How to use sports supplements for Cycling.

There are some key supplementation fundamentals that need to be adhered to when chasing your best on the bike, whether it be on-road or off-road. In this article I will show you an in depth look at how supplements can enhance each fundamental to allow you to smash previous times, increase on endurance performance more than ever before and push through those giant walls that appear when your bodies scream "no more".

Hydration:

One of the most important supplementation fundamentals of cycling is Hydration, staying hydrated with a positive electrolyte balance can be the difference between winning and not finishing at all.

URBAN MUSCLE ISO-MAX is the perfect choice and has been specifically formulated to be the perfect isotonic electrolyte that ensures greater hydration, less chance of cramping, glycogen support and greater ATP production(which I will discuss more in depth later in the article).

Whether your using it during training or on competition day ISO-MAX will deliver the nutrients your body most needs to allow optimal hydration and performance on the bike.

ISO-MAX is precisely formulated for rapid hydration and absorption of electrolytes during intense training/competition. Iso-MAX is based on the latest scientific studies and uses only the highest quality ingredients. Iso Max contains no banned substances or stimulants just high-tech natural ingredients proven to make you perform at a higher level for longer.

As well as containing higher levels of electrolytes and magnesium than the competition. Iso Max also contains Co Enzyme Q10 which is a component of the electron transport chain and participates in aerobic cellular respiration, generating energy in the form of ATP. It also supports heart tissue health.

A key component to ISO-MAX is it large dose of Co-enzyme Q10.
CoQ10 is a molecule produced in the body with a primary role as both antioxidant (direct and indirect) and to aid the function of the mitochondria and thus energy production. It can also act as an endothelial protective agent and enhance blood flow which is related to preserving nitric oxide function.

ISO-MAX uses a combination of dextrose which is glucose polymer and fructose. Carbohydrate intake during exercise can delay the onset of fatigue and improve performance of prolonged exercise as well as exercise of shorter duration and greater intensity (e.g., continuous exercise lasting about 1 h and intermittent high-intensity exercise), but the mechanisms by which performance is improved are different.

During prolonged exercise, the performance benefits of carbohydrate ingestion are likely achieved by maintaining or raising plasma glucose concentrations and sustaining high rates of carbohydrate oxidation, whereas during intense exercise, carbohydrate intake seems to positively affect the central nervous system.

Carbohydrate from a single source, such as glucose, can only be oxidized at rates of approximately 60 g/h.

When a combination of carbohydrates is ingested (e.g., glucose and fructose) oxidation rates of slightly more than 100 g/h can be achieved if large amounts of carbohydrate are ingested (e.g., > 140 g/h).

Ingesting a carbohydrate solution that is very concentrated and/or has a high osmolality is likely to cause gastrointestinal discomfort.

The osmolality of a fluid is a measure of the number of particles in a solution. In a drink, these particles will comprise of carbohydrate, electrolytes, sweeteners and preservatives. In blood

plasma the particles will comprise of sodium, proteins and glucose. Blood has an osmolality of 280 to 330mOsm/kg. Drinks with an osmolality of 270 to 330mOsm/kg are said to be in balance with the body's fluid and are called Isotonic. Hypotonic fluids have fewer particles than blood and Hypertonic have more particles than blood.

Consuming fluids with a low osmolality, e.g. water, results in a fall in the blood plasma osmolality and reduces the drive to drink well before sufficient fluid has been consumed to replace losses.

The amount of carbohydrate an individual athlete should ingest during exercise should be determined by trial and error, and a balance should be struck between increasing carbohydrate availability during exercise and minimizing gastrointestinal distress.

Lactic acid and H+ Ion buffering:

That horrible feeling of icy fire that builds up in your legs just when you need them most...LACTIC ACID.

Lactic acid is something we cannot avoid, it will always be there and in fact plays both positive and negative rolls. Lactic acid is a by-product of anaerobic glycolysis and anaerobic metabolism. Although used as a fuel by the heart, excessive lactic acid slows down contractions of the skeletal muscles, preventing you from cycling at a high intensity for long periods. When lactic acid builds up its negative effect is that it restrict contractile function of the muscles in your legs forcing them to move slower and slower and to feel very heavy. So what if I said it is very possible to dilute the barriers of lactic acid and smash through those lactic walls.

URBAN MUSCLE **BETA-ALANINE** efficacy is backed by major university, peer-reviewed studies performed on humans, not a cell, rat or goat study upon which other products typically base claims. The science behind Beta-Alanine is simple, it makes sense and it works. There is no doubt that Beta-Alanine is the most effective supplement for adding pure performance and superior strength. Below is a list of the benefits purported from Beta-Alanine.

Benefits of Beta-Alanine as supported by scientific studies:

- ***Boost Explosive Muscular Strength & Power Output***
- ***Boosts Muscular Anaerobic Endurance***
- ***Increases Aerobic Endurance***
- ***Increase Exercise Capacity so You Can Train Harder & Longer***

What causes our muscles to lose strength,power and endurance during intense exercise?

When we exercise, especially when it’s high intensity exercise, our bodies accumulate a large amount of hydrogen ions (H+), causing our muscles’ pH to drop (become more acidic). **This process is occurring whether you feel a burn or not.**

The breakdown of ATP and the subsequent rise in H+ concentrations occur in all of our energy systems but H+ buildup is most prevalent in an energy system called glycolysis, which also produces lactic acid. At physiological pH, lactic acid dissociates H+ and is the primary source of released H+ ions during exercise, causing pH to drop. It is the released H+ from lactic acid that causes muscular performance problems, not the leftover lactate ions as many incorrectly believe. While lactic acid is the primary source of released H+, it is not the only source. H+ ions are also being released at a rapid rate when you break down the high energy compound ATP during exercise. With the presence of many sources during energy production releasing H+, pH drops quickly.

