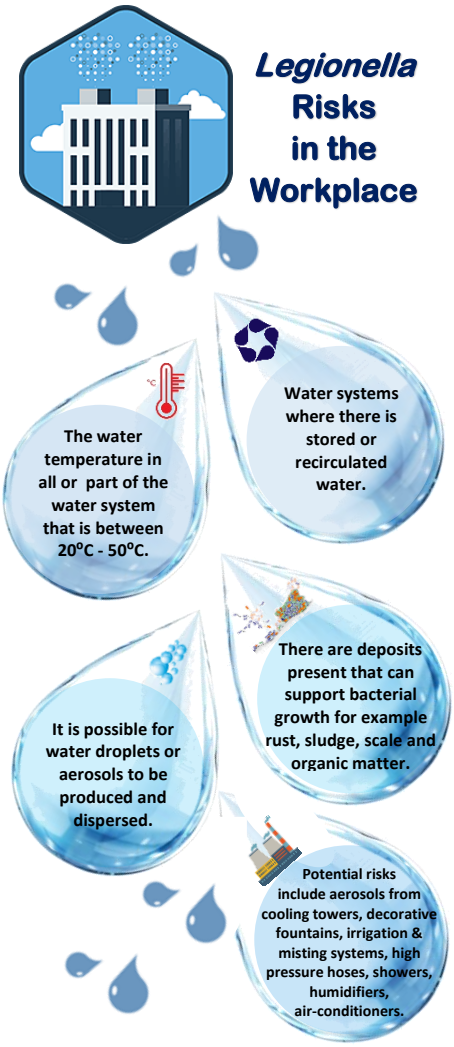
30 August

Legionella Awareness Day

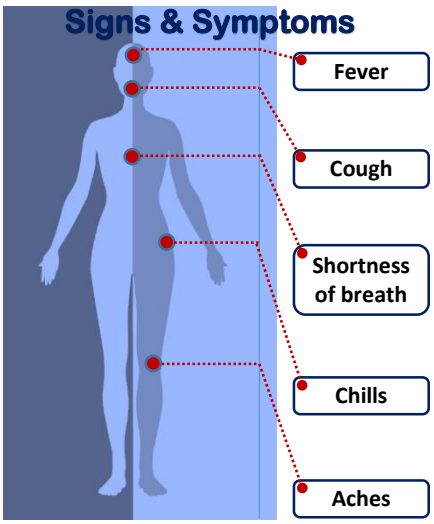
Legionella are gram negative bacteria commonly found in warm, water environments. There are more than forty known *Legionella* species. Although the majority of infections are caused by *L. pneumophila*, other species have also been implicated in disease. They grow well in large complex water systems that are not adequately maintained.

Legionella Risks in the Workplace



Legionella is spread through the air by breathing in very small droplets of water laden with bacteria, from a contaminated water source. Once inhaled, the bacteria multiply in the lungs causing Legionellosis.

Signs & Symptoms



Cases in South Africa

- Both sporadic cases and outbreaks of Legionnaires'disease have been reported
- Serological testing identified ~8% of community acquired pneumonias caused by *Legionella* species
- Prospective surveillance identified 21/1805 (1.2%) cases of legionellosis amongst individuals with severe respiratory illness
- One out of ten cases will be fatal

HEALTH EFFECTS

There are two forms of **Legionellosis**:

Pontiac Fever: less severe characterised by flu-like symptoms

Legionnaires'disease: potential fatal involving pneumonia

CLINICAL TESTS

- Urine Antigen test
- Legionella culture
- Real-time PCR on lower respiratory tract specimens such as sputum

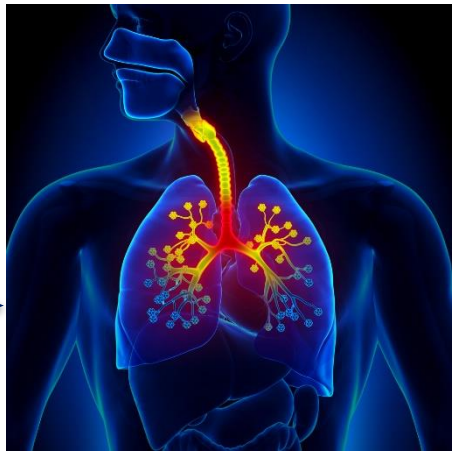
NOTIFICATION

Legionellosis is a notifiable disease and must be reported to the local health department and the National Institute for Communicable Diseases (NICD).

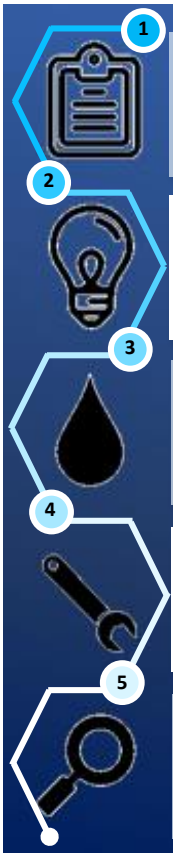
CHALLENGES

Very few work-related cases are diagnosed in South Africa, due to difficulties in diagnosis and lack of awareness of the disease in the workplace. There is often a lack of association between *Legionella* exposure at work and clinical symptoms of the worker. Thus it is likely that many cases are missed.

TRANSMISSION



PREVENTION IN THE WORKPLACE



1. Conduct a *Legionella* risk assessment to identify potential risks from engineered water systems in the workplace.
2. Assign a responsible person to characterise the risk of exposure to *Legionella* from work activities and water systems.
3. Ensure cold water temperature remain below 20°C and hot water above 50°C, and descale the piping when necessary.
4. Conduct regular maintenance and treatment of the water systems. Remove dead-legs from the piping network of the building.
5. Regular inspections are required to ensure that *Legionella* counts are below the recommended standards and action taken where required.

LEGIONELLA WATER TESTING

Fill water in sterile water bottle/s. Label the bottle/s and log the sample information on a log sheet.

Keep in a cool container out of sunlight and transport to the laboratory for testing within 24 hours.

To know more about Legionella testing:
Tanushas@nioh.ac.za (011 712 6475) or
NoncyG@nioh.ac.za (011 712 6404)

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