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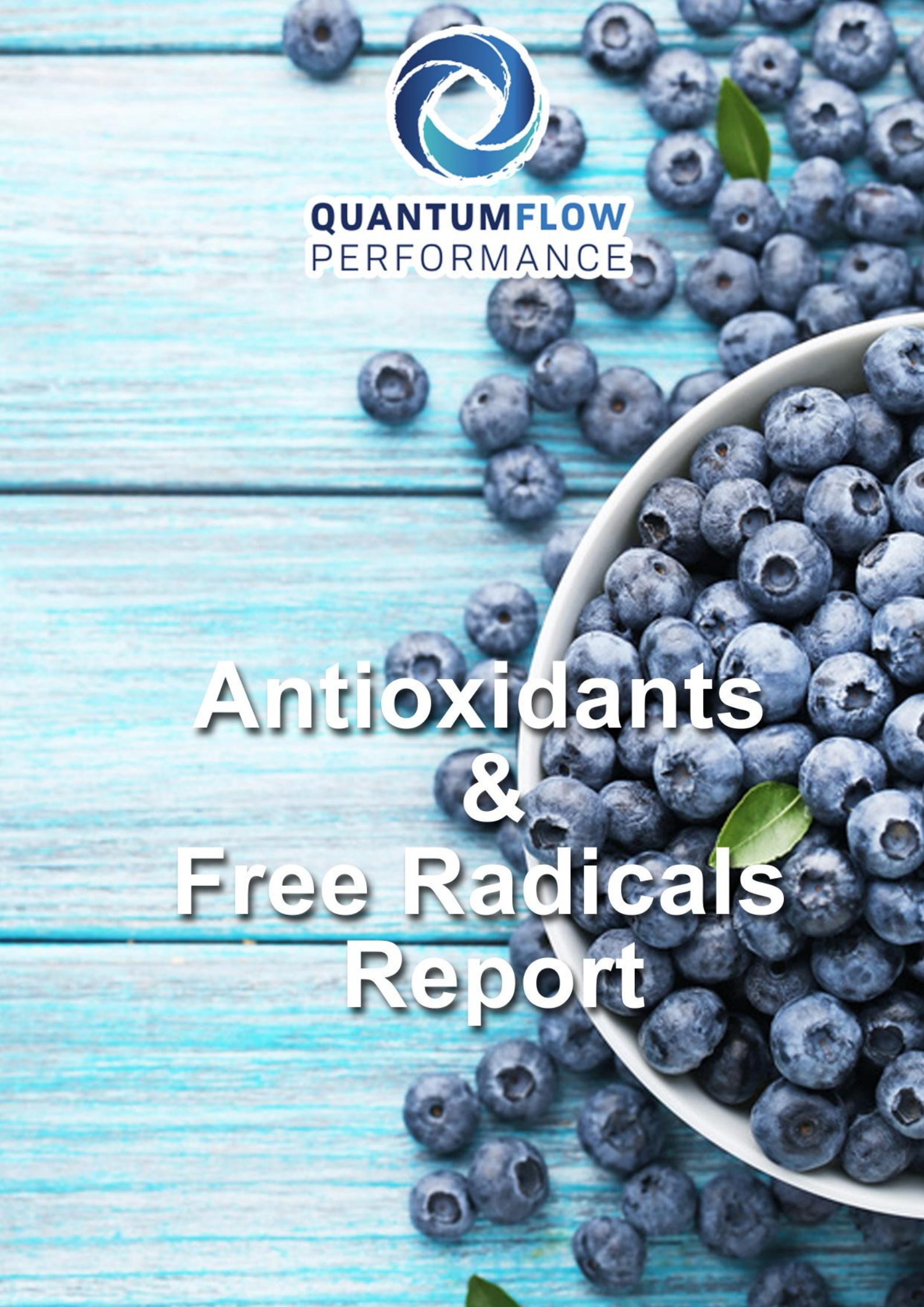

Antioxidants & Free Radicals Report

Introduction

My name is Tony Lawless. I am founder of Quantum Flow Performance and author of the Quantum Flow Running Series.

For the past 20 years I have been studying and practicing techniques that help people of all ages regain health and energy in their daily lives.

