

Vo2 Vortex – Enhanced Athletic Formula for Better Hydration & Energy – Nutr8-ion.



“Beyond Your Limits”

Vo2 Vortex – is a scientific breakthrough in how to **fuel the body during exercise**. The combination of carbohydrates & ketones for energy, electrolytes for muscle function, amino acids for muscle repair, nitric oxide production for improved blood flow, and antioxidant protection for muscle and DNA health in the formula, all contribute to optimal fluid balance and to your muscles feeling stronger when you fuel with Vo2 Vortex.

We help reduce cramping and muscle soreness, combat inflammation while you exercise, and **protect the athlete's DNA**.

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Testimonial

Kenneth Ramaano – Founder of SpotRun and Ultra Distance Athlete

“Vo2 Vortex doesn’t just keep me hydrated on the spot and on the road, it fuels my running and adds power to my legs I never thought possible!! Not only do I stay energised throughout the exercise, but I find my recovery is simply incredible. I use the complete Nutr8Deli range of sports products, and this helps me to complete multiple runs over multiple days. A great example of running multiple times a week is me completing the Comrades distance of 86Kms on Friday 7th June 2024 running On-the-Spot at the Comrades Expo, and then running the actual Comrades Marathon on Sunday 9th June 2024 – 1 day later.

#UnparalleledEnergy&Recovery!

Usage recommendations:

Take 50gs in 600ml water to stay hydrated throughout your exercise. Each serving contains 44gs of carbohydrates of which 32gs are fast and slow-release sugars. Also contains 1,000mg of BHB ketones for mix use energy sources to help with the maintenance of an **energy reservoir** while exercising. A slew of B-Vitamins (energy vits), BCAA’s, minerals and Superfood extracts make this the complete hydration platform for the professional athlete. Blood sugar tests after usage have yielded optimal blood sugar results – **no concerns about inflated blood glucose levels.**

#Nutr8-ion
#Nutr8Deli
#Vo2Vortex



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SnapShot:

Immediate Hydration (Strength, Speed, Stamina & Energy)

Gain: all vitamins, electrolytes, amino acids & antioxidants to sustain:

- Strength, speed, stamina and energy
- Immediate hydration in a low osmolality formula (#SuperFast)

Reduce:

- Dehydration
- Fatigue
- Muscle cramps and muscle soreness

Outcomes:

- Sustained Energy
- Immediate Hydration
- Continuous ATP production
- Faster Recovery
- Anabolic and Catabolic benefits

How Vo2 Vortex Works:

1. **Purified Water:** Essential for hydration, helping with muscle function, temperature regulation, and recovery.
2. **Sucrose:** A quick source of energy, providing glucose to fuel muscles during workouts or recovery.
3. **Potato Starch:** A carbohydrate source, providing energy through slow-release glucose.
4. **Isomaltose:** A slow-digesting carbohydrate, offering sustained energy without spiking blood sugar levels.
5. **Citric Acid:** Helps with energy metabolism and acts as a preservative.
6. **BHB Magnesium (Beta-Hydroxybutyrate):** Provides ketones, an alternative energy source to glucose, which can support endurance and mental clarity and better levels of ATP than purely glucose derived energy.

