Further Application

Nose Unblocking

Exercise

Breathe Light to Breathe Right

Breathe Light to Breathe Right-Jogging

Breathing Recovery, Improve Concentration

Simulate High Altitude Training-Walking

Simulate High Altitude Training-Running, Cycling, Swimming

Advanced Simulation of High Altitude Training

Increased CO₂

Sports Meditation

Enter the Zone

Tolerate strong air shortage during competition

psychological preparedness

Reduced Lactic Acid & Fatigue

Kidneys release EPO

Spleen releases red blood cells

SaO₂↓

Increased oxygen carrying capacity

Opens blood vessels

Opens airways

Bohr Effect

Improved Oxygenation of the heart

Increased Oxygenation tissues & organs

The Oxygen Advantage

Improved Sports Performance
NUANCES

• Persons with migraine, panic attacks, heart disease (if recent heart attack - relaxation without air shortage), hypertension may experience stress from holding the breath. (even if measuring the BOLT) Also, if the heart rate remains higher when measured five minutes after the breath hold.

• Instead begin with relaxation, light air shortage.
• Strong breath holds are only suitable if the heart rate normalises when measured five to ten minutes after completion of the steps or strong breath hold.
PERSONS WITH ANXIETY

• May find it difficult to focus on breathing.

• Air shortage may generate panic.

• If BOLT increases too quickly, cleansing reaction may occur.

• If necessary practise exercises involving distraction. (breathing through nose, stop sighing, relaxation, small breath holds, walking with mouth closed).
HIGH BLOOD PRESSURE

• In first week- feel better with deeper sleep and more energy.
• Blood pressure may increase slightly (10-15mmHg).
• With continued gentle practise, high blood pressure reduces toward normal.
• Don’t do strong breath holds. Instead relaxation, reduced breathing, walking with mouth closed, many small breath holds.
PREGNANCY

• During first trimester- no reduced breathing exercises

• Prevent hyperventilation- avoid overeating, high temperatures, stress, mouth breathing etc

• BOLT should not increase by more than 2 seconds each week

• 2nd trimester- go gently with air shortage
MEDICATION

- When the morning BOLT increases to above 20 seconds, persons taking medication for hypertension, diabetes or thyroid should visit their medical doctor to have their medication evaluated.

- Persons taking asthma and rhinitis medication also need to have their medication evaluated.
SEVERE ASTHMA

• Limit breath holding while walking to ten paces- see how he or she does, then increase to twelve, see how he does. Continue to increase the paces while observing recovery.

• If child or adult has under twenty paces- breathing is very intense. Higher chance of disrupting breathing and causing symptoms.

• Try to achieve as many paces without causing cough, wheeze.

• Do hundreds of small breath holds (breathing recovery) to make progress.
IF HAVE SYMPTOMS

• Too difficult to reduce breathing if symptoms are present or BOLT is very low.

• Do many small breath holds until symptoms pass, or BOLT reaches 12/13 seconds.
IF FEELING SUFFOCATED

• Concentrate on stronger breath holds (if person is suited)
• Do paces exercise to help reset respiratory centre quickly
• Breathing will quieten in about half an hour
MILDLY BLOCKED NOSE AT NIGHT

• First clear nose by completing the nose unblocking exercise and rinse your nose with saline solution (described in Close Your Mouth).
• Wear paper tape over lips.
• While wearing the tape, your nose will never completely block. Your nose will partially block if BOLT is low.
• Nose will continue to block until BOLT is 20 seconds.
UNCOMFORTABLY BLOCKED NOSE AT NIGHT

- Practice half an hour of reduced breathing before bed. (or ten repetitions of Paces exercise)
- Rinse your nose with sea salt and water.
- Wear the tape over your mouth.
- Wear Breathe Right strips on your nose.
- This will help overcome the feeling of suffocation during sleep.
KNOW WHEN TO REFER TO DOCTOR

• Practise six repetitions of Paces Exercise (create a strong air shortage)

• If child or adult can breathe through their nose for one minute, they can do so for life

• If child or adult is unable to breathe through their nose for one minute, then refer to Doctor/ENT specialist
NOSE UNBLOCKING EXERCISE
NOSE UNBLOCKING EXERCISE

• Take a small, silent breath in and a small, silent breath out through your nose.

• Pinch your nose with your fingers to hold your breath.

• Walk as many paces as possible with your breath held. Try to build up a large air shortage, without overdoing it.

• When you resume breathing, do so only through your nose. Try to calm your breathing immediately.
NOSE UNBLOCKING EXERCISE

• You should be able to recover normal breathing within 2-3 breaths. If your breathing is erratic or heavier than usual, you have held your breath for too long.

• Wait for a minute or two before repeating the breath hold.

• Repeat this exercise five or six times until the nose is decongested. (Demonstration)
BREATHE LIGHT TO BREATHE RIGHT
The objective is to breathe less than what you were breathing before you began the exercise, to create a tolerable need for air and sustain it over three to five minutes.

At first, you might only feel an need for air for a few seconds.

