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# Body Oxygen Level Test (BOLT) Therapy: A Potent Solution for Respiratory Disorders.

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**ABSTRACT:** The plundering effects of Corona Virus pandemic (Covid-19) era and the increasing concern of the changes in climatic conditions, posing worrisome threats on the well-being of man's free existence and his properties. There is no doubt of the fact that, the quality of man's healthiness is determined by the quality and most importantly the quantity of air he breathes. And everyone starts dying the moment they stop breathing. With permission granted by the Food and Drug Administration of the U.S during the outbreak of Covid-19, with open-source access, letting the general public through Emergency Use Authorizations (EUAs) to contribute innovative efforts under professional jurisdiction to curb the spread of the virus, and finding potent panaceas to respiratory disorders. This study discovered the Body Oxygen Level Test (BOLT) Therapy as one of those panaceas to over-breathing, and asthmatic conditions. With methodical practices and procedures in this research work, an optimum BOLT scores of 40seconds was obtained from a procedural breath pausing exercise, which is capable of eliminating asthmatic, snoring, and over-breathing respiratory conditions. BOLT therapy is applicable in Medicine, Sports, Space travel and as far as man's existence is concern.This innovative work to be used as lifesaver, test requirements appropriate to support safe operation were identified. This BOLT system's main goal is to get you back to the way you were created to breathe and live long. BOLT therapy's fundamental facts are; the nose is for breathing, the mouth is for eating and breath light to breathe right.

**KEYWORDS:** BOLT, Tidal Volume, Asphyxia, Hypotension, Pulse.

## I. INTRODUCTION

### Background

Realistically, we could live in the absence of food for some weeks also water for some days, but we can only live a few minutes without air. As human beings, people give great amount of concentration and care on what they need to take in and drink, and they pay typical less or no consideration to the air they take in. this is a common trend that our day to day routine food and water intake must pass certain threshold quality and quantity. excess and scarcity of it will be a problem. We likewise know the need of taking pure, and quality oxygen, but what about the amount? (the volume of air). What then is the quantity of air we should breathe for optimum health? Air is by far of important compare to food and water for our existence, and it is compulsory to meet fundamental threshold.

The amount (volume) of the oxygen one breathe carries the potency to change all you thought you comprehend concerning your body, your well-being, your wellness, and your alertness, doesn't matter you're a sportsman, footballer, an infant, a toddler, a child, a teenager, an adult, an elder or any

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other person just trying to get off the couch, an athlete seeking a top notch edge in his or her sport performance.

A section like this, you are going to found out the basic affiliation among oxygen and your system. The oxygen flow to your muscles, organs, and tissues must now be improved if you want to improve your fitness. In addition to being beneficial, increased oxygenation also makes it possible to exercise harder and longer without being out of breath. In essence, you will be able to discover improved performance as well as enhanced health and fitness.

Peradventure you are in a competition, you will be excited and compete better, because you are going to achieve a lot with ease. Total wellness and athletic stamina normally will be constrained by the lungs. But never your legs and hands, the hands, and your mind. Because anybody that involves in frequent workout knows, the urge of serious breathing difficulty in moment of physical activity indicates workout concentration is more than muscle tiredness.

**I.1 Chronic Over-breathing**

Research by scientists, and testimonies and experiences shared by many persons I have come in contact or worked with, has shown that adopting to breathing correctly is very important. The major issue here is that correct breathing, which seems to be our birthright, is now a thing of concern nowadays. Though we believe our body involuntarily knows great amount of air it needed every time, it is not so, it is not the case. Years ago, we had naturally altered the surrounding so tremendously in a way many people seem to have overlooked their natural show of respiring. The respiring system has been distorted by severe burnt out, inactive living, malnutrition, harsh environments, and feebleness. All these contribute in no small measure to poor breathing habits. It results in to fatigue, weight increase, problems with sleeping, respiratory issues, and cardiac disease. Our forefathers put up a lot of physical labor while surviving on a normal food in a far minimal hostile dwelling.

Nowadays living lifestyles have gradually increased the quantity of breath, though having more oxygen into the respiratory track will make you feel good, in an ideal situation, it is lean respiration that is a testimony to quality healthy and soundness. The major challenges to our health and wellness have rarely identified the problem: prolonged over-breathing. We breathe twice or even as plenty air as needed without awareness of it.:

**Research Question**

1. Are you often respiring via your mouth as you go about your daily activities?
2. Are you respiring via the mouth during deep sleep? (If you are not sure, do you have a dry mouth when you wake in the morning?)
3. Are you snoring when asleep or pausing or fluctuating breathing when sleeping?
4. Do you physically observe your pulse when at resting state? You breathe more heavily as you perceive more movement.
5. If you listen to your breathing, do you notice that your chest moves more when breathing than your abdomen does?
6. You often sigh all the day? (if one do sigh again and again it is not a problem, but constant sighing is okay to infers a serious over-breathing.)
7. Are you ever noticing your respiration while you are resting?
8. Are you experiencing symptoms resulting from constant over-breathing, like tightening of the nostrils, tiredness, dizziness, nasal congestion, or light-headedness?

If your answers are in **affirmative** to few or all questions asked before. We suspect that you have over breathing case. These characteristics are typical of what occurs when we breathe more air than is necessary. The same as you know the adequate amount of water and food you take in daily, we got to beware that there also an optimal quantity of air to breathe. You know overeating is bad as it concerns our wellbeing, so also can over-breathing. The reflexive habit of over-breathing has reached an epidemic proportion all around the developed countries, sadly, it is a red flag to sound health. prolong over-breathing results in bad health, low wellness, and inadequate stamina, also cause some illnesses including but not limited to fatigue, anxiety, insomnia, asthma, heart problems, and obesity.