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7. **Malic Acid:** Plays a role in the Krebs cycle (ATP production), enhancing energy production and reducing muscle fatigue.
8. **Citrulline:** Improves nitric oxide production, aiding blood flow, nutrient delivery, and muscular endurance.
9. **Glutathione:** A powerful antioxidant that supports recovery by reducing oxidative stress. Also helps with DNA protection.
10. **Tyrosine:** Enhances mental focus and reduces stress, especially during intense physical activities.
11. **Taurine:** Supports endurance and reduces oxidative stress, aiding recovery and performance.
12. **Leucine, Isoleucine, Valine (BCAAs):** Help with muscle protein synthesis, reduce muscle breakdown, and improve recovery.
13. **MSM (Methylsulfonylmethane):** May reduce joint pain and inflammation, promoting recovery and flexibility.
14. **Potassium Chloride:** Essential for electrolyte balance, muscle function, and preventing cramps.
15. **Sodium Phosphate:** Enhances endurance by buffering acid buildup in muscles and improving oxygen delivery.
16. **Calcium Lactate:** Provides calcium for bone health and muscle contraction.
17. **Sodium Chloride:** Supports hydration, electrolyte balance, and nerve function.
18. **Steviol Glycosides:** A natural sweetener, providing sweetness without affecting blood sugar.
19. **Vitamins B1, B3, B5, B6:**
 - **B1 (Thiamine):** Supports energy metabolism and nerve function.
 - **B3 (Niacin):** Improves energy production and reduces fatigue.
 - **B5 (Pantothenic Acid):** Aids in fat metabolism and energy production.
 - **B6 (Pyridoxine):** Important for protein metabolism and neurotransmitter function.
20. **Selenium:** An antioxidant that supports immune function and recovery from oxidative stress.

How does Vo2 Vortex assist the athlete with Energy, Speed, Strength, Stamina, Hydration and DNA Protection?

Vo2 Vortex offers a well-rounded blend of ingredients that support **energy, speed, power, stamina, hydration, and DNA protection**, making it highly suitable for both endurance athletes and power athletes such as sprinters and bodybuilders. Here's a breakdown of its benefits in each area:

Energy:

- The combination of **Sucrose** (quick energy), **Isomaltose** (sustained energy), and **BHB Magnesium** (ketone-based energy) provides a steady and flexible fuel supply for both immediate bursts and prolonged endurance efforts.
- **B Vitamins** play a crucial role in converting carbohydrates, fats, and proteins into ATP, ensuring optimal energy production throughout exercise.

Speed:

- **Citrulline** enhances **nitric oxide production**, improving blood flow and oxygen delivery to muscles, which is key for faster reactions and explosive movements. This is essential for sprinting or high-intensity intervals.
- **Tyrosine** helps improve mental focus and alertness, aiding athletes in maintaining their speed during intense activity.

Power:

- **Leucine, Isoleucine, and Valine (BCAAs)** stimulate muscle protein synthesis and prevent muscle breakdown, supporting the development of strength and power, particularly in bodybuilders and sprinters.
- **Electrolytes** (Potassium, Sodium, Calcium, Magnesium) support muscle contraction, enabling athletes to generate maximum force and power during intense efforts.

Stamina:

- **Citrulline** and **Taurine** help delay muscle fatigue by improving oxygen delivery and reducing oxidative stress, allowing athletes to maintain performance over extended periods.
- The slow-release energy from **Isomaltose** and **BHB** ensures that athletes can sustain their endurance for longer sessions, while **Glutathione** helps protect cells from fatigue-inducing oxidative damage.

Hydration:

- The formula contains **key electrolytes** (Potassium, Sodium, Calcium, and Magnesium), which are vital for maintaining fluid balance, preventing cramps, and supporting muscle function during exercise.
- **Taurine** aids in regulating cellular hydration, ensuring muscles remain efficient and hydrated, crucial for both endurance and power athletes.

DNA Protection:

- **Glutathione** and **Selenium** provide potent antioxidant protection, shielding cells from oxidative damage caused by intense exercise, including DNA protection. This helps ensure long-term cellular health and reduces the risk of injury or fatigue caused by cellular damage.

Summary:

In summary, the **Vo2 Vortex** product formula benefits the athlete in many ways, including maintaining adequate hydration, the production of energy, musculoskeletal repair, inflammation management and overall health. The formula provides a variety of nutrients and caters to metabolic flexibility in the context of the variety of energy inducing ingredients. Hence, we have chosen to align **Vo2 Vortex** to our **Infinite Energy Platform** formulation Initiative. **Vo2 Vortex** also lends itself to the Nutr8 Sport Moniker of:

#Beyond Your Limits

How specifically does Vo2 Vortex assist with ATP Production?

