



O2 Drops®

Frequently Asked Questions

Why is oxygen so important to a healthy body?

Oxygen plays a powerful and primary role in our overall health and well-being. It is vital to body's ability to function properly and rebuild itself. It is also key to peak physical and mental performance. Substantial research has found that one of the best ways to improve health and fitness is through optimum oxygenation at the cellular level.

The oxygen concentration in a healthy human body is approximately three times that of air, and the human body is largely composed of oxygen. All metabolic processes in the body are regulated by oxygen, and 80% of all our metabolic energy production is created by oxygen. Oxygen is vital for proper metabolic functions, blood circulation, the assimilation of nutrients, and digestion and the elimination of cellular and metabolic wastes. Even our abilities to think, feel, and act require oxygen-related energy production.

It is no surprise then that scientists have determined that low levels of oxygen can disrupt the body's ability to function correctly. Dr. Arthur C. Guyton, M.D. included this statement in *The Textbook of Medical Physiology*, "...all chronic pain, suffering and diseases are caused from a lack of oxygen at the cell level." As the body's oxygen levels decrease, cellular energy is reduced, and disease organisms find the conditions more ideal for proliferation.

Don't we get enough oxygen just from breathing?

Because pollution is everywhere, we don't always get enough oxygen just from breathing. As toxins contaminate the air, they replace oxygen molecules in the air. Addition stress (emotional or physical), lack of exercise, infections, medications, viruses, drugs and alcohol, highly processed fast foods, and polluted water further reduce the availability of oxygen to the blood stream.

What is the role of oxygen in performance?

The key to peak performance is maximum energy efficiency. The most efficient form of energy production (called aerobic metabolism) depends on a steady supply of oxygen to convert sugar into muscle energy. During strenuous exercise, the lungs can't supply enough O₂ to keep up with muscle demands, so the body reverts to a less efficient fuel system called anaerobic metabolism. This process triggers a buildup of lactic acid, resulting in muscle soreness and fatigue. Fortunately, ASO® can help. By increasing oxygen in the bloodstream, more energy can be produced to power muscles —extending aerobic metabolism, reducing lactic acid buildup, and maximizing performance.

What is Activated Stabilized Oxygen?

Activated Stabilized Oxygen (brand name ASO®) is a unique supplement engineered from three simple ingredients: distilled water, natural sea salt, and oxygen molecules. A proprietary manufacturing process bonds these free oxygen molecules into a stabilized liquid solution that is easily and rapidly absorbed into the bloodstream. Unlike other stabilized oxygen solutions that are toxic or caustic in nature, ASO® is non-toxic and pH balanced. O2 Drops® combine ASO® with additional essential trace minerals for even more body-boosting benefits.

What can destabilize O2 Drops®?

The oxygen molecules in O2 Drops® will become unstable when they come into contact with metal (like a stainless-steel spoon) or when combined with organic matter (food). Therefore, use a plastic spoon when stirring and always take O2 Drops® 30 minutes before and one hour after eating.

How does the oxygen in O2 Drops® get into the body?

There appears to be ample supportive scientific evidence that dissolved oxygen in a liquid supplement form can be absorbed either sublingually into the blood stream or may pass directly through the stomach lining into the blood plasma. Research has shown (Dr. Arthur Guyton, M.D.) that the blood plasma contains approximately 3% dissolved oxygen; the red blood cells (hemoglobin) hold the remaining 97% in a completely healthy and well-oxygenated individual. Oxygen passes out of the red blood cells and into the plasma to be transferred to the cells that need oxygen for the metabolic process. These cells then pass CO₂ back into the plasma that is picked up by the red blood cells in the exchange. Oxygen is almost always present in the plasma as it travels through the body.

Research conducted on the activated oxygen in O2 Drops® by Suntory International of Japan indicates that there is a direct and long-lasting correlation between the consumption of O2 Drops® and an increased partial pressure of oxygen in arterial blood. A Duke University study, completed in March of 1996, indicates clearly, for the first time, the actual mechanisms by which oxygen is transported in the blood directly to the tissues and how oxygen is released and acquired by the blood through both the lungs and the plasma. The combination of these two studies implies that O2 Drops®, when taken orally, is absorbed into the blood stream where it is transported directly to the tissues. Please note that free radical damage is not a concern for users of O2 Drops®.

