



Hand Hygiene

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Introduction

Hand hygiene is deemed very important in preventive medicine, and is really the most important step to prevent transmission of infections. All healthcare professionals should have adequate knowledge of hand hygiene. The significance of hand washing in patient care was postulated way back, in the early 19th century. Labarraque provided the first evidence that hand decontamination is able to markedly reduce the incidence of puerperal fever and maternal mortality(1). Hand hygiene can be performed with either soap and water, or alcohol-based hand sanitizer. Three types of hand washing are there:-_ social hand wash, surgical hand wash and antiseptic hand wash. While social hand washing is performed up to wrist level, surgical hand wash is done up to elbow and needs elbow tap. Hand washing kills only the transient microbial flora of hands, like *S. aureus*, *E. coli* and *Enterococcus* spp. and not the resident microbial flora. Seven steps of social hand washing are there. In hand sanitization 6 steps are there. Two ml liquid soap or sanitizer is needed for hand hygiene.

Germs in hands come from the environment, ambient air, the soil and also from the external nose since many people habitually pick their noses. Dirty hands can transmit germs like *S. aureus* and *E. coli* to the food chain and hence cause foodborne infections and intoxications. Unclean hands may also transmit respiratory pathogens like SARS-CoV2 and Influenza virus.

It should be remembered that nails should be trimmed short before hand washing. Rings should be removed from fingers. Normal soaps are good enough for hand hygiene, and medicated soaps are not significantly better than normal soaps. In hand sanitizers, glycerol or Vitamin E or aloe vera can be added as emollient, to prevent drying of hands. Washing hands with soap and water is the best way to get rid of germs in most cases. If soap and water are not readily available, one can use an alcohol-based hand sanitizer that contains at least 60% alcohol(2). The alcohol used commonly is either ethanol or isopropyl alcohol. The latter has better germicidal action. Research has shown that handwashing can diminish the rates of certain respiratory and gastrointestinal infections by up to 23 and 48%, respectively(3). The duration of hand wash should last between 20 to 40 seconds and lather formation should be encouraged. The CDC recommends that if one encounters trouble keeping track of the duration of hand washing, he

or she may try humming the entire “Happy Birthday” song twice before rinsing(4). While using sanitizers, it should be remembered that they are effective only when fully vapourized, and when hands are visibly dirty, they should not be used.

Normally, critical points one should wash hands in social hand washing is before eating and after defecation.

Moments of hand hygiene in the healthcare facility:_

According to the World Health Organization (WHO), there are 5 Moments for hand hygiene:-

1. Before Patient Contact.
2. Before and Antiseptic Task.
3. After Body Fluid Exposure Risk.
4. After Patient Contact.
5. After Contact with Patient Surroundings.

Thus, hand hygiene is very important; it should never be neglected. It is important both in daily life as well as in the healthcare facility. More and more awareness campaigns like “hand hygiene day” observation and commemoration by “global handwashing day” will help generate more awareness about hand hygiene, its importance and its steps amongst the masses.

References

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2. About Handwashing.
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4. How Much Time You Spend Washing Your Hands Makes a Difference.