Vo2 Vortex contains several ingredients that directly or indirectly support ATP production, which is the primary source of energy for all cellular processes, including muscle contraction during exercise. Here's how the key ingredients contribute to ATP synthesis:

1. **B Vitamins (B1, B3, B5, B6)**

- **Vitamin B1 (Thiamine):** Plays a critical role in the conversion of carbohydrates into energy by facilitating the metabolism of glucose. It helps produce ATP through the Krebs cycle, which is essential for cellular energy.
- **Vitamin B3 (Niacin):** Acts as a precursor to NAD⁺ (Nicotinamide Adenine Dinucleotide), a key coenzyme in the electron transport chain, where the majority of ATP is produced in cells. NAD⁺ is crucial for converting food into usable energy.
- **Vitamin B5 (Pantothenic Acid):** Involved in the formation of Coenzyme A (CoA), which is essential for the Krebs cycle. CoA helps convert fats, carbohydrates, and proteins into energy, supporting continuous ATP production.
- **Vitamin B6 (Pyridoxine):** Assists in the breakdown of glycogen (stored carbohydrates) into glucose, providing fuel for ATP production during exercise.

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2. **Sucrose & Isomaltose (Carbohydrates)**

- These carbohydrates provide glucose, which is a primary fuel for glycolysis, a process that rapidly generates ATP.
- Sucrose gives a quick spike in glucose levels, supplying immediate energy for ATP production, while Isomaltose breaks down more slowly, offering a sustained release of glucose, which is especially useful for endurance athletes requiring prolonged ATP production.

3. **BHB Magnesium (Beta-Hydroxybutyrate)**

- BHB (Beta-Hydroxybutyrate) provides an alternative fuel source in the form of ketones. Ketones can be converted into Acetyl-CoA, which enters the Krebs cycle to produce ATP. This provides energy when glucose is scarce, such as during long-duration exercise or low-carb diets.
- Magnesium is a critical cofactor in ATP synthesis. It helps stabilize ATP molecules and assists in energy transfer during muscular contractions.

4. **Citrulline**

- Citrulline enhances nitric oxide (NO) production, which improves blood flow and oxygen delivery to muscles. This increases the efficiency of aerobic respiration, supporting ATP production by ensuring muscles get sufficient oxygen and nutrients for energy production.
- Citrulline also aids in the removal of ammonia, a byproduct of protein breakdown that can interfere with ATP production, ensuring a more efficient energy process during intense exercise.

5. **Malic Acid**

- Malic acid plays a role in the Krebs cycle by acting as an intermediate. It helps facilitate the conversion of carbohydrates, fats, and proteins into energy (ATP), making the energy production process more efficient.
- It also supports the malate-aspartate shuttle, which helps transport reducing equivalents (like NADH) into the mitochondria for aerobic ATP production.

6. **Taurine**

- Taurine helps regulate calcium levels in muscle cells, which is essential for effective muscle contraction and energy utilization. It indirectly supports ATP production by ensuring that muscles can contract properly and efficiently during exercise.

7. **Glutathione**

- While primarily an antioxidant, glutathione helps maintain cellular health and protects mitochondria from oxidative damage, which could impair ATP production. By reducing oxidative stress, it ensures that the cells can continue to produce ATP efficiently during exercise.

8. Electrolytes (Potassium Chloride, Sodium Phosphate, Calcium Lactate, Sodium Chloride)

- These electrolytes help maintain the balance of fluids and ions in muscle cells, which is crucial for muscle contraction. Proper muscle function requires ATP, and electrolytes ensure that the environment in the cell is optimal for efficient ATP use.
- Sodium Phosphate can help buffer lactic acid, delaying fatigue and allowing for continued ATP production during high-intensity exercise.

