

Howard Talks Tech

Hand Washing is Vital to Disease Prevention

Dr. Ignaz Semmelweis demonstrated in the 1800's that hand washing is an important means of preventing the spread of germs. Semmelweis worked in a Vienna hospital and was alarmed at the mortality rate in the maternity ward. The patients were dying at a rate five times greater than those who gave birth at home.



Most of those dying were being treated by student physicians who worked on cadavers during anatomy class before beginning their rounds on the maternity ward. Students did not wash their hands between touching the dead and living. This resulted in the pathogenic bacteria from the cadavers regularly being transferred to the mothers by the students' hands.

Semmelweis insisted that the students wash their hands after anatomy class before seeing patients in the maternity ward. The results of this experiment led to a fivefold decrease in deaths on the ward.

This was the beginning of infection control, not just in hospitals, but public health in general. Today, the value of hand washing in preventing disease is recognized throughout communities, schools, child care settings and in eating establishments.

According to the Centers for Disease Control (CDC), each year Americans are sick more than 4 billion days, spend \$950 billion on direct medical costs and more than 160,000 die due to infectious diseases. Infectious diseases are caused by various types of microscopic germs such as: viruses, bacteria, parasites and fungi. These germs cause illnesses ranging from common ailments, like the cold and flu, to disabling diseases, such as Lyme disease, to deadly diseases, like the Hantavirus. The good news is that many of these diseases can be prevented through amazingly simple and inexpensive methods. Hand washing is one of the most important things that can be done to keep from getting sick. To properly wash your hands:

- Wet your hands and apply liquid or clean bar soap. Place the bar soap on a rack and allow to drain.
- Rub hands vigorously together and scrub all surfaces.
- Continue scrubbing for 10 -15 seconds or about the length of time it takes to sing "**Happy Birthday**" It is the soap combined with the scrubbing action that dislodges and removes germs.
- Rinse your hands and dry well. Soap does not kill germs.

The Food and Drug Administration and the CDC work together to control the transmission of pathogens that result in food borne illnesses. Transmission of pathogenic bacteria, viruses & parasites from raw food or from ill workers to food by way of improperly washed hands is one of the major factors in the spread of food borne illnesses.

Finally, the OSHA's Blood borne Pathogens Standard, 29 CFR 1910.1030, general working practices require that hand washing facilities be made available. Soap has the ability to decrease the surface tension of water. It also binds to dirt and germs. These two qualities allow soap to cling to unwanted dirt and wash away easily. If they are not feasible, an antiseptic cleanser and towels or antiseptic towelettes must be available.