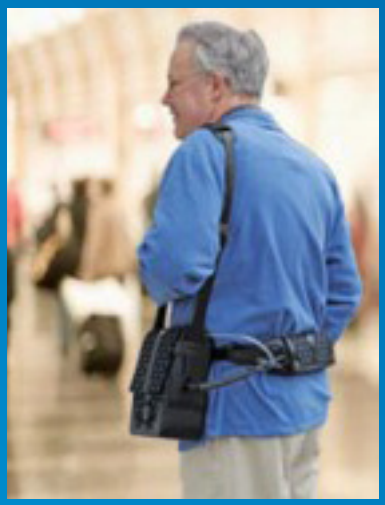
Official

Guide To

Portable Oxygen Concentrators



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Introduction

A portable oxygen concentrator, also known as a POC, functions unlike any standard or liquid oxygen tanks you may currently be using. Instead of scheduling regular refills or replacements for tanks, a portable oxygen concentrator takes in ambient air and sends it through a filtration process to produce medical grade quality oxygen. This innovative process is powered by a rechargeable internal/external battery or both, depending on the oxygen concentrator you choose. They may also be plugged into an AC or DC outlet to power and even charge the unit during treatments.

How does a portable oxygen concentrator work? Easily put, an oxygen concentrator pulls in ambient air from its surroundings. The air is then compressed and nitrogen is removed by the air filter and sieve beds to deliver purified medical grade oxygen via a nasal cannula. The level of oxygen delivered is regulated by the flow rate set on your machine.

Whether you are a caregiver or an oxygen patient, you're here because you want to improve your's or your loved one's personal freedom and quality of life. In this ultimate guide to portable oxygen concentrators we will cover everything from their history, why they vary in size, differences in continuous and pulse flow, reasons why you need a POC, traveling tips, purchasing a concentrator and much more. To help you make the most informed purchasing decision so you end up with an oxygen concentrator that meets your oxygen and lifestyle needs fully.

History of Oxygen Concentrators

Oxygen therapy isn't something that was newly introduced in the past century, in fact the molecule of oxygen was discovered all the way back in 1772 by a Swedish chemist named Carl Wilhelm Scheele. Shortly after oxygen was discovered, the medical implications were quickly realized, specifically for patients suffering from respiratory illnesses. Thomas Beddoes, who's considered the father of respiratory therapy, worked with inventor James Watt to begin generating oxygen and other gases.

Then in 1798 the duo successfully opened up a Pneumatic Institute in Bristol, England. Using oxygen and nitrous oxide to treat patients with asthma, congestive heart failure, and other ailments. Unfortunately the institute had to close 3 years later due to the typhus epidemic.

Thanks to apothecaries, oxygen was still available throughout the 18th and 19th centuries. Oxygen treatment went in and out of style until the first oxygen cylinders to store oxygen were developed in 1868, leading to the first recorded use of oxygen for medical purposes on March 6th, 1885. Dr. George Holtzapple was the first doctor to record the use of oxygen to treat a patient with pneumonia, reinforcing and securing oxygen's role in medical treatment. It wasn't until the late 1970's that a home oxygen concentrator, which pulls oxygen from surrounding air, was first developed.

The Beginning of Hyperbaric Oxygen Chambers

Hyperbaric oxygen therapy is the use of oxygen for medical reasons at a higher level than atmospheric pressure using a chamber that patients lay in. Dating back to 1662 Nathaniel Henshaw is reportedly the first person to use compressed air in a chamber known as a domicilium to achieve an hyperbaric oxygen environment.

The following two centuries saw an increase in new reports of the benefits of using increased pressure to improve oxygen saturation levels. By 1877 hyperbaric chambers were being used to treat a wide range of varying health conditions. Unlike the chambers of today, the first chambers used compressed air, instead of oxygen for fear of oxygen toxicity. It wasn't until 1917 that the German inventors, Bernhard and Heinrich Dräger, begun using pressurized oxygen to treat decompression illness that is caused by diving accidents.

The first hyperbaric chamber in the United States was built in 1861 by James Leonard Corning in New York. Using a hyperbaric chamber for non decompression related illnesses was often discredited until 1921. When physician Orval J. Cunningham built his own hyperbaric oxygen chamber in Kansas. In 1928 Orval then later opened up the world's largest hyperbaric oxygen chamber in Cleveland, Ohio.

A one million dollar, 900 ton sphere that measured 64 feet in diameter, was 5 stories tall, and each floor was equipped with 12 bedrooms. The chamber was dismantled in 1937 due to Orval failing to backup his claims of the effectiveness of a hyperbaric chamber. It wasn't until 1961 that Willem Brummelkamp restored interest and his findings showed hyperbaric oxygen

chambers can treat numerous medical conditions, solidifying their place in the medical field of today.

The use of hyperbaric oxygen chambers to treat COPD or other respiratory illnesses is still widely debated. Typically doctors will not use a hyperbaric oxygen chamber to treat COPD as the increased pressure could cause your lungs to leak into the chest cavity and eventually collapse.