How This Supports ATP Production During Exercise

- **Immediate ATP Generation:** Ingredients like sucrose and Vitamin B1, B3, B5, B6 help rapidly generate ATP through glycolysis and the Krebs cycle, which is essential for both short bursts of energy (e.g., sprinting) and sustained efforts (e.g., long-distance running).
- **Sustained ATP Production:** Isomaltose and BHB provide longer-term energy sources. The slow breakdown of Isomaltose ensures steady glucose availability, while BHB acts as an alternative fuel during prolonged exercise, helping to prevent fatigue.
- **Efficient Energy Use:** Electrolytes and Taurine help regulate muscle contractions, which are ATP-dependent, ensuring that muscles work efficiently without excessive ATP waste.

Conclusion

Vo2 Vortex supports ATP production through multiple pathways, making it effective for both endurance athletes (who need sustained energy for long durations) and power athletes (who require rapid bursts of ATP for explosive movements). By enhancing both aerobic and anaerobic energy systems, it helps ensure that athletes can perform at their best, with sufficient energy for both high-intensity efforts and prolonged endurance.

Vo2 Vortex is well complimented by 2 great companion products:

1. **S3 Energy:** A Formula to assist the body to create nitric oxide and ATP for enhanced energy throughout the duration of the exercise with heightened mitochondrial performance, cellular biogenesis, and nutrient bioavailability.

Directions:

- To test resilience to the S3 formula – specifically in the context of the intense vasodilation it fosters, take 1 capsule the first time you try the product. Once your tolerance is acceptable, take 3 capsules 30 minutes before exercise and 2 more capsules every 90 minutes (into a run) or every 2 hours (into a cycle). Other athletes who participate in intense sport for shorter duration, 3 capsules (30 minutes before the event) will suffice.

#YourATPfactory!

#BeyondYourLimits!



2. Complete repair:

Complete Repair - contains 3gs of ketones per serving, 16.6gs of Protein, BCAAs, carbohydrates, vitamins, minerals and select superfood extracts. We call the formula our **Nutr8-ion platform** as it feeds and hydrates the athlete at the same time, increasing the power and stamina of the athlete and leading to maximal intensity and duration of energy and effort. The low osmolality formula ensures almost immediate hydration and food uptake.

Take 35g in 300ml of water 30mins before you train.

Can also be taken during exercise for additional energy and food, as well as a post exercise recovery drink for your **#UltimateInflammationManagementPlatform!**



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More detail you may enjoy reading:

Anabolic vs Catabolic (Metabolic Processes)

Anabolic and **catabolic** refer to two opposing processes in the body that are part of **metabolism**, which is the set of life-sustaining chemical reactions in organisms.

Anabolic (Building Up)

- **Definition:** Anabolism is the process by which the body **builds up** tissues and molecules. It involves the synthesis of complex molecules from simpler ones, requiring energy to create new cells, tissues, and proteins.
- **Purpose:** Anabolic processes are responsible for **growth, repair, and maintenance** of tissues, such as muscles, bones, and other cells.
- **Examples:**
 - **Muscle growth:** Protein synthesis, where amino acids are used to build muscle tissue.
 - **Bone growth:** Formation of new bone cells.
 - **Hormones involved:** **Insulin, growth hormone, testosterone, and IGF-1** (Insulin-like Growth Factor 1) all promote anabolic processes.

Catabolic (Breaking Down)

- **Definition:** Catabolism is the process by which the body **breaks down** larger molecules into smaller ones, often to release energy. It's the metabolic pathway that degrades complex molecules to extract usable energy.
- **Purpose:** Catabolic processes provide the body with **energy** by breaking down nutrients like carbohydrates, fats, and proteins, especially when the body is under stress or needs to mobilize stored energy.
- **Examples:**
 - **Muscle breakdown:** Breakdown of muscle proteins into amino acids during periods of fasting, intense exercise, or calorie restriction.
 - **Fat breakdown:** Breakdown of stored fat (triglycerides) into fatty acids for energy.
 - **Hormones involved:** **Cortisol, glucagon, and adrenaline** promote catabolic processes, especially during stress or energy deficiency.