This BOLT system's main goal is to get you back to the way you were created to breathe and live. I'll share with you easy techniques that you may use to break unhealthy breathing patterns and discover another level of cardiovascular wellness which enhance your general wellbeing.

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But, the first step, to get to the solution it's important to initially comprehend the sickness. The way you respire in your daily life that suggests how you respire when engaged in physical walkout. taking in excess air each minute, each hour, and each day causes excessive panting while exercising. Overbreathing causes your airways to be narrow. Does not matter if you're a professional sportsman or your primary form of workout is climbing the staircase in your home, these systemic effects have a significant impact on your health. Award winning sport professions can flourish or ends by sportsman's over breathing. The lungs can fail you, it doesn't matter if your body is strong, excess breathing will affect your health. Athletics know that our lungs get exhausted and tired before our hands and limbs.

To understand how BOLT therapy works, for instance, many people are accustomed to mountain workout, a skill often adopted by top-performing athletes to better their cardiovascular wellness and to increase their strength, staying power and endurance. On the high altitudes, there is little air availability, this leads to minimal ambient force/area of oxygen. your body adjusts to this surrounding by taking in more red-blood cells. Red-blood cells connote an increase oxygen Concentration. Given to the body part, a low supply of lactic acid availability, and improved total function, include but not limited to prolong stamina and a low- risk of irritation and fatality. Now, the message is clear, since mountain workout is not within our environment to engage on. This is why I will inform you of the essence of this research.

"They said if Mohammed cannot go to the mountain, the mountains can come to Mohammed". Does not matter what your goals as an athlete are, to have an effective breathing pattern can change your health and life in an unimaginable paradigm in records time. This is well received; this is a personal experience I have at a stage in my life when I do over-breathing.

**I.IIThe misconception of large (deep) Breath, Better performance for Athletes or Runners.**

Because of this misunderstanding, many athletes are accustomed to purposefully taking big breaths at resting and during workout, mainly when their body systems are overworked. However, when you do so, you shorten and occasionally even degrade their outcome. For instance, a group of Athletes were surveyed and asked, who here believes that deep breathtaking into the lungs when at resting will elevate the oxygen makeup of the blood?" with a reflex chorus response, 95 % of the Olympic runners carry their hands up to attest to that act. They were not right, though many people have such notion. This dogma is common in the arena of sports and athletics. However, taking deep breaths into the lungs while resting will not enhance the oxygen makeup. It is the exact opposite of what you should do if you want to increase your endurance.

In this session, I'll go through how we may train our bodies to breathe in a healthy amount of air while we're resting in order to counteract these harmful effects of modern living. By doing this, we make sure that the proper amount of air is supplying our heart, lungs, and muscles. This will cause a reduction in breathlessness when you are involved in a physical workout, this in turn will make increases wellness more achievable. The key to entering a new level of health is improved breathing. (Patrick, 2015).

**I.IIIRespiratory System**

Before going into elaborate details of the BOLT therapy, let's look at the fundamental of breathing. The breathing components and the functions of $CO_2$ plays in the respiratory network. The network is made up of the body parts that supply $O_2$in the air into body vital organs and carry the carbon dioxide made in system into the surrounding. During taking in air, the air passes down to the trachea, then enterin to twain-like bronchi: other side goes to the rightside lungs, ant the leftside lungs respectively. see figure below.

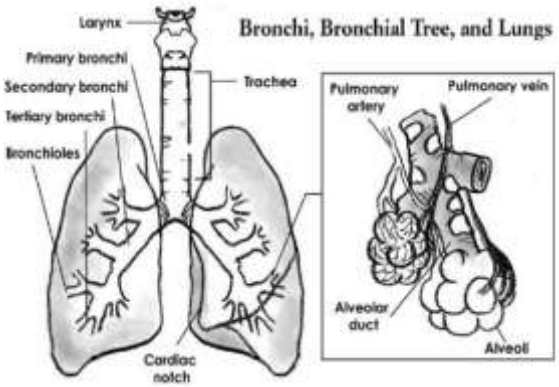


**Figure. 1a.The Respiratory System**

The human lungs contain approximately 300 million alveoli, each of which is surrounded by tiny blood vessels called capillaries. Categorically, the

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area of contact between your alveoli and blood capillaries can be compared to the dimension of a lawn tennis field. Note, oxygen is actually the energy the body requires to work proactively. Now, however, a general ignorance that taking in enormous amount of oxygen increases the oxygen conc. of the blood. Because the blood is virtually always fully saturated, it is physically unachievable to elevate the oxygen blood Conc. in this manner. It would be the equivalent of putting extra water into a glass that is already full. But precisely what is oxygen Conc. When at rest, a healthy individual typically breathes at a rate of 4 to 6 liters of inspired air in a minute, this results in a nearly perfect oxygen Conc. In a range 95 to 99 %. It is not always possible to get 100% saturation since oxygen is constantly flowing from the blood into the cells. oxygen concentration of 100% implies that your red blood cells' affinity for oxygen content is so great, which would limit the blood cells' capacity to carry oxygen to muscles, internal organs, and ligaments or tissues. One requires the blood to give out oxygen, and never hold firm to it. The body moves excess amount of inspired air (oxygen) in the bloodstream 75 % is released out during resting and more as 25 % is released during strenuous workout. elevating oxygen concentration to maximum percent do not give you additional benefits. Actually, taking deep breath will make one feel nice and relaxed, though, in reality, it is bad for you. Breathing with large breath into your lungs forces the upper body negatively, making the person feeling at restafterward. Honestly, it results in majority to accept thatdeep respiration, big is preferred.

