

## Time to Check Your Ambu Bag by Elaina Zebroff

Did you know that PROP recommends that your Ambu bags be checked daily to ensure they are functioning properly? It is your responsibility to ensure these checks are done.

Checking the Ambu bag—or bagger—takes only a few moments and these daily checks could save your life. If you cannot check your Ambu bags yourself, please make sure your care attendants are checking them daily. And, it is OK to quiz your care attendant on their method of checking your bagger!

### Daily Ambu Bag Check

**Locate Ambu Bags.** Remember, these bags should be within your reach at all times. Many people will have two Ambu Bags, so ensure that both are checked.

**Pressure Check.** With clean hands, use the palm of your hand to fully cover the trach adapter or the patient port of the Ambu Bag. Squeeze the Bag, while keeping the patient port covered. The Bag should hold

the pressure; it should not leak or lose pressure during this check. If there is air escaping, ensure that the palm of your hand is pressed tightly against the patient port opening or the trach adapter. If air is still escaping, the Ambu bag is not functioning properly. Please call PROP at 1-866-326-1245.

**Inflation Check.** Squeeze the Ambu Bag and ensure the body of the Ambu Bag re-inflates.

Ambu Bags are your primary piece of emergency equipment. Whether it is a power outage or a medical emergency, Ambu Bags are your back-up devices and need to be functioning and ready to use at any moment.

This simple check can ensure that yours are functioning. For your own peace of mind, please speak to your care attendants about checking the Ambu Bags.

Please do not hesitate to call the office at 1-866-326-1245 and speak to a respiratory therapist, if you have any questions about this process.

We can also create a short video clip via email demonstrating the Ambu Bag check. ●



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## Ask the Respiratory Therapist



What do the letters on my Bilevel screen mean? This is a common question we hear from our clients. Here are some of the letters and their meanings.

### Mode

**S/T:** Spontaneous timed. This setting is a combination of spontaneous breaths (those you take yourself) and timed breaths (those that the machine gives to you).

You could say that a car with a standard transmission is a spontaneous mode where you do all the work, whereas a car with an automatic transmission is like a timed mode where you do not have to exert yourself at all.

**S:** Spontaneous mode. This is your standard transmission, you are doing all the work of breathing.

**T:** Timed mode. This is the automatic transmission. You sit back and the Bilevel does all the work of breathing.

**RR:** Respiratory rate or breaths per minute. This is the number of times you take a breath per minute. You can take these breaths on your own or this can be set on the Bilevel for you.

**AVAPS (Average Volume Assured Pressure Support):** This is the amount or volume of air you will receive with each breath, based on your needs and comfort level. This will be delivered by your Bilevel unit, within a certain pressure range that is not too high

and not too low. Not available on all units.

**VT:** Tidal volume. The letters seem backwards, but sometimes in the translation from Latin, things get a bit mixed up. C'est la vie!

Tidal volume is the amount of air that you breathe in each time you take a breath, like the tide coming in and going out. When you breathe in the tide comes in and when you breathe out the tide goes out. However, just remember to keep breathing and don't stay out with the tide enjoying yourself! Not available on all units.

### IPAP (Inspiratory Positive Airway Pressure)

**Maximum:** When you breathe in, the pressure will not go over the IPAP. It's like blowing up a balloon: once its expanded you cannot put more air in. Like a safety valve, we wouldn't want you flying around the room, if someone decided to let go of you.

### IPAP (Inspiratory Positive Airway Pressure)

**Minimum:** This is the lowest amount of pressure that is required to start taking a breath in.

### EPAP (Expiratory Positive Airway Pressure):

This pressure prevents our lungs and airways from totally closing. When we have a problem with our lungs, we have difficulty getting rid of the old air in our lungs and bringing in the good air. We need this pressure which acts as a splint or brace for our lungs, to allow us time to get rid of the old air and get in the new air. I'm starting to sound like an advertisement for a company, "Out with

the Old and In with the New." Thank goodness my boss doesn't think that way or I would have been long gone!

