

Department of  
**PHYSIOTHERAPY**

## Suctioning (Caregiver Training)



# Content Page

**There are 3 phases to this caregiver training (CGT).**

## **Phase 1: Theory**

- Indications for Suctioning
- Equipment
- Monitoring

## **Phase 2: Hands-on Practice with Mock Model**

- 2A: Oral Suctioning
- 2B: Tracheostomy Suctioning (with Oral Suctioning)

## **Phase 3: Hands-on Practice with Care Recipient**

# Phase 1: Theory

## Indications for Suctioning

During caregiver training for oral/tracheostomy suctioning, the following information will be discussed and demonstrated by your physiotherapist.

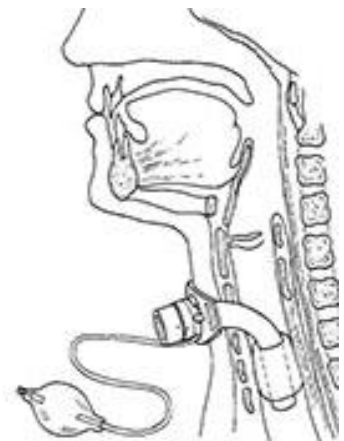
At the end of the training, you should be able to perform the techniques by yourself.

### Why Do You Need to Do Suctioning?

- To help remove phlegm from the airways to:
  - Allow care recipient to breathe easier
  - Help prevent chest infection

### How Often Do You Have to Do Suctioning?

- Your physiotherapist will advise you regarding the suctioning frequency.
- You are advised to check on the care recipient every \_\_\_\_ hourly.  
You are advised to perform suctioning when:
  - You hear sounds from the throat
  - Coughing is more frequent and moist
  - You see phlegm in the mouth or throat
  - The care recipient has difficulty breathing
  - Requested by the care recipient
  - Oxygen saturation is low ( < \_\_\_\_%)



Tracheostomy

### Possible Complications:

- Drop in oxygen saturation
- Injury to airway
- For care recipients with tracheostomy :
  - Infection
  - Loosening of tube

\*In case of emergency situations (e.g. vomiting, persistent drop in oxygen level, bloody phlegm, obvious blood, change in alertness etc.), please call 995 for ambulance.

# Phase 1: Theory

## Equipment

### Suctioning Equipment Required:



Home Suctioning Unit



Suction Connecting Tube



Suctioning Catheter  
(Without Valve)



Suctioning Catheter  
(With Valve)



Catheter Connector



Plastic Cup



Water for Irrigation



Latex Gloves

# Phase 1: Theory

## Equipment

**Suctioning Equipment (for Tracheostomy Suctioning) Required:**



Sterile Gloves  
(For Tracheostomy Suctioning)



Inner Cannula Brush  
(For Tracheostomy Suctioning)

## Optional



Geudel Airway



Pulse Oximeter

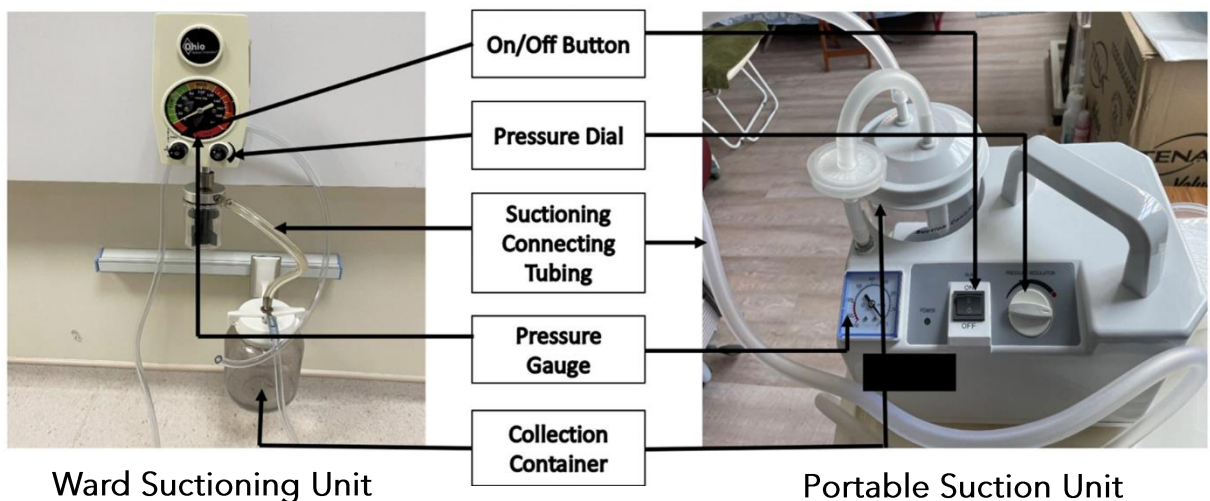
# Phase 1: Theory

## Equipment (Portable Suction Unit)

### IMPORTANT TO NOTE:

- Learn how to assemble and operate the portable suction unit from the vendor whom you have purchased the suctioning machine directly.
- Due to hospital policies, your physiotherapist will not be able to use a portable suction unit for training. Nevertheless, please be assured that the suctioning skills learned are applicable regardless of the type of suctioning machine used.

