

COVID-19 SUPPORTIVE OXYGEN THERAPY

Lewis Environmental Services, Inc. (LES) has developed an innovative COVID-19 supportive respiratory therapy to enhance oxygen availability to the body. This therapy utilizes supersaturated oxygen micro-bubbles in a water media to deliver increased dissolved oxygen levels to the patient's bloodstream associated with the epidermis and dermis skin layers. The additional bioavailability of oxygen enhances supportive respiratory and pharmaceutical treatments along with regenerative cell repair.



HOW THE VIRUS ATTACKS THE BODY

The attack begins when an infected person expels virus-laden droplets and someone else inhales them through the nose and or throat. The virus then invades healthy cells by attaching to their angiotensin-converting enzyme 2 (ACE2) receptor. Once attached to the cell, the virus hijacks its programming and begins manufacturing uncontrolled replicas of the virus and invading new cells. If the immune system doesn't suppress the virus during this initial phase, the virus then migrates to the respiratory system and attacks the lungs. The cells in the lung's respiratory air sacs, called alveoli, are rich in ACE2 receptors. The virus can also weaken other organs of the body, such as the brain, heart, liver, kidneys, eyes, cause increased inflammation and impact our taste and smell.

SUPERSATURATED OXYGEN WATER THERAPY



Since the mid 1800's, there have been multiple studies evaluating oxygen uptake through the human skin since its only organ besides the lungs that is directly exposed to atmospheric oxygen. Mayo Clinic states, "Your body's tissues need an adequate supply of oxygen to function. LES has significantly improved the beneficial properties of oxygen therapy through the skin by developing the SOMA Oxygen Water Process (SOWP) (patent pending); a novel COVID-19 supportive respiratory treatment of highly supersaturated oxygen in water. The patient submerges their whole body or targeted area in the supersaturated oxygen bath at normal room like atmospheric conditions. The proprietary process produces supersaturated oxygen (+500%) by pumping high levels of oxygen under novel process and mechanical parameters into a water stream. The richly saturated oxygen water mixture is then pumped into a soaking chamber (bath) or container to treat the desired area or the entire patient. The oxygen saturation levels are so high that the patient's entire body floats in the oxygen/ water bath.

SOWP BENEFITS

The SOWP is a game changer in regenerative oxygen therapy because the generated oxygen levels in the bath can exceed 50 mg/l (+500% oxygen saturation) with microbubble diameters of <math><1\mu\text{m}</math> (note - atmospheric oxygen saturation levels in water average <math><10\text{ mg/l}</math>). More importantly, the oxygen gradient produced by the SOWP is so high across the submerged area's epidermis

and dermis layers that it drives oxygen into the vasculature associated to that

skin's surface! This capability delivers needed oxygen to depleted blood cells and organs strengthening the patient's natural immune system to destroy the COVID-19 infected cells. The process is superior to other technologies because it provides the following benefits: (1) supplies patients entire body through epidermis contact with high levels of oxygen in a safe and nonhazardous way as compared to hyperbaric chamber; (2) increases available oxygen to the bloodstream and key organs, such as the brain, feet or lungs; (3) increase in oxygen uptake can be measured with pulse oximeter; (4) increase in blood oxygen temporarily restores normal levels of blood gases and tissue functions to promote healing and fight infection; (5) delivers increased dissolved oxygen levels to blood vessels through the patient's epidermis and dermis skin layers.