

WHY YOU NEED TO BE AWARE OF INFECTION CONTROL ISSUES

- infectious diseases can occur in even the cleanest workplaces as some diseases are resistant to antibiotics and sterilisation techniques
- if you are injured or become sick, what will happen to your income?
- communicable diseases poses a major threat to health workers because you are constantly exposed to other people's germs and biological hazards
- even workers who 'never touch a client' can be exposed to blood-borne infections by contact with body fluids and infected wastes on surfaces or equipment
- the dispensary and the product storage area can pose a potential risk of cross contamination through improper handling
- every workplace should be a safe environment
- safety is everyone's business



Infection control in complementary health dispensaries

If your work involves the repackaging of herbals or other materia medica you should follow the Australian and New Zealand Food Handling standards.

These are similar to the standard precautions outlined in this module:

- Wash your hands
- Use the clean to dirty principle
- Keep equipment and materia medica in clean demarcation zones

More information on food standards can be found at www.foodstandards.gov.au

CROSS INFECTION RISKS

Every personal service workplace carries with it a risk of cross infection from a range of organisms which can cause serious or life-threatening disease. We are constantly bombarded with disease causing organisms, but the actual incidence of infection is generally very low in normal circumstances.

The **chain of infection** is the process by which infectious disease occurs and spreads. It begins with the presence of a pathogen or causative agent, such as a:

- Bacterium
- Virus
- Fungus
- Parasite
- Or other micro-organism capable of causing disease.



All of these 6 links in the **Infection Chain** must be present for an infection to develop:

- A micro-organism that causes disease. (infectious agent)
- A person such as the health worker or patient who carries the micro-organism. (reservoir)
- A way out of the carrier, such as sneezing, coughing, shedding (skin, hair)-- (portal of exit) .
- A method of travelling, such as through the air, through direct physical contact or through contaminated hands, linen, instruments, bandages, etc. (modes of transmission).
- A way into the other person, such as breathing, swallowing or skin puncture. (portal of entry)
- A person who doesn't have resistance and becomes infected. (susceptible host).

All germs have the same needs we have to survive:

- A nice warm place to breed (our normal body temperature is ideal for them too!)
- Lots of water (we are largely made up of water and there are plenty of places on and in our body that make us ideal hosts)
- Food (they can feed on our blood sugars in the same way that we do)
- Time (if no-one notices they are there, then they can have a party before the 'police' arrive in the form of medicines or our own body defence mechanisms.)
- A fast way in and a fast way out (to make sure that some members of the 'tribe' move on before they are all killed off by the host or medicine).

As well as being perfect hosts, we are also perfect disease vectors. We do lots of things every day that make sure that there is a fast exit:

- We excrete contaminated fluids and wet solids
- We indulge in skin contact with other disease vectors (people, animals, foodstuffs)
- We breathe and cough out water droplets that can spread through the air and air conditioning systems.

No wonder they call us **hosts**, we throw the best germ parties in town!



HOW DISEASES ARE SPREAD

There are four ways (modes) in which diseases are transmitted:

Contact transmission may be direct, indirect, or droplet spread.

- Direct contact: is the person-to-person spread of the pathogen where there is actual physical contact between the source and susceptible host.
- Indirect contact: Occurs when there is a contaminated object involved in the transmission.
- Droplet spread: occurs when large particles containing the pathogens travel through the air to susceptible host.

Airborne transmission involves the suspension of droplet nuclei in dust particles in the air.

Common vehicle transmission is the transfer of pathogens to multiple persons through contact with a contaminated object, such as food, water, or blood products.

Vector-borne transmission is the spread of micro-organisms by contact with insects, such as ticks, mosquitoes, or fleas.

Diseases are opportunistic and have to find a way to use the host for food, shelter and water. They cannot harm us if they cannot get in – so they have to find an open door (known as a portal of entry):

The portal of entry is the path by which the pathogen enters the susceptible host, for example:

- Respiratory tract- by inhalation
- Gastrointestinal/Genitourinary tract –by contaminated food, water or objects
- non-intact skin, such as lesion or wound

Entry may also occur through:

- Accidental cuts with kitchen knives
- Surgical incisions
- Insertion of needles or other devices
- Needle-stick injuries



All of the above items may be contaminated with blood and body fluids (ours or animal). This is why we need to take special care in handling sharps and blades.

The clinical setting increases the number of contacts we have with sick people and these can make us ill, or turn us into carriers of the disease to others. At most risk are people:

- with suppressed immune systems
- under extreme physical or psychological stress
- who are on antibiotics, who take prescribed medication, or use drugs
- who are very young or very old
- who are pregnant
- with a long-standing serious illness (e.g. asthma, heart disease, diabetes)
- who come into contact with biological wastes and spills (including food wastes)
- who perform clinical procedures which involve physical invasion of the body
- who are at risk of accidental needle-stick injuries (e.g. in changing linen)

ASSESSMENT RECORD

Student Name:	
Student Number:	
	Postcode:
e-mail:	
Assessor/Trainer:	
Telephone:	
e-mail:	

Six: Cross infection control	Tasks	Page	Date	CA	NYC
	1. Infection risks	2			
	2. Personal hygiene	6			
	3. Infection control	8			

Assessor's comments:

Assessor Signature: _____

Student Signature: _____

Sign-off date: _____

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Task 1: Infection risks

From the notes in this topic, the articles in the reader, or from other reading, answer the following questions:

1. Define the term 'infection' and describe how infections are transmitted

2. Define the term 'contagion' and describe how contagious diseases are transmitted

3. What organisms are the causes of disease?

4. What are the three most common human activities which cause contamination?

5. Why are humans and animals perfect places for diseases to spread?

6. *What are the links in the Chain of Infection?*

7. *What can you do in your clinic to break the chain?*

8. *Who is most at risk of infection in a health care setting?*

9. *What common sense precautions can you take to make sure that you do not catch all the germs that are present in your workplace?*
