



衛生防護中心
Centre for Health Protection

Health Advice to School for the Prevention of Ebola Virus Disease (EVD)

I. Ebola Virus Disease (EVD)

A. Causative Agent

EVD is caused by infection with Ebola virus. EVD in humans has an average case fatality rate of around 50% (varied from 25% to 90% from previous outbreaks).

B. Clinical Features

2. EVD is a severe acute viral illness often characterised by the sudden onset of fever, intense weakness, muscle pain, headache and sore throat. This is followed by vomiting, diarrhoea, rash, impaired kidney and liver function, and in some severe cases, internal and external bleeding.

C. Mode of Transmission

3. Ebola virus can spread in the community through human-to-human transmission, with infection resulting from direct contact (through broken skin or mucous membranes) with the blood, secretions, organs or other bodily fluids of infected people, and indirect contact with environment contaminated with such fluids.

4. An infected person may spread the disease to others after (and not before) he/she has developed symptoms and will remain infectious as long as their blood and secretions contain the virus.



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轄下執行疾病預防
及控制之專業機構
The Centre for Health
Protection is a
professional arm of the
Department of Health
for disease prevention
and control

D. Incubation Period

5. It ranges from 2 to 21 days.

E. Treatment

6. There is no specific treatment for the disease.
7. Patients must be managed in isolation facilities to prevent the spread of the infection.

F. Vaccination

8. There is no licensed vaccine available for EVD.

9. The Department of Health advises school to take the following precautionary measures to minimize the risk of contracting and spreading EVD.

II. Preventive Measures

A. Stay Alert

- (a) Remind students/staff that they should avoid travel to the affected areas. Good personal and environmental hygiene should be maintained. For the EVD updates, please visit Centre for Health Protection website https://www.chp.gov.hk/files/pdf/evd_updated_statistics.pdf
- (b) Instruct students/staff who had travelled to those affected areas in the past 21 days; they should notify school and observe closely their health condition. Within the 21 days of returning from those affected areas, they should measure their body temperature every day before going to school. If feeling unwell, they should seek medical consultation promptly and should not go to school. If developing symptoms of EVD, they should call 999 (instead of using public transport) and inform the ambulance call centre about their travel history and their condition to arrange consultation in Accident and Emergency Department (AED).
- (c) A student/staff with travel history if developing symptoms of EVD in school, the school should put the student/staff in a single room, inform student's parents/staff's relatives and call 999 for ambulance (instead of using public transport) to send the student/staff to AED for medical consultation. School should inform ambulance call centre about their travel history.

B. Maintain Good Personal Hygiene

- (a) Perform hand hygiene properly before touching your eyes, nose or mouth; before eating; after using the toilet; and touching public installations or equipment such as escalator handrails, elevator control panels or door knobs.
- (b) Wash hands with liquid soap and water properly whenever possibly contaminated.
- (c) When hands are not visibly soiled, clean hands by rubbing them with 70-80% alcohol-based handrub as an effective alternative.
- (d) Cover nose and mouth with tissue paper when sneezing or coughing. Dispose soiled tissue paper properly into a lidded rubbish bin and wash hands with liquid soap and water afterwards.
- (e) Students/staff should wear a surgical mask if develop respiratory symptoms and consult their doctor promptly. They should take rest at home and refrain from going to school if having fever.
- (f) Disinfect and cover wounds properly.

C. Preparation of Hand Hygiene Facilities

- (a) Provide liquid soap and disposable paper towels or hand dryers at places where there are handwashing facilities, e.g. toilets, kitchens, tuck shops/canteens, art rooms, activity rooms as indicated.
- (b) Provide alcohol-based handrub in places where handwashing facility is not available.
- (c) The children should be instructed to use alcohol-based handrub properly.

D. Maintain Good Indoor Ventilation

- (a) Windows of classroom should be opened. Window and louver are not located on the same wall to improve convection and for better ventilation.
- (b) Switch on fans or exhaust fans to enhance air flow.
- (c) Keep air-conditioners well-maintained.
- (d) Clean the dust-filters of air-conditioners regularly.

E. Maintain Environment Clean and Hygienic

- (a) School management is advised to maintain good hygienic standard of the school premises through thorough cleansing and disinfection daily (please refer to Annex I for procedures of preparing and using diluted bleach). Keep classrooms, kitchens, tuck shops/ canteens, toilets and bathrooms clean and hygienic by using mixture of 1 part of household bleach containing 5.25% sodium hypochlorite to 99 parts of water wait until dry and then rinse with water. For metallic surface, disinfect with 70% alcohol.
- (b) Clean and disinfect frequently touched surfaces, furniture, toys, commonly shared items and floor at least daily by using appropriate disinfectant (e.g. 1 part of household bleach containing 5.25% sodium hypochlorite to 99 parts of water for non-metallic surface), leave for 15-30 minutes, rinse with water and wipe dry afterwards. For metallic surface, disinfect with 70% alcohol.
- (c) If places are contaminated by respiratory secretions, vomitus or excreta, use strong absorbent disposable paper 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 to 49 parts of water for non-metallic surface), leave for 15-30 minutes, rinse with water and wipe dry afterwards. For metallic surface, disinfect with 70% alcohol.

III. Early Recognition of Infection

- (a) Contact the staff and parents/guardians of students to ascertain the reasons for their absence.
- (b) Keep sick leave records of staff and students properly. This helps early detection of possible infections.
- (c) Inform Centre for Health Protection (CHP) of the Department of when staff or student diagnose of EVD/with similar symptoms of EVD. This helps to reduce the risk of the spread of communicable diseases.