**Ti:** Inspiratory Time. This is the amount of time we need to take in a normal breath, whatever that may be for each of us. Remember VT? Or are you all still out there with the tide? I did warn you about that.

**Rise Time:** This is the speed the air enters the lungs. The speed can be set on your Bilevel.

As you can see there are many things to consider when we set up someone up on a Bilevel. We do our best to make your breathing easy, comfortable and natural.

Have you ever wondered whether you are breathing in or out when you talk?

The answer is we talk when we breathe out. Someone who breathes with a ventilator has to adapt and become used to talking when the ventilator gives them a breath in.

So, when you are talking to someone who uses a ventilator to breathe, be patient when they pause while talking. Remember they are waiting for the next breath in to continue.

Thank you for taking the time to read this. Have a great day and enjoy the lovely weather.

If you are having problems adjusting to your BiLevel and its settings, please call your Respiratory Therapist for help. ●

## Showing Off TIL Services

BY JERZY PACEK

The Biomed Department has created a display featuring a variety of TIL services.

As the viewer, you experience how it feels to use Environmental Control Systems (ECS) like clients of TIL.

Viewers are able to control all features of the display by using a single button or switch. If you compare the two pictures at the right, you will see that the door is either open or closed. This is just one of the household tasks our ECS's can handle.

Other features you can control in this display are the phone, fan, radio and lamp.

The display currently resides in the BioMed Shop at BCITS and has received great reviews from our co-workers.

We are now building a transport case, so we can bring the TIL display to conferences and workshops.

**For more information, please contact the BioMed department at TIL at 604-326-0175.**



ILLUSTRATIONS BY ROGER DESMARAIS



ILLUSTRATION BY ROGER DESMARAIS

# Voice Control Apps for Your Smart Phone

Voice assistant apps have been an amazing tool for some of our clients who had difficulty using a smart phone by touch.

**BY SAMIKO GUEST** Smart phones have made way for a multitude of software programs known as applications (apps).

This article discusses voice control and voice assistant apps that use speech synthesis and recognition technology.

Smart phones equipped with a voice assistant app have allowed some of our clients to use verbal commands to make calls, answer the phone, create and send e-mail, play music or movies, search the internet, get directions to a location and more!

Voice assistant apps have been an amazing tool for some of our clients who had difficulty using a smart phone by touch.

While this is a tremendous improvement, voice assistant apps are not yet perfect for every client who would like to use them.



Some apps require touch, while others can be set up to operate fully with just voice commands.

A combination of a voice assistant app and a customized strategy to overcome the need for touching actions—such as using a stylus pen, a special smart phone switch access interface like Tecla hardware or configuring a smartphone screen to be more accessible—will make your life a bit easier and allow more independence.

On the opposite page is a list of some voice assistant apps with good reviews. They are free and available in Canada.

Each smart phone and app works differently and has its pros and cons. And most apps are available only with a specific phone/device.

If you don't have a smart phone yet, take the opportunity to test out different phones and apps to see which suits your needs best.