I have realized over time that the most efficient way to restore total health is to view and treat the body as a single system which can be then sub-divided into smaller specific systems, each working tirelessly in their own right to maintain our total mental and physical health.

The 3 techniques I use to improve daily physical wellbeing are:

1. Bio-Testing which detoxifies the body and supports the immune system.
2. Cranio-Sacral Therapy which is used to remove physical and emotional restrictions.
3. Pilates which improves mobility, muscle tone and circulation.

When it comes to teaching someone how to develop a positive, happy mental approach to living and how to cope with stress I fully recommend and teach courses developed by The Pacific Institute, Seattle.

There are 3 simple steps that we can all follow to give us the best possible chance to stay mentally and physically healthy and they should be followed in this order: Cleanse, Nourish, Balance.

If you can imagine that your body is like a 4-lane highway and all the exits along the highway are the network that keeps traffic (nutrition and toxins) circulating correctly. When a blockage happens at the top of an exit the flow of traffic gets blocked up and traffic jams build up. By following the three simple

steps daily, you will substantially reduce the risk of traffic jams taking place in your body.

This report will focus on:

- What Free Radicals are and why they are damaging to the human body.
- Explaining how Free Radicals effect our overall health and sports performance.
- How you can combat the destruction of healthy cells by Free Radicals by including Antioxidants (the Natural Enemies of Free Radicals) in your daily diet.
- How Antioxidants help us beat Free Radicals.
- Why it is so important to include rich sources of Antioxidant nutrients.
- Taking a look at how some vitamins and other antioxidant nutrients help protect the body against free radical damage and how to include them in your daily diet.

The Effects of Oxygen on the Body

While oxygen is essential to life, it is a double-edged sword. On the one hand it allows us to live and breathe. On the other it damages cells creating Free Radicals and causing oxidative stress. Think of the effect of an open avocado when left out for an hour or so. That change in color is the effect of exposure to oxygen.

The Science

NOW IT'S TIME FOR A BIT OF SCIENCE 101. IF THIS SECTION OF THE REPORT DOESN'T INTEREST YOU PLEASE FEEL FREE TO SKIP ON TO THE REST OF THE REPORT, BUT I FEEL THAT IT IS IMPORTANT THAT THIS BACKGROUND INFORMATION IS DISCUSSED AT THIS POINT.

You probably remember from your old high school days that the human body is composed of many different cells and each cell is composed of many different molecules. Molecules consist of one or more atoms of one or more elements joined together by chemical bonds.

A typical atom is comprised of a nucleus - neutrons, protons, and electrons. Electrons are those negatively charged particles that orbit the cluster of protons in an atom. When there are eight electrons in an orbit, it means that that particular orbit (or shell as it is called) is full and therefore the atom is stable.

Stable atoms tend not to enter into chemical reactions. Because atoms seek to reach a state of maximum stability, an atom will try to fill its shell with electrons by:

- Gaining or losing electrons to either fill or empty its outer shell.
- Sharing its electrons by bonding together with other atoms in order to complete its outer shell.

This is where Free Radicals come in.

Free Radicals

Free Radicals are formed when weak bonds between atoms are split. They contain an odd, unpaired electron which causes them to be very unstable and react quickly with other compounds. Because it is the nature of Free Radicals to achieve stability, they will try to do so by capturing the needed electron from other molecules.

When the Free Radicals steal electrons from a stable molecule, that molecule will become a free radical itself, beginning a chain reaction. Once the process of Free Radicals formation is started, it can cascade, finally resulting in the disruption of a living cell.

This actually sets off a chain reaction that can damage the body's proteins and cell membranes, weaken the cell's natural defenses, and disrupt the cell's DNA. Such damage, when accumulated, can lead to degenerative conditions.

Why are they so important for people who exercise?

When you run outside, the weather along with exercise and air pollutants can lead to an increase in the number of Free Radicals produced in the body.

Free Radicals can also have another very obvious negative toll - on your skin. It can be responsible for premature ageing. This phenomenon has led to the phrase “Runners Face” being used to describe accelerated Free Radical Damage which is present in people who run regularly. People who exercise and exercise outdoors regularly are more likely to show signs of premature ageing unless they take the precaution of adding powerful Antioxidants to their diet. Note: The other – but completely unrelated way to help slow down the ageing process is to wear sunscreen all year round.