Why is pH important in an oxygen supplement?

Water, the universal solvent, has a neutral pH of 7. O2 Drops® is slightly alkaline and has a pH of about 7.1. Stabilized Oxygen solutions with a pH below 5.0 and above 9.0 can potentially damage the skin and tissues in the mouth and esophagus. The Activated Stabilized Oxygen in O2 Drops® is the only nearly neutral and pH balanced oxygen supplement available today.

Are O2 Drops® antimicrobial?

Independent tests have demonstrated that, even when diluted as much as seven times, the oxygen in O2 Drops® kills the test organisms (including bacteria and fungus) on contact. The oxygen in O2 Drops® disrupts the integrity of the bacterial cell envelope through the oxidation of the phospholipids and lipoproteins. In fungi, O2 Drops® oxygen inhibits cell growth at certain stages.

Are O2 Drops® better than (35%) hydrogen peroxide?

35% hydrogen peroxide is not intended for internal use. Hydrogen peroxide is labeled "Food Grade" as an approved use for use to clean food-handling equipment. Ingesting hydrogen peroxide can cause serious side effects and hydrogen peroxide is listed as a hazardous material.

Does O2 Drops® contain hydrogen peroxide, chlorine dioxide, or chlorine?

No. Independent analysis indicates there are no molecules of hydrogen peroxide (H₂O₂) or chlorine dioxide "chlorite" (ClO₂) in O2 Drops®. Also, O2 Drops® do not contain chlorine and are chlorine free. It is processed using activated charcoal filters that eliminate any and all trace amounts of free chlorine that might be in the solution.

Research Findings

The proprietary Activated Stabilized Oxygen (ASO®) in O2 Drops® has been independently tested by researchers at laboratories and universities across the world. The proprietary formula has been the subject of more than two dozen independent research studies. No other activated oxygen supplement formula has undergone as much scrutiny and validation.

"This study is the first to report that an oxygen enhanced sports drink also improves athletic performance. A possible explanation may be that the oxygen-enhanced water allows for rapid diffusion of oxygen for transport into the blood stream. Since these factors were not directly measured, follow up studies should be conducted to collaborate these findings and to evaluate possible mechanisms to explain the athletic benefits of oxygen enhanced water." – *John J. Duncan, Ph.D., Texas Center for Research on Women's Health, Texan Woman's University*

"Results: ... lactate clearance was significantly improved during recovery in the OS (oxygen supplement) trials. Both AUC (109 ± 32 vs. 123 ± 38 mmol.min, $P < 0.05$, $d = 0.40$) and lactate half-life (λ) (1127 ± 272 vs. 1223 ± 334 s, $P < 0.05$, $d = 0.32$) were significantly reduced. ... Applications to Performance: Many sports such as track sprinting, cycling, swimming, and rowing require the athlete to perform on more than one occasion during a single day. The ability to clear lactate more efficiently and hence recover faster in early rounds of competition is of benefit to such athletes. Lactate clearance is also of importance in several team based sports which involve intermittent exercise and recovery. ...Despite these periods of recovery, it has been shown that players compete with average circulating blood lactate concentrations of 6.8 mmol.L^{-1} throughout the game [29]. Any intervention which enhances the clearance of lactate during a player's recovery would therefore likely improve overall performance in such sports." – *"Ingestion of oxygenated water enhances lactate clearance kinetics in trained runners," 2017. N. Fleming, J. Vaughan, and M. Feeback, Journal of the International Society of Sports Nutrition*

