

Dr. Braun Answers Ventilator Users' Questions



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Question: *My physician told me it is time to switch to a volume ventilator. I use a ResMed VPAP™ III (Variable Positive Airway Pressure). So, I have been using pressure. Why would he think I should switch to volume?*

Dr. Braun: The person to best answer the question is your physician. But, he is probably suggesting a different ventilator because you are changing in some way. What happens as we age? Our joints become more rigid. It takes more force to alter range of motion, and in this case, the chest cage. You may need more pressure. (Note: Adding pressure causes the nose and mouth to dry out, and can mean more leaks and less air getting to the lungs.) I suggest you ask your physician specifically what he observed. Are your blood gases signaling that a change is needed? Do you not sleep at night? Are you more and more tired during the day? Are you less sharp? Do you have trouble answering questions? Do you doze during the day? These are a few indications that your current settings aren't working for you anymore.

It is interesting that I, as all people do, need different amounts of air depending on what I am doing. I need more air if I am walking fast than if I am seated in a chair. For those who use a vent, the amount of air they receive is an average amount that doesn't fluctuate. Vent users' needs change based on what they are doing, where they live, how old they are, and changes in scoliosis, for example.

There is another reason your physician may want to switch your vent and that has to do with Medicare or insurance coverage. "Pressure" devices are also called RAD (respiratory assist devices) and after 13 months, the machine is yours,

and you no longer receive respiratory therapy services or third party payment for them. In my opinion, most polio survivors' conditions require more attention, and those services are always available with a volume vent. I also think that many polio survivors need two ventilators – one at the bed and one for the day's activities. For some, that means two different types of machines. Some machines are smaller and lighter and easier to move.

Question: *Can you clarify the difference between a volume ventilator and a pressure ventilator?*

Dr. Braun: A volume ventilator is set to deliver a specific volume of air with each breath, e.g., 600 cc. A pressure vent is set to deliver a constant specific pressure and the amount (volume) of air may vary.

Question: *Vent users are told to "check your settings." How is that done?*

I can tell you what I do. Since I work with home care companies that listen to me, I fax or email a prescription and ask them to go to the home and run two tests. One, check their oxygen level in the position in which they sleep. Secondly, check the end-tidal CO₂ (the level of carbon dioxide released at the end of expiration).

The other important thing they do is to ask patients how they feel. Asking the patient "How do you feel?" is exquisitely better than any test. Based on the information, we make some adjustments. If it doesn't feel right, we go back and make more adjustments. Then we do an overnight test in the home from which I can obtain from the computer printout the following: oxygen levels, CO₂ levels and pulse rate. The only thing I don't get is sleep cycle, but the patients can tell me how they slept. With this I have a pretty good idea if the changes we made were adequate. I may choose to do a formal test in a sleep lab that can do an EEG and tell me their sleep cycle. I rarely have to do this, though. ■