

Advice on Household Disinfection at the Height of Influenza Season

Influenza is a highly infectious viral disease. In Hong Kong, the peak season is from January to March and from July to August. Influenza is transmitted from person to person by droplet or contact of respiratory secretion (direct or indirect). Since infective agents can survive in the environment for a period of time, it is essential to maintain good household environmental hygiene to minimize the transmission of influenza.

Everybody has a role to play in the control of influenza by practising good personal hygiene and household environmental hygiene. The following actions are advised for maintaining a clean and hygienic household environment for the prevention of influenza and containing its spread during the peak season:

Maintain good ventilation

- Windows should be opened for better ventilation
- Switch on fans or exhaust fans to enhance air flow
- Keep air-conditioners well-maintained
- Clean and wash the dust-filters of air-conditioners regularly

Maintain household environment clean and hygienic

- Clean and disinfect frequently touched surfaces, furniture, toys, utensils, toilet, bathroom and floor at least daily by using appropriate disinfectant (e.g. 1 part of household bleach containing 5.25% sodium hypochlorite in 99 parts of water for non-metallic surfaces or 70% alcohol for metallic surfaces), wait for 15-30 minutes, and then rinse with water and wipe dry. (Please note Annex 1 for Preparing and Using Diluted Bleach)
- If places are contaminated by respiratory secretions, vomitus or excreta, use strong absorbent disposable towels to wipe them away. Then disinfect the surface and the neighbouring area with appropriate disinfectant (e.g. 1 part of household bleach containing 5.25% sodium hypochlorite in 49 parts of water for non-metallic surfaces or 70% alcohol for metallic surfaces), leave for 15-30 minutes, and then rinse with water and wipe dry. (Please note Annex 2 for Preparing and Using Diluted Bleach)
- Clean the floor regularly and increase the frequency as circumstances arise, and keep it dry.
- Carpets should be kept clean by daily vacuum cleaning and regular washing.
- Change and clean bed sheets, pillow cases, towels and clothes regularly.
- If pets (such as cats and dogs) are kept, increase the frequency of cleaning.
- Rubbish should be properly wrapped up and discarded into garbage bins with lids. Empty garbage bins at least once a day.

Maintain toilet and bathroom clean and hygienic

- Keep toilets and bathrooms clean and dry.
- Provide liquid soap and disposable paper towels for washing hands.
- Ensure the flushing system of the toilet is in proper function at all times. Flush immediately after using toilet.
- Towels should never be shared. Personal towels to be reused must be stored properly and washed thoroughly at least once daily. It is even better to have more than one towel for frequent replacement.

Centre for Health Protection

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Annex 1

Preparing and Using Diluted Bleach

1. Keep windows open when diluting or using bleach to ensure good ventilation
2. Put on personal protective gear (e.g. mask, gloves and goggles) when diluting or using bleach as it irritates mucous membranes, the skin and the airway
3. Cold water should be used for dilution of bleach as hot water decomposes the active ingredient of bleach and renders it ineffective.
4. Bleach containing 5.25% sodium hypochlorite should be diluted as follows:
 - 1 in 99 diluted household bleach (mixing 10 ml of bleach with 990 ml of water) can be used for general household cleaning.
 - 1 in 49 diluted household bleach (mixing 10 ml of bleach with 490 ml of water) is used to disinfect surfaces or articles contaminated with vomitus, excreta and secretions.
5. Make adjustments to the amount of bleach added if the concentration of sodium hypochlorite is above or below 5.25%.
 - Calculation: Multiplier of the amount of bleach added = $5.25\% \div \text{concentration of sodium hypochlorite in bleach}$
 - For example, when diluting bleach containing only 5% sodium hypochlorite, the multiplier is $5.25 / 5 = 1.05$. That means $10 \text{ ml} \times 1.05 = 10.5 \text{ ml}$ of bleach should be used.
6. For accurate measurement of the amount of bleach added, a measuring cup can be used.
7. Rinse disinfected articles and surfaces with water and wipe dry.
8. Cleaning tools should be soaked in diluted bleach for 30 minutes and then rinsed thoroughly before reuse.
9. Finally, wash hands with liquid soap and water, then dry hands with a clean towel or disposable paper towel.

Precaution

- Avoid using bleach on metals, wool, nylon, silk, dyed fabric and painted surfaces.
- Avoid touching the eyes. If bleach gets into the eyes, immediately rinse with water for at least 15 minutes and consult a doctor.
- Bleach should not be used together or mixed with other household detergents as this reduces its effectiveness in disinfection and causes chemical reaction. For instance, a toxic gas is produced when bleach is mixed with acidic detergents such as those used for toilet cleaning. This could result in accidents and injuries. If necessary, use detergents first and rinse thoroughly with water before using bleach for disinfection.
- As undiluted bleach liberates a toxic gas when exposed to sunlight, it should be stored in a cool and shaded place out of reach of children.
- Sodium hypochlorite decomposes with time. To ensure its effectiveness, it is advised to purchase recently produced bleach and avoid over-stocking.
- For effective disinfection, diluted bleach should be used within 24 hours after preparation.