**I.IV Useful Terminologies for BOLT Therapy.**

It is wise to consider some useful terminologies that will broaden our knowledge of the BOLT system (Therapy)

**Respiratory Rate:** your respiratory speed is the frequency or cycle of complete breaths you take in a minute. Normally, An adult's resting respiration rate ranges from 12 to 20 BPM. When resting, a respiratory rate of less than 12 or more than 25 BPM is typically regarded as abnormal. (Clinic, 2019) and (MESERVE, 2022). The table below shows the respiratory rate of healthy people according to their age.

**Table 1a. Normal Respiratory Rate by Age**
(Schriger DL, 2007)

| Age | Respiratory Rate(per/min) |
|---|---|
| Newborns baby | 44 |
| Infants baby | 20-44 |
| teenagers | 20-30 |
| Under 20 | 16-25 |
| Adults | 12-20 |
| Mature person in exercise | 35-45 |

**Volume (Amount) of air per breath:** This is explained as the quantity of oxygen taken into your lungs in every breath. The amount of each breath of oxygen we take in and give out is determined in liters, and these are usually observed over 1 minute. In practical medicine, the physiological observed respiration rate that a fittest person takes in that minute is between 10 to 12, in each breath taking in a quantity of 500 ml of air, for a maximum volume of 5 to 6 liters in one minute.

**Effects of Over-Breathing**

The following is the summary of the effects of over-breathing

I. Loss of Health,
II. Poor Fitness,
III. Compromised day-to-day Performance
IV. Anxiety,
V. Asthma,
VI. Fatigue,
VII. Insomnia,
VIII. Snoring
IX. Heart Problems,
X. Obesity
XI. Reduces Mental Energy
XII. Reduce Physical Energy
XIII. Hinders Athletic Performance
XIV. Excessive breathing reduces the amount of blood flow and oxygen deliver to the heart

**Hypotension** (lower blood pressure) is having a value of **90/60 mm Hg** or lower, which also is seen to be normal for a few persons and would not be a cause for worry. (Prevention, 2019)

**Pulse:** Your pulse refers to the number of times your heart beat per minute. Pulse rates differs with persons. Your pulse is lower if you stay at rest and increases when you engage in energy sapping exercise (because more oxygen-rich blood is needed by the body when you exercise). A normal heartbeat

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for a healthy adult at resting stateis between**60 - 80**bpm. Female pulse is faster compared to men. Your pulse reading could be obtained if you grasp with the 1st and 2nd fingertips against your wrist. Usually obtained at the wrist or side of one's neck

**Asphyxia** (asphyxiation) is the failure or disruption of the respiratory process as a result of insufficient oxygen to the brain. Sometimes this can lead to an immediate or untimely death.

**Tidal volume**: the lung's volume represents the standard amount of air inspired or expired between breathing in and breathing out without extra effort applied.

**Carbon Dioxide ($CO_2$):** This is a vital gas produced from the lungs to the atmosphere. Keeping the right breathing rate while monitoring the amount of carbon dioxide that is optimum for the lungs, blood, tissues, and cells.

**Oxygen ($O_2$):** Oxygen is a gas that your body needs to work properly. Your body needs oxygen to make energy. Your lungs absorb oxygen from the air you breathe. The oxygen goes into your blood via your lungs and circulates among your organs and body tissues. Certain medical situations could trigger your blood oxygen levels to be too low. Low blood oxygen may make you feel short of breath, tired, or confused. It can also damage your body. Oxygen therapy can assist you get more oxygen. (Medicine:, 2020). The crucial point to remember is that hemoglobin releases oxygen when in the presence of carbon dioxide. When we are over-breathing, excess carbon dioxide is washed from the lungs, blood, tissues, and cells. This condition is called hypocapnia, it causes the hemoglobin to hold onto oxygen, causing oxygen shortage and therefore reduced oxygen delivery to tissues and organs. With less oxygen delivered to the muscles

## II LITERATURE REVIEW

According to Konstantin Buteyko, The Russian health personality who first discovered what is called the Buteyko's Method, in the 1950s proposed when he discovered the central role of over-breathing in the development and degree of asthma. He and his colleagues also discovered that asthma patients who practiced decreased breathing immediately experienced relief from the symptoms of an asthma attack.

Let me mention here that the 6 most successful clinical trials on asthma administered the Buteyko respiratory method (McKeown, 2003). This therapy aims to reduce breathing to the medical norm or standard. Does this mean an individual with asthma is termed an over-breather? In 1968 The New England Journal of Medicine published the results of a large study in which the breathing and blood gases of a group of asthmatics were investigated. The scholar observed that all **101** tested casualties had severe alveolar hyperventilation. Those with asthma who had a mild or low degree of the illness breathed about **15 liters of air per minute or 25** more than the medical standard of **6 l/min**

## III. METHODOLOGY

### III.I. Research Area

This research area is about the restoration of respiratory disorders such as asthma, over-breathing, Snoring and the likes. This falls under supplemental oxygenation and Resuscitation.

### III.II How the Bolt Therapy Works

First and foremost, BOLT means (Body Oxygen Level Test), This Technique helps to determine your breath-holding time, also we can call it Control Pause (CP). this therapy is all about the unfolding of the hidden facts about a healthy lifestyle through a correct breathing pattern. BOLT is the secret to high performance in all kinds of Sports, long life, happy living, and healthy breathing. It also guarantees 90% freedom from all respiratory-related issues (ailments). This system will assist you to recognize the factors that lead to oxygen entersyouractive muscles and vital organs, improving running economy (reducing the amount of energy used during running) and increasing "VO2 max" (the body's maximal capacity to transport and utilize oxygen).

