



Dental Nurse Network
Professional growth for dental nurses

Level 2 Certificate: Infection Prevention and Control (IPC) Lead Module 4

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Module 4 Aim

For students to gain knowledge of Legionella
and how it can affect dental unit water lines (DUWL).



Module 4 Objectives

By the end of the module, students will be able to:


- Describe why maintaining the dental unit water lines (DUWL) is important.
- List the risks associated if the water lines are not maintained.
- Demonstrate knowledge for maintaining the water lines.
- Create a Legionella log book, as required by health and safety legislation.



Legionella

Definition:

Bacteria that are common in natural water sources that in favourable conditions can grow, increasing the risk of Legionnaires' disease.




Legionella

Cluster - Linked by area or residence or work

Outbreak- Onset illness closely linked to time

Travel associated cluster- affects people who stayed in the same accomodation




Legionella

The symptoms of Legionnaires' disease can range from a high temperature to mental confusion.

The disease can be spread by:


- Inhaling droplets from coughs and sneezes.
- Ingesting contaminated food or water.
- Insect or animal bites.



Legionella


Your workplace could be at risk of Legionella if:

- Your water temperatures are between 20-45 degrees.
- Aerosols can be created.
- Water is stored and/or re-circulated.
- There is a source of nutrients available



Legionella


- It is the law to have a workplace risk assessment to show the risks of Legionella are low and that they are being properly managed.
- Your employer is responsible for health and safety in the workplace. However, a nominated person can be used to help with the management and audits.



Legionella

For health and safety reasons and to reduce the risks of exposure to Legionella, the following must be understood and implemented:

- How to identify and assess sources of risk.
- How to manage any risks.
- How to prevent or control any risks.
- How to keep and maintain the correct records.



Legionella

The person responsible needs to be able to identify:

- If the water temperature of the system is between 20-45 degrees.
- Sludge, scale or biofilm.
- Conditions likely to encourage bacteria to multiply.
- Whether it is possible for water droplets to be produced.
- Whether it is likely that employees or visitors are more susceptible.



Log Book

At the beginning of the Log book, you should complete a health and safety Legionella audit.

A free download can be found on
<http://www.hse.gov.uk/pubns/books/ck02.htm>

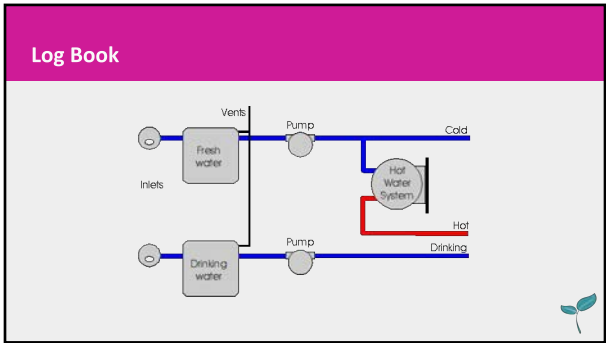


Log Book

Your map should show:

- Filters, strainers, pumps and all outlets (showers, sinks etc).
- Spare pumps.
- Pipework and piping routes.
- Storage and header tanks.
- Origin of the water supply.
- Any out-of-use parts.





Log Book

A log should be kept of monthly water temperature checks.

Water Temperature Monthly Log

Dental Practice: _____ IPC Lead: _____ Date started: _____

Cold Water Under 20 Degrees				Hot Water Over 55 Degrees			
Outlet	Temperature at 60 seconds	Pass/Fail Initials	Comments	Outlet	Temperature at 60 seconds	Pass/Fail Initials	Comments
Reception & Admin and	18 degrees	Pass CP	OK	Reception & Admin and	62 degrees	Pass CP	Reported to registered manager on 12.12.18 (see fault log)

Log Book

You are required to retain a log for flushing of non-frequent pipes on a weekly basis.

Date started: _____

Outlet	Time Flushed	Initials	Comments
Toilet cold and hot water taps	5 minutes	CP	OK
Old lab room cold water tap	5 minutes	CP	Water broken in colour with an odour present. Reported to registered manager on 11.12.18 (see fault log)

Log Book

In order to prevent the growth of Legionella, hot water tanks need to be set above 60 degrees. This will kill off bacteria.

A monthly log should be kept and updated in your log book.

Date	Time Checked	Temperature Set	Initials	Comments
11.12.18	10.15 AM	60 degrees	CP	OK



Log Book

You are also required to retain a protocol in your log book for the following:

- When water sampling would be appropriate.
- Identifying where samples are to be taken, frequency and actions required.

This information should be sourced from your registered manager.



Log Book

To ensure that the conditions for Legionella to grow are kept at a minimum, scale must be removed and this must be logged.

Date	Area	Checked or De scaled	Initials	Comments
11.12.18	Kitchen Taps	De scaled with lime scale remover	CP	Hard lime scale present around base of taps and also on water output. Removed today.



Log Book

During performance of your role, you may identify faults, so it is important to log your findings.

Serial No	Date	Fault Reported	Reported by	Reported to	Actions taken	Comments
0001	11.12.18	Kitchen cold water tap is running brown in colour despite flushing.	CF	registered manager and external agencies	External agencies contacted and use due to check the pipes 11.12.18. Advised not to use this water until end of quotation.	On going.
	15.12.18	As above	CF	As Above	Water checked, confirmed that as pipes are old and rusted its colouring the water. Avoid use for now. Fault complete 15.12.18	When funding is present pipes will be replaced. Avoid use for now. Fault complete 15.12.18

Dental Unit Water Lines (DUWL)

DUWLs are at risk of developing Legionella as they can be connected to the water mains. Handpieces can suck back into the water lines, and when changing the water bottle, the water can become contaminated by aerosols and/or contaminated hands.

Dental Unit Water Lines (DUWL)

Distilled water only

Flush 2 minutes and remove water bottle overnight leaving inverted

Water Maintenance


Leave on the chair overnight

Dental Unit Water Lines (DUWL)

Dip Slides:

Recommended but not essential


Help to identify bacterial growth



Dental Unit Water Lines (DUWL)

Citricil


- Dissolve tablet in 2 litres of water
- Can stay on for upto 7 days
- Flush DUWLs and Leave bottle on the chair



Dental Unit Water Lines (DUWL)

Alpron

- Starter Kit
- Mix recommended amount of liquid with distilled water
- Flush DUWLs and Leave bottle on the chair
- Dip slide every 3 months and disinfect water bottle



Dental Unit Water Lines (DUWL)

- In between patients, your water lines should be flushed for 20-30 seconds.
- At the start and the end of the day, your lines should be flushed for at least 2 minutes.



Summary:

- Described the dental unit water lines (DUWL)
- Risks associated if the water lines are not maintained.
- Legionella
- Legionella log book