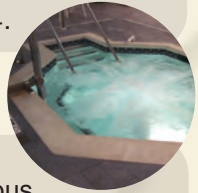


# Legionnaires' disease



## Causative agent

**Legionnaires' disease (LD)** is an infectious disease caused by a type of bacteria called *Legionella*. The disease was named after an outbreak of chest infection occurring in a Legion Convention in USA in 1976. In Hong Kong, LD has been made a statutory notifiable infectious disease since March 1994.



## Mode of transmission

*Legionella* bacteria are found in various environmental settings and grow well in warm water (25°C – 40°C). They can be found in aqueous environment such as water tanks, hot and cold water systems, cooling towers, whirlpool and spas, water fountains and apparatus that supports breathing.

People may get infected when they breathe in contaminated droplets (aerosols) and mist generated by artificial water systems. They may also get the infection when handling garden soils, compost and potting mixes.

The disease is not transmitted by person-to-person contact, eating or drinking.

## Susceptible groups

While anyone may develop LD, the following groups of people are at higher risk:

- ▶ Men (2 – 3 times more susceptible than women)
- ▶ Elder persons (usually aged 65 years or above)
- ▶ Smokers
- ▶ Alcoholics
- ▶ Persons with weakened immunity, especially those with chronic illnesses (such as cancer, diabetes mellitus, chronic lung disease or kidney diseases) and those taking corticosteroids or drugs that suppress body immunity

The following situations may also increase the risk of infection:

- ▶ Poor maintenance leading to stagnant water in water system
- ▶ Living in areas with old water distribution or plumbing systems
- ▶ Living near cooling towers or fountains
- ▶ Using electric water heater, whirlpool, spas or hot water spring spas
- ▶ Recent stay in hotels or ships

## Incubation period

About 2 – 10 days.

## Clinical features

Mostly presents with fever, dry cough, shortness of breath, tiredness, headache, muscle pain, abdominal pain and diarrhoea. In severe cases, neurological symptoms (e.g. confusion) and respiratory failure may appear and some may cause death.

Some patients infected with *Legionella* bacteria may have a milder, non-pneumonic form of disease called Pontiac fever, which is a self-limiting febrile illness of short duration.

## Management

It can be treated with antibiotics.

## Prevention

Currently, there is no vaccine available for LD.

It is most important to operate and maintain properly designed man-made water systems to prevent LD. For more information about the good practices in handling man-made water systems, please visit the website of the Electrical and Mechanical Services Department at <http://www.emsd.gov.hk> for the Code of Practice published by the Prevention of LD Committee.

Members of the public should observe the following advice to reduce the risk of infection:

- ▶ Observe personal hygiene
- ▶ Avoid smoking and excessive drinking
- ▶ Maintain domestic water filters properly and change them regularly
- ▶ Clean water tanks of buildings regularly
- ▶ Seek and follow doctor's advice regarding the use and maintenance of home respiratory devices
- ▶ When handling garden soils, compost and potting mixes:
  - Water gardens and compost gently using low pressure
  - Open composted potting mixes slowly and make sure the opening is directed away from the face
  - Wet the soil to reduce dust when potting plants
  - Avoid working in poorly ventilated places such as enclosed greenhouses
- ▶ In addition, persons with weakened immunity should:
  - use sterile, distilled, or boiled water (or water outlet fitted with appropriate filters) for drinking, tooth brushing and mouth rinsing;
  - avoid using humidifiers, or other mist- or aerosol-generating devices. Shower may also generate small aerosols.



**Centre for Health Protection Website**

**[www.chp.gov.hk](http://www.chp.gov.hk)**



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