment from God

- Hippocrates** 500 BC disease brought on by foul vapors (**miasma**). Malaria for instance.
- Aristotle** 350 BC Taught Alexander the Great to **boil drinking water & bury feces** to prevent disease.
- Fracastorius** 1546 (1478-1553)

Theory of **contagion**: disease infection can be caused by minute bodies (“germs”) capable of self-replication, transmitted from patient to new host. Named syphilis?

- Leeuwenhoek** 1670s improved microscope
- Agostino Bassi** 1834

First to show that a microorganism could cause disease in case of a fungal disease of silkworms (muscardine): contagious and could be transmitted naturally by direct contact or infected food, or experimentally by means of a pin previously sterilized in a flame

- Oliver Wendle Holmes** 1843

Noted that it was safer to give birth at home than in hospital. Postulated something present *in hospital* is cause (**nosocomial** disease)

- M.J. Berkeley** 1845
Showed Irish potato blight caused by a fungus

- Ignaz Semmelweis** 1848 (1818-1865)
Proposed **Iatrogenic** disease.

In charge of lying-in hospital in Vienna. Noted high puerperal fever death rate:

- Ward II midwives = 3%,
- Ward I, medical faculty = ~10%.

Phys. friend died of autopsy wound, S&S same as puerperal fever.

- Proposed etiology: “cadaveric particles.”
Smell **not** removed by hand washing, but “chloride of lime” wash (calcium hypochlorite: $\text{Ca}(\text{OCl})_2$ did, rate drop: 12.4% to 1.27%. (see graph)

- John Snow** 1854 (1813-1858)
deduced Broad Street Pump contamination caused cholera epidemic in London. (Epidemiology)

- Joseph Lister** 1860s
(p 14) (1827-1912)

Introduced use of **antiseptic** during surgery:
phenol in surgical dressings and sprayed into the air. Wound infections dropped dramatically, thus due to bacteria.