Key Differences

- **Goal:**
 - **Anabolic:** Builds and stores energy for growth and repair.
 - **Catabolic:** Breaks down stored energy and tissues for immediate use.

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- **Energy:**
 - **Anabolic:** Requires energy (ATP) to create complex molecules.
 - **Catabolic:** Releases energy by breaking down complex molecules.
- **Hormonal Regulation:**
 - **Anabolic hormones** (e.g., insulin, growth hormone) trigger tissue growth and repair.
 - **Catabolic hormones** (e.g., cortisol, adrenaline) promote energy release by breaking down tissues.
- **Effect on Muscles:**
 - **Anabolic:** Promotes muscle growth and tissue repair.
 - **Catabolic:** Leads to muscle breakdown, particularly during stress or lack of nutrients.

Balance:

In a healthy body, there is a balance between anabolic and catabolic processes. **Anabolism** is more dominant during periods of growth, recovery, or after eating, while **catabolism** becomes more prominent during fasting, intense exercise, or stress.

Understanding this balance is important for athletes and those aiming to build muscle, recover from exercise, or manage their weight effectively.

How Vo2Vortex assists with Anabolism?

Vo2 Vortex contains several ingredients that can support **anabolic performance** - the process by which the body builds up muscles and tissues. Anabolic performance typically involves muscle protein synthesis, recovery, and hormone regulation, all of which are crucial for muscle growth and repair. Here's how some of the key ingredients may assist with anabolic performance:

1. Leucine, Isoleucine, and Valine (BCAAs):

- **Leucine** is especially important for stimulating **muscle protein synthesis** through the activation of mTOR (mechanistic target of rapamycin), a key pathway for muscle growth.
- **Isoleucine and Valine** also play supportive roles in **muscle repair** and **reducing muscle breakdown** during and after workouts.

2. BHB Magnesium (Beta-Hydroxybutyrate):

- BHB provides an alternative energy source (ketones), which can preserve muscle glycogen stores. By sparing glycogen, the body is less likely to break down muscle tissue for energy, supporting an anabolic environment.

- Magnesium is critical for **muscle contraction** and **protein synthesis**, playing a direct role in building new muscle.

3. Citrulline:

- Citrulline helps increase **nitric oxide production**, which improves **blood flow** to muscles. This boosts the delivery of nutrients and oxygen, supporting **muscle growth** and recovery during and after exercise.
- Increased nitric oxide can enhance **muscle pumps**, a sign of increased nutrient delivery and cell swelling that may contribute to long-term muscle growth.

4. Tyrosine:

- Tyrosine is a precursor to neurotransmitters like dopamine, which enhances **mental focus** and performance during workouts. Improved focus and stress management can lead to better, more intense training sessions, indirectly supporting anabolic goals.

5. Taurine:

- Taurine helps reduce oxidative stress and promotes cell hydration, which can support **muscle recovery** and reduce muscle damage from intense training. Well-recovered muscles are more likely to enter an anabolic state post-exercise.
- It may also improve muscle endurance, leading to better overall performance, which is vital for anabolic growth.

6. Vitamins B1, B3, B5, B6:

- These **B vitamins** are essential for **energy metabolism** and the conversion of food into usable energy (ATP). Efficient energy production supports higher-intensity workouts, which are crucial for triggering anabolic signals in the body.
- B vitamins also play roles in **protein synthesis**, a key aspect of muscle growth.

7. Glutathione:

- As a powerful antioxidant, glutathione reduces **oxidative stress** and inflammation, which can inhibit muscle recovery and growth. By protecting muscles from excessive oxidative damage, it helps maintain an anabolic state after training.

8. MSM (Methylsulfonylmethane):

- MSM supports **joint and connective tissue health**, reducing inflammation and allowing for consistent, high-intensity training essential for stimulating anabolic responses. It also provides **sulfur**, an important element for protein synthesis and tissue repair.