"Conclusion: A definite improvement was noticed in between the sprints of the trials with placebo and the controlled ASO® stabilized liquid oxygen. This would indicate the fact that athletes who consumed ASO® stabilized liquid oxygen were able to reproduce similar and sustained effort during both sprints as compared to those that consumed the placebo." – *"Stabilized Liquid Oxygen as an Erogenic Aid for Sprinters in a Competitive / Heat Scenario," 2004. Hj Danish Zaheer Hj Zaheeruddin M.D., PhD. and David Hennessy, BSc (Hons), Sports Medicine & Research Centre, Department of Youth & Sports, Brunei Darussalam*

"The analysis...indicated that the levels of lactate in the blood of the subjects during the 40-minute test, when compared to the 40 meter test, were different when compared to sampling done while exercising one week prior to the repetition of the test using the oxygen solution [ASO®]. In three test cases, there was a definite reduction in the lactate levels in the blood in both the 40 minutes as well as the 400 meter running tests. There was also overall VO2 max improvements in the subjects for the 40 minute test....From the results it is concluded that the ingestion of the activated oxygen solution (ASO®) considerably affects the tolerance levels of lactate acid in the blood and improves VO2max." – *"The Concentration of Lactate in the Blood and the Improvement of the Maximum Reception of Oxygen after the Ingestion of ASO Solution," 2003. Nicos Yiannaki Pericleous, M.Sc., ACSM (independent tests demonstrate less pain and better muscle recover in athletes after ingestion on ASO®)*

"The main finding from the current battery of test is that ingestion of [ASO®] significantly improved post-exercise recovery from high-intensity aerobic exercise via enhanced lactate clearance. Drinking [ASO®] did result in a statistically significant improvement in post-exercise. Enhancing post-exercise recovery from training is of significant benefit to competitive athletes as it is likely to increase the rate of training adaptation in the long term. The ability to clear lactate more efficiently and hence recover faster in the early rounds of competition is of clear benefit to an athlete." – *"An investigation of the ergogenic and physiological effects of ingesting a high concentration oxygen supplement on subsequent exercise performance in running," 2015. Neil Fleming, Ph.D., Department of Kinesiology, Recreation and Sports, Indiana State University*

"In short, in both measurable parameters and subjective observations, the test subjects in the group treated with the oxygen supplement (ASO®) experienced the following to a greater degree than the control group: Greater

stamina and endurance, reduced muscle fatigue, more energy, less “out of breath”, greater feeling of strength, felt that the product helped them perform better.” – *“Effect of stabilized oxygen consumed with water on blood and urine markers of oxidative stress and blood oxygen saturation during extended military mountaineering training at moderate altitude,”* 1999. Department of Human Performance, Naval Health Research Center, San Diego, CA; the Marine Corps Mountain Warfare Training Center, Bridgeport, CA

“Each subject’s partial pressure of oxygen was relatively stable prior to ASO® consumption, but then rose immediately after ASO® consumption. The partial pressure peaked 90 to 120 minutes after ASO® consumption, after which it gradually dropped, eventually reading its pre-ASO consumption level. In a subject with a particular low baseline, a significant increase was observed.” – *“Testing to test the effectiveness of ASO® and its effect on the partial pressure of oxygen in arterial blood,”* 1996. Suntory International, Japan (study demonstrates increased blood oxygen levels in subjects who consume ASO®)

“I believe ASO®, because of its inherent “energy factor” potential, may just be the “Rosetta Stone” that unblocks the pathogenetic mechanisms of disease in general and provides the knowledge for proper disease prevention management. ASO® Activated Oxygen is not simply an important nutrient supplement but a dynamic energy molecule. ASO® has an extremely high ORP (Oxidation Reduction Potential) of 950 mV. That means ASO® possesses energy that can be transferred to the surrounding environment, potentiating the bioenergetic processes and correcting or reversing underlying cellular dysfunctions. In other words, ASO® works like a bright new cellular battery.” – *Menicos A. Spartalis, M.D., Vascular Surgeon*