Athletes of all sports,have demonstrated miraculous achievements over the years. When it comes to their athletic potential, efficient breathing has made no comparison to the incredible difference that extreme breathlessness, weak diaphragms, and inefficient breathing caused in so many of these sportsmen. This work will reveal toyouwaysof increasing your respiringpower in conjunction with any athletic involvement. regimen. Building up body strength without considering breathing efficiency is detrimental.

The BOLT (Body Oxygen Level Test) therapy is a tool for observe breathing volume. It may be used at any time, is easy to use, safe, and doesn't require any complicated equipment. It is inaccurate to

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just obtainyour BOLT value by pausing your breath for long as you can.

**III.III BOLT Fundamental Facts.**

I. Use nose for breathing
II. Use mouth for eating.
III. Breathe light to breathe right.

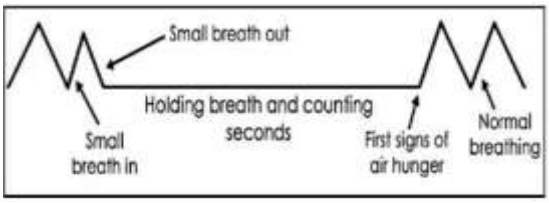


**Figure. 3. BOLT Exercise graph**.

I. With your mouth close. Inhale normally through your nose (small breath in), then let out freely through your nose(small breath out).
II. To stop air from entering your lungs, close your nose with your fingers. (holding breath and counting)
III. Time how many seconds pass until you notice the first distinct surge to breathe or the first physical pressures encouraging you to do so. The need to swallow or a choking of the airways are two examples of these sensations. As the body signals you to start breathing again, you might also experience the firstprompt contractions of your respiring muscles of the throat or belly. (Note, BOLT is not a determination of how long you are able to pause your breathing but how long before you feel the hunger of air)
IV. Free the nose, stop the timer, and take breathe via the nose. After breath pause, you should calmly inhale rather than take a huge or deep breath.
V. Start normal breathing.

Important points to note when determining your BOLT value:

1. Take your breath immediately after you exhale
2. Once the breathing muscles start to move, the breath is held. You are not tracking how long you can go without breathing.
3. Free the nose if you feel the initial clear impulse or first clear stress to continue respiring if you do not feel the initial involuntary motions of your respiring muscles.
4. This therapy is not only an act to correct your breathing but also a test to determine your body's reaction to a want of oxygen.

Note that determining your BOLT entails holding your breathing only unless you experience the first instinctive engagements of your respiratory muscles. If there is need for you to take a largerespire after your breath pause, that means you didit for longer time.

**BOLT Explanation:**

In the state of pausing your breath, you restrict $O_2$ entrance into your lungs and obstruct$CO_2$from being removedout of the body. Carbon dioxide builds up in the blood and lungs as the breath hold is maintained, as the$O_2$quantity drop. Because $CO_2$ is the main promoter of respiring, how long you pause respiring ispredisposed by the quantityof $CO_2$ you can endure, or the ventilation feedbacks to $CO_2$. Your threshold will be achieved earlier due to a strong ventilatory reaction to carbon dioxide, which will cause a shorter breath-hold period. On the other hand, a long breath-hold time is caused by a good tolerance to carbon dioxide and a diminished ventilatory response. At a lower BOLT reading, your breathing sensors would most especially be reactive to the carbon dioxide, and the volume of your breathing could be greater as the lungs exert force to evacuate any carbon dioxide above programmed levels. However, if you experience a normal endurance to $CO_2$ and a greater BOLT value, it is possible to maintain calm breathing at rest and lighter breathing during walk out engagement.

Interestingly, you will realize that the first time you obtain your BOLT value, you are surprised that the value is lower than your expectation, it is okay even the top-performing athletes may observe a small BOLT value. The better part is that a BOLT value can gradually be increased with a sequence of constant daily simple breathing exercises incorporated in your routine way of life or exercise schedules. For a person that exercise frequently at a less intensity, a typical starting BOLT value is around 20 seconds. Depending on your genetic makeup, you may feel a blocked nose, coughing, wheezing, disturbed sleep, snoring, weariness, and extreme

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dyspnea during physical activity if your BOLT value is below 20 seconds.

The essence of the BOLT therapy is to better the value to 40 seconds, and it is achievable. Increasing the BOLT value is key to having greater physical stamina.

The ideal BOLT value for a healthy being is 40 seconds. That is, if a person's breath holds after a normal exhalation, it takes closely 40 seconds before a hunger to breathe advance enough to start inhalation." Though, what is accepted in theory is not always evident in practice. The fact is that the majority of individuals, including athletes, have a relax breath hold duration of about 20 seconds, often less. However, to achieve your full life and athletic potential, attaining a BOLT value of 40 seconds should be the goal. And this is the objective of the BOLT Therapy in this study.

The general goal of Oxygen Therapy is to optimize your BOLT value to over 40 seconds, note that, every time you improve your BOLT value by 5 seconds you will find out that all respiring symptoms will reduce drastically.

### III.IV Methods of Data Collection

**BOLT Value and Breathing Volume Experiment**

Now, we performed some selected number of BOLT values for easy tracking of breath-holding exercise.

Have a sit, provide yourself a pen and paper.

Dedicate attention to your respiration and follow both the rate and depth of each breath.

As you observe closely the way you breathe, draw the rate and depth across the sheet of paper.

Do this for about 30 minutes or so, then observe how your drawing relates to your BOLT reading, and the explanation are shown below. We now start having a Body Oxygen Level test score of 10 seconds.

