

## Questions and Answers

### BBEA Webinar on the Oxygen Advantage® Program

May 23 & 24, 2018

**Q:** What are the signs of a "Tired diaphragm"?

**A:** For the athlete's I've dealt with, they typically experience some sort of discomfort or pain in their diaphragm. They describe it as a "cramping" sensation when they exert themselves. Several in full diaphragm exhaustion, were unable to do any physical exercise without experiencing significant diaphragm discomfort. I do advise them to see a doctor to rule out any internal issues.

**Q:** Besides being medically checked for diaphragm fatigue, how can an athlete know this is the issue? Would it be different than "tired intercostals"? Or just being out of breath?

**A:** I've not seen an athlete feel they are more out of breath with breathing muscle fatigue. They do experience general fatigue. As noted above, the athlete usually experiences discomfort when exerting themselves.

The athletes that have come to me with diaphragm fatigue are usually competitive amateurs or elites. Most say their coach, trainer, doctor or physiotherapist "diagnosed" it as diaphragm fatigue. I do get athletes that call and say their diaphragm is "not working right." I've not had any athlete come to me saying their intercostals are a problem.

**Q:** You mentioned that with intermittent hypoxic training, the athlete drops their oxygen saturation below 92% and to 85%. Is this safe given health care personal administer giving oxygen to patients at these levels?

**A:** According to our Oxygen Advantage® team of doctors, it is safe to drop oxygen saturation (spO2) as low as 80% for healthy individuals. This has been tested with hundreds of athletes. I checked with several doctors before starting these exercises for myself. All said it should not be an issue given my health.

With intermittent hypoxic training(IHT), we encourage the athlete to avoid going much below 85% spO2. The work we've done shows there is little incremental benefit of reducing spO2 below 85%. Also, given the way we do IHT, hypoxia is imposed for less than a minute at a time, therefore the notion of intermittent hypoxic training. Their spO2 should return to normal before starting the next hypoxic set. There is an

advanced form of the training, for athletes with a very high BOLT (control pause) where they maintain spO2 below 90% for 3-4 minutes continuously.

**Q:** Does oxygen saturation drop at altitude?

**A:** Yes it does and that's how the hemoglobin adaptation occurs. The drop in spO2 at altitude is what stimulates the kidneys to signal the bone marrow to produce more red blood cells and hemoglobin. This is why athletes pursue high-altitude training.

We can get the same results with intermittent hypoxic training without the altitude. The exercises are just as effective at sea level.

During the Oxygen Advantage® training we present a chart that shows how spO2 drops with altitude. For example, at an altitude of 15,000 feet (4,600 meters), spO2 readings are typically 85%. Of course with time spent at altitude, spO2 will normalize but with much higher levels of active hematocrit.

**Q:** Is this method of training done only with the presence/permission of a physician? It comes with a lot of responsibility.

**A:** With breathing for health training (Buteyko) I always encourage clients to consult with their doctor before starting breathing training. When asked, I provide a list of the possible issues breathing training may cause and offer to answer their doctors questions. I do all the above with the Oxygen Advantage®.

I also ensure each athlete completes an intake form that clearly outlines the contraindications of breathing training, be it Buteyko or the Oxygen Advantage®. I will personally talk to any client who is a risk, making sure they fully understand the concern and advise them to check with their doctor before doing the exercises. The legal release form the client signs furthers this discussion.

However, US discrimination laws say I can't forbid anyone from taking the training. I have to rely on good written documentation (warnings) to the client, doctor permission letters, along with the legal release form to protect me. Again, this is the same for Buteyko and the Oxygen Advantage®.

**Q:** Could you elaborate please about the contraindications for sleep apnea patients?

**A:** Strong breath holds and intermittent hypoxic training simulate an apnea. It is not unusual to see a person with sleep apnea experience side effects. The most typical side effect is an elevated heart rate lasting a very long time. By the way, this is also

true with some of the stronger Buteyko exercises. Even with Buteyko, we need to take care if a client has high blood pressure, sleep apnea, epilepsy, heart conditions, etc. As many of you know, elevated heart rate is what we look for with the Sleep Apnea Two Hour Test. Contraindications are covered in much more detail during the Oxygen Advantage® instructor training program.

**Q:** Could you also elaborate regards hematocrit Oxygen Advantage training; & blood thinners?

**A:** Hematocrit increase is the objective of intermittent hypoxic training. This enables the athlete to transport more oxygen from the lungs to active muscles. This is where the more significant speed and endurance improvements come from.