FAA Approval is Obtained

After patients began to see the incredible benefits that home oxygen concentrators provide, younger and more active patients wanted a method to supplement their active lifestyle on the go. Cumbersome metal oxygen or liquid oxygen tanks were the only answer for patients that wanted their oxygen therapy while away from home, however they severely restricted patients from doing things they enjoyed most, especially traveling.

To help enhance the lives of patients with COPD and other respiratory diseases, manufacturers went to the drawing board to design a portable version of the effective home oxygen concentrator that would be approved by the FAA. After the development of the Inogen One and the AirSep LifeStyle portable oxygen concentrators, the FAA approved these portable concentrators for in-flight use in 2005. Paving the way for the portable oxygen concentrators of today and solidifying a new standard for oxygen therapy.

Present Day Portable Oxygen Concentrators

After years of testing and research, manufacturers were able to make incredible strides in the functionality of portable oxygen concentrators. Today, the battery life of portable oxygen concentrators has been greatly increased and many can be enhanced with the use of an external battery. Many portable concentrators are able to be charged and powered in your car, truck, R.V., or boat through the cigarette lighter outlet.

While many portable concentrators also contain sleep mode technology, which will allow you to use your POC 24/7 such as with a home oxygen concentrator. Select units even have CPAP/BiPAP compatibility to allow you to attach your device directly to the POC.

Portable oxygen machines also feature numerous audible alarms that help keep you safe and let you know when an error has occurred. So you can rest assured knowing that your oxygen concentrator is functioning properly at all times of use. Any concentrator without an alarm system is not FDA or FAA approved.

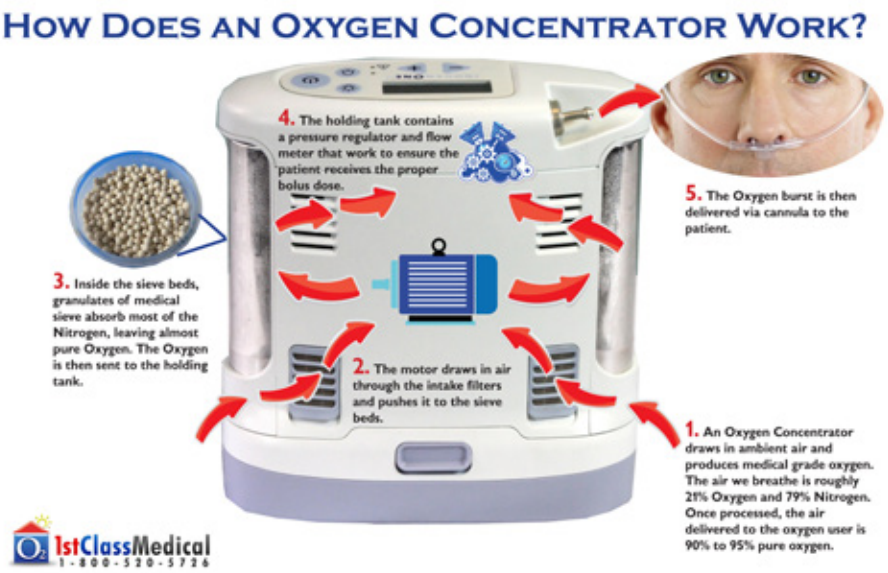
To make operating a portable oxygen concentrator as user-friendly as possible, the entire functionality of the concentrator is controlled by an easy to operate control panel. As technology advances select POC's are even beginning to feature a touch screen control panel.

How Oxygen Concentrators Work

The functionality of an oxygen concentrator may seem like magic at first but in reality it's easily explainable. An oxygen concentrator functions by taking ambient air from the surrounding environment. The air is then sent through an internal sieve bed that removes nitrogen and delivers medical grade oxygen to you via a nasal cannula.

A concentrator is operated electrically by its rechargeable internal/external battery, the AC power supply through a standard wall outlet, or in your car, boat, or RV with the DC power supply.

Learn the step by step process on how oxygen concentrators make their own air below.



How Oxygen Concentrators Make Their Own Oxygen:

- **Step 1:** The concentrator pulls air from its surrounding area

- **Step 2:** Air is then compressed and the cooling mechanism protects the unit from overheating

- **Step 3:** The Sieve beds and filter remove nitrogen from the air

- **Step 4:** Medical grade oxygen is then delivered via a nasal cannula according to your preset flow setting

Charging a Portable Oxygen Concentrator

Depending on the portable oxygen concentrator you choose, you may have some or all 3 of the charging methods that will be discussed.

All concentrators can be charged while stationary using an AC power supply through any conventional US or Canadian power outlet. Giving you access to every flow setting while the concentrator is charging. For charging on the go, the majority of concentrators can at the very minimum be powered through your car battery with a DC power supply, while others will be powered and charged on every flow setting.

When you have more than one battery it can become cumbersome to charge each one individually with the AC power supply. To help, certain oxygen concentrator manufacturers rolled out an external battery charger option. Which operates with its own AC power supply and will charge a battery externally from the concentrator.

