

## Artificial Larynges

*Elizabeth Durand, M.A., CCC-SLP*

1. There are two basic types of artificial larynges:
  - (1) P \_\_\_\_\_
  - (2) E \_\_\_\_\_
2. An artificial larynx powered by the lungs is a \_\_\_\_\_ device.
3. An example of a pneumatic device is the T \_\_\_\_\_.
4. The basic characteristics of a pneumatic device include these features:
  - (1) Steel or soft rubber cup that fits over the \_\_\_\_\_.
  - (2) Cylinder that houses a \_\_\_\_\_ membrane.
  - (3) Steel or plastic tube from the cylinder to the mouth tube.
  - (4) Mouth tube made of rubber or plastic.
  - (5) Pitch adjusted by width and t \_\_\_\_\_ of the rubber membrane.
  - (6) The f \_\_\_\_\_ of exhaled lung air varies the pitch and loudness.
5. Two types of electro larynges (battery powered) are these:
  - (1) I \_\_\_\_\_ device.
  - (2) N \_\_\_\_\_ device.
6. The Cooper Rand is an example of an \_\_\_\_\_ electro larynx.
7. The characteristics of the Cooper Rand include these features:
  - (1) P \_\_\_\_\_ generator is activated by a 9 volt non-rechargeable battery.
  - (2) A cord connects the pulse generator to an h \_\_\_\_\_ - h \_\_\_\_\_ tone generator and plastic mouth tube.
  - (3) Sound is produced by pressing a button on the t \_\_\_\_\_ generator.
  - (4) Sound is transferred to the oral cavity by the mouth tube.
  - (5) Controls on the pulse generator vary \_\_\_\_\_ and \_\_\_\_\_.
8. The U \_\_\_\_\_ V \_\_\_\_\_ is an example of an intra-oral denture electro larynx.
9. Neck electro larynges have these features:
  - (1) Battery powered motor drives a spring loaded piston against a d \_\_\_\_\_.
  - (2) V \_\_\_\_\_ produce sound.
  - (3) The shape of the unit is typically cylindrical.
  - (4) Made of \_\_\_\_\_ or plastic or a combination of both.
  - (5) Some have re- \_\_\_\_\_ batteries

10. Neck electro larynges can be used with or without an \_\_\_\_\_.
11. Tubing for intra-oral adapters for neck devices can vary in length, \_\_\_\_\_ and flexibility.
12. There are different brands of neck electro larynges. Three examples are these:
- (1) \_\_\_\_\_
  - (2) \_\_\_\_\_
  - (3) \_\_\_\_\_
13. The benefits of using an artificial larynx include these factors:
- (1) Relatively intelligible and i\_\_\_\_\_ speech.
  - (2) Useful interim method while learning esophageal speech or prior to TEP.
  - (3) Takes \_\_\_\_\_ time to learn.
  - (4) Beneficial when emotionally \_\_\_\_\_ or warding off an upper respiratory infection.
  - (5) Easily \_\_\_\_\_ on the phone or in noisy places.
  - (6) Reduces stress for patient and family.
14. Selection of a device is influenced by these elements:
- (1) \_\_\_\_\_ of the patient or the significant other.
  - (2) Length of \_\_\_\_\_ after the surgery.
  - (3) C\_\_\_\_\_ of the neck tissue.
  - (4) O\_\_\_\_\_ structures, neck size and prior speech habits.
  - (5) Manipulatory skills.
  - (6) Environmental needs.
  - (7) Aversions, or f \_\_\_\_\_.
  - (8) Cost. \$\$\$
15. Skill development needed to be effective with the artificial larynx.
- (1) Appropriate eye \_\_\_\_\_.
  - (2) Correct p\_\_\_\_\_.
  - (3) Consistent \_\_\_\_\_/\_\_\_\_\_ timing.
  - (4) Pitch variation.
  - (5) \_\_\_\_\_ variation.
  - (6) Appropriate s\_\_\_\_\_.
  - (7) Good rate.
  - (8) Proper \_\_\_\_\_.

16. Skill refinement and becoming an “expert” using these devices involves these habits performed accurately and consistently.
- (1) Finding the “ \_\_\_\_\_ ” spot with precision and without hesitation.
  - (2) Turning the device \_\_\_\_\_ immediately when you start to speak and \_\_\_\_\_ when you stop.
  - (3) Using correct rate, phrasing, pitch and loudness.
  - (4) Distinguishing between \_\_\_\_\_ and \_\_\_\_\_ consonants in conversation.
  - (5) Implementing non- \_\_\_\_\_ communication skills.
  - (6) Practice, practice, practice
17. Placement of neck device:
- (1) Soft tissue
  - (2) 1-2 inches under \_\_\_\_\_ line.
  - (3) Side of the \_\_\_\_\_.
  - (4) Midline
  - (5) Under the chin
  - (6) C \_\_\_\_\_ placement.
18. Intra-oral placement:
- (1) Tip placed \_\_\_\_\_ to \_\_\_\_\_ inches into the corner of the mouth.
  - (2) Lateral surface of \_\_\_\_\_ and \_\_\_\_\_ molar. (Blom)
  - (3) Upper lateral surface of the tongue. (Salmon)
19. Placement of pneumatic device:
- (1) Insert tube in mouth
  - (2) Cover the stoma with steel or rubber cup
  - (3) Modify placement as needed
20. Timing requires switching the device on and off simultaneously with \_\_\_\_\_.
21. To precisely articulate voiceless consonants override the electronic sound of the device by increasing pressure or emphasis on voiceless plosives and fricatives or turning o\_\_\_\_\_ the device during production of voiceless consonants: P, T, F, K, H, Ch, Sh, Th and S.
22. Proper phrasing and rate require natural pauses at \_\_\_\_\_ and \_\_\_\_\_.
23. Loudness, pitch and stress can be varied by these actions:
- (1) Tense oral-p \_\_\_\_\_ muscles.
  - (2) Move intra-oral tube forward.
  - (3) Increase or decrease lung air for \_\_\_\_\_ device.
  - (4) Slide neck device \_\_\_\_\_ or \_\_\_\_\_ the neck.
  - (5) Vary pressure on the neck.
  - (6) Loosen the vibrating head collar or alter the duration of the word.