With practise it becomes easier.
EXERCISE

• There is no suggestion of changing the number of breaths per minute, or to vary the length of each breath.

• For example, telling someone to inhale for two seconds and exhale for three seconds does not provide guidance on whether they should take in a very gentle breath or a huge inhalation of air.
BREATHE LIGHT TO BREATHE RIGHT

Two options:

1) Slow down the speed of the air as it enters and leaves your nostrils.

2) Take a shorter breath in and allow a relaxed breath out.
BREATHE LIGHT TO BREATHE RIGHT

Four places where air is felt coming into the body:

1. The nose
2. The back of the throat
3. The chest
4. The diaphragm
If client is unable to follow their breathing, try the following:

• Begin air shortage by holding the breath

• Ask client to look at his breathing

• Point out to the client his or her breathing
BREATHE LIGHT TO BREATHE RIGHT

Possible mistakes:

1) Deliberately interfering with breathing muscles - eg. tensing the stomach to restrict breathing

2) Holding of the breath on the exhalation or inhalation

3) Freezing the breath

4) Having too much of an air hunger
BREATHE LIGHT TO BREATHE RIGHT

• Sit up straight.

• Place one hand on your chest and one hand on your tummy.

• As you breathe, exert gentle pressure with your hands against your tummy and chest. This should create resistance to your breathing.

• Breathe against your hands, concentrating on making the size of each breath smaller.
BREATHE LIGHT TO BREATHE RIGHT

• With each breath, take in less air than you would like to. Make the in-breath smaller or shorter.

• Gently slow down and reduce your breathing movements until you feel a tolerable hunger for air.

• Breathe out with a relaxed exhalation.

• When the in-breath becomes smaller and the out-breath is relaxed, visible breathing movements will be reduced. You may be able to notice this in a mirror. (Demonstration)
BREATHE LIGHT TO BREATHE RIGHT

• Slow breathing down or take a shorter breath in to the point where you feel a tolerable need for air. If the need for air is too much, or if you feel a little panicky or stressed, then take a slightly larger breath or take a rest from the exercise for half a minute or so.

• Continue the exercise for three to five minutes. Take a break for about one minute and repeat again.
BREATHE LIGHT TO BREATHE RIGHT

- The need for air should be no greater than at the end of the BOLT.

- Achieve an air shortage where you are on the verge of disrupting your breathing rhythm but try not to go beyond it.

- It is a fine line. With practise, it is easier to maintain a tolerable air shortage.
Inhalation

Exhalation

Small breath in

Relaxed breath out

Usual breathing pattern

Reduced breathing to create perfect air shortage

Loss of control of breathing

Too much of an air shortage. Breathing is chaotic
BREATHE LIGHT TO BREATHE RIGHT

- Eyes go glassy
- Increased saliva in mouth
- Nose may run
- Hands get warm
- Face gets pink
- Some people feel sudden calmness, others may feel slight panic
BREATHE LIGHT TO BREATHE RIGHT

- Lighter breathing
- Final BOLT 25-40% higher
SIMULATE HIGH-ALTITUDE TRAINING WHILE WALKING
SIMULATE HIGH-ALTITUDE TRAINING WHILE WALKING

• WALK & HOLD: After a minute of continuous walking, gently exhale and pinch your nose to hold your breath.

• Walk while holding the breath until you feel a medium to strong air shortage.

• Release your nose, inhale through it and allow your breathing to return to normal.
SIMULATE HIGH-ALTITUDE TRAINING WHILE WALKING

• BREAK FOR 30 SECONDS & REPEAT: Continue walking for half a minute to one minute, then gently exhale and pinch your nose with your fingers. Walk while holding the breath until you feel a medium to strong hunger for air. Release your nose and calm your breathing;
SIMULATE HIGH-ALTITUDE TRAINING WHILE WALKING

- REPEAT BREATH HOLDS 8 TO 10 TIMES: While continuing to walk, perform a breath hold every half minute to one minute in order to create a medium to strong need for air. Repeat for a total of eight to ten breath holds during your walk. (Demonstration)
SIMULATE HIGH-ALTITUDE TRAINING WHILE RUNNING
SIMULATE HIGH-ALTITUDE TRAINING WHILE RUNNING

• RUN & HOLD: 10-15 minutes into your run, gently exhale and hold your breath until a strong air shortage is reached.

• The length of the breath hold may range from 10-40 paces and will depend on your running speed and BOLT score.
SIMULATE HIGH-ALTITUDE TRAINING WHILE RUNNING

• BREAK FOR ONE MINUTE AND REPEAT: Following the breath hold, continue to jog with normal breathing for about one minute, until your breathing has partially recovered;

• REPEAT BREATH HOLDS 8 TO 10 TIMES
ADVANCED SIMULATION OF HIGH-ALTITUDE TRAINING
ADVANCED SIMULATION OF HIGH ALTITUDE TRAINING

• Practise on a relatively empty stomach;

• The first breath hold is between 40-60 paces, or until you feel a medium to strong need for air;

• After the first breath hold, subsequent holds are performed every five to ten paces;

• Following each breath hold take either a tiny inhalation or a gentle exhalation or sip of air;
ADVANCED SIMULATION OF HIGH ALTITUDE TRAINING

• A ‘sip of air’ means taking a tiny breath, the purpose of which is to relieve tension rather than take in air. It is about 10% of a normal breath;

• With each successive breath hold, oxygen saturation will continue to decrease;

• Continue to observe the pulse oximeter, ensuring that you do not go below 80% SaO2

• Challenge but do not stress yourself;
ADVANCED SIMULATION OF HIGH ALTITUDE TRAINING

• If the air shortage is too great, take a slightly larger breath and continue to relax;

• Perform this exercise for 1-2 minutes.