How Charging Works:

- The AC power supply unit cord plugs into the concentrator while the 3 pronged power cord plugs into a wall outlet.

- The electrical current from the wall outlet will travel through the power supply and begin charging/powering the concentrator's battery.

- The oxygen concentrator will begin to charge automatically whether the machine is On or Off.

- The length of the charging cycle depends on a couple of things, 1) the remaining charge left in the battery, 2) whether or not you are using the POC while charging, 3) the flow rate you use while charging

Oxygen Delivery: Pulse Flow vs. Continuous Flow

- **Pulse Flow Delivery:** A pulse flow delivery oxygen concentrator is the on-demand delivery method. Rather than providing a continuous stream of oxygen, pulse flow delivery reads and reacts to your breathing rate. At the onset of inhalation the portable concentrator will recognize your breath and deliver a bolus dose of oxygen. Since a pulse flow POC only delivers oxygen on-demand, less oxygen is wasted and you get better battery life. With each breath you will hear the machine make a faint pulsing sound.

- **Continuous Flow Delivery:** As its name implies, a continuous flow portable oxygen concentrator will deliver a constant and continuous flow of oxygen per minute, whether you are inhaling or exhaling. These POC's are for patients that require 0.5-3 liters per minute of oxygen. Certain patients can use pulse flow during the day but need a continuous flow at night while sleeping to be used with CPAP/BiPAP or because they breathe too shallowly to trigger the pulse. A continuous flow is also used by patients who breathe through their mouth rather than their nose. A great way to visualize how continuous flow works, is to imagine it as a sink faucet. Once you turn it on to fill your cup a "continuous" stream of water will flow no matter how filled the cup is.

Portable Oxygen Concentrator Overview

Now that you are aware of the basic functionality of pulse and continuous flow portable oxygen concentrators, it's time to discuss the varying features these machines offer

Pulse Flow Oxygen Concentrators

- **Size:** When comparing POC's that offer pulse flow, continuous flow, or a combination of both. You will notice that they vary in size. Pulse flow units are smaller and lighter than units with continuous flow, due to smaller sieve beds and internal components.

- **Weight:** Strictly pulse flow delivery oxygen concentrators are the lightest on the market, in fact the lightest POC in the world is the 1.75 pound AirSep Focus. These lightweight concentrators allow you to perform any of your regular daily activities such as exercising, running errands, or attending pulmonary rehab with ease.

- **Battery Life:** On average pulse flow concentrators have a longer battery life because the unit's sieve beds have a reduced workload when compared to continuous flow machines. Many pulse flow units are equipped with internal batteries and they also offer the ability to extend portable operation with a supplemental battery.

- **Features:** Pulse flow concentrators offer an easy to operate control panel for flow and basic setting adjustments, internal/external batteries, additional external batteries to extend your portable freedom, and FAA approval. Select units like the LifeChoice Activox 4L and Inogen One G3 offer active mode for use during the day and sleep mode for use at night. Giving you the ability to use the POC 24/7. Pulse flow units deliver between 450 ml per minute to 1250 ml per minute in each pulsed delivery of oxygen, based on a breathing rate of 20 breaths per minute.

- **Compressor Comparison:** The compressor is what pulls room air into the concentrator and sends it to the sieve beds. Since pulse flow units have smaller oxygen outputs, the compressor is smaller than that of continuous flow machines. However, the smaller size doesn't mean shorter compressor life. Most portable concentrators have a compressor life of up to 20,000 hours.

Continuous Flow Oxygen Concentrators

- **Size:** Continuous flow units are bigger in size due to the larger sieve beds, compressor, and motor that are needed to match the increased oxygen demand. Batteries are also larger than their pulse flow counterpart.

- **Weight:** In addition to a larger compressor and sieve beds, these types of units require a heavier battery to operate the regular functionality of the concentrator. Patients typically transport their continuous flow unit with a wheeled travel cart to support the heavier weight. The lightest continuous flow POC is the Respironics SimplyGo at 10 pounds and the heaviest is the Oxlife Independence at 19.9 pounds.

- **Battery Life:** You may expect that the larger battery would mean longer battery life, but in fact, battery life on a continuous setting is noticeably less than the battery life on a pulse setting. This is because pulse flow units only deliver oxygen when they detect your breath, whereas, continuous flow units constantly have the compressor and motor running to deliver your oxygen. However advances in reducing battery size and increasing battery life are helping to reduce the overall weight and extend the usage of these types of concentrators.

- **Features:** In addition to the features offered in pulse flow units, continuous units additionally offer CPAP/BiPAP compatibility, 24/7 operation, and the option of both pulse and continuous flow settings. You may also humidify your oxygen therapy with a humidifier bottle attachment to reduce nasal dryness and painful nosebleeds that may occur.

- **Compressor Life:** The higher demand of oxygen output causes the compressor to be larger in order to satisfy the continuous flow demand. Most portable oxygen concentrators have a standard compressor life of 20,000 hours.