Application & Compatible Devices	Where to Get & How to Start the App	Bluetooth Headset Compatibility	Things you can do	Comment
Siri  iPhone 4S/5, iPad(3 <sup>rd</sup> gen), iPad mini	Comes installed  Hold down "Home" button until you hear 2 beeps  Press "Mic" icon every time you speak to it	Works with: headphone w/ remote or Bluetooth headset (Press and hold centre or "call" button until you hear 2 beeps)	-Make a call -Send a message -Search the web -Get directions -Schedule meetings -Check/send email -Set alarms -Get weather information -Get movie information	If you have limited sight, you can use the "Voice Over" feature. Siri will respond by speaking the text you've entered.  There is a standard "Voice Control" feature that is different from Siri.
S-Voice  Samsung Galaxy III, Samsung Galaxy Note II, Samsung Galaxy Note 10.1, Samsung Galaxy Stellar	Comes installed  Press "Home" button twice  Press "S-Voice" icon  You can use a voice command to open the app, but you need to go through a set-up process first	Unknown; depends on compatibility of Bluetooth device and phone configuration	-Make a call -Send text -Search the web -Navigation -Play music -Update social network -Open apps -Record voice -Simple system setting controls -Check for missed calls and messages -Open camera	Voice recognition is a bit weak.
Google Voice Search App with Voice Action feature  Android phone with OS 2.2 +	Download from Google Play  Press "Mic" button in the Google search box in your phone's home screen	Unknown	-Make a call -Send email/text message -Search the web -Navigation -Get a map -Play music	Better voice assistant app. Available only in US right now.
Vlingo  Android phone with OS 2.2 + iPhone 3GS/4	Download from iTunes or Vlingo home page  Press "Vlingo" app icon	Works with Bluetooth headset/ speaker devices from Blueant	-Make a call -Send email/text message -Searching the web -Navigation -Updating social network	Vlingo app is also available for BlackBerry devices, but may require purchase.
Dragon: Dictation App & Search App  iPhone 2G + iPad 2 with iOS 4.0+ iTunes 9	Download from iTunes  Press "Dragon Dictation" app and/or "Dragon Search" app icon	Unknown	"Dictation" app does only dictation. Sending needs to be controlled by pressing buttons.  "Search" app listens to the keyword you want to search on the web. Need to press buttons to start and end the session.	Reputable speech recognition software, but it requires many physical inputs to execute an action.

## balance

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We are pleased to have content from BALANCE reprinted in other publications. Contact us with your request and please cite BCITS, BALANCE and the edition date when reprinting.

BC Association for Individualized Technology and Supports for People with Disabilities is the home of Technology for Independent Living (TIL) and the Provincial Respiratory Outreach Program (PROP).

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Vancouver, BC V5X 4N6

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## Suction Troubleshooting BY WAYNE POGUE

Do you ever find yourself in a situation where your suction machine has stopped working? This may be due to a few things, but the following are the most likely culprits.

1. If the suction machine canister lid has a crack in it, this will not allow pressure to build up in the canister which will result in poor suction.
2. If you're using suction on internal battery power, and you find the suction machine battery doesn't hold a charge (compared to when you first received the suction machine), this could cause the suction machine to have inadequate power to build up pressure for suctioning.
3. If you have the yellow/blue "LSU" (Laerdal Suction Unit), and you find your machine stops suctioning after approximately 2 minutes, rest assured this is the LSU's proper operation. It has a built in "auto shutoff" that turns the machine off after 2 minutes to prevent overheating.



**The Kinsmen Foundation** is helping to raise funds for the Technology for Independent Living program and other supports for people with disabilities, through the KinKlassic Golf Tournament. You can help this fundraising effort by spreading the word to golfers you know. Or register yourself or put in a team. If you are not a golfer you can donate a prize for the auction or volunteer at the Tournament to be held at the fabulous Mayfair Lakes Golf Course,

4. If you find your suction machine isn't producing enough suction after re-assembling the circuit following a cleaning, the issue probably isn't the machine. It's likely the hoses weren't connected tightly during re-assembly.

To resolve this issue, remove the tubes and re-assemble the circuit. Do one tube at a time, stopping to check the pressure at the end of that tube. If you connect a tube and find suction pressure isn't increasing at the end of that tube, tighten the connection. If it still doesn't create pressure, replace that section with a new section of tubing and continue. You have likely found the faulty tube.

If you need replacement suction machine canister lids, suction supplies or if you think you need a replacement suction machine (after reading these suction machine tips), please contact the PROP office at 1-866-326-1245 or [prop@bcits.org](mailto:prop@bcits.org).

We are, as always, more than happy to help! ●

September 19th. For information, please phone Jim Watson at 604-644-2771. Tiger Woods may be attending!



**PROP & TIL Are Coming to Facebook!** We're planning a Facebook page for BCITS/PROP/TIL. We would love to hear your ideas about what you'd like to see. Send them to [info@bcits.org](mailto:info@bcits.org). ●

## Help Us Fulfill Our Vision

BCITS, proud home of PROP and TIL, is a registered non-profit and charitable organization. The funds to operate these programs come from the Ministry of Health, through the Vancouver Coastal Health region. We are very grateful for this generous support.