In order for the body to recover from exercise fast it needs to reduce the level of inflammation after every session as quickly as possible. It is the presence of Free Radicals that contributes to unwanted inflammation and slows down the Recovery phase of your training.

If you are not able to recover completely between training sessions and you are feeling stiff, tired and sore it is likely that you are suffering from Free Radical Damage as well as muscle fiber damage and will be heading away from your long-term goal for two reasons.

- **Reason one:** You will push yourself through the tiredness and get frustrated when you see a dip in progress and form – in other words - You will hit a Training Plateau.

- **Reason two:** You will push too hard during your sessions to maintain some sort of progress and in doing so you will over train and you will suffer an injury. Then you will be forced to take time away from training and may have to spend a substantial amount of money on rehabilitation.

Both of the above scenarios can be avoided by dramatically lowering the number of Free Radicals floating around and bumping into healthy cells causing damage to your healthy cell walls. It takes vital post workout energy to repair the damaged cell walls and this is energy that would be better used to facilitate a faster training session recovery rather than used to repair unnecessarily damaged cells.

Antioxidants

Fortunately, nature has provided us with a system to help control Free Radicals. Antioxidants are natural enemies of Free Radicals because one of their functions is to break the chain reaction and destroy Free Radicals. Antioxidants do this by donating one of their own electrons, thus ending the electron-"stealing" reaction.

Antioxidants have the ability to dramatically reduce the number of Free Radicals floating around in the blood stream and as a result speed up your recovery times.

Antioxidants can help:

- Fatigue & Tiredness
- People who exercise
- Endurance athletes
- Individuals who are exposed to environmental stresses such as UV Light, smoking and alcohol all suffer from higher than normal levels of oxidative

stress and free radical build up.

- Stressed out Professionals
- Anti-Ageing & Skin Conditions. Free radical damage is one of the major causes of premature ageing in tissues, especially the skin. This cellular damage, mainly due to exercising in the outdoors has led as mentioned before to the phrase “Runners Face”.
- Free radical damage in the cells also reduces the cells ability to produce energy and leads to overall loss of vitality and endurance.

Glutathione

Glutathione is one of the most important molecules you need present in your body to stay healthy and to prevent disease. It's the body’s natural secret ingredient to preventing aging, cancer, heart disease, dementia and much, much more. Its presence in the body is necessary to treat everything from Alzheimer's to Autism. There have been more than 80,000 medical articles written about it and it truly is the King of Antioxidants. It is the master of detoxification and the key to a healthy immune system.

How does it work?

Your body produces its own glutathione naturally. However, things like the “natural ageing process”, bad diet, daily ingestion of toxins, medications and stress all deplete our natural levels of Glutathione.

When Glutathione levels become depleted in your body you can start to encounter unrestrained cell disintegration from things like, oxidative stress, Free Radicals and infections. The follow on from this situation is that your liver then gets overloaded with toxins and finds it hard to do its job of detoxification.

When your liver function becomes compromised, your blood quality starts

to drop. It becomes sticky and gloopy. This in turn leads to an inability of the blood to deliver fresh oxygen and nutrition to hard working muscles and to provide the nutritional support to repair daily cell damage and slow down the ageing process.

Glutathione can also help us reach and sustain our peak mental and physical function. And who would not want that. If you are finding that you could do with more energy, mental focus and are overloaded with daily stress, you likely have glutathione deficiency.

The Top British medical journal, “The Lancet”, found that the highest glutathione levels occur in healthy young people, while there were substantially lower levels in the elderly and still lower levels of Glutathione in the unwell elderly group while the lowest of all was recorded in the hospitalized elderly.

Keeping yourself fit and healthy, sustaining high physical and mental performance levels, while preventing disease and slowing down the Aging process all depend on keeping your glutathione levels high.

Glutathione is also critical for controlling inflammation and maintaining a healthy immune system. It is the master detoxifier and the body's main antioxidant, protecting our cells and making our energy metabolism run well.

Oysters

Aging is a natural part of life for all of us. What isn't natural is disease. They are disorders - unnatural conditions of the body.

So, what if there was a way to slow down the ageing process, that would be great - right?