Oxygen Concentrator Manufacturers

There are many manufacturers of portable oxygen concentrators, however we don't just deal with any fly by night company, instead we only offer units from reputable manufacturers with a proven track record in service and production so you receive a product that you will be completely satisfied with.

CAIRE Inc. (SeQual and AirSep)

CAIRE Inc. is a Chart Industries company that is responsible for the production of all AirSep and SeQual portable oxygen concentrators. They were one of the first companies to develop an oxygen concentrator, in fact, the AirSep LifeStyle was one of the first POC's to ever receive FAA approval. CAIRE is responsible for some of the most cutting edge units on the market.

Units we offer:

- AirSep Focus (1.75 Pounds | Pulse Flow Only)
- AirSep FreeStyle 3 (4.4 Pounds | Pulse Flow Only)
- AirSep FreeStyle 5 (6.2 Pounds | Pulse Flow Only)
- SeQual Eclipse 3 (18.4 Pounds | Pulse & Continuous)
- SeQual Eclipse 5 (18.4 Pounds | Pulse & Continuous)
- SeQual eQuinox (14 Pounds | Pulse & Continuous)

Inogen

Inogen was established in 2001 and is another leader in the portable oxygen field. Inogen was responsible for the Inogen One, which was another one of the first POCs to receive FAA approval. All Inogen portable oxygen concentrators offer strictly pulse flow settings, for now. Who know's what they have up their sleeve for the future. If you ever have any issues that require a repair, 1st Class Medical is the only online distributor with our own in-house repair center. Cutting the repair time from 4-6 weeks plus down to 1-2 weeks.

Units we offer:

- Inogen One G2 (7 Pounds | Pulse Flow Only)
- Inogen One G3 (4.8 Pounds | Pulse Flow Only)

O2 Concepts

This world class oxygen manufacturer strictly offers the Oxlife Independence. Instead of following the suit of other manufacturers, O2 Concepts developed a continuous and pulse

flow oxygen concentrator with an integrated cart and handle. While also giving patients the freedom to choose the weight of the unit with the ability to use 1 or 2 batteries simultaneously.

Unit we offer:

- Oxlife Independence (21.4 Pounds w/ Both Batteries | Pulse & Continuous)

Inova Labs

Developing the LifeChoice Activox line of concentrators, which are some of the most innovative POC's to ever hit the market, Inova Labs is well known for pushing the limits of battery life and flow rate in a compact and easy to carry oxygen concentrator. Something most manufacturers only dream of. Founded in 2002, this Austin, Texas based manufacturer continuously develops products of outstanding quality and reliability.

Units we offer:

- LifeChoice Activox Sport (3.9 Pounds | Pulse Flow Only)
- LifeChoice Activox Pro (4.3 Pounds | Pulse Flow Only)
- LifeChoice Activox 4L (4.8 Pounds | Pulse Flow Only)

DeVilbiss Healthcare

Devilbiss' roots date back to the late 1880's when Dr. Allen Devilbiss engineered the first atomizer to help patients breathe easier. After being acquired by companies over the years, Devilbiss is now a part of the Drive Medical family. Operating as seperate entities, DeVilbiss offers a concentrator that improves the quality of patients' lives by making breathing easier.

Unit we offer:

- DeVilbiss iGo (19 Pounds | Pulse & Continuous)

Philips Respironics

Respironics is the respiratory division of the electronics giant Philips. They manufacture some of the most popular and reliable portable oxygen concentrators on the market. They started with the Respironics EverGo, which quickly became the world's most popular concentrator due to its lightweight and long lasting battery life. As technology advanced Respironics developed the smallest and lightest continuous flow portable oxygen concentrator, the Respironics SimplyGo. Respironics didn't stop there. They just released the brand new 5 pound SimplyGo Mini to replace the EverGo as their small and lightweight pulse flow portable concentrator.

Units we offer:

- Respironics EverGo (10 Pounds | Pulse Flow Only)
- Respironics SimplyGo (10 Pounds | Pulse and Continuous)
- Respironics SimplyGo Mini (5 Pounds | Pulse Flow Only)

Reasons to Get a Portable Oxygen Concentrator

Everyone has different reasons for wanting to upgrade to the convenience of a portable oxygen concentrator. But typically it's for one of the following reasons. (EDIT)

Travel

One of the biggest restrictions of standard oxygen tanks is that they are not FAA approved, requiring you to arrange for oxygen delivery at your destination and something for your trip out there. A task that is both tedious and stressful. Possibly causing you to forgo traveling at all and miss out on important family events, dream vacations, and romantic getaways. When upgrading to a portable oxygen concentrator you will gain the ability to fly anywhere to visit family or friends while receiving oxygen treatment thanks to the FAA approval.