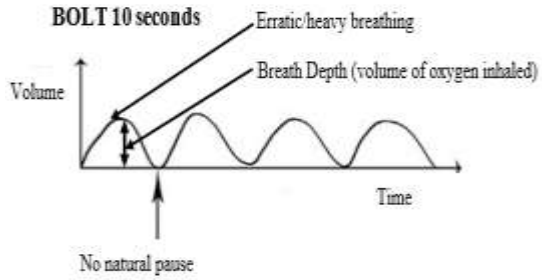


**Figure. 3a BOLT value of 10 seconds.**

At 10 seconds BOLT value, here, the breathing was observed to be noisy, loud, irregular, large, heavy, erratic, and effortful, with no natural pauses between breaths. When you have a BOLT value of 10s or less, you will certainly experience a pang of air hunger, even when you are just sitting down. An addicted upper-chest breathing and mouth respiration is also expected. The respiratory rate (number of inhalation ad exhalations during rest per minute) can be about 15 to 30 breaths.

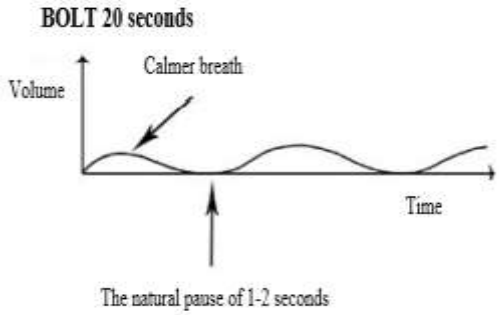


**Figure.3b. BOLT value of 20 seconds**

1. At 20 seconds BOLT value, you will observe that the breathing is heavy but regular. Both the number of breaths and volume of every breath are less than at a BOLT reading of 10 seconds. A natural pause of between 1 and 2 seconds occurs at the end of each exhalation. The rate of breathing at rest will differs ranges between 15 and 20 moderately sized breaths.

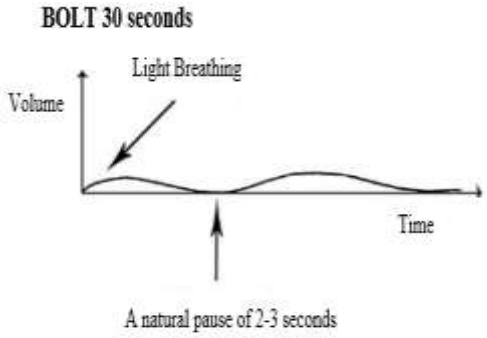


**Figure.3c. BOLT value of 30 seconds**

At 30 seconds BOLT value, the breathing is calm, gentle, soft, effortless, and quiet. As a BOLT value rises, the pace and volume of each breath continue to decrease. Each breath's natural pause

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grows longer. About 10 to 15 minimum breaths will be taken per minute while you are at rest.

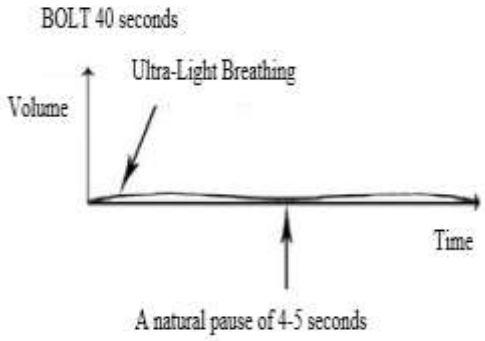


**Figure.3d BOLT value of 40 seconds**

At 40 seconds BOLT value, the breathing is easy, peaceful, moderate, noiseless, smooth, and minimal. With a 40 seconds BOLT value, it is hard to see breathing obviously between each breath, there is a little natural gap of 4 -5 seconds. There are 6 to 10 minimum breaths taken each minute while at rest.

**Ways to Increasing the BOLT Value**

There are three steps to help one increase their BOLT value.

1. Avoid loss of Carbon Dioxide
2. Advance your Carbon Dioxide tolerance
3. Activating High-Altitude exercise

**Asthma**

Asthma is a chronic lung condition where the lung tissues become hypersensitive to external stimuli (Vaquera, 2022). According to the World Health Organization (WHO), an Asthmatic condition is a non-communicable disease (NCD), with negative effects for children and adults, it is also a commonest chronic disease in children.Asthmatic signs, which include any combination of coughing, wheezing, short breath experience, and tightness in the chest, are brought on by inflammation and restriction of the tiny airways to the lungs. According to statistics, asthma killed 455 000 people and negatively impacted over 262 million human beings in 2019 alone. According to WHO, asthma has no cured yet, but can only be managed with an inhaler prescription and avoidance of asthma triggers. Also, WHO is committed to advancing the finding, cure, and monitoring of asthma to reduce the global task of NCDs and make progress toward universal health coverage.(WHO, 2022).

This research work provided a natural simple practice that can cure or eliminate asthmatic symptoms without an inhaler, using BOLT Therapy (i.e. Controlled Over-breathing). Athletes should be taught how to endure healthy breathing volume during exercise to reduce the effect of hyperventilation.

People need to know and improve their BOLT (Body Oxygen Level Test) scores. People need to train their BOLT figure to the standard healthy status of 40 BOLT.

People with asthma breathe a volume of 10 to 20 liters per minute between attacks, according to a scientific study undertaken by Professor Buteyko over three decades and scientific experiments at the Mater Hospital in Brisbane in 1995, and over 20 liters during an attack. Overbreathing causes an inadequate carbon-dioxide.

During sleep, as each hour passes, breathing gets deeper and heavier for most people. That is easy to check using the Control Pause (CP). The decrease is significantly feasible after 4-6 hours of stretch sleep. We are naturally fashion to sleep less than 4-5 hours. Russian studies do show that different sleeping positions have different effects on breathing. Sleeping on one's back is the worst. It is among main causes of poor health for many modern people. $CO_2$ losses at night are particularly high when people breathe through an open mouth while sleeping on their back.

