

HAND HYGIENE

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HoEFSF 9 June 2003

INTRODUCTION

- Hands do get **contaminated** with harmful germs (bacteria & viruses) from raw foods and people
- Once contaminated, hands can **spread** such germs widely (surfaces, handles, utensils, other foods)
- Hand hygiene is therefore critical for the **control** of the spread of food poisoning pathogens
- Proper **technique** is vital but there are also other important associated factors (training, supervision/monitoring, 'culture'/motivation/reinforcement, working procedures)

TWO TYPES OF BACTERIA

Skin can be contaminated by 2 types of bacteria:

Resident bacteria - customary bacteria usually found throughout the skin, hair follicles & skin glands. Not generally a health hazard (except *Staph. aureus*) but can lead to food spoilage. Can reduce them by handwashing but cannot remove them completely.

Transient bacteria - picked up from the environment and transferred around the food handling environment e.g. *Salmonella*, *E. coli*. Can be removed by normal handwashing.

EXAMPLES OF PATHOGENS

- **Staphylococcus aureus** - 'resident' in many people (harboured by 22% in nose, 6% in throat, 25% of skin lesions, 40% (kitchen staff) on hands)
- **Listeria** - 12% of food workers had Listeria on their hands
- **Hepatitis A virus** - can cause viral food borne illness. The virus has been shown to be still present on hands 4 hours after (inadequate) hand washing. Easily spread, low infective dose.

POOR PERSONAL HYGIENE (1)

BAD HABITS

- People say they wash their hands more than they actually do. 22 studies between 1974 & 1998 showed average of 38% (hospital), 40% (commercial food preparation), 42% (at home)
- The number of germs on the fingertips doubles after using the toilet, yet up to 50% of men and 25% of women fail to wash hands after going to the toilet.
- A single hair follicle can harbour 50, 000 germs... potentially serious implications for scratching head/skin!
- Rings or bracelets reduce effectiveness of handwashing by harbouring germs underneath.

POOR PERSONAL HYGIENE (2)

Poor Technique

Most of us do not wash our hands properly.



■ Areas most frequently missed during hand washing

■ Less frequently missed

■ Not missed

(Adapted from Taylor L (1978), An evaluation of hand washing techniques - I, Nursing Times, 12 January, pp 54-55)

POOR PERSONAL HYGIENE (3)

Poor Technique (cont'd)

Most people do not wash their hands for **long enough**. [10 minutes after a 15 second handwash, Salmonella could still be detected on the hands)

Hands may not be **dried properly**. The residual moisture left on hands is the major factor determining the TRANSFER of bacteria from those hands to food or food contact surfaces. **1,000 times more germs are spread from damp hands than dry hands.**

Soap or **sanitiser** used on their own are not as effective as either when used in sequence together or when combined in a single hand cleaning product

SO WHAT IS "HAND WASHING"?

- *“The purpose of hand washing is to remove dead skin cells, sweat etc. and associated transient bacteria as well as organic material adhered to the hands through normal activities. The immediate anti-microbial effects (removal of ‘transient’ bacteria) depend upon:*
 - *the type and amount of washing product*
 - *the time spent washing the hands*
 - *the mechanical pressure and friction employed*
 - *the temperature of the water*
- *The persistent anti-microbial effects (reduction in the level of ‘resident’ bacteria) depends upon the actual effectiveness of the anti-microbial product used.”*

...AND "HAND DISINFECTION"?

Hand disinfection is the application to the hands of a chemical substance having anti-microbial activity. This would take place after the removal of gross soiling etc. by hand washing with soap.

The main classification of hand disinfection with relevance to the food industry is **Hygienic Hand Disinfection** which primarily results in 'transient' micro-organisms being killed although there may be some secondary effect on 'resident' micro-organisms. The agents are quick acting (typically 15 – 30 seconds) and usually comprise alcohols or alcoholic solutions.

RECOMMENDED BEST PRACTICE

A



Wet hands and wrists under running water and apply cleansing agent/soap to palm surface of one hand. Rub hands together.

B



Interlace fingers while rubbing right palm surface over back of left hand and repeat left over right.

C



Interlace fingers palm to palm with rubbing action.

D



Work knuckles of left hand into right palm and simultaneously work knuckles of right hand into left palm.

E



Rub right thumb with palm surface of left hand and vice versa.

F



Work right hand finger tips into palm and repeat with left hand fingertips.

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TO FINISH OFF THE PROCEDURE...

- **Rinse** hands thoroughly
- **Dry** hands well (about 45 seconds for warm air driers, or using at least 2 paper towels)
- Apply an **alcoholic preparation** with an emollient (moisturiser) and rub this all over all hand surfaces.

IN CONCLUSION

- The solution lies in your hands...
 - You
 - Your colleagues
 - Your employees