“This test represented a variety of individuals with varying physiological differences including age, sex, weight, medical health conditions, physical conditioning, etc. The test was conclusive on three major points: (1) Free oxygen (160) is present in ASO® as it was absorbed into the blood stream both sublingually and/or internally after it was tagged with Protac C/Iodine26 in every administered case. (2) The combination of component ingredients in ASO® has a positive effect, in varying degrees, on capillary dilation. (3) The combination of component ingredients in ASO® has a significant effect on the reduction of systolic and diastolic blood pressure. It is the researcher’s opinion that ASO® results in greater metabolic efficiency which may correlate to significant energy reductions thus prolonging and enhancing the quality of an individual’s life. Further, ASO®, used in conjunction with mineral supplements, may be an excellent therapeutic tool for treating physiological disorders including chronic fatigue syndrome, immune deficiency disorders and several chronic pain related disorders.” – *James D. Aker, Ph.D., M.S., P.A., P.P.A., President, Third State Analytical, Inc. (biochemical, nutritional and medical research consultant specializing in nutritional products)*

“Blood gas analyses conducted on the participants’ arterial blood samples showed definite increases in arterial blood oxygen (PaO₂), as well as elevated discharges of carbon dioxide waste matter. Older subjects appeared to respond better to the test product’s therapeutic actions, than was reported from younger recipients. The inclusion of an iron supplement with the test product indicates a helpful role in how the body utilizes “Vitamin O”. However, non-iron subjects also receiving test product posted higher-than-expected hemoglobin values, which suggests that the apparent blood-building action of “Vitamin O” can happen also without iron-dependency. A general stabilization of arterial blood oxygen levels following three months of steady supplementation with the test product became evident but could change if daily intake were temporarily discontinued.” – *John Heinerman, Ph.D.*

“ASO® stabilized oxygen is undoubtedly a new powerful tool in the modern world of medicine. The more we get to know about it, the more we can treat without side effects. ASO® is a tool, a key to a noble dream for a better world, better life quality and life itself. ASO® works as a strong antiseptic on the wound, killing anaerobic and fungal microorganisms. ASO® increases the healing process. ASO® was effective in dilutions and in the oral treatment of Stomatitis Aphthosa in the mouth and gums. ASO® was effective as a topical treatment against Oral Candidiasis and tongue’s fungal plaques. ASO® was effective on degenerative lip dermatitis and Angulus Infectiosus in mouth angles. ASO® was effective on eczematic areas as a moisturizing and skin repair agent.” – *Marios L. Christofinis, M.D., Ph.D.*

“From my clinical experience this product can be used in all aspects of the oral medicine and surgery, for example: As an irrigant for the cleaning and prophylaxis of the oral cavity; For the treatment of periodontitis and gingivitis; Post-surgical procedures and post extracting treatment; For biological treatment and elimination of amalgam filling and heavy metal drainage; For therapy in a systemic disease, and many other applications. In

conclusion, I would like to say that ASO®, because of its bio-friendly capabilities, it has the potential to be a powerful source for clinical or paramedical practice.” –*Stylianou Panayiotis, M.D.*

“In the beginning I used ASO® activated oxygen rather cautiously for cleaning the face for local uses thus assessing the action of this product as a bactericide. Later I started recommending it for the detoxification of the organism thus testing its activity for neutralizing free radicals. I gave it to my patients with tired and rather lifeless skin, with black circles under the eyes or individuals suffering from eczema and dermatitis. The results were fantastic, and this made me bolder and able to recommend it to athletes, smokers, persons with feebleness, lack of energy, chronic bronchitis, asthma and to people with frequent viral infections due to a weakness in their immune system as well as to patients with bedsores, etc. In all these cases the results have been excellent.” –*Margarita Chilindri, M.D., Pathology and Dermatology*

“All four test organisms were rendered harmless after subjecting them to the ASO® solution. All four organisms were tested after submersing them for 24 hours. Three of the four organisms (*Escherichia coli* 0157:H7, *Salmonella choleraesuis* and *Staphylococcus aureus*) were effectively killed in a diluted solution of ASO® at 20% of its original strength. *Pseudomonas aeruginosa* was killed after subjecting it to a diluted solution of ASO® at 40% of its original strength.” –*Keith Goins, Ph.D., Manager, Microbiology, SGS U.S. Testing Company, Inc.*