• Because this exercise can promote bowel movements, it is best practised near a bathroom;

• If you experience any other negative effects, please stop this exercise immediately.  

(Demonstration)
BREATHING RECOVERY
Small breath in  
Small breath out  
Hold breath for 2-5 seconds  
Breathe normally for 10-15 seconds  
Continue until calm

2-5 secs  2-5 secs  2-5 secs  2-5 secs

10 sec.  10 sec.  10 sec.  10 sec.
BREATHING RECOVERY

• Take a small silent breath in and out through your nose;
• Hold your breath for 2-5 seconds;
• After each breath hold, breathe normally for 10-15 seconds.
  Do not interfere with your breathing;
• Continue to do a small breath hold followed by your normal breathing for 10-15 seconds;
• Do this exercise for a minimum of 15 minutes.
AIRWAY NARROWING

Influences of modern life

Coughing
Wheezing
Breathlessness

Increased breathing volume

Loss of CO₂
Drying of airways
Cooling of airways

Airway hyper sensitivity
PROGRAM
PROGRAM

BOLT Score of Less Than 10 Seconds

• Measure your BOLT score each morning after waking;

• Breathe through the nose both day and night. Wear paper tape across your lips during sleep;

• Practice the Breathing Recovery Exercise throughout the day, ideally spending 10 minutes, 6 times per day, doing small breath holds of between 2 and 5 seconds;

• Exhale through your nose, pinch your nose with your fingers, and walk while holding the breath for 5 to 10 paces. Rest for 1 minute and repeat 10 times.
PROGRAM

BOLT Score of Less Than 10 Seconds

• Engage in 10 to 15 minutes of slow walking each day with the mouth closed. If you need to breathe through your mouth, you must stop walking to recover your breath;

• When BOLT score increases to 15 seconds, Breathe Light to Breathe Right. It is more beneficial to practice this exercise than Breathing Recovery once your BOLT score has reached 15 seconds. 1 hour per day (six 10-minute sets);

• As your BOLT score increases, it will become a lot easier to engage in physical exercise. Your expected progress is to increase your BOLT score to 25 seconds within 6 to 8 weeks.
PROGRAM

BOLT Score of Less Than 20 Seconds

• Measure your BOLT score each morning after waking;
• Breathe through the nose at all times. Wear paper tape at night;
• Regularly observe your breathing throughout the day;
• Swallow or hold the breath any time you feel a sigh coming.
• Breathe Light to Breathe Right exercise for 10 minutes by 6 times daily;
• Practice Breathe Light to Breathe Right-Walking for between 30 and 60 minutes per day.
PROGRAM

Oxygen Advantage Program for a BOLT Score of 20 to 30 seconds

• Measure your BOLT score each morning after waking;

• Breathe through the nose both day and at night, including wearing tape;

• Breathe Light to Breathe Right exercise for 10 minutes, 3 times per day;

• Warm up for 10 minutes by walking with breath holds;
PROGRAM

Oxygen Advantage Program for a BOLT Score of 20 to 30 seconds

• Breathe Light to Breathe Right during a fast walk or jog for 30 to 60 minutes;

• Simulate High-Altitude Training during walking or jogging by practicing 8 to 10 breath holds;

• After physical exercise, practice the Breathing Recovery exercise.
PROGRAM

BOLT Score of 30 Seconds or More

• Measure your BOLT score each morning after waking;
• Breathe through the nose both day and at night, including wearing tape during sleep;
• Warm up for 10 minutes by walking and breath holding every minute or so;
• Breathe Light to Breathe Right during the run;
• Continue with running and nasal breathing for 20 minutes;
PROGRAM

BOLT Score of 30 Seconds or More

• Midway through the run, practice breath holds;

• After the breath hold, resume nasal breathing while simultaneously relaxing the body. Intersperse breath holds every few minutes throughout the run.

• After physical exercise, Breathing Recovery exercise;

• Practice one session of Advanced Simulation of High Altitude every other day;

• Reduce breathing using the Breathe Light to Breathe Right exercise for 15 minutes last thing at night.
THE OXYGEN ADVANTAGE

• Reduce breathlessness during exercise
• Increase Oxygen carrying capacity and delivery
• Improve your VO2 max
• Improve Running Economy
• Prevent exercise-induced asthma
• Improve oxygenation of the heart
• Reduce lactic acid and fatigue
• Improve your overall health and sports performance