Research and practice have shown that lying down on the left side of the stomach (or chest) is the optimal or best sleeping posture for most people.

**Steps to Cure or Eliminate Asthmatic Condition.**

1. Switch your breathing from mouth to nose.

For people who display asthma symptoms, this information is vital for them. Note when breathing quantity is bigger than normal, there is a potency to open the mouth to supplement oxygen or allow air to enter the lungs. People identified with asthma usually think they are not taking in enough air while breathing via the nose, therefore, resort to mouth breathing. Mouth breathing escalates asthmatic symptoms in no small ways. These include but are not limited to:

I. Inhalation via the mouth introducesunfiltered airborne particles, like germs and bacteria.

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II. The vocal cavity is simply not as effective as the nose in conditioning air to the correct temperature and humidity before entering the lungs.

III. The mouth has a bigger airway than the nose, therefore breathing volume will be higher, and more carbon dioxide will be evacuated from the lungs as a result. Natural "openers" of the smooth muscle of the airways include carbon dioxide and oxygen. The diminishing of carbon dioxide will however cause asthma airways to narrow even more.

IV. Unlike the respiration via the nose, mouth respiratory action do not give us the rich advantages of **nasal nitric oxide**, which supports the lung's defensive capabilities. Considering all these aspects, it is not surprising that mouth respiration results in the reduction in lung function in people with mild asthma and plays a significant role in the exacerbation of asthma symptoms. Not only is it important to respire via the nose during rest, but it is also beneficial to nasal breath during energy sapping exercise. A study by ARRD (American Review of Respiratory Disease) observed that; breathing through the mouth further narrowed down the respiratory tract (airway), complicating asthmatic conditions (Susan D. Pasnick, 2022). Therefore, the initial move to eliminate asthmatic symptoms is to start breathing with the nose.

V. Practice the BOLT Therapy to improve your score to the optimum number of 40 seconds. This form the major results obtained from this study, to correct all naturally induced respiratory disorders, for example, Asthma. Embarking on the BOLT Therapy exercises will reduce or completely remove any asthmatic symptoms within 3 months.

## IV. RESULTS AND DISCUSSIONS

### IV.I Results

The application of BOLT Therapy to mitigate over-breathing, while optimizing the tidal volume, all are meant to solve the problem of Asphyxiation.

i. We now start with a BOLT value of 10 seconds.

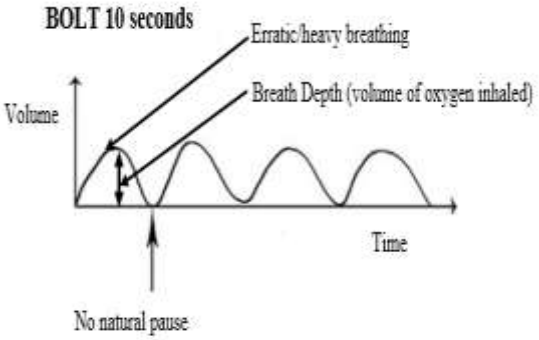


**Figure. IV.I. BOLT value of 10 seconds**

ii. BOLT Value of 20 seconds

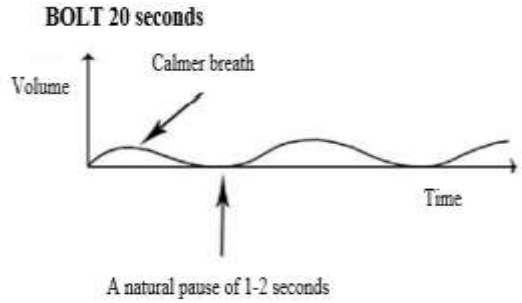


**Figure.IV.II: BOLT value of 20 seconds.**

iii. BOLT value of 30 seconds

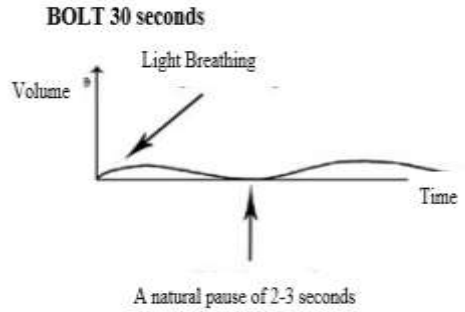


**Figure.IV.III: BOLT value of 30 seconds**

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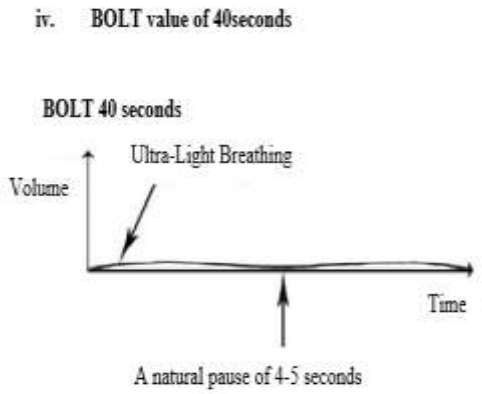


**Figure IV.IV. BOLT value of 40 seconds**

**IV.II Summary of The BOLT Therapy**

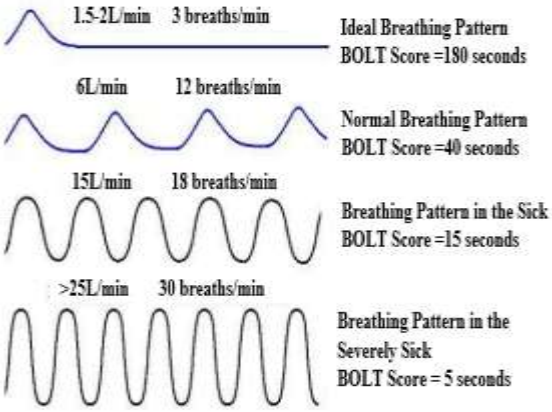


**Figure IV.V. Breathing Patterns and Body Oxygenation**(Rakhimov, 2007)

**IV.III Discussion of Results**

**i.** 10 seconds BOLT value was recorded, breathing is noisy, loud, irregular, large, heavy, erratic, and effortful, with no natural pauses between breaths. Should your BOLT value be 10s or smaller, the person certainly will experience a pang of air hunger, though if you are just sitting down. Habitual chest breather and mouth breathing is also expected. The respiratory rate (breath in a minute) can be about 15 to 30 breaths.