“The concentration of all bacteria from all exposed plates show a high percent reduction of bacterial contaminants (*Staphylococcus epidermis*, *Streptococcus faecalis*, *Escherichia coli*, *Pseudomonas fluorescens*, *Enterobacter aerogens*, and *Aspergillus niger*). This factor proves that [ASO®] is effective in reducing bacterial contamination.” –*“Inhibitory Residue Test,” 1996. Tri-Tech Analytical Laboratories, Inc., Cosmetic Manufacturers, Longwood, FL*

“The diluted test product effectively reduced, to the detectable limits of the test, all the bacteria and *Candida* by the Time 0 sample interval. No bacterial organisms or *Candida* were recovered from the product throughout the remaining test period. The *Aspergillus* cultures effectively reduced, to the detectable limits of the test, at the 24-hour sample interval. The first Disinfectant Efficacy Test study investigated whether a 5% strength solution of Stabilized Oxygen had any antimicrobial disinfectant effect of *Staphylococcus aureus* ATCC 6538, *Salmonella choleraesuis* ATCC 10708, and *Pseudomonas aeruginosa* ATCC 15442. A follow-up Modified Antimicrobial Preservative Effectiveness Study further investigated whether a 5% strength solution of Stabilized Oxygen had any disinfecting properties on six different organisms: *Staphylococcus aureus* ATCC 6538 [Bacteria, Gram (+) cocci], *Pseudomonas aeruginosa* ATCC 9027 [Bacteria, Gram (-) bacillus], *Escherichia coli* ATCC 8739 [Bacteria, Gram (-) bacillus], *Candida albicans* ATCC 10231 [Yeast], *Aspergillus niger* ATCC 16404 [Mold] and *Aspergillus flavus* ATCC 9643 [Mold]. In ALL INSTANCES, the Stabilized Oxygen solution clearly demonstrated highly effective disinfecting antimicrobial properties.” –*Nelson Laboratories, Salt Lake City, UT (global leading microbiology testing lab)*

“We find that Stabilized Oxygen is very effective when used as a sanitizing disinfectant on Cat’s Claw. The results of this study show that on average the 1% SL-12-1 product showed a reduction of 85.7% of total molds on the powder and an 82.9% reduction of the chips. The SL-8 product showed a 78.6% reduction in mold cfu/gm and a 90.2% reduction on the chips...Based on these findings, Stabilized Oxygen shows great promise as a sanitizing agent for herbs, spices and other agricultural products where a significant reduction in mold colony forming units is required to enhance/maintain quality, reduce spoilage and extend shelf life.” –*Joseph Montecalvo, Jr., Ph.D., Central Coast Consulting and Professor of Food Sciences, California Polytechnic State University, San Luis Obispo, CA*

“ASO® reduced the incidence of *Alternaria zinniae* on zinnia seeds. Control seeds (0%) had 85% (17 of 20) while seeds soaked for 48 hours in a 100% solution of ASO® had 20% (4 of 20) with *A. zinniae*. Conidia or hyphae contaminating the surface of the zinnia seeds were probably killed by the ASO®, but hyphae within the seed coat probably escaped. Germination rates tended to be increased by the ASO®, although our results did not show an increased germination rate with soaking for 48 hours in a 100% solution of ASO®. Control seeds soaked for 48 hours had a 65% (13 of 20) germination while seeds soaking for 24 hours in ASO® had a 90% (18 of 20) germination. Under conditions where seed lots are heavily infested with *Alternaria zinniae*, seed disinfection with ASO® prior to seeding can reduce the incidence of damping off and blight of zinnia. Additionally, seed germination rates would be increased, resulting in many more healthy plants. With the additional characteristics of having no toxicity to humans or animals and being biodegradable, ASO® activated oxygen shows promise

being used as a disinfectant of fruits and vegetables and other food products in addition to being used to produce clean seeds and increase seed germination rates.” – *“Uses of ASO Activated Oxygen to Control Alternaria Zinniae,” 2006. M. Yoshimura, Ph.D., A.M., C. Sanders, E. Shae, M. Treber and M. Williams, School of Biological Sciences, Phytopathology Department, California Polytechnic State University*