9. Potassium Chloride, Sodium Phosphate, Calcium Lactate, Sodium Chloride:

- These **electrolytes** support **muscle contraction**, hydration, and overall muscle function. Proper hydration and electrolyte balance are key to maintaining muscle

performance and preventing cramping, both of which contribute to sustaining anabolic activity during prolonged training sessions.

10. Sucrose & Isomaltose:

- These **carbohydrates** provide the body with both quick and sustained energy. Post-workout, they help replenish **muscle glycogen** stores, which is critical for recovery and maintaining an anabolic state.
- Carbs also stimulate insulin release, a hormone that promotes **nutrient uptake** into muscle cells, supporting recovery and muscle growth.

11. Selenium:

- Selenium acts as an **antioxidant**, helping to minimize muscle damage and protect muscle cells from oxidative stress during intense workouts. This enables faster recovery, which is key for sustained anabolic growth.

12. Malic Acid:

- **Malic acid helps generate ATP through the Krebs cycle, providing energy for muscle performance** and recovery, both of which are crucial for anabolic processes.

Summary:

Vo2 Vortex supports anabolic performance by:

- **Stimulating muscle protein synthesis** (BCAAs, Leucine)
- **Increasing nutrient delivery and muscle pumps** (Citrulline, Taurine)
- **Enhancing recovery and reducing oxidative stress** (Glutathione, MSM, Taurine, Selenium)
- **Providing energy and supporting efficient metabolism** (BHB, Carbohydrates, B Vitamins)
- **Improving mental focus and workout intensity** (Tyrosine)

Effectively, **Vo2 Vortex** helps create an optimal environment for **muscle growth, strength gains, and recovery**, which are central to achieving anabolic goals.

How does **Vo2Vortex** help manage Catabolism?

Vo2 Vortex also contains ingredients that help reduce or manage catabolism, the breakdown of muscle tissue and other tissues during intense exercise or under stress. Catabolism often occurs when the body lacks sufficient energy or nutrients to sustain activity, leading to the breakdown of muscle protein for fuel. Here's how the ingredients in **Vo2 Vortex** can help combat catabolism:

1. **Leucine, Isoleucine, and Valine (BCAAs):**

- Leucine, in particular, is a key player in preventing muscle breakdown. It stimulates muscle protein synthesis, which counters the muscle degradation that occurs during catabolism.
- BCAAs help reduce muscle soreness and fatigue, allowing for better recovery and preventing muscle tissue from being broken down during prolonged or intense exercise.

2. **BHB Magnesium (Beta-Hydroxybutyrate):**

- BHB provides an alternative energy source in the form of ketones, which can reduce the body's reliance on breaking down muscle tissue (catabolism) for energy.
- Ketones can help preserve muscle glycogen and reduce the need for muscle breakdown during periods of low carbohydrate availability or caloric deficit.

3. **Glutathione:**

- Glutathione is a potent antioxidant that helps protect muscles from oxidative damage and inflammation, both of which contribute to catabolism.
- By reducing oxidative stress, glutathione allows for quicker recovery, preventing muscle tissue from being broken down for repair purposes.

4. **Taurine:**

- Taurine helps protect muscle cells from oxidative stress and reduces inflammation, both of which contribute to catabolic processes.
- It also aids in maintaining cell hydration, which is crucial for preventing the breakdown of muscle tissue under stress.

5. **MSM (Methylsulfonylmethane):**

- MSM has anti-inflammatory properties, helping reduce muscle and joint inflammation caused by intense exercise. This reduction in inflammation protects against catabolism by promoting faster recovery and preserving muscle tissue.

6. **Sucrose & Isomaltose:**

- These carbohydrates provide fuel for energy, reducing the likelihood that the body will turn to muscle protein as an energy source.
- By replenishing glycogen stores post-exercise, they help create an anabolic environment, reducing the risk of catabolic breakdown.

7. **Citrulline:**

- Citrulline improves blood flow and nutrient delivery to muscles, enhancing recovery and preventing muscle degradation. Better blood flow ensures that muscles receive the oxygen and nutrients they need to avoid catabolism.