**ii.** 20 seconds BOLT value was recorded, and breathing is heavy but regular. Compared to when a BOLT value is 10 seconds, both the rate and volume of each breath are lower. A natural pause of between 1 and 2 seconds is observed after each exhalation. The count of breaths per minute during rest will vary from between 15 and 20 moderately sized breaths.

**iii.** At 30 seconds BOLT value, breathing is observed to be calm, gentle, soft, so effortless, and very quiet. The number and size of every breath continue to diminish when a BOLT value rises. Each breath's natural pause grows longer. About 10 to 15 minimum breaths will be taken per minute while you are at rest

**iv.** At 40 seconds BOLT value, breathing is also observed to be effortless, calm, gentle, quiet, soft, and minimal. At 40 seconds BOLT reading, it is difficult to see breathing movements. The breath time delay between each breath is generally about 4 to 5 seconds. The respiration rate while at rest varies from 6 to 10 minimal breaths.

**IV.IV. Breathing parameters of a normal healthy person.**

I. The BOLT value of 40 seconds is said to be the optimum limit for a healthy person.
II. The duration of inhalations = 1-2 second
III. The durations of exhalations = 2-3 seconds
IV. Respiratory rate = 10-12 BPM
V. Automatic pause period of almost no breath =1 second
VI. Volume (amount of air inhaled per minute is 6 l/m (liters per minute)
VII. The depth of inhalation is = 500ml-600ml

**IV.V. Body Oxygen Level Test Experiment Apparatus:**

The following are the apparatus used for the Body Oxygen Level Test experiment.

1. **Stop watch**:
2. **Soft mat**:
3. **Quiet environment**:
4. **Sport wear**:
5. Time for the experiment is morning, just immediately waking up from sleep.

**Body Oxygen Level Test Experiment Procedure**

1. Immediately when you wake from sleep, find a plain corner in your room and sit down with your back prop on the wall and relax.
2. Avoid any stress induce exercise, like sit up or press up or walk out
3. You can choose to do this before early morning prayer, to avoid any exhausted energy, this is when your breath is normalized.
4. Set your stop watch to 00:00 (reset it to initial,)

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5. Hold the stop watch with one hand, use the other hand to close your nose gently.
6. Breathe in and out gently, close your nose immediately breathing out
7. Start the stop watch, keep your finger on the stop button to easily stop it when needed.
8. Stop the watch when you can no longer hold yourbreathe, by this time you should feel some strong hunger to take breathe, there will be a movement on your respiratory organs forcing you to breathe in.
9. At your limit threshold stop the watch, remove your hand from the nose, and commence breathing again
10. Make sure you don't take deeper breath on commencement of respiration, do it gently, this is to avoid over breathing.
11. Record the value on your stop watch. That value is what is called Body Oxygen Level Test otherwise known as BOLT value.
12. Repeat the experiment after you have done some morning exercise like your morning prayer, sit ups, press up, stretch outs, and gym or any energy sapping exercise.
13. Record the value you have and compare them.

**.Table IV.1 Body Oxygen Level Test Experimental Data.**

| **Body Oxygen Level Test (BOLT) Experiment** | | | | |
|---|---|---|---|---|
| **Date** | **BOLT reading** | **Time (sec) am** | **Activity** | **Key** |
| 17/02/2023 | 40.59 | 6. 30 | 0 | 0= Nil |
| 18/02/2023 | 41.2 | 8.23 | 0 | 1= Prayers |
| 19/02/2023 | 31.97 | 6.34 | 2 | 2= Exercise |
| 20/02/2023 | 41.54 | 6.06 | 0 | |
| 21/02/2023 | 42.06 | 6.38 | 0 | |
| 22/02/2023 | 29.23 | 6.39 | 1 | |
| 23/02/2023 | 30.43 | 6.40 | 1 | |
| 24/02/2023 | 41.90 | 6.35 | 0 | |
| 25/02/2023 | 41.75 | 7.34 | 0 | |
| 26/02/2023 | 41.50 | 6.37 | 0 | |
| 27/02/2023 | 38.45 | 6.38 | 1 | |
| 28/02/2023 | 40.81 | 6.45 | 0 | |
| 01/03/2023 | 40.81 | 6.42 | 0 | |
| 02/03/2023 | 39.40 | 6.27 | 1 | |
| 03/03/2023 | 38.18 | 6.27 | 2 | |
| 04/03/2023 | 30.09 | 9.58 | 2 | |
| 05/03/2023 | 41.8 | 10.1 | 0 | |
| 06/03/2023 | 41.82 | 6.32 | 0 | |
| 07/03/2023 | 29.30 | 6.37 | 2 | |
| 08/03/2023 | 32.36 | 6.44 | 1 | |
| 09/03/2023 | 41.91 | 6.27 | 0 | |
| 10/03/2023 | 42.99 | 6.34 | 0 | |

