

How to Use Your External Battery

A Guide for VEP Clients, Clinicians, and Caregivers

The Ontario Ventilator Equipment Pool provides a stationary 12 Volt battery and battery charger with necessary cables for eligible clients as determined by ADP. Batteries for mobility are not available from the VEP and must be purchased by the client.

The purpose of this education package is to provide clinicians, VEP clients, and their caregivers the information they need for the safe and effective use of external batteries and chargers.

Battery and Charger Use and Safety:

The battery provided to eligible clients is a 12 volt, SLA (sealed lead acid) battery. The battery comes prewired in a protective battery case with all necessary electrical fittings already in place. Never open and expose the battery from its case as this may lead to malfunction of the battery and risk injury. Place the battery and the charger provided in a well ventilated area close to your respiratory device to make for easy access during power outages. Make sure the charger is plugged into a properly grounded 3 prong electrical outlet. For safety reasons, extension cords are not recommended and should never be used for your charger or respiratory device as this may affect the power delivered to the devices.

Keep the battery connected to the charger and charging at all times. Always disconnect the battery from the charger before connecting to your respiratory device. Prior to disconnecting the battery from the charger, unplug the charger from the electrical outlet for safety.

To reduce risk of injury, charge only the battery supplied to you from the VEP using the provided charger. Other types of batteries may burst causing personal injury and damage when charged using this charger. Do not expose the charger to rain or snow. To reduce the risk to the chargers electrical plug, pull the plug rather than the cord when disconnecting the charger.

Make sure the charger and cable attached to the battery are located so they will not be stepped on, tripped over, or subjected to damage or stress.

Do not use a damaged charger, call the VEP for replacement if the unit appears damaged, has received a sharp hit, been dropped or otherwise damaged in any way.

Never disassemble the charger or battery unit.

Never charge a frozen battery. If your battery has been exposed to excessive heat or cold for a period of time, allow the battery to reach “room” temperature before recharging.

Hibernate Mode:

The charger you have been provided has what is known as a “Hibernate Mode”. It is recommended to always leave your battery connected and charging using the battery charger. The battery may be connected to the charger in the “READY” mode indefinitely, in order to maintain the battery in a fully charged state while not in use without the risk of overcharging.

The battery chargers supplied by the VEP are fitted with an energy saving Hibernate Mode Feature, if the charger is left connected for 24 hours after the end of a charge cycle, with the green “Battery Ready” LED on, the charger automatically enters the Hibernate Mode in which it draws minimum power from the AC supply.

Hibernate mode is indicated by all the LED’s turning off except for the red LED blinking briefly once per second. The charger will remain in the hibernate mode for up to 30 days, after which it will automatically switch back on and complete one recharge cycle. The repeated cycle will keep your battery fully charged and ready for use in an emergency when needed.

This hibernate mode will terminate early if the AC power supply is switched off, or the battery is disconnected from the charger.

Care of your Battery:

The backup battery supplied to eligible VEP clients leaves the VEP fully charged and undergoes a thorough charging and checkout procedure to ensure the battery meets manufacturers specifications.

The supplier of VEP batteries for backup use recommends the battery be kept charging when not in use. If the battery is needed for emergency backup power, always unplug the battery charger unit first, and disconnect the battery from the charger, then connect the battery to your respiratory equipment. Once discharged or partially discharged and the battery is no longer needed for emergency backup power, unplug the battery from your respiratory equipment, reconnect the battery to the charger and plug the charger in.

Repeated deep discharging of your battery will shorten the life of the battery. Leaving the battery charging, especially when the charger enters “Hibernate” mode consumes very little power.

Battery duration:

There are many factors affecting the length of time your respiratory device can be powered in an emergency for backup power.

- . The device it is powering, including settings of the device. Different devices draw different amounts of power.
- . Age and overall condition of the battery.
- . The number of times the battery has been discharged and recharged (Remember, “deep” discharging a battery (using the battery until it is depleted) can affect its useable life.)
- . The environmental temperature in which the battery is used. Excessively warm or cold ambient temperatures can affect the duration and power available from the battery.
- . Whether or not the battery has been given sufficient charging time to reach a full charge (it is recommended your battery be left charging when not in use)

How Long Will My Battery Last?

When you receive your battery and charger from the VEP, you may wish to test how long your battery will last in the event of a power failure. Verifying the battery duration will give you some piece of mind and help to prepare you in the event of a power failure. Follow these steps to test the battery duration:

1. If your breathing machine has an internal and/or detachable battery, make sure they are fully charged
2. Disconnect your breathing machine from AC power
3. Disconnect the charger from AC power and unplug the battery cable connecting to the charger.
4. Connect the external battery to your breathing machine with the power cable provided, there may be a switch on the cable connecting the battery to your breathing machine, make sure it is the “on” position.
5. Start your therapy, keeping track of the time you start therapy using the external battery. The breathing machine will first use power from the external battery (the large battery the VEP has supplied you with), then to the detachable battery if there is one on your breathing machine, and finally to an internal battery if present in the machine.
6. You need to note the time that the power switches from the “external” battery to the detachable battery or internal battery.

7. The number of hours the machine was powered by the external battery tells you how long your battery should last during a power failure.
8. Connect your breathing machine back to AC power, disconnect the external battery, connect the battery back to the charger, plug the charger in and allow the battery to reach full charge.
9. Remember, follow this guide to keep your battery in optimal condition, and remember that repeated deep discharges and other factors may affect how long your battery lasts.

Discharging the Battery:

The supplier of the external batteries for the VEP does not recommend regularly discharging (draining) the batteries supplied to VEP clients as this can affect the life of the battery. Keeping your battery connected to the charger is the best way to keep your battery fully charged and ready for an emergency.

Using my Battery for Other Equipment or For my “Portable” Ventilator:

The battery provided to you by the VEP has been supplied to provide you with an emergency backup power supply in the event you lose power in your home. It is not intended to be used connected to your second device, if you have one, for regular mobility away from your home. Make sure if purchasing another battery to be used for mobility that it meets the standards and specifications as outlined by the manufacturers of the devices you will be connecting the battery to, to ensure safety to both yourself and safety and protection of the equipment it will be used on. Homecare vendors or mobility experts may be able to help you with your battery and mobility needs, or with connections and cables to connect to 12 volt power supplies in vehicles. Make sure additional batteries meet these specifications and have their own separate and dedicated charger applicable for the purchased battery.

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