

How effective is handwashing?

Personal Hygiene

It is the act of cleansing hands by applying soap and water, rubbing them together vigorously, rinsing them with clean water, and thoroughly drying them. **This process gets rid of dirt and germs.** Every handwashing stage is important and effectively contributes to soil removal and reduction of microorganisms that can cause illness.

Why is handwashing important?

Handwashing reduces the spread of pathogenic microorganisms that are transmitted through food. The hands of food employees can be colonized with microorganisms such as *Staphylococcus aureus* or contaminated with organisms from human fecal material, such as Norovirus, *Shigella* spp., hepatitis A virus, *E. coli* O157:H7, or *Salmonella* Typhi, or contaminated from raw animal foods, with *E. coli* O157:H7 and *Salmonella* spp. These and other pathogenic microorganisms can get on the hands from a number of sources and then move from hands to food during preparation and service.

An infected food employee and/or food employees with unclean hands, and exposed portions of arms or fingernails, can contaminate food. If a consumer eats contaminated food, foodborne illness may result.

When should food employees wash their hands?

They should do this immediately after engaging in activities that contaminate the hands and:

- When entering a food preparation area;
- Before putting on clean, single-use gloves for working with food and between glove changes;
- Before engaging in food preparation;
- Before handling clean equipment and serving utensils;
- When changing tasks and switching between handling raw foods and working with RTE foods;
- After handling soiled dishes, equipment, or utensils;
- After touching bare human body parts, for example, parts other than clean hands and clean, exposed portions of arms;
- After using the toilet;
- After coughing, sneezing, blowing the nose, using tobacco, eating, or drinking; and
- After caring for or handling services animals or aquatic animals such as molluscan shellfish or crustacea in display tanks.

What handwashing steps do food employees need to follow?

Clean hands and exposed portions of arms, including surrogate prosthetic devices for hands and arms, for at least 20 seconds by the following method:

1. Rinse under clean, warm running water;
2. Apply soap and rub all surfaces of the hands and fingers together vigorously with friction for at least 10 to 15 seconds, giving particular attention to the area under the fingernails, between the fingers/fingertips, and surfaces of the hands, arms, and surrogate prosthetic devices;
3. Rinse thoroughly with clean, warm running water; and
4. Thoroughly dry the hands and exposed portions of arms with single-use paper toweling, a heated-air hand-drying device, or a clean, unused towel from a continuous towel system that supplies the user with a clean towel.

Avoid recontamination of hands and arms by using a clean barrier, such as a paper towel, when turning off hand sink faucets or touching the handle of a restroom door.

It is important to follow these steps to remove germs from hands and ensure hands are as clean as possible. Thorough handwashing with warm water, the recommended amount of soap as indicated by the manufacturer, and proper hand drying are essential to reduce the possibility of hands transferring microorganisms to food.

How important is the temperature of water used for handwashing?

Warm water is generally more comfortable than cold water and encourages handwashing for the recommended duration. The water temperature used in handwashing can also affect the solubility or emulsification of some soils. Warm water is more effective than cold water in removing fatty soils. An adequate flow of warm water will cause soap to lather and aid in flushing soil quickly from the hands. The *2005 FDA Food Code* specifies a minimum handwashing water temperature of 38°C (100°F).

How important is properly drying your hands after handwashing?

Hand drying is a vital part of the handwashing process because thorough hand drying can provide an added reduction of microorganisms on the hands. The 2005 FDA Food Code lists three different effective methods. These include drying the hands with an air dryer and using a single-use towel or a clean, unused towel.

Can hand antiseptics (hand sanitizers) be used in place of adequate handwashing in food establishments?

No. Hand antiseptics should be used only in addition to proper handwashing.

What are some ways a food establishment can promote compliance with handwashing requirements?

Train food employees on:

- When to wash hands;
- How to wash hands; and
- Where to wash hands.

Stress the importance of:

- Following proper cleaning procedures;
- Keeping hands and exposed portions of arms, including surrogate prosthetic devices for hands and arms, clean;
- Keeping fingernails trimmed;
- Washing hands only in designated handwashing sinks; and
- Following the appropriate use of hand antiseptics.

Managers are responsible for:

- Ensuring that food employees wash their hands, as required;
- Providing accessible, properly maintained, designated handwashing sinks;
- Making sure that handwashing sinks have clean, running warm water, soap and paper towels, or other approved means for drying;
- Posting signage that notifies food employees of the handwashing requirement; and
- Monitoring food employees to ensure proper handwashing and good hand hygiene protocol during the work shift.

Tips for promoting effective handwashing practices in food establishments:

- Make food employees aware of media coverage on local and national foodborne outbreaks. This awareness reinforces the reporting of symptoms, illness, and good handwashing procedures.
- Create opportunities to remind food employees each week about the importance of hand hygiene.
- Emphasize handwashing at the beginning of a shift, after using the toilet, after handling raw meat, and between changes of gloves. This emphasis will help keep good hand hygiene at the forefront.
- Use a "buddy" system so that fellow food employees can support each other.
- Use training and incentive programs to motivate food employees to take ownership and practice good personal hygiene habits.

An FDA study published in 2004 found food establishments were frequently out of compliance with the Food Code requirements for proper and adequate handwashing. In the study, the percent of food establishments observed to be out of compliance with handwashing requirements ranged from 34% in hospitals to 73% in full-service establishments.

The following elements can impact handwashing compliance among food employees:

- **Make it a Priority:** When management enforces handwashing compliance as a mandatory requirement, employees are more likely to follow the requirement.
- **Motivate:** Provide motivation for handwashing, which has proven to have an impact on improving handwashing compliance.
- **Remove Deterrents:** Conveniently located handwashing sinks have a huge impact on handwashing compliance. Studies have found that availability of handwashing sinks supplied with soap and running water has a big influence on compliance; however, materials and practices that cause irritation to the skin can decrease handwashing compliance. For example, excessive handwashing or use of harsh soaps can lead to skin irritation and subsequently decrease handwashing compliance.
- **Provide Positive Reinforcement:** Rewards for compliance generally have a positive impact on improving handwashing compliance.

Should food employees with one hand or those with a surrogate prosthetic device for hands and arms follow these handwashing procedures?

Yes, this requirement for thorough handwashing is achievable through reasonable accommodation in accordance with the ADA. In order to achieve the intent of this requirement, devices are available that are attachable to a lavatory. These devices enable a one-handed food employee to generate the necessary friction to achieve the intent of this requirement