UIP2 - Infection Prevention (COVID-19) for Beauty Therapy and Nail Services

LO1 Understand the causes, transmission and effects of COVID-19

How infection can spread

An infection occurs when a pathogenic (disease-causing) bacteria or virus enters the body and multiplies, disrupting normal body functions and damaging body tissues.

Micro-organisms such as bacteria and viruses require certain conditions to grow and spread, such as temperature, moisture, nutrients and time and can be passed on via bodily fluids such as saliva and mucus.

In the case of COVID-19, poor hand hygiene or standing too close to an infected person can provide the perfect conditions for the spread of the virus via respiratory droplets.

How infection can **spread**

Common causes of the spread of infections are:

- Poor or lack of hand hygiene

- Poor or lack of cleaning procedures

- Lack or incorrect use of PPE

- Use of contaminated equipment, tools, linen

do not touch your face with your hands

do not sneeze in the palm of your hand

How infection can **spread**

Routes of transmission can be:

- *Direct*, for example from person to person through contact

- *Indirect*, for example in the air, from contaminated objects (fomites) or via the blood

General infection can pass into the body through:

- The respiratory tract – inhalation of airborne pathogens

- Skin – open wounds or broken skin

- Digestive tract – ingestion

- Urinary/reproductive tract – passage of bacteria into the tract(s)

- COVID-19 – through the respiratory tract, the eyes, mouth and nose

Chain of infection

- **Chain of infection**
  - Series of events which enable bacteria, fungi and viruses to cause infections in a person

- **Pathogen**
  - An organism capable of causing disease in its host

Chain of infection

Infection occurs when pathogenic microorganisms enter the body, increase in number and damage body tissues.

Stages in the chain of infection:

- *Infectious agent* – the pathogen which causes the disease

- *Reservoir* – environment where the pathogen survives, for example, people, equipment, work surfaces

- *Portal of exit* – way the pathogen leaves the reservoir for example, coughing, sneezing

- *Mode of transmission/transfer* – how the pathogen is passed on, for example, direct contact, inhalation

- *Portal of entry* – the way the pathogen enters a new host for example, respiratory tract, mucous membranes

- *Suitable/susceptible host* – individual at risk of infection

Chain of infection

Infectious Agent (Pathogen) · Reservoir · Portal of Exit · Mode of Transmission · Portal of Entry · Susceptible Host
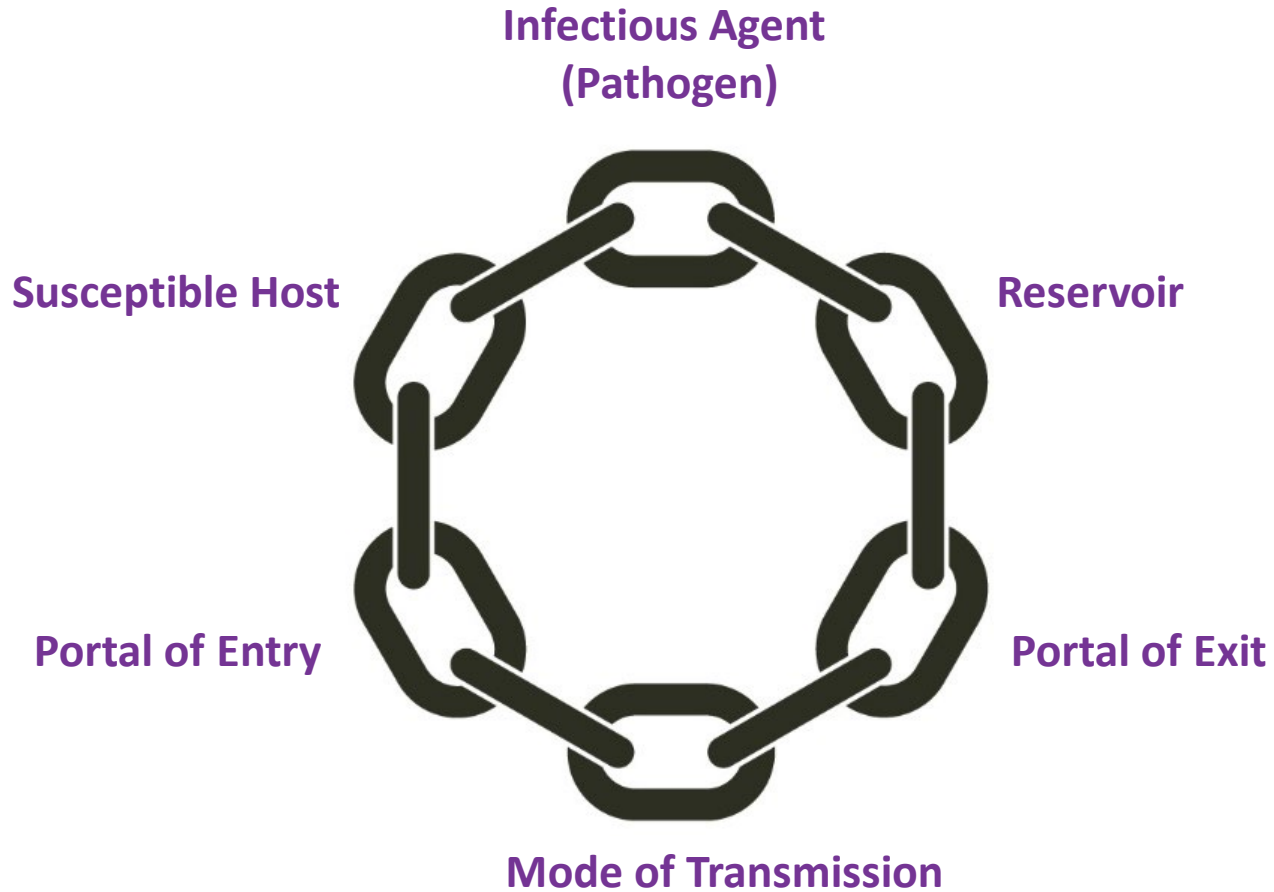
Coronaviruses