“Aphanomyces is a fungus that has been attacking sugar beet (*Beta vulgaris*) fields in the Red River Valley of Minnesota and North Dakota. The organism is soil borne and may affect the sugar beets from the early season seedling stage until the late summer more mature stage. This study shows the effect of stabilized oxygen on aphanomyces in petri dish cultures and soil. One can see that ASO® at all concentrations had an adverse effect on Aphanomyces growing in petri dish cultures. It can also be seen that at the highest concentration most of the Aphanomyces were killed.” – *Charles Habstritt, Ph.D., Professor of Agronomy and Soils University of Minnesota*

“I can find no substance with levels high enough to indicate toxicity to anyone consuming your solution. The sodium level at only 9.24 p.p.m. is well below the recommended daily reference values determined by the U.S. Government. Toxic metals (lead, mercury and arsenic) are virtually undetectable as are nitrate levels and other trace minerals. Your solution, in its current formulation, is totally safe to the human body.” – *John H. McDonald, Ph.D., Senior Scientist, USANA, Inc.*

“When tested as specified, the ASO® Stabilized Oxygen at 20% Strength Concentrated Solution was not acutely toxic to the test animals following dermal application of the test substance at 2.0 g/kg. When tested as specified, the Stabilized Oxygen Solution, at 40% Strength, was not acutely toxic to the test animals following a 4-hour inhalation exposure at a nominal concentration of 23.9 mg/L (actual concentration was 14.6 mg/L). LC50 was estimated at greater than 23.9 mg/L (actual concentration was 14.6 mg/L). When tested as specified, the submitted test substance Stabilized Oxygen Solution at 20% Strength Concentrated Solution, was not considered to be a skin sensitizing agent. There were no significant differences in skin irritations observed in the test animals and in the control animals on challenge. When tested as specified, the submitted test substance, Stabilized Oxygen at 20% Strength Concentrated Solution, was not an eye irritant.” – *Charles C. Tong, Ph.D., D.A.B.T., Study Director and Director of Biological Services, SGS U.S. Testing Company, Inc.*

“Overall, this has been a very successful preliminary study.... The positive results of increased growth, weight, less mortality, overall improved health and vitality of the chickens, improved flavor of the meat in taste test, and improved acceptability of the end products were all observed in this study.... It was noted that the wholesale buyers of the chickens were very impressed with the flavor of the ASO® treated chickens in this study. The reason, the Doctors believe, is that the oxygen from ASO® helps build stronger immune systems and therefore bacteria and parasites are controlled to a higher degree. The treated chickens are more active and thereby develop more as well as stronger muscles resulting in less fat. The improved quality of the meat and the lack of Antibiotics used as a result of ASO® treatment might allow the producer to market the chickens as “Organic” thereby reaching higher sales prices and more demand. Overall, this has been a very successful preliminary study and points towards areas that need to be examined further. The positive results of increased growth, weights, less mortality, overall improved health and vitality of the chickens, improved flavor of the meat in taste tests and improved acceptability of the end products were all observed in this study.” – *“ASO® Activated Oxygen – Cyprus Broiler Study,” 2004. Dr. Antonio and Dr. A. Rotou, DVM (conducted at a poultry farm in Lymbia Village, Larnaca, Cyprus)*

“We received your sample of ASO® to determine the presence of hydrogen peroxide. We used our decomposition procedure for hydrogen peroxide, which involves contacting the solution with platinum metal foil. In this procedure, the platinum would catalyze the decomposition of peroxide resulting in bubbles of oxygen forming. Using your sample of ASO®, we observed no bubble formation even after heating the solution to 60°C for 5 minutes. Since this is typically a qualitative test, we estimate the detection level to be about 0.1%. So, from this result, we can say that the solution contains <0.1% hydrogen peroxide (or <1000 ppm hydrogen peroxide).” – *Michael T. Volosin, President, AnalysisNow*

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