

## RECREATIONAL OXYGEN FROM A CANADIAN PERSPECTIVE

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2<sup>nd</sup> Wind Oxygen Bars | [www.oxygenbars.ca](http://www.oxygenbars.ca)

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As a Canadian business owner in the recreational oxygen industry, I have encountered many conflicting statements and half-truths in my search for compliant, ethical and safe practices in this niche industry. When it comes to recreational oxygen, there's not much out there that I could find as a reliable source of information. I would like to share what I have learned about the Canadian regulatory bodies that govern the consumption and transportation of recreational oxygen in an effort to provide some clarity to industry professionals and consumers regarding compliancy, ethics and safety.

Let's look at the consumption of recreational oxygen. One form of recreational oxygen is an Oxygen Bar which is generally used in settings like a tradeshow, festival, spa, corporate party or shopping mall. This is where you can stand or sit at a bar, hook yourself up to a plastic nose hose and breathe 88 – 90% purified oxygen. Your oxygen bar operator will offer you a selection of different aromas and your session will usually last for between 5 and 20 minutes. Your oxygen session will serve as a refreshing little 'pick-me-up' when feeling foggy headed or drowsy. Another popular form of recreational oxygen is Canned Oxygen which is intended for active people on the go. If you're out participating in sports like football, hockey, basketball, hiking, biking or snowboarding, and want to quickly recover from your strenuous activity, a few breaths from your handy can of oxygen will give you the boost you're looking for. If you want to try recreational oxygen, you don't need any certification or training. Just carefully read the instructions provided on the can or follow the guidance of your oxygen bar operator.

If you think you may need oxygen for medical purposes, please consult a medical doctor. Don't use recreational oxygen to treat any medical condition. If you are already prescribed medical oxygen, DO NOT use recreational oxygen as it will alter your prescribed oxygen dosage. Health Canada is the governing body that regulates the consumption of enriched oxygen in Canada and recognizes 4 categories of enriched oxygen in gas form: Industrial oxygen, Medical oxygen, Research oxygen and Aviation oxygen. Let's look at these one by one:

Industrial oxygen as a gas intended for uses like welding, glass blowing and making jewelry etc. The source of industrial oxygen is the same as medical oxygen but is not allowed to be used for breathing. The storage cylinders are not inspected to the same standards as medical oxygen cylinders and can corrode on the inside or not get properly purged when being refilled causing sour gas. When industrial oxygen cylinders are teamed up with acetylene for example, one gas can seep into the other cylinder when one becomes empty. Other issues are the oxygen regulators that are not designed to allow a safe oxygen pressure and flow rate which can cause severe lung injury.

Medical oxygen is strictly regulated by Health Canada. It is filtered to 99% purity and stored in cylinders specifically designed and used for medical use only. That includes all parts associated with the delivery of oxygen from the regulators and tubing to nasal cannulas and masks. Medical oxygen is off limits to the recreational consumer and can only be obtained through a prescription by a medical doctor.

I don't know much about Research oxygen other than it is the purist form of oxygen gas at a minimum purity of 99.999% and obviously intended for use in the laboratory for research.

Aviation oxygen is produced for the safety needs of flight crew and passengers when flying at altitudes where the oxygen is thinner. The air we breathe contains about 21% oxygen at all altitudes but the partial pressure of the oxygen becomes less and less the higher you go, making it harder to breathe unless the cabin or cockpit is pressurized. The safety requirements are regulated by the Air Transportation division of Transport Canada in concert with other governing bodies like the Canadian Civil Aviation Authority and the FAA in the USA. Aviation oxygen is actually refined to a higher purity than medical oxygen! To reduce the risk of delivery systems clogging because of freezing moisture in the oxygen as it leaves the tank, aviation oxygen is filtered to a minimum purity of 99.5% and contains a much lower parts per million of water and other particulates. This is the grade of oxygen used in the scuba diving industry and in canned oxygen for the recreational oxygen industry.

Recreational oxygen bar companies get their oxygen from a different source other than cylinders. Oxygen concentrators are used to supply enriched oxygen to oxygen bars. An oxygen concentrator is a machine that plugs into an AC power outlet to provide a steady flow of 88 – 92% oxygen through an aroma delivery station, then to the oxygen bar patron. The oxygen concentrator does not create oxygen. It separates the oxygen from the nitrogen and other gases that already exist in the air by a method called 'PSA' (Pressure Swing Adsorption). <http://oxygenbars.net/education/faq>. This is a much safer delivery system than cylinders because an oxygen concentrator does not change the percentage of oxygen content in the room. It simply separates and delivers the oxygen out of the top of the machine while the nitrogen vents out of the bottom of the machine. This eliminates the increased risk of a fire and the transportation of heavy pressurized tanks which are considered 'Dangerous Goods'.

There are medical oxygen concentrators and industrial/recreational oxygen concentrators. Both concentrators are basically comprised of the same components but here's the big difference. Medical oxygen concentrators have an additional built in alarm system that alerts the patient if the oxygen concentration falls below an 88% concentration possibly due to poor air ventilation or clogged filter. There is also an alarm that sounds if the oxygen flow gets cut off to the patient possibly due to a foot or furniture crushing an oxygen delivery hose. Industrial/Recreational concentrators do not have this built in alarm system. Medical concentrators can only be used for patients when prescribed by medical doctors and never in an oxygen bar setting. Industrial oxygen concentrators may be used in oxygen bar settings and never for medical uses. Medical

oxygen concentrators are clearly marked 'FOR MEDICAL USE ONLY'. There are also oxygen concentrators on the market that are designed for portable use. They are battery operated compact units that are easily recognized because of their smaller size, carrying case and attached dolly or shoulder strap. These style units operate on a pulse flow system that only delivers oxygen when the patient is in the act of inhaling. All DC powered portable oxygen concentrators are medical oxygen concentrators and must not be used in a recreational oxygen bar setting.

As an ethical and compliant oxygen bar operator, it is mine and our responsibility as an industry, to use only recreational oxygen equipment from the oxygen concentrators and aroma delivery stations, to connectors, tubing and nose hoses. We must not make any medical claims about our services or products. If we offer canned oxygen for sale, it must be designed, manufactured and intended for recreational use only.

Next time you happen to pass an oxygen bar kiosk in the mall, airport or Vegas, let your curiosity allow you to belly up to the bar for a refreshing oxygen bar experience and pick up a can to go.  
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