

HISTORY OF THE GERM THEORY OF DISEASE

rvsd 20 July 1992, 6/28/93, 8 July 1994, 5 July 1995, 8 July 1996, 8 July 98, 5 July 2000, 3 July 01, 8 Jan 02, 3 July 02, 9July04, 08July05, 6July08
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: 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 causing disease (**nosocomial** disease)

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

Ignaz Semmelweis 1848 (p 16) (1818-1865) Proposed **Iatrogenic** disease. In charge of lying-in hospital in Vienna.

Childbirth 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 calcium hypochlorite: $\text{Ca}(\text{OCl})_2$ did. Chloride of lime wash reduced puerperal fever death rate 12.4% to 1.27%.

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

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.