However, this funding does not cover the costs to provide equipment to TIL clients. For example, a special telephone for a person with a high level disability can cost as much as \$1000 and an automatic door opener can cost \$3000.

**We provide many devices like these to adults—at no cost—to fulfill our vision of people living in the community as independently as possible.**

**You can help us continue this work through your donation.** Any contribution large or small will be gratefully accepted. **100% of your donation will go toward equipment and assistive devices.**

Thank you, Simon Cox, BCITS Executive Director  
Charitable Registration Number 807477070RR0001

### Yes, I would like to support TIL's equipment program.

- I enclose a cheque for \$ \_\_\_\_\_.
- I will make a donation by credit card through CanadaHelps.org. [Donate in minutes by clicking on the CanadaHelps button on our home page at [www.bcits.org](http://www.bcits.org).]
- I would like to donate directly by VISA. I will call Clara Chalifour at 604-326-0175.

**Please be sure to fill in all your contact details, so we can send your tax receipt (for donations of \$10 or more).**

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

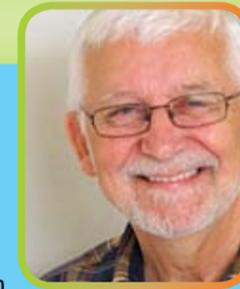
CITY & PROVINCE \_\_\_\_\_

POSTAL CODE \_\_\_\_\_

PHONE \_\_\_\_\_

EMAIL \_\_\_\_\_

**Please return this form to:** BCITS, #103-366 E. Kent Ave S., Vancouver, BC V5X 4N6



## Research Participants Needed

We are looking for volunteers who have breathing difficulties due to either spinal cord injury or muscular dystrophy. We would like you to take part in a study of lung volume recruitment (LVR). This technique may be helpful in maintaining or improving lung function.

Your participation would involve one session which would last approximately 4 hours. The researchers will provide remuneration for transport and a meal while you are undergoing testing.

For more information about this study, please contact Esther at PROP and she can forward your details to the research team.

This study has been reviewed by, and received ethics approval by, the Clinical Research Ethics Board, University of British Columbia. The lead investigator is Dr. Jeremy Road. ●

### Bon Voyage Miranda!

We're sad to report that one of our RTs, Miranda Whitely, will be leaving us as of August 16, 2013.



Miranda has been a very valuable contributor to the PROP team, as many of you are aware.

She will be greatly missed, not only for her knowledge, but also for her sense of humour.

We wish Miranda all the best for the future in all of her endeavours. ●

## Yes, I Accept Your Invitation To Join BCITS



The BC Association for Individualized Technology and Supports for People with Disabilities (BCITS)  
Home of Provincial Respiratory Outreach Program (PROP) & Technology for Independent Living (TIL)

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/Prov: \_\_\_\_\_ Postal Code: \_\_\_\_\_

Telephone: \_\_\_\_\_ Email: \_\_\_\_\_

### Please Check One

- Membership for registered BCITS clients**  
Please mail completed form to BCITS (the cost of postage constitutes your membership fee)
- Non-client membership fee**  
Please mail completed form along with \$20.00 annual membership fee payable to BCITS.

Please mail this form along with any applicable membership fees to BCITS - The Home Of PROP and TIL, #103-366 E. Kent Ave S., Vancouver, BC V5X 4N6



## Troubleshooting the Ventilator

BY ELAINA ZEBROFF

If you experience an alarm that reads "Check Vt" or "Check Valve" when using the Legendair or PB 560 Ventilator, this may mean condensation has built up in the clear smooth sensor lines or in the exhalation valve itself.

One great way to troubleshoot this alarm is to exchange your circuit with a dry circuit from your supply inventory. If the alarm stops, it is fairly safe to assume that condensation was the culprit. ●



Older Legendair



PB 560