Everyday Use

With a portable oxygen concentrator there is no need to schedule refills or predict the number of tanks you will need for the week. Instead, a POC can be used everyday thanks to rechargeable batteries. Once the battery is low simply swap out for an extra battery, or charge the battery while using the unit with the AC power supply through any of your home's wall outlets. While many units also give you the ability to power and even charge the concentrator in your vehicle with a DC power supply.

Not to mention that a POC will give you the freedom to exercise regularly, socialize, run errands, enjoy hobbies, attend pulmonary rehab and much more with little to no restrictions.

Sick of Using Tanks

Oxygen tanks are bulky, ugly, cumbersome, and restrictive. Not to mention the constant headache of scheduling regular tank refills or replacements.

When you have COPD or another respiratory disease you already have enough to worry about. You want to focus on improving the quality of life with your respiratory disease not constantly worrying about if your supply of tanks will last or if your delivery will arrive on time.

Tanks are also wasteful and tend to leak oxygen, which is potentially very dangerous. As you probably already know, oxygen is flammable and you need to take extra precautions with your tanks or liquid oxygen. With a portable oxygen concentrator you can have peace of mind knowing your concentrator isn't leaking oxygen into your car or the room you're in and you drastically reduce your chances of an oxygen related fire with a concentrator. In fact, you would need to hold an open flame near your nasal cannula or smoke a cigarette while using your concentrator to risk having an oxygen related fire.

Owning Your Concentrator Outright

Instead of having to pay a monthly fee for renting oxygen tanks or having your insurance pay a monthly fee, a lot of oxygen patients want to own their equipment outright. Most insurance companies and Medicare classify portable oxygen concentrators as a luxury device, especially if they have already rented you tanks and a home concentrator.

With a portable oxygen concentrator you have the ability to seamlessly change your flow rate to your precise needs, the option to extend battery life, customize alarm settings, use accessories that enhance portable use by minimizing strain, and select POC's are even CPAP/BiPAP compatible.

Owning your oxygen equipment also gives you the ability to upgrade to a newer unit at any time you see fit. Whether your flow rate gets increased or a newer, lighter model comes out you can upgrade on your own time.

No Longer Want to Deal with DME

Dealing with medicare or your insurance for durable medical equipment (DME) is frustrating and confusing. Often times patients run into the problem of Medicare not covering the exact POC they want, or not covering a POC in all becuase they are viewed as nonessential.

You will also be tasked with finding a reputable company that deals with Medicare. Once you are able to find one, you may only rent the unit in 5 year cycles and never have the option to purchase the concentrator outright. Then you and/or your insurance company are faced with paying a recurring monthly fee for something that you will never be able to keep.

If you are new to oxygen and you have not been supplied anything by a DME through your

insurance or Medicare plan you have a much better chance of getting a portable concentrator paid for by your insurance company or Medicare. If you have already been provided supplemental oxygen tanks or liquid oxygen Medicare and insurance are going to classify portable oxygen concentrators as a luxury device since they have already provided you with a portable oxygen setup.

How to Choose the Best POC for You

Once you begin the journey of finding the best portable oxygen concentrator for your medical oxygen needs, there are a few things that you need to keep in mind.

- **Step 1:** Find a portable oxygen machine that completely meets your lifestyle and medical oxygen needs. Do you need pulse or continuous flow, CPAP/BiPAP compatibility, or the ability to charge in the car? You should also take into consideration that as your disease progresses your flow settings may change so it may be smart to purchase a POC with higher flow settings.

- **Step 2:** How will you be using the POC daily? Will it only be used during times of peak physical activity and while traveling or will you be using it 24/7? Keep your personal and respiratory health goals in mind while comparing different oxygen concentrators. Instead of simply basing your purchasing decision off of which unit is the lightest or offers the longest battery life.

- **Step 3:** Thoroughly research all oxygen concentrators online

  - Read product reviews from patients because there is no better way to get insight into a concentrator than from a current user

  - Educate yourself on POC's by watching product videos

  - Find a concentrator that will meet your medical oxygen needs of today and in the future as the disease progresses

- **Step 4:** Do your due diligence on portable oxygen concentrator distributors

  - Ensure you are dealing with a reputable company that values their patients by checking reviews from previous and current customers. Specifically reviews and testimonials discussing delivery time, customer service, product education assistance, and overall satisfaction. A legitimate place to search for company reviews is on the Better Business Bureau (BBB.org).

○ What services do they offer that you may need? Such as a buy-back program, FREE lifetime tech support, or a full service repair center.

○ Keep in mind that just because a company may have the lowest pricing, doesn't mean they are the best or most legitimate option. Which is why looking at reviews, testimonials, and company reputation before buying is extremely important.

How to Purchase a Portable Oxygen Concentrator

Not just anyone can go out and buy a portable oxygen concentrator. The only way to legally purchase a POC according to federal law is to have a written prescription for medical grade oxygen from your doctor. If you do not have an oxygen prescription, we will be unable to sell a concentrator to you as they are regulated by the FDA and FAA.