### Components of Ward Suctioning Unit vs Portable Suction Unit



# Phase 1: Theory

## Monitoring

The following is **OPTIONAL** (please check with your physiotherapist if you are required to do the following). You may monitor the care recipient's phlegm by checking on:

### 1) Amount of Phlegm Suctioned:

- ☐ Small amount: less than 15cm length in the suction connecting tube
- ☐ Moderate amount: 15 - 30cm length in the suction connecting tube
- ☐ Large amount: more than 30cm length in the suction connecting tube

### 2) Consistency

- Loose: Watery
- Moderately thick: Egg-white
- Thick: Jelly-like

### 3) Colour

- White
- Yellow
- Green
- Others (brown, rusty)

### Keeping a Record:

- You may keep a record of the care recipient's phlegm using a suctioning chart of the format shown below:

| Date | Time | Oral | Tracheostomy<br>(if applicable) | Phlegm |             |        | Remarks |
|------|------|------|---------------------------------|--------|-------------|--------|---------|
|      |      |      |                                 | Amount | Consistency | Colour |         |
|      |      |      |                                 |        |             |        |         |
|      |      |      |                                 |        |             |        |         |

# Phase 2: Hands-on Practice with Mock Model

## 2A. Oral Suctioning

### Before Suctioning

1. Ensure that at least 40 minutes have passed after feeding. Alternatively, perform suctioning a short while before feeding. If the care recipient is on continuous feeds, **stop** the continuous feeds.
2. Position care recipient flat or on their side as advised by your physiotherapist. Keep their head supported.



Care recipient's head supported on a pillow

3. **OPTIONAL:** Check care recipient's blood pressure, heart rate and oxygen saturation before starting the procedure (please check with your physiotherapist).
4. Wash your hands thoroughly with soap and put on gloves.
5. Check all equipment:
  - a. Pour water for irrigation into the plastic cup.
  - b. Turn on the suctioning machine.
  - c. Check that the suctioning machine is functioning by closing the suctioning valve. Adjust the suction pressure by turning the pressure dial. Ensure it is set to **80 - 120mmHg**.



Suction pressure set to 80 – 120mmHg

# Phase 2: Hands-on Practice with Mock Model

## 2A. Oral Suctioning

### During Suctioning

1. Connect the suction connecting tube to the suctioning catheter while it is still in the packaging. Ensure that the suction catheter remains clean and not touching anywhere outside of the packaging.
2. Secure the suctioning catheter (still in the packaging) between your arm and body.



Connect suction connecting tube to suctioning catheter



Secure the suctioning catheter between your arm and body.

3. Wear a clean latex glove over your dominant hand. Ensure that your glove remains clean. Do not touch anything before removing the suctioning catheter from its packaging.
4. Remove the packaging. Ensure that the suctioning catheter DOES NOT come in contact with anything in the environment.



Remove the suctioning catheter from packaging with clean gloves

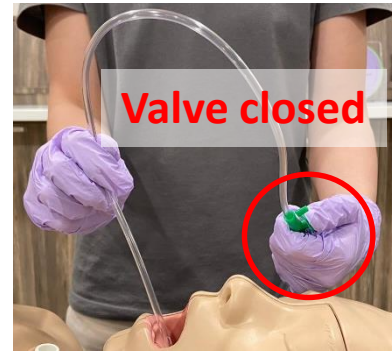
5. Insert a guedel airway if required.
6. Insert the suctioning catheter (without closing the valve) into the care recipient's mouth. Stop when:
  - Recipient starts coughing, or
  - When you feel resistance.

# Phase 2: Hands-on Practice with Mock Model

## 2A. Oral Suctioning

### During Suctioning

7. Withdraw the suctioning catheter slightly, then apply intermittent suction by closing and opening the valve alternately. Suction should not be applied for more than 5 seconds continuously.



8. The entire suctioning process should not last more than 15 seconds.
9. Allow the care recipient to rest for 20 - 30 seconds in between passes.
10. **OPTIONAL:** Monitor the care recipient's heart rate and oxygen saturation on the pulse oximeter throughout the procedure. (Please check with your physiotherapist)
11. **OPTIONAL:** Note the colour, amount and consistency of the phlegm suctioned.
12. Repeat suctioning when:
- You still hear sounds from the throat
  - Coughing is still frequent and moist
  - You still see phlegm in the mouth or throat
  - The care recipient has difficulty breathing
  - Requested by the care recipient
  - Oxygen level is low (if pulse oximeter is available)
13. Flush the suctioning catheter and suction connecting tube as required.



