

Personal hygiene

Persons who come into direct or indirect contact with edible parts of animals or meat should:

- maintain an appropriate standard of personal cleanliness;
- wear protective clothing appropriate to the circumstances, and ensure that non-disposable protective clothing is cleaned before and during work;
- if wearing gloves during the slaughter and dressing of animals and the handling of meat, ensure that they are of an approved type for the particular activity, e.g. chain-mail stainless steel, synthetic fabric, latex, and they are used according to specifications, e.g. washing of hands before use, changing or sanitizing gloves when contaminated;
- immediately wash and sanitize hands and protective clothing when there has been contact with abnormal animal parts that are likely to harbour food-borne pathogens;
- cover cuts and wounds with waterproof dressings; and
- store protective clothing and personal effects in amenities that are separate from areas where meat may be present.

Persons who come into direct or indirect contact with edible parts of animals or meat in the course of their work should:

- where necessary, have a medical examination prior to and during employment;
- not work while clinically affected by, or suspected to be carrying, communicable agents likely to be transmitted through meat; and
- be aware of and comply with reporting requirements to the establishment operator in respect of communicable agent.

Source: FAO/WHO. 2004. Draft code of hygienic practice for meat. In *Report of the 10th Session of the Codex Committee on Meat Hygiene*. Alinorm 04/27/16. Rome (available at ftp://ftp.fao.org/codex/Alinorm04/AL04_16e.pdf).

INTRODUCTION

In any food production process, contamination of the product can originate from the animal, from the environment or from the personnel involved in the operation. Human beings can suffer from diseases that may be transmitted to others via meat, or they may unwittingly carry disease agents. There are many organisms that live in and on our bodies, and cause no illness in this, their natural environment. However, if these organisms find themselves in or on foodstuffs, they may proliferate or produce toxins that can subsequently cause severe illness in the unsuspecting consumer. This section examines measures that the food handler can take to minimize the risk of contaminating the product.

PERSONAL HEALTH

The aim of any organism is to survive and proliferate, ensuring the survival of the species. This is as true of the micro-organisms that cause disease as it is of animals and human beings. When a disease-producing organism enters the body and produces disease, it multiplies, making many copies of itself to be spread in the excretions of the ill host. Thus, respiratory diseases are spread in the nasal secretions and phlegm of the patient, and disseminated to the environment and other potential victims by coughing and sneezing, whilst gastro-intestinal diseases are spread through the faeces and vomit of the patient.

If a person is unwell, and particularly if the illness is of gastro-intestinal type, that person should not handle food. It is possible that the person's hands or clothing may be contaminated with the organism responsible for the illness, even though he or she has done everything to minimize this risk. These organisms are rather hardy, and enough may survive normal washing procedures to pose a risk to the food. Some organisms also remain in the body even after the person has recovered from the episode of illness, and will be present in the faeces. It is recommended that faecal samples are screened for causes of the gastro-enteritis prior to the person returning to food handling, or there should be a period of perhaps three weeks after

recovery during which time the person should not handle food.

It should be noted that some people become lifelong carriers of diseases such as typhoid.

Cuts, grazes and other skin lesions should be covered, using blue waterproof adhesive tape, or waterproof gloves. This is because, during the healing process of skin lesions, the organism *Staphylococcus aureus* proliferates around the lesion. This organism could be transferred to foods, where it produces a toxin that is responsible for food poisoning.

CLOTHING

Personal clothing can carry micro-organisms that have been gathered from a wide variety of sources into the food-processing environment. To protect the food from personal clothing, protective coveralls should be worn. The coveralls should be light in colour so that contamination can be easily identified and the coveralls cleaned. Protective clothing should be



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PHOTO 11.1

GOOD PRACTICE: clean light-coloured coveralls and waterproof footwear

replaced at least at the start of each working day, and whenever contaminated. Ideally, clean protective clothing should be donned at regular intervals throughout the day, at a frequency appropriate to the production volume and soiling.

Clean waterproof footwear should be worn, and should be cleaned before starting or resuming work after a break, and at the end of a period of work. This footwear should not be used in any area other than the food-processing hall, and separate footwear should be provided for staff working in high-risk areas and in “dirty” areas. A colour-coding system allows easy identification of equipment allocated to particular areas of the process.

The wearing of jewellery, watches and other detachable items should be discouraged. Dirt, and organisms such as *S. aureus*, can build up on and around such items, and they also pose a risk of foreign body contamination if they fall into the food.

Similarly, cosmetics, false nails or eyelashes and strong perfumes should not be allowed because of the risk of contamination and even tainting of the food.

CLEANLINESS

All parts of the body carry numerous micro-organisms, including *S. aureus*. While it is impossible for a person to remove all of these micro-organisms, careful attention to personal hygiene will minimize the risk of contamination.

Care should be taken not to touch the ears, nose, mouth, eyes and hair while working with foodstuffs. These parts of the body may carry a higher number of organisms that could be transferred to foods. Also chewing, eating, spitting and smoking should be discouraged, as these activities involve touching the mouth, and saliva may be disseminated into the environment.

Hands should be kept clean, and fingernails short. Hands should be washed:

- before entering any food-processing area;

- after using the toilet;
- after coughing, sneezing or touching the face or hair;
- after handling any waste material;
- before handling any food or food-contact equipment;
- after handling food or food-contact equipment;
- when leaving the food-processing area.

If gloves are to be worn, hands must also be clean, and the gloves must be cleaned exactly as the hands would be.

Hand-washing procedure:

- rinse hands with warm water;
- apply soap and rub well into all parts of the hands and fingers;
- using a small brush, scrub under the fingernails, and in the creases of the hands and fingers;
- rinse the hands with warm water;
- re-apply soap and rub well in;
- rinse well;
- dry hands thoroughly.

All the above steps should be carried out to minimize the risk of contamination. An optional addition is a sanitizer, applied after the hands have been dried, but this should not replace any of the above steps.

It is important that the warm water used be clean, potable and preferably running water, and that wastewater be ducted away from the food-processing area. The use of soap is important to lift grime from the hands, and it should be unperfumed to ensure that there is no risk of tainting the foodstuffs. Drying is vital. Many micro-organisms are highly susceptible to desiccation, and the risk of contamination is reduced by drying. The method of drying should be using clean disposable towels. A re-usable towel will gradually become more contaminated than the hands it is supposed to dry, as each use will add some more micro-organisms to it. Warm-air hand-dryers may cause spread of micro-organisms in droplets into the environment, and often people do not use the dryer for a sufficient length of time to completely dry their hands.