IV. When a Suspected EVD Case is Encountered in School

A. Cleansing Staff should Wear Appropriate PPE Including:

- (a) Surgical mask,
- (b) Double gloves: inner latex or nitrile gloves and outer rubber gloves,
- (c) Water resistant gown/plastic apron on top of disposable gown,
- (d) Eye protection (goggles/face shield),
- (e) Cap (optional), and
- (f) Gumboots.

B. Enhanced Environmental Disinfection

- (a) Disinfect all potentially contaminated surfaces or items by using 1 part of household bleach containing 5.25% sodium hypochlorite to 49 parts of water, leave for 15-30 minutes, rinse with water and wipe dry afterwards.

C. If There is Blood, Secretions, Vomitus or Excreta, Take Enhanced Measures:

- (a) Cleansing staff should wear appropriate personal protective equipment (PPE) including surgical mask, double gloves, water resistant gown/plastic apron on top of disposable gown, eye protection (goggles/face shield), cap (optional) and gumboots.
- (b) Use forceps to hold the strong absorbent disposable towels to wipe away the blood, secretions, vomitus or excreta during a preliminary clean up.
- (c) Then put the forceps and used absorbent disposable towels in a garbage bag carefully without contaminating oneself/ the environment.
- (d) Use 1 part of household bleach containing 5.25% sodium hypochlorite to 4 parts of water, wipe from outside inward, leave for 10 minutes, rinse with water and wipe dry afterwards.
(Recommended disinfection area: contaminated surface and the neighbouring area, such as 2 metres).
- (e) After the procedure, put all the wastes and cleansing tools (e.g. forceps, cloth, mop head) in the garbage bag.
- (f) Carefully remove PPE, put them in the garbage bag, and then perform hand hygiene.
(When hands are not visibly soiled, use 70-80% alcohol-based handrub. Wash hands with soap and water when hands are visibly dirty or visible soiled with blood, body fluid.)
- (g) Wear a pair of new gloves, seal the waste bag tight and dispose it properly in covered rubbish bin. Then, label the rubbish bin and put it in a safe undisturbed place until the status of case is confirmed. #
- (h) Remove gloves carefully. Wash hands with liquid soap and water.

If EVD is confirmed, CHP will inform the school as soon as possible and the wastes will be collected by the Food and Environmental Hygiene Department. On the contrary, if EVD is excluded, the wastes can be disposed as usual.

D. EVD is Confirmed

- (a) Wear a new pairs of gloves
- (b) Put the waste bag into red clinical waste bag (with biohazard sign), each bag of clinical waste should be labeled with “clinical waste” tag and clearly indicate the source of the waste in a non-fading black pen.
- (c) Remove gloves carefully. Wash hands with soap and water.
- (d) The Food and Environmental Hygiene Department will arrange a collector approved by the Environmental Protection Department and the clinical waste will be collected and transported to a licensed disposal facility.

V. Updated Information for EVD

10. Please visit the website of the Centre for Health Protection of the Department of Health at

http://www.chp.gov.hk/en/view_content/34199.html

VI. Guidelines on Prevention of Communicable Diseases in Schools

11. Please refer to “Guidelines on Prevention of Communicable Diseases in Schools/Kindergartens/Kindergartens-cum-Child Care Centres/Child Care Centres” for more details:

http://www.chp.gov.hk/files/pdf/guidelines_on_prevention_of_communicable_diseases_in_schools_kindergartens_kindergartens_cum_child_care-centres_child_care_centres.pdf

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Safe Use of Bleach Solution

I. Preparing and Using Diluted Bleach

- (a) Keep windows open when diluting or using bleach to ensure good ventilation.
- (b) Put on personal protective equipment (e.g. mask, gloves and goggles) when diluting or using bleach as it irritates mucous membranes, the skin and the airway.
- (c) Cold water should be used for dilution of bleach as hot water decomposes the active ingredient of bleach and renders it ineffective.
- (d) Bleach containing 5.25% sodium hypochlorite should be diluted as follows:
 - (i) 1 to 99 diluted household bleach (mixing 10 ml of bleach with 990 ml of water) can be used for general household cleaning.
 - (ii) 1 to 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.
- (e) Make adjustments to the amount of bleach added if the concentration of sodium hypochlorite is above or below 5.25%.
 - (i) Calculation: Multiplier of the amount of bleach added = $5.25\% \div$ concentration of sodium hypochlorite in bleach.
 - (ii) 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.
- (f) For accurate measurement of the amount of bleach added, a measuring cup can be used.
- (g) Rinse disinfected articles and surfaces with water and wipe dry.
- (h) Cleaning tools should be soaked in 1 to 49 diluted household bleach for

30 minutes and then rinsed thoroughly before reuse.

- (i) Finally, wash hands with liquid soap and water, then dry hands with a clean towel or disposable paper towel.

II. Precaution

- (a) Avoid using bleach on metals, wool, nylon, silk, dyed fabric and painted surfaces.
- (b) Avoid touching eyes. If bleach gets into eyes, immediately rinse with water for at least 15 minutes and consult a doctor.
- (c) 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.
- (d) 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.
- (e) Sodium hypochlorite decomposes with time. To ensure its effectiveness, it is advised to purchase recently produced bleach and avoid over-stocking.
- (f) For effective disinfection, diluted bleach should be used within 24 hours after preparation.