# Phase 2: Hands-on Practice with Mock Model

## 2A. Oral Suctioning

### After Suctioning

1. Twirl the suctioning catheter around your dominant hand and disconnect it from the suction connecting tube.
2. Dispose gloves and suctioning catheter properly.



3. Flush the suction connecting tube.



4. Turn off the suctioning machine.
5. **OPTIONAL:** Check the care recipient's blood pressure, heart rate and oxygen saturation (please check with your physiotherapist).
6. Wash your hands.

# Phase 2: Hands-on Practice with Mock Model

## 2A. Oral Suctioning

### **When to Seek Medical Assistance:**

Call the ambulance if you observed any of the following :

- Care recipient stops breathing
- Care recipient's face turns blue
- A large amount of bleeding in the phlegm during suctioning
- Care recipient suddenly becomes very drowsy or unconscious
- Care recipient's blood pressure / oxygen saturation becomes too low

**After you are deemed competent in Phases 1 and 2A, your physiotherapist will arrange for you to practise Oral Suctioning with the care recipient in the ward.**

# Phase 2: Hands-on Practice with Mock Model

## 2B. Tracheostomy Suctioning (with Oral Suctioning)

### Before Suctioning

1. Ensure that **at least** 40 minutes have passed after feeding.  
Alternatively, perform suctioning a short while before feeding.  
If the care recipient is on continuous feeds, **stop** the continuous feeds.
2. Position care recipient flat or on their side as advised by your physiotherapist. Keep their head supported.



Care recipient's head supported on a pillow

3. **OPTIONAL:** Check the care recipient's blood pressure, heart rate and oxygen saturation before starting the procedure (please check with your physiotherapist).
4. Wash your hands thoroughly with soap and put on gloves.
5. Check all equipment:
  - a. Pour water for irrigation into the plastic cup.
  - b. Turn on the suctioning machine.
  - c. Check that the suctioning machine is functioning by closing the suctioning valve.
  - d. Adjust the suction pressure. Adjust the suction pressure by turning the pressure dial. Ensure it is set to **80 - 120mmHg**.



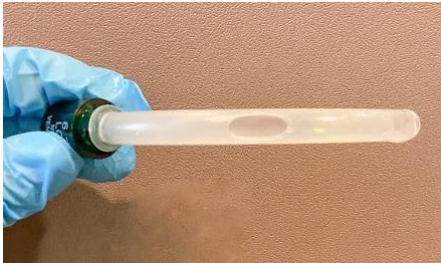
Suction pressure set to 80 – 120mmHg

# Phase 2: Hands-on Practice with Mock Model

## 2B. Tracheostomy Suctioning (with Oral Suctioning)

### Before Suctioning

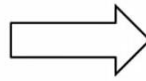
6. Remove the tracheostomy fenestrated inner cannula with / without speaking valve and replace it with the non-fenestrated cannula (if applicable).



Fenestrated Inner  
Cannula



Speaking  
Valve



Non-fenestrated  
Inner Cannula

# Phase 2: Hands-on Practice with Mock Model

## 2B. Tracheostomy Suctioning (with Oral Suctioning)

### During Suctioning

1. Connect the suction connecting tube to the suctioning catheter while it is still in the packaging. Ensure that the suction catheter remains clean and not touching anywhere outside of the packaging.
2. Secure the suctioning catheter (still in the packaging) between your arm and body.



Connect suction connecting tube to suctioning catheter



Secure the suctioning catheter between your arm and body.

3. Wear a sterile glove over your dominant hand. Ensure that the sterile glove remains clean. Do not touch anything before removing the suctioning catheter from the packaging.
4. Remove suctioning catheter from packaging. Ensure that the suctioning catheter DOES NOT come in contact with anything in the environment.



Remove the suctioning catheter from packaging with clean sterile gloves



Use sterile gloves instead of latex gloves

5. Insert the suctioning catheter (without closing the valve) into the tracheostomy inner cannula. Stop when:
  - Recipient starts coughing, or
  - When you feel a resistance.

# Phase 2: Hands-on Practice with Mock Model

## 2B. Tracheostomy Suctioning (with Oral Suctioning)

### During Suctioning

6. Withdraw the suctioning catheter slightly, then apply intermittent suction by closing and opening the valve alternately. Suction should not be applied for more than 5 seconds continuously.