What you need to purchase a POC from 1st Class Medical:

● A written and signed oxygen prescription from your doctor

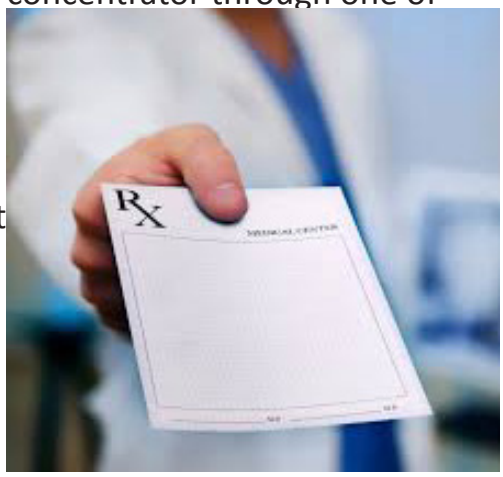
● We will contact your doctor on your behalf and take care of getting your prescription and complete all the necessary paperwork

Purchasing Options with 1st Class Medical

To better assist you we offer 3 ways to purchase a portable oxygen concentrator. Which include cash/credit card, financing, or renting. We understand a POC may not be in the budget at the moment so we want to provide you with an affordable and convenient payment option.

Purchasing Process:

● **Cash/Credit Card:** After finding the perfect portable oxygen concentrator through one of our respiratory specialist, payment by credit card can be done immediately over the phone. This is the quickest way to get payment approved, allowing us to ship the concentrator to you in less time. We accept Visa, American Express, MasterCard, and Discover. Though you may also send payment via personal checks, cashier's checks, traveler's checks, money



orders, and cash. Your concentrator will not ship until payment has been received.

- **Financing:** When wanting to finance your oxygen concentrator, you will first have to go through our financing process and receive approval. Then once you are approved, the full dollar amount of approved financing will be applied to the purchase of your POC. You will then make one low monthly payment until the full amount is paid off. The concentrator will then be yours to keep.

- **Rentals:** If you are not sure if a portable oxygen concentrator will work for you, opt to rent a unit for one low and affordable weekly price. If you decide that you like the concentrator, simply give us a call and your first week's rental fee will be put towards the final cost of the POC.

How to Operate Your Portable Oxygen Concentrator

Turning Your Oxygen Concentrator On and Off:

- **Step 1:** Plug a power supply into the concentrator or install a fully charged battery

- **Step 2:** Turn the oxygen concentrator On by pressing the power button on the control panel

- **Step 3:** Allow a few minutes for the machine to warm up, set your flow rate using the control panel, attach a nasal cannula, and the machine will start to deliver oxygen based on your flow setting

- **Step 4:** Once you no longer need to use your oxygen concentrator, simply press the power button and the machine will power down

How to Charge Your Batteries:

- **Step 1:** For stationary charging plug the AC power supply into your concentrator and a nearby wall outlet. Select portable oxygen concentrators offer an additional cost external battery charger that is also powered with its own AC power supply. Allowing you to charge an additional battery on the side.

  - Depending on your unit's functionality, many concentrators can be powered and charged simultaneously in your vehicle through a cigarette lighter outlet with the DC power supply. Some POC's will charge on all settings, while others will charge on specific settings but only be powered on others. So be sure to double check that your POC will charge on your flow setting using the DC power supply.

● **Step 2:** Once the AC power supply is plugged in, your unit will begin to charge automatically no matter what flow setting is being used. Most concentrators will charge whether the unit is On or Off.

○ If you are using an external battery charger, plug the 3 pronged end into a nearby wall outlet and attach your battery. Charging will begin automatically and you can check the charging status with the on-board battery gauge.

○ If your oxygen concentrator is able to be charged with the DC power supply, once you plug the DC power supply into the unit and the cigarette lighter outlet, charging will begin.

How to Change Your Batteries:

Keep in mind that not all portable oxygen concentrators have a removable battery, select units have a built-in internal battery that may be supplemented by an additional external battery.

● **Step 1:** Power the concentrator completely down and remove any power cords.

● **Step 2:** Look for release button on the battery.

● **Step 3:** Press the release button and the battery will seamlessly remove from the concentrator.

● **Step 4:** Replace the depleted battery with a battery that is fully charged.

● **Step 5:** If you have multiple batteries then an external battery charger might benefit you in your everyday life. External battery chargers allow you to charge the depleted battery on the side while your additional battery operates your oxygen concentrator. This gives you the ability to keep your extra batteries charged and ready to go, no matter what you do.

POC Safety Tips:

● NEVER smoke while using your portable oxygen concentrator

● Avoid open flames such as candles and stoves with open flames

● Ensure your POC is in 100% working condition before traveling or leaving the house

- Avoid exposure to extreme cold and heat
- Avoid petroleum based lotions and creams, opt for water-based products
- Follow safety instructions provided by the manufacturer
- Always turn your vehicle on before plugging in your POC with the DC power supply
- Never leave your POC unattended in your vehicle
- Allow the concentrator to warm up when exposed to cold environments
- Do not block inlet or outlet filters

Traveling with Your Portable Oxygen Concentrator

Whether you are traveling by plane, train, bus, car, or boat (cruise), there are are necessary steps for each that need to be followed due to government and company regulations. Before heading out for your trip, you should call your travel provider in advance to see if they have any additional requirements for patients traveling with supplemental oxygen.

