POSTURAL DRAINAGE

AIM
To safely and effectively teach and supervise a service user undertaking Postural Drainage as a means of airways clearance.

To assess users ability to complete independent treatments and consider preference and adherence for progression of sputum clearance regime.

BACKGROUND
Postural Drainage (PD) uses gravity to help with the removal of sputum from the deeper parts of the lungs. It is only effective for patients who produce moderate to large amounts of sputum (40ml+)\(^1\). It allows specific segments of the lung to be drained.

It is usually done together with the Forced Expiratory Technique (FET) or Active Cycle of Breathing Techniques (ACBT). If independent techniques are not as effective or the patient tires, manual techniques (chest percussion/shaking) can be added to the regime. The use of Non Invasive Ventilation can be applied if PD is essential in a breathless patient. This will offset the increased load of breathing

Precautions – Postural Drainage should not be done with a service user who has or develops any of the conditions listed below:

Gastro-oesophageal reflux (acid reflux/acid stomach)

Nausea

Significant increase in breathlessness

Current haemoptysis (fresh blood in sputum)

Recent rib, spine or muscle injury

Bronchospasm (wheeze): seek advice from physiotherapist this may be bronchoconstriction or excessive sputum blocking airways

Do not do postural drainage for at least an hour after eating a large meal.

Consider Modified PD which eliminates the head down positions – check plan.
Procedure

1. **Check plan** for number of positions required and length of treatment and any variations. Also note antibiotic regime. The position will depend on the area of the lungs affected. The aim is to stay in the position for at least 10 minutes for the most effective treatment but can be up to half an hour so ensure enough time is available. Identify whether any observations need to be taken and do this prior to commencing the technique (as per the relevant competencies).

2. **Explain the reason for the technique:** e.g. “this is to help you clear secretions from the deeper parts of your lungs.” It may be carried out with other chest clearance techniques such as ACBT. If so explain as per competency.

3. **Position and preparation of Service User:** Check plan. The service user position is very important as postural drainage is done in order to aid secretion removal. Ensure the service user is wearing comfortable clothing and service user has taken or can take prescribed medication at the appropriate time. e.g. **DNase 1 hour before treatment, Bronchodilators 10 minutes before treatment OR Nebulised antibiotics within 30 minutes after treatment, Nebulised steroids within 30 minutes after treatment.**

4. **Position of Rehabilitation Assistant:** in front and to side of service user, so you can clearly observe their face and respiratory action throughout.

5. **Explain how to assume the Postural Drainage position** (you may need to demonstrate this first) or assist the service user into the position (check manual handling plan).
   - **Upright sitting: Draining Upper Part of Lungs (Uppers)**
     "sit in a comfortable upright position. You can lean slightly forwards to affect the back of your lungs or lean backwards to affect the front of your lungs."
   - **Supine (lying on your back): Draining Front and Upper Parts of Lungs (Anterior Uppers)**
     "lie on your back with the bed flat; your knees and head can be supported by a pillow if required"
   - **Right side lying with a ¼ turn: Draining the middle area of the left lung.(Lingula)**
     "lie on your right side with a pillow long ways down your back, under your left shoulder and hip. Roll back onto the pillow so your body is at an angle “
   - **Left side lying with a ¼ turn: Draining the middle lobe of the right lung.**
     "lie on your left side with a pillow long ways down your back ,under your right shoulder and hip. Roll back onto the pillow, so your body is at an angle“
   - **Right side lying with tip: Draining the left base of the lung (medial basal)**
     "lie on your right side with your hips supported by at least three pillows“
   - **Left side lying with tip: Draining the right base of the lung (lateral basal)**
     "lie on your left side with your hips supported by at least three pillows“
   - **Prone (lying on your front): Draining the back parts of the base of the lungs (posterior bases)**
     “lie on your front with the bed flat. If you have a lot of sputum you may find it useful to place 2 or 3 firm pillows under your hips to tip your chest down.”

6. **Ready …** ‘Explain getting into position as above “. Explain how long they will need to be in the position. If you are not staying for the duration of the session, ensure they
have a means of getting attention if they need to i.e. if they become wheezy or very breathless, if you are with them and this happens STOP and seek advice from registered practitioner.

7. **On completion** seek feedback from service user re how they found the technique. Did they manage the length of treatment on the plan, **if not feed back to the delegating registered practitioner.** Establish how the volumes cleared compared to previous sessions and other techniques. Consider if the user could adhere to this regime independently. Ensure the service user is comfortable and not in distress.

8. **Document** in the Service User’s notes the above, also noting nature of secretions produced e.g. colour, consistency and volume.

9. **Feedback** clearly to the Registered Practitioner who delegated the task.

References

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1. Read plan, identify exercises and any variations (e.g. position/timing/with other techniques)
2. Appropriate explanation of the reason for the exercise/technique to Service User
3. Start position of Service User (as per plan)
4. Position of Rehab Assistant relative to Service User
5. Verbal explanation of how to perform the exercise/technique, including adjunct techniques and any warnings
6. Supervision of exercise/technique
   i. Verbal prompts and encouragement
   ii. Appropriate positioning and correction
   iii. Correct timing of repetitions and rest periods
   iv. Appropriate use of touch
   v. Appropriate recognition of when to stop and seek advice/help
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**Sign and date when achieved**

- Signature of Learner
- Signature of Assessor
- Date of Review