7. The whole suctioning process should not last more than 15 seconds.
8. Allow the care recipient to rest for 20 - 30 seconds in between passes.
9. **OPTIONAL:** Monitor the care recipient's heart rate and oxygen saturation on the pulse oximeter throughout the procedure. (Please check with your physiotherapist).
10. **OPTIONAL:** Note the colour, amount and consistency of the phlegm suctioned.
11. Repeat tracheostomy suctioning when:
  - You still hear sounds from the throat
  - Coughing is still frequent and moist
  - You still see phlegm in the mouth or throat
  - The care recipient has difficulty breathing
  - Requested by the care recipient
  - Oxygen level is low (if pulse oximeter is available)
12. After tracheostomy suctioning, you may perform oral suctioning by inserting the suctioning catheter (without closing the valve) into the care recipient's oral cavity. Stop when:
  - Recipient starts coughing, or
  - When you feel resistance.

### Do Not:

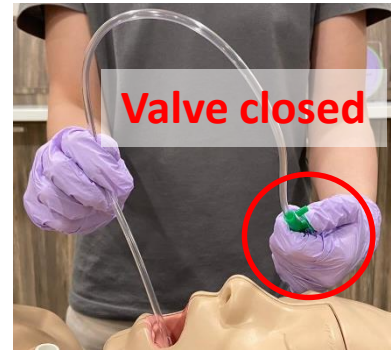
- Flush the suction catheter in between passes into the tracheostomy
- Re-insert the suction catheter into the tracheostomy once it is used for oral suctioning.

# Phase 2: Hands-on Practice with Mock Model

## 2B. Tracheostomy Suctioning (with Oral Suctioning)

### During Suctioning

7. Withdraw the suctioning catheter slightly, then apply intermittent suction by closing and opening the valve alternately. Suction should not be applied for more than 5 seconds continuously.



8. The entire suctioning process should not last more than 15 seconds.
9. Allow the care recipient to rest for 20 - 30 seconds in between passes.
10. **OPTIONAL:** Monitor the care recipient's heart rate and oxygen saturation on the pulse oximeter throughout the procedure. (Please check with your physiotherapist).
11. **OPTIONAL:** Note the colour, amount and consistency of the phlegm suctioned.
12. Repeat suctioning when:
  - You still hear sounds from the throat
  - Coughing is still frequent and moist
  - You still see phlegm in the mouth or throat
  - The care recipient has difficulty breathing
  - Requested by the care recipient
  - Oxygen level is low (if pulse oximeter is available)
13. Flush the suctioning catheter and suction connecting tube as required.



Flushing of suctioning catheter

# Phase 2: Hands-on Practice with Mock Model

## 2B. Tracheostomy Suctioning (with Oral Suctioning)

### After Suctioning

1. Twirl the suctioning catheter around your dominant hand and disconnect it from the suction connecting tube.
2. Dispose the glove and the suctioning catheter appropriately.



3. Flush the suction connecting tube.



4. Turn off the suctioning machine.
5. Remove the non- fenestrated inner cannula and replace it with the fenestrated cannula with/without speaking valve (if applicable).



Non-fenestrated  
Inner Cannula



Fenestrated Inner  
Cannula



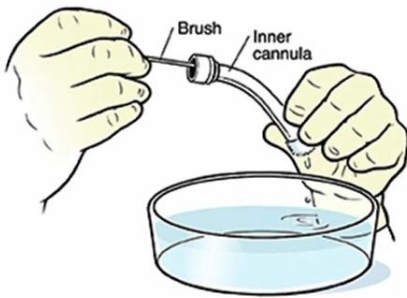
Speaking  
Valve

# Phase 2: Hands-on Practice with Mock Model

## 2B. Tracheostomy Suctioning (with Oral Suctioning)

### After Suctioning

6. Clean the non-fenestrated inner cannula with an inner cannula brush. Rinse it with irrigation water.



7. **OPTIONAL:** Check the care recipient's blood pressure, heart rate and oxygen saturation (please check with your physiotherapist).
8. Wash your hands.

## Phase 2: Hands-on Practice with Mock Model

### 2B. Tracheostomy Suctioning (with Oral Suctioning)

#### When to Seek Medical Assistance:

Call the ambulance if you observed any of the following :

- Care recipient stops breathing
- Care recipient's face turns blue
- A large amount of bleeding in the phlegm during suctioning
- Care recipient suddenly becomes very drowsy or unconscious
- Care recipient's blood pressure / oxygen saturation becomes too low

## Phase 3: Hands-on Practice with Care Recipient

After you are deemed competent in Phases 1, Phase 2A and Phase 2B, your physiotherapist will arrange for you to practise Tracheostomy Suctioning with the care recipient in the ward.

**Clinics B1C (Physiotherapy)**  
TTSH Medical Centre, Level B1  
**Contact:**  
6357 7000 (Central Hotline)



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