Airline Travel Tips

- Contact Your Airline Provider and Let them Know You are Traveling with a POC
  - Most airlines require patients to call at least 48 hours in advance, be sure to check your

specific airline provider's guidelines.

- Call Your Doctor in Advance to Request a Copy of Your Oxygen Prescription and a Written Doctor's Note
  - It is required to have a copy of your oxygen prescription and a written doctor's note clearing

your to fly. If you show up without these two important documents, the airline will not allow you to board. Check your airline's website for a pre-made form to print and have your doctor fill out.

- Ensure You Purchase an FAA Approved POC
  - Portable oxygen concentrators changed the medical oxygen industry by allowing patients to easily travel. However, to use your POC during flight it must have FAA approval.

- Always Double Check to Make Sure You have Enough Battery Life
  - The FAA requires all oxygen patients flying with a portable oxygen concentrator to have 150% of the flight time in battery life. For example, if you have a 4 hour flight you must have a minimum 6 hours of battery life. Contact your airline when flying internationally for required guidelines.

- Charge Your Batteries the Night Before
  - Make sure you fully charge all of your batteries the night before your trip. Keep in mind though that batteries take anywhere between 2-6 hours to charge, so plan accordingly and set yourself up for success!

- You May be Asked to Demonstrate Operational Knowledge
  - Become familiar with your portable oxygen concentrator in advanced. All airlines require you to have the knowledge on how to properly operate the unit. In certain cases you may be asked to demonstrate how to use the unit. If you are unable to operate the machine on your own you must be traveling with someone that can operate it for you.

FAA Approved Portable Oxygen Concentrators that We Offer:

- AirSep Focus
- AirSep FreeStyle 3 & 5
- SeQual Eclipse 3 & 5
- SeQual eQuinox
- Inogen One G2
- Inogen One G3
- Invacare SOLO2
- Invacare XPO2
- LifeChoice Activox 4L
- LifeChoice Activox Pro & Sport
- Respironics EverGo
- Respironics SimplyGo
- DeVilbiss iGo
- Oxlife Independence

Cruise Travel Tips

Cruises provide an exceptional way for patients suffering from COPD or other respiratory diseases to see the world with a reduced load of physical effort. Before you head out for your relaxing vacation, keep the following tips in mind:

- Contact Your Cruise Line Provider in Advance About Traveling with an Oxygen Concentrator
  - Review their policies and guidelines for traveling with supplemental medical grade oxygen.

- Get a Written Doctor's Note and a Copy of Your Oxygen Prescription
  - As portable oxygen concentrators have become more and more popular, cruise lines are familiar with your oxygen needs. With that said, it is still required that you bring a copy of your oxygen prescription and a doctor's note stating your condition and that you are cleared to travel.

- Give a Minimum of 3 Weeks Notice that You will be Traveling with Oxygen
  - Doing so will allow the cruise line to prepare any necessary staff or accommodation adjustments. While also allowing the cruise line to inform you on their policies and guidelines for oxygen.

- Plan Accordingly and Bring Extra Batteries
  - Even though you will have access to an electrical outlet in your cruise cabin and other areas of the ship. Having extra batteries on hand will prevent you from having to locate a power outlet or head back to the room.

- Never Store Your Portable Oxygen Concentrator in Checked Baggage
  - It is strictly prohibited to store your portable oxygen concentrator in your checked bag. Instead, ask for help when boarding and disembarking the ship if needed.

Train and Bus Travel Tips

Even though the popularity of traveling with planes has surpassed that of trains/buses, they are still a fantastic way to travel. Especially when using a portable oxygen concentrator since many give you the option to get a seat/cabin with power outlets. Keep the following train and bus travel tips in mind.

- Let Your Train/Bus Company know You will be Traveling with an Oxygen Concentrator in Advance
  - Each train and bus company may have their own set of policies and guidelines for traveling with a portable oxygen concentrator.

- Keep a Copy of Your Oxygen Prescription on Hand
  - Before boarding, you will be required to show proof of your need for oxygen and a doctor's note clearing you for travel. Call and double check with your train or bus company that you have all the required documentation to board before your trip.

- Ask for a Seat or Cabin with Power Outlets
  - Doing so will set you up for success as you can quickly charge and preserve the battery life of your portable oxygen concentrator.

- Be Prepared for Delays/Outages
  - It's important to have additional batteries on hand in the event that there is a delay or power outage. This way you won't go without your much needed oxygen therapy and can operate your POC for the duration of delays/outages.

- Don't Forget Medications
  - Keep all your necessary medications easily accessible in your bag just in case of an emergency.