While antioxidants can be found in many fresh fruits and vegetables, it still pays to take an antioxidant dietary supplement along with your food. I find the

best source of antioxidant dietary supplement is perhaps one that you may not have considered before – Oysters.

The Oyster, in my opinion is one of, if not the most powerful antioxidant available.

By reducing exposure to Free Radicals and increasing the intake of antioxidant enzyme rich foods or antioxidant enzyme supplements, your body's potential to reducing the risk of free radical-related health problems is made more palpable.

Research shows that this particular form of antioxidant dietary supplement greatly helps in boosting the immune system and thus aid in preventing the onset of degenerative diseases.

- Clinical findings on Oysters have shown that after just 8 days, oxidative stress in the blood was reduced by 90%. This proves that Oysters have great potential to help reduce the causes of premature ageing.
- Oysters also promote tissue repair, they have an anti-inflammatory effect and contain the building blocks for the enzymes which destroy damaged cells before they have a chance to become cancerous. Weak brittle nails, dull hair, split ends and many other skin conditions like Acne, Eczema and Psoriasis can be ameliorated by using a quality Oyster supplement.
- The Oyster also contains 59 trace elements, 19 amino acids, 12 vitamins, EPA and DHA and as well as boosting the body's natural levels of glutathione it also contributes to 300 different enzyme reactions.
- The human body produces several types of antioxidant enzymes. The antioxidant enzymes include superoxide dismutase (SOD), catalase, and

glutathione peroxidase. These antioxidant enzymes neutralize many types of disease-causing Free Radicals, ridding the body of their harmful effects.

- The fatigue and tiredness associated with the higher than normal levels of oxidative stress have been shown to decrease by taking an Oyster supplement.
- Along with the 90% reduction in Free Radicals, they discovered that Oysters increase the production of Glutathione in the body. Glutathione is a major antioxidant in the body and it protects all cells from oxidative damage.
- Further research has shown that raised glutathione levels decrease muscle damage, reduce recovery time, increase strength and endurance and shifts metabolism from fat production to muscle development.

Conclusion

It is important not to become dependent on supplements and to maintain a healthy balanced diet and I would highly recommend that you include Antioxidative foods in your diet as well as supplementing – especially if you are exercising regularly.

It seems everywhere you go it's all about blueberries. I love blueberries. But, in our rush to embrace the latest antioxidant food craze (blueberries, cranberries, pomegranates) we're ignoring some very high-antioxidant foods that are probably sitting in our cupboards and fridges.

Red kidney beans and pinto beans have more antioxidants per serving size than a serving of cultivated blueberries.

Other foods that are high in antioxidants include; artichoke hearts,

blackberries, prunes, pecans, spinach, kale, russet potatoes and plums. And, no, that's not a mistake. Russet potatoes are on the list of foods high in antioxidants.

The truth is, there are many common foods high in antioxidants and you should not just restrict yourself to one particular food source. Why? Well, have you ever heard the expression, "eat your colors?" That refers to the fact that foods are in different color "families" containing different types of antioxidants which have different benefits. For example, the yellow-orange color family of peaches and nectarines help our immune systems. The purple-red color family of foods (pomegranates, plums, berries) helps reduce inflammation. It's important to eat foods from all color groups to reap the full benefits of antioxidants.

So, give your blueberries some company at the dining table. Invite some beans, spinach, potatoes and artichoke hearts to the party and enjoy some antioxidants with every meal.

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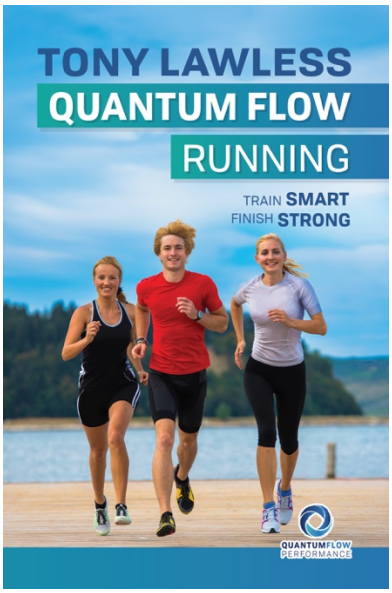

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