Coronaviruses are a large family of viruses that can cause illness in animals and humans. In humans, they can cause diseases which have mild effects such as the common cold through to those which are severe/life-threatening such as SARS (Severe Acute Respiratory Syndrome) and MERS (Middle East Respiratory Syndrome).

The term 'Corona' is derived from the Latin word for Crown, as the virus has spike-like projections on its surface which resemble the appearance of a crown.
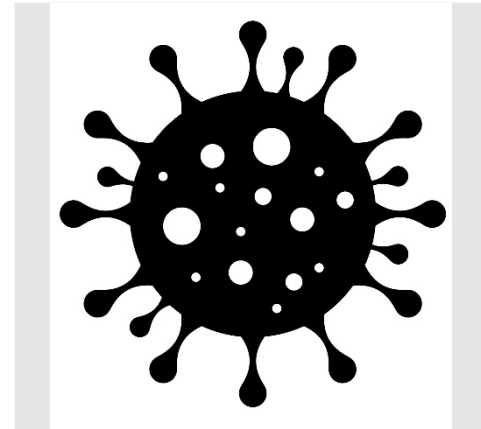
Coronaviruses/COVID-19

SARS (Severe Acute Respiratory Syndrome or SARS-CoV) – first occurred in Guangdong province, China in November 2002. Believed to be an animal virus which crossed the species barrier to humans, it spread internationally and caused significant local social and economic disruption and disruption to international travel. The epidemic lasted until July 2003.

MERS (Middle East respiratory syndrome coronavirus, or MERS-CoV) – was first identified in Saudi Arabia in 2012 and 80% of human cases have been reported there. It is transmitted primarily from dromedary camels to humans, but human to human transmission is also possible.

In December 2019, a new virus was detected in Wuhan, China – **Novel Coronavirus** (SARS-CoV-2) which causes the disease Coronavirus Disease 2019 **(COVID-19)**. This quickly spread around the world and a global pandemic (an epidemic which occurs worldwide) was declared in March 2020 by the World Health Organisation.

COVID-19 – **Signs and symptoms**

The main symptoms of COVID-19 are:

- High temperature

- New, continuous cough

- Loss or change to sense of smell or taste

FEVER

COUGH

LOSS OF TASTE OR SMELL
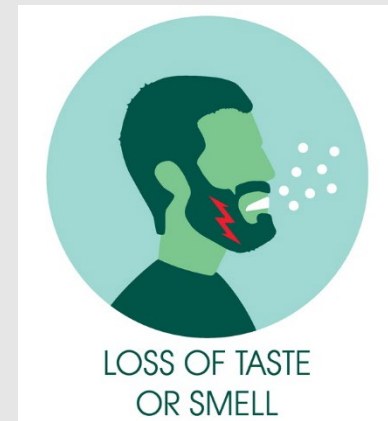
COVID-19 – **Signs and symptoms**

Less common symptoms:

- Sore throat

- Nasal congestion

- Headache

- Conjunctivitis

- Skin rashes

- Diarrhoea

- Aches and pains

COVID-19

- COVID-19 is spread through close contact with an infected person

- It is spread primarily from person to person through droplets from the nose or mouth, usually when a person coughs, sneezes or speaks; the uninfected person breathes in droplets from the infected person

- The droplets can also land on objects and surfaces around the infected person or be passed on when the infected person coughs/sneezes into their hand and then touches an object or surface, such as a door handle or light switch. An inanimate object contaminated with an infectious agent is known as a fomite and can be porous such as clothes or paper or non-porous such as metal or plastic. The infection may be passed on when the object is touched and the person then touches their own face, in particular the eyes, nose or mouth

COVID-19 – who can spread it?

- Pre-symptomatic – those who have contracted the disease but are not yet exhibiting symptoms

- Symptomatic – those exhibiting signs of the disease

- Asymptomatic – those who have contracted the disease but who are showing no signs

Who can catch it and those at risk

People of all ages can be infected by the new coronavirus (nCoV-2019).
Older people, and people with pre-existing medical conditions (such as asthma, diabetes, heart disease) appear to be more vulnerable to becoming severely ill with the virus.
WHO advise people of all age to take steps to protect themselves from the virus, for example by following good hand hygiene and good respiratory hygiene.

World Health Organization

#Coronavirus

Does the new coronavirus affect older people, or are younger people also susceptible?

Website: www.who.int

COVID-19

COVID-19 can survive on:

- Plastic or stainless steel – up to 72 hours

- Copper – less than 4 hours

- Cardboard – less than 24 hours