Car/Truck/RV Travel Tips

When opting to travel by car or RV you not only have the freedom to travel at your own pace, but also the ability to charge your portable oxygen concentrator virtually anywhere on the road. Skip the headache of airport security lines and hit the road with your loved one. Before you load up the car or RV, remember these tips:

- Travel with Both the AC and DC Power Supplies
  - The AC power supply will be able to be used with your RV's wall outlets. While the DC power supply can be used to charge your oxygen concentrator through your vehicle's cigarette lighter outlet. Charge your POC virtually anywhere!

- ABSOLUTELY NO SMOKING
  - This may seem like common knowledge but you should NEVER smoke in your vehicle with an oxygen concentrator. That goes for passengers as well, after all they should have enough respect for you to consider your health.

- Open Your Window for Airflow Circulation
  - Keep a fresh supply of airflow circulating throughout your vehicle by cracking a window. This prevents the oxygen from building up in your car and eliminates any oxygen related

fire risks while you are traveling.

- Never Use the DC Power Supply When Your Vehicle is Off
  - Charge or power your portable oxygen concentrator with the DC power supply only when your vehicle's engine is turned on. Otherwise you car/RV's battery will die and prevent them from starting.

- Make Required Medications Easily Accessible
  - Keep all your medications and inhalers in an easily accessible area. So in the event of an emergency they can be accessed quickly.

- Don't Leave Without Your Oxygen Suppliers Contact Info
  - If you begin to experience problems with your portable oxygen concentrator while on the road, it's important to have your suppliers contact info on hand. If you purchase from 1st Class Medical, we offer FREE lifetime tech support and will happily help you wherever you are on the road.

How to Properly Care for Your POC

A portable oxygen concentrator is one advanced piece of technology, but that doesn't mean there are advanced methods to properly care for and maintain your POC. The regular maintenance for portable oxygen concentrators may vary slightly from unit to unit, but for the most part they are designed to be virtually maintenance free.

Changing & Cleaning Filters:

It's important to keep the inlet particle filter clean and in proper working condition. The gross-particle filter is what removes pet dander, hair, dust and dirt from the air. Stopping these harmful particles from entering the machine and causing major problems.

- **Step 1:** Unplug any power supplies and turn your POC off.

- **Step 2:** Locate and remove the gross-particle filter. It looks like a mesh screen or sponge. They're most commonly located on the front, side, or back of the

concentrator.

- Certain units such as the LifeChoice Activox Pro, LifeChoice Activox Sport, and the AirSep Focus do not have removable gross-particle filters. Wipe these filters clean with a Q-Tip dipped in alcohol and wipe the filters clean.

- **Step 3:** After removing the gross-particle filter, rinse with warm water. Once completely saturated, add soap to disinfect the filter. Gently wash the soap through the filter and rinse thoroughly with warm water.
  - You should clean the gross-particle filter 1-2 times per week; While replacing the filter only when needed. If you live in an environment that is dusty or with lots of pets, you may need to clean the filter more frequently.

- **Step 4:** Allow the filter to air dry completely before using it again. During this time you should also inspect the filter for any tears or damage. If you see that the filter is damaged, it's time for a new one.
  - It's recommended that you keep additional gross-particle filters on hand so you aren't rushing to find one when your current filter begins to tear or degrade.

Cleaning Your POC:

Maintain the pristine look of your portable oxygen concentrator long after purchase by cleaning the outside of the unit at least once per week.

- **Step 1:** Turn your POC off and disconnect any power supplies.

- **Step 2:** Wipe down your POC with a cloth saturated in warm soapy water or a mild cleaner. Never spray cleaner directly onto the concentrator.

- **Step 3:** Allow to air dry completely before beginning therapy again.

Proper Cannula Care:

To help minimize infections, you should clean your cannula at least once per week or as needed. While making sure to replace your cannula every 1-2 weeks to ensure the most effective functionality. If you get sick, make sure you change cannulas once you are feeling better, there's no need to risk falling ill again while you're already battling a respiratory disease.

- **Step 1:** Remove the cannula from your portable oxygen concentrator.

- **Step 2:** Wash the cannula in warm soapy water.

- **Step 3:** Rinse out the cannula with a solution of warm water and vinegar.

- **Step 4:** Again, rinse the cannula thoroughly with hot water and hang to air dry.

Conclusion

First off, congratulations on making it through this entire guide to portable oxygen concentrators. If you've made it this far then you are serious about improving not only your life but your treatment for COPD or another respiratory disease.

It's important that you understand every aspect of a portable oxygen concentrator to make the most informed purchasing decision for your oxygen needs of today and as your disease progresses in the future.

You are now equipped with the knowledge to understand the differences in pulse & continuous flow POC's and how they work, the varying features associated with different units, travel and lifestyle tips to enhance the quality of your oxygen therapy, and what you should look for in an oxygen company before you buy.

Our trained respiratory specialists and manufacturer trained technicians are here to answer any additional questions or concerns you may have about a portable oxygen concentrator. We want to make sure you get into the right unit for your needs the first time and are 100% satisfied.