

The use of O₂ in the Environmental Patient: First test the Venous PO₂ with a VBG to see if O₂ is indicated in the first place.

Tissue hypoxia from endothelial damage to capillaries, which leads to swelling of the endothelia and does not permit O₂ to get across the membrane to the tissue. This leads to muscle, heart, and brain hypoxia that can lead to mitochondrial damage from anoxia at the severest end of the spectrum. Arms can be blue and lactates high. (Lactate /Pyruvate ratio can be elevated).

Normal PO₂ is 20 to 25 and many patients who think they are fine are 32 to 36. But you can see that their brain function and memory aren't great. the sicker patients are in the 40's and they have chronic fatigue and may sweat on exertion and looked spaced out. The PO₂ in the artery maybe around 100 and should be 25 in the vein because the tissues used up the oxygen.

If the O₂ cannot get through the inflamed capillary wall it continues back to the heart and is found to be elevated in the anticubital vein. Keeping in mind arterial PO₂ is about 100, you will see how poor I was when I tell you that my venous O₂ was 75 when I was very ill! Those in the 70's are the highest recorded and I only know of 1 besides mine.

The treatment is 18 days or more of O₂ for 2 hours a day at 5 liters with a set up (mask and tubing from Dallas). The Venous O₂ becomes about 20 after 10 to 20 days and depending on the ongoing exposure can stay there for 6 months to a year -- it is quite incredible. Some need to continue O₂ for a long time; it helps the dysautonomia significantly.

The Foundation Store in Dallas - (214) 361-9515:

1. Ask for Tygon Tubing 8 feet or more for two pieces total.
2. Humidification bottle
3. Porcelain (or aluminum, if have a beard) mask
4. Rebreathing Reservoir (cellophane bag in a little wood frame to make flow high enough when you make a seal with the mask and inhale)

Rx for VBG should read:

Venous Blood Gas, anticubital vein, no tourniquet,
Place in green top tube (on ice) and run like an ABG. May report and charge for just PO₂.

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