

Speaking on a Vent

By E.A. Oppenheimer, MD, FCCP

Can one speak while using mechanical ventilation? The answer is “yes”. There are some “ifs” and “buts”, of course... Unfortunately people are often given misinformation about this. My first patient with ALS lived 17 years on trach ventilation and speech was always excellent. Of course if spoken communication is already impaired due to bulbar problems in ALS, this will continue regardless of whether or not ventilation is used.

If your breathing capacity is weak, your voice volume will be poor off the ventilator; you may only be able to get a few words out at a time. With mechanical ventilation this is usually improved due to the increased lung capacity that allows you to talk louder and say more with one breath. When using noninvasive ventilation, such as BiPAP or VPAP, with a nasal mask, you can talk since your mouth is free and your lung and voice power are improved. When using tracheostomy ventilation you have to allow air to come up around the tracheostomy tube so the vocal cords can create sound for speech. There are a number of ways to accomplish this, such as:

- Use an uncuffed tracheostomy tube (my preferred option).
- Only partially inflate the trach cuff so some air leaks around it and passes up through the vocal cords.
- Use a fenestrated tracheostomy and take the inner cannula out for speech.
- Use a special speaking tracheostomy tube that provides a second built-in tube to deliver air to go up through the vocal cords.

When using these techniques with a tracheostomy, you must adjust the ventilator volume so that enough air is delivered with each breath to both inflate the lungs and also the air that goes up around the trach tube through the vocal cords and out the mouth. I usually use a Passy-Muir speaking valve attached to the tracheostomy circuit and an uncuffed trach tube to get smooth speech during both inhalation and exhalation, as well as improved swallowing. Speaking requires vocal cord and bulbar function. If the physician and respiratory therapist are experienced with these techniques, then speech can work quite well. On the other hand sometimes the needed techniques are not provided, and those involved (mistakenly) believe that speech is not possible on a ventilator.

PALS who use tracheostomy ventilation can survive for many years (more than ten additional years is common with good care). The ALS motor neuron impairment often progresses and 50% of PALS on long-term trach ventilation eventually develop severe communication impairment (not due to trach ventilation but due to progression of ALS). If this is happening there are very good augmentative and alternative communication (AAC) methods available. About 10% will eventually not be able to communicate at all (totally locked-in) and need to plan on whether to continue life-support if this occurs; hopefully the new developments in brain wave (EEG) controlled communication technology will improve and provide help.

So the short answer is “yes” you can speak while using mechanical ventilation. However one needs to have experienced professional help, especially if you use trach ventilation. And, be prepared to use AAC if ALS progresses and impairs speech.

This article is based on a February 18, 2002 email response by Dr. Edward Anthony Oppenheimer, MD, FCCP to a question posted to the Living-with-ALS email discussion group on Yahoo Groups. Dr. Oppenheimer is Associate Clinical Professor of Medicine, University of California, Los Angeles (UCLA). He retired after 31 years with Kaiser Permanente Medical Group where he organized and coordinated the Kaiser home ventilator program. Although Dr. Oppenheimer is no longer seeing people in office practice and does not have an office referral, he will try to respond to comments and questions emailed to him at Eaopp@UCLA.edu.