We want the athlete to keep hematocrit levels in the “safe zone” and encourage them to work with their doctor to establish their personal safe zone. The key parameters on this are age, health and the altitude they live at.

Blood thinners is a good question. In most cases the use of blood thinners is for a health issue that is contraindicated to the Oxygen Advantage® program. Blood clots, heart problems, etc. are good examples.

**Q:** How do Oxygen Advantage® breathing exercises differ from Buteyko breathing exercises?

**A:** The Oxygen Advantage® has the same roots as Buteyko and is built on top of it. Many of us have been using Buteyko to teach athletes for years. Some of the Oxygen Advantage® exercises are very similar to Buteyko exercises but have twists, alterations or major changes to accommodate athletes and to take advantage of the science.

Athletes are a peculiar bunch to deal with, especially the more competitive ones. Adaptations of the exercises have been made with this in mind.

Also, through the vast amount of sports science and research available to us, the Oxygen Advantage® exercises, while built on Buteyko’s principles, are very different. For example, intermittent hypoxic training involves strong breath holds. The way you do the exercise is very different than we were taught to do breath holds in Buteyko. Dr. Buteyko and even Alexander Stalmatski might not recognize them.

**Q:** What is being done to promote the Oxygen Advantage®?

**A:** We are in the active stage of promoting the Oxygen Advantage®. Most of this work is being done through content marketing, using the internet and social media. Patrick does a lot of interviews with the press and key outlet marketers such as sports magazines, bloggers, podcasters, etc. During the Oxygen Advantage® instructor training, I dedicate several hours on how to leverage this work and market the program locally. I'm working on a marketing kit for instructors.

**Q:** I'm not an athlete or I'm older than most athletes. Will athletes want to learn the Oxygen Advantage® from me?

**A:** My personal opinion on this is yes of course. If you are able to teach me something that will help advance my skills and success, you have my attention.

In the instructor training courses I've been involved with, 50% or more of the attendees have been recreational (weekend warrior) athletes at best. Several admitted they seldom exercise. Several were in their 60's and I believe a couple of folks were in their 70's.

Many see the Oxygen Advantage as a great program to "bolt on" to their existing work. We get a lot of interest from physiotherapists, personal trainers, coaches and those running gyms.

**Q:** What does the Oxygen Advantage® athlete training program look like?

**A:** It's up to each instructor to decide how to present the Oxygen Advantage® program to their athletes. The only requirement is that the core material and breathing exercises be presented unwashed.

Originally, my athlete training was six to seven hours long. Athlete feedback was that the training was too long and while interesting, it covered material they just didn't need. I've sense cut the training back to 4 hours.

The training I provide athletes covers the theory behind the Oxygen Advantage®, a high-level presentation of the sports science showing how the exercises work and then mastery of the exercises themselves. I provide one year of support after the training, answering questions about the exercises, the process and the method.

**Q:** What does the Oxygen Advantage® instructor training program look like?

**A:** The instructor training is a three day event. The key components of the training include:

- Breathing anatomy and physiology, as it pertains to athletes.
- A deep dive into the 8 ways the program improves athletic performance.
- The sports science and research standing behind the program.
- Exercise mastery and how to teach them.
- Managing problems and contraindications.
- A four-hour live/real athlete training session with athletes in the room.
- Athlete training simulation (theory and exercises.)
- Case study reviews.
- The business and marketing of the program.

I'm working on a new instructor training syllabus which I'll forward to you soon.

**Q:** Can anyone teach the Oxygen Advantage®?

**A:** No. Patrick McKeown is retaining the rights to the intellectual property behind the Oxygen Advantage®. Anyone training the Oxygen Advantage® must be certified and licensed to do so.

The instructor training is the core of the certification process, along with an examination and an internship of five documented athlete cases. Once certified, the instructor is given a license to market and teach the Oxygen Advantage® for the first year. The first year license fee is included in the instructor training tuition.

There is a \$250(US) annual license fee for subsequent years. This fee provides each instructor access to all promotional and content marketing material, training materials, newly released technical research, adaptations to or new exercises (two new ones in the last year have been added), contact and event (work in progress and not final) listings on the Oxygen Advantage® website and ongoing technical support from your master instructor. We are also working on additional marketing support. The full list of benefits the instructor will receive is being developed and I will provide it to you when ready.