

CHP investigates cluster of Legionnaires' disease

The Centre for Health Protection (CHP) of the Department of Health is today (February 13) investigating a cluster of Legionnaires' disease (LD) cases involving 11 patients and stressed the importance of using and maintaining properly designed man-made water systems and that susceptible groups should strictly observe relevant precautions.

Further to the CHP's announcements on a cluster of LD cases on February 1, 3, 6, 7, 10 and 11, one additional LD case relevant to the cluster has been recorded today, acculminating a total of nine male and two female patients aged 65 to 84.

The 11th patient is an 82-year-old man who lives in Kam Hon House, Choi Hung Estate, Wong Tai Sin. The patient's sample tested positive for *Legionella pneumophila*.

"Epidemiological investigations revealed that while two patients had travelled to Macao and Shenzhen respectively, the other nine patients had no travel history in the incubation period. All of them had underlying illnesses and live in Wong Tai Sin district," a spokesman for the CHP said.

Water samples and environmental swabs were collected from the patients' flats and vicinities to test for legionella in a series of joint site visits by the CHP and the Electrical and Mechanical Services Department on the possible source of infection.

Upon laboratory testing, water samples collected from three out of the four cooling towers at the Choi Hung MTR station revealed presence of *Legionella pneumophila* above the action levels

According to the MTR Corporation Limited, disinfection of the cooling towers concerned were performed on February 4 and 12. In view of the high count of *Legionella pneumophila* in the water samples collected before the disinfection on February 4, as precautionary measure, the company was advised to suspend operation of all four cooling towers, to clean and disinfect the system today. Water samples would be collected again to ascertain effectiveness of the disinfection.

"Men, people aged over 50, smokers, alcoholics and persons with weakened immunity are more susceptible to LD. Some situations may also increase the risk of infection including poor maintenance of water systems leading to stagnant water; living in areas with old water systems, cooling towers or fountains; using electric water heaters, whirlpools and spas or hot water spring spas; and recent stays in hotels or vessels," the spokesman said.

Legionellae are found in various environmental settings and grow well in warm water (20 to 45 degrees Celsius). They can be found in aqueous

environments such as water tanks, hot and cold water systems, cooling towers, whirlpools and spas, water fountains and home apparatus which support breathing. People may become infected when they breathe in contaminated droplets (aerosols) and mist generated by artificial water systems, or when handling garden soil, compost and potting mixes.

Immunocompromised persons should:

- Use sterile or boiled water for drinking, tooth brushing and mouth rinsing;
- Avoid using humidifiers, or other mist- or aerosol-generating devices. A shower may also generate small aerosols; and
- If using humidifiers, or other mist- or aerosol-generating devices, fill the water tank with only sterile or cooled freshly boiled water, and not water directly from the tap. Also, clean and maintain humidifiers/devices regularly according to manufacturers' instructions. Never leave stagnant water in a humidifier/device. Empty the water tank, wipe all surfaces dry, and change the water daily.

The public should observe the health advice below:

- Observe personal hygiene;
- Do not smoke and avoid alcohol consumption;
- Strainers in water taps and shower heads should be inspected, cleaned, descaled and disinfected regularly or at a frequency recommended by the manufacturer;
- If a fresh water plumbing system is properly maintained, it is not necessary to install domestic water filters. Use of water filters is not encouraged as clogging occurs easily, which can promote growth of micro-organisms. In case water filters are used, the pore size should be 0.2 micrometres (μm) and the filter needs to be changed periodically according to the manufacturer's recommendations;
- Drain and clean water tanks of buildings at least quarterly;
- Drain or purge for at least one minute infrequently used water outlets (e.g. water taps, shower heads and hot water outlets) and stagnant points of the pipework weekly or before use;
- Seek and follow doctors' professional advice regarding the use and maintenance of home respiratory devices and use only sterile water (not distilled or tap water) to clean and fill the reservoir. Clean and maintain the device regularly according to the manufacturer's instructions. After cleaning/disinfection, rinse the device with sterile water, cooled freshly boiled water or water filtered with 0.2 μm filters. Never leave stagnant water in the device. Empty the water tank, keep all surfaces dry, and change the water daily; and
- When handling garden soil, compost and potting mixes:
 1. Wear gloves and a face mask;
 2. Water gardens and compost gently using low pressure;
 3. Open composted potting mixes slowly and make sure the opening is directed away from the face;
 4. Wet the soil to reduce dust when potting plants; and
 5. Avoid working in poorly ventilated places such as enclosed greenhouses.

The public may visit the CHP's LD page, the Code of Practice for Prevention of LD and the Housekeeping Guidelines for Cold and Hot Water Systems for Building Management of the Prevention of LD Committee, and the CHP's risk-based strategy for prevention and control of LD.