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| | | | | |
|---|---|---|---|---|
| 11/03/2023 | 31.36 | 6.3 | 2 | |
| 12/03/2023 | 41.29 | 6.5 | 0 | |
| 13/03/2023 | 39.78 | 6.33 | 1 | |
| 14/03/2023 | 37.28 | 6.59 | 1 | |
| 15/03/2023 | 26.95 | 6.35 | 2 | |
| 16/03/2023 | 42.75 | 6.11 | 0 | |
| 17/03/2023 | 40.52 | 9.02 | 0 | |
| 18/03/2023 | 39.06 | 6.2 | 0 | |
| 19/03/2023 | 42.85 | 6.41 | 0 | |
| 20/03/2023 | 39.53 | 6.36 | 0 | |
| 21/03/2023 | 41.10 | 6.4 | 0 | |
| 22/03/2023 | 38.55 | 7.12 | 1 | |
| 23/03/2023 | 31.35 | 6.3 | 2 | |
| 24/03/2023 | 40.5 | 6.22 | 0 | |
| 25/03/2023 | 40.86 | 6.22 | 0 | |
| 26/03/2023 | 41.86 | 6.22 | 0 | |
| 27/03/2023 | 41.5 | 6.1 | 0 | |
| 28/03/2023 | 40.56 | 6.54 | 0 | |
| 29/03/2023 | 38.01 | 6.29 | 1 | |
| 30/03/2023 | 29.71 | 6.15 | 2 | |
| 31/03/2023 | 41.79 | 6.21 | 0 | |
| 01/04/2023 | 41.82 | 6.21 | 0 | |
| 02/04/2023 | 30.77 | 6.21 | 2 | |
| 03/04/2023 | 31.44 | 7.8 | 2 | |
| 04/04/2023 | 30.03 | 7.2 | 2 | |
| 05/04/2023 | 29.44 | 6.2 | 2 | |

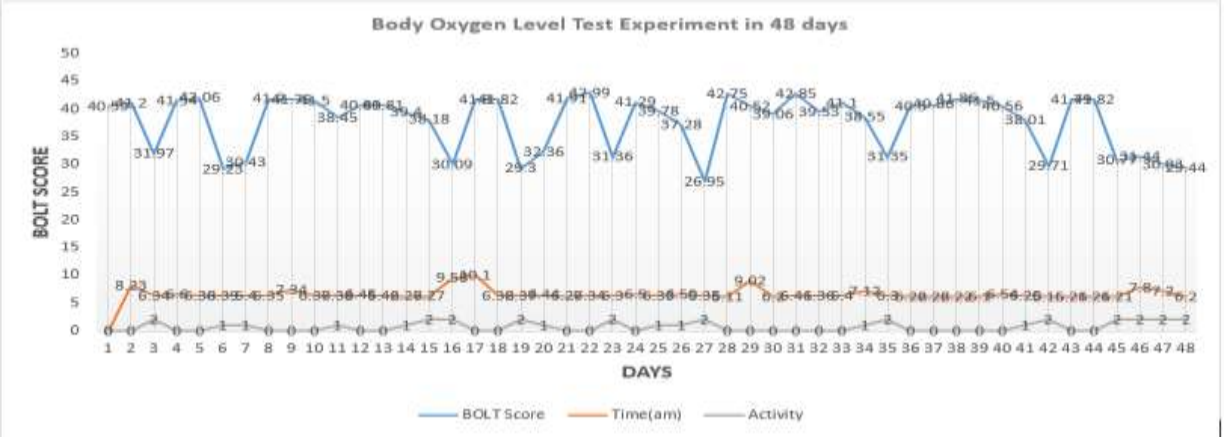


**Figure IV.VI. Graph of Body Oxygen Experimental Data**

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The Average BOLT value is 37.7239 seconds.

The graph above explained in details the BOLT values experiment, we observed, that with zero (0) activity before the experiment, the BOLT values were higher and met the optimum research value. At one (1) activity, that is morning prayers were made and the operator has exerted some vocal energy hence tempered with the resting nature of the respiratory system. Here the BOLT values were below 40, the same was observed with activity (2), that is, exercise, this means the operator did some bodily ab seat-up and stretching before conducting the BOLT experiment. And the values were lesser compare to 1 and 0 activities

## V. CONCLUSION

Finally, theBOLT therapy when applied can eliminate all respiratory disorders; such as asthma, over breathing, snoring, wheezing, natural suffocation, and domestic cardiac seizures.

The Body Oxygen Level Test Therapy to normalize or restore breathing rhythm, volume and pattern for effective and high-performance living. It has been researched that most of the fatalities recorded over time from respiratory malfunctions, 50 percent of the cases stemmed from improper breathing pattern that was overlooked.

This BOLT Therapy came with great health benefits. One of the advantages of BOLT Therapy is that, it can be administered by yourself when you follow the simple instructions prescribed here. Also, BOLT Therapy is a secret to a healthy living, longevity, and high performance as an athlete and it is the therapy used in astronautics, space science, and aeronautics fields. Any astronaut who travels to space must be subjected to BOLT therapy to normalize their breathing pattern to enable them to survive the scanty atmospheric environment at the ISS (International Space Station). The optimum BOLT value for a normal breathing person is 40 seconds and the ideal score is 180 seconds.

### V.I. Contribution to Knowledge

This piece of work is centered on the principle of supplemental oxygenation or oxygen therapy (That is; the use of oxygen as a medical treatment) for rapid and effective resuscitation of asphyxiated Patients. We use BOLT therapy to restore breathing rhythm, and breathing volume, and elimination of over-breathing disorders for healthy living.

Developed a proactive BOLT exercise model to obtain the required BOLT reading of 40 seconds for better and high-performance living.

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