8. Tyrosine:

- Tyrosine reduces mental stress and fatigue, which indirectly prevents catabolism. Stress hormones like cortisol are known to contribute to muscle breakdown, and tyrosine can help reduce these effects by improving mood and focus during intense exercise.

9. Vitamins B1, B3, B5, B6:

- These B vitamins play crucial roles in energy metabolism and ensure that the body efficiently uses carbohydrates and fats for fuel, rather than breaking down muscle protein.
- By supporting efficient energy production, these vitamins reduce the need for muscle breakdown (catabolism) to generate energy.

10. Selenium:

- Selenium helps combat oxidative stress and cellular damage, which are triggers for muscle breakdown (catabolism). It plays a role in maintaining cellular health and preserving muscle tissue under stress.

11. Malic Acid:

- Malic acid supports ATP production through the Krebs cycle, providing the energy needed for muscle function and repair. This energy production helps prevent the body from breaking down muscle proteins for fuel.

12. Potassium Chloride, Sodium Phosphate, Calcium Lactate, Sodium Chloride:

- These electrolytes maintain fluid balance, preventing dehydration and muscle cramping, which can trigger catabolic processes.
- Proper electrolyte levels help muscles function efficiently and reduce the likelihood of muscle breakdown during prolonged or intense exercise.

Summary:

Vo2 Vortex supports anti-catabolic effects by:

- Providing alternative energy sources (BHB, Sucrose, Isomaltose)
- Promoting muscle protein synthesis (BCAAs, Leucine)
- Reducing oxidative stress and inflammation (Glutathione, MSM, Taurine, Selenium)
- Enhancing recovery and preventing muscle breakdown (B Vitamins, Citrulline, Tyrosine)

These effects help minimize muscle loss, support recovery, and maintain muscle tissue during periods of intense training, stress, or caloric deficit, making the formula highly effective in combating catabolism.

How **Vo2Vortex** assist with DNA Protection?

Vo2 Vortex includes several ingredients that may help protect an athlete's DNA by reducing oxidative stress, supporting cellular repair, and enhancing antioxidant defences. Here's how:

1. **Glutathione:** A potent antioxidant that neutralizes free radicals, which can damage DNA through oxidative stress. Glutathione helps maintain the integrity of cells by protecting them from damage caused by intense exercise.
2. **Selenium:** This mineral plays a key role in DNA protection by contributing to the production of antioxidant enzymes like glutathione peroxidase. These enzymes reduce oxidative damage to DNA.
3. **B Vitamins (B1, B3, B5, B6):** These vitamins are essential for proper DNA synthesis and repair. They also help in energy metabolism, reducing the accumulation of reactive oxygen species (ROS) that can damage DNA during exercise.
4. **Citrulline:** While primarily known for improving nitric oxide production and blood flow, Citrulline may indirectly protect DNA by enhancing circulation, delivering more oxygen and nutrients to cells for efficient repair and detoxification.
5. **Tyrosine:** Supports the production of neurotransmitters that regulate stress and mood, which may indirectly protect DNA by reducing chronic stress-related damage.
6. **Taurine:** Taurine exhibits antioxidant properties, helping to protect cells and DNA from oxidative damage, particularly under the stress of physical exertion.
7. **MSM (Methylsulfonylmethane):** It has anti-inflammatory and antioxidant effects that help reduce oxidative stress, which can damage DNA over time. MSM also supports tissue repair and recovery, indirectly protecting cellular structures like DNA.
8. **BHB Magnesium (Beta-Hydroxybutyrate):** As a ketone body, BHB has been shown to reduce oxidative stress and inflammation, which can protect cellular structures, including DNA, from damage during intense physical activity.

In essence therefore, **Vo2 Vortex** provides antioxidant protection, supports the body's natural DNA repair processes, and reduces the impact of oxidative stress during athletic performance. This helps maintain cellular integrity and promotes long-term health.

#LiveYoung!