As our muscles pH quickly drops, so does their ability to contract forcibly and maintain a high level of performance throughout your workout session. Not being able to perform and maintain forceful muscular contractions and push your body to the limit during your workout session, seriously hampers your ability to maximally overload your muscles and force new muscle gains.

In a nutshell, H+ causes your muscles pH to drop, in tern decreasing your strength and causing you to fatigue faster. These limitations stop you from performing at peak for long periods

How long will it take to start noticing benefits?

Performance benefits typically occur in as little as two weeks, although some individuals will notice benefits within one week. As carnosine levels increase, the benefits will follow. The most dramatic results are generally experienced within the 3-4 week range but they don't stop there. Recent research is now showing carnosine levels continue to increase for a minimum of 12 weeks which is why we recommend staying on Beta-Alanine for at least three months to optimize your carnosine levels.

How much Beta-Alanine is needed to cause performance increases?

Research has shown that you can take an amount between 3.2 grams and 6.4 grams per day to significantly boost carnosine levels and improve performance. The most recent research, now using 4-5 grams a day, is showing comparable carnosine concentration and performance improvements to those using 6.4 g daily. Based off the current research, we suggest 4 grams of beta-alanine a day, with an "optional" 2 week loading phase of 6 grams a day during the first month of use.

Immediate benefits: Many users experience intense vasodilatation/pumps from the very first dose of Beta-Alanine. Because Beta-Alanine increases carnosine and carnosine is a powerful precursor in generating nitric oxide synthase (a group of enzymes necessary for making the powerful vasodilator nitric oxide), this is an added, immediate benefit of Beta-Alanine.

CREATINE and ATP (Adenosin Tri Phosphate):

Creatine will not make you bulky. Creatine does not make your muscles magically grow so big you become nonfunctional. Creatine will not make you hold water to the point of dramatic weight gain.

Creatine will however increase on the energy (ATP-Adenosine Tri Phospate) the muscles need to perform with greater capacity. Creatine will increase on explosive energy. Creatine will assist in recovery due to muscle cell volumisation,

Creatine is a molecule, produced in the body, but also found in foods, mostly meat, eggs and fish.

Creatine confers a variety of health benefits, including neuroprotective and cardioprotective properties. It also improves power output and is often used by athletes to increase high-intensity exercise capacity and lean body mass.

Creatine's main action in the body is storing high-energy phosphate groups in the form of phosphocreatine. During periods of stress, phosphocreatine releases energy to aid cellular function. This is what causes strength increases after creatine supplementation, but this action can also aid the brain, bones, muscles and liver. Most of the benefits of creatine are provided through this mechanism.

URBAN MUSCLE IN-CEL is an extremely powerful physical performance formula with super fast absorbing creatine for instant ATP energy production and cell volumizing, the ultimate nitric oxide booster for increased vasio-dialation which allows more blood flow, oxygen and nutrients to the muscles during intense training, D-ribose for dramatic instant muscle energy and lactic buffering to allow you to perform at extremely elevated levels for long periods of time and finally, uptake enhancers to make IN-CEL absorb at an unprecedented rate.

POST TRAINING RECOVERY:

A very important component of recovery is protein. Protein is what our muscles are made from and without it our muscle tissue would go into a state of catabolism (break down). When we use our muscles in extreme environments such as cycling we need to supply our bodies with appropriate quantities of protein to stop the degradation of muscle tissue, this in turn allows us to become faster and stronger. Using a protein supplement does not automatically make you muscles bigger. Your training depicts your results, so if you are training to increase muscle size then that is the result you will achieve but if you are training to become faster or have better endurance then this is what protein will assist your recovery for. To further our recovery adding carbohydrates to your post training recovery protocol is just as important as protein. As you have seen at the beginning of this article our bodies major source of energy is carbohydrates. Carbohydrates are digested, converted to glycogen and shuttled into our blood stream to be used by our muscles as fuel. At times of strenuous exercise/training/competition our bodies use greater amounts of glycogen and in turn requires replenishment post training. Particularly if you have multiple events on the one day.

URBAN MUSCLE NECTAR OF THE GODS:

Urban Muscle Nectar of the Gods is a revolution in post workout nutrition. With it's combination of ultra fast absorbing Whey Protein Isolates, simple and complex Carbs, Glutamine, a huge dose of BCAA's, and Electrolites, plus a super refreshing Lime Splash flavour, Nectar of the Gods has no rivals in the post workout nutrition game. Never before has there been such a complete post training formula, from body builders to triathletes and anyone in between this product will transform the way you think about your post training drink.

Urban Muscle's "Nectar of the Gods" is a revolution in post training nutrition, not only for your body but for your tastebuds too!
It contains some of the fastest absorbing proteins known to man and both short and long chain glucose polymers. N.O.T.G also includes the maximum allowable amount of BCAA's and the heavy weight of the amino acid world L-glutamine. Glutamine makes up a staggering 62% of the amino acids in skeletal muscle and plays a major role in protein synthesis.

The electrolites sodium , potassium and magnesium are also included.
Nectar of the Gods with its cool refreshing lime spash and pine orange split flavour will catapult you back to life after those gruelling sessions at the gym, field, or track.

Nectar of the Gods has been formulated specifically as a post training drink but can also be utilized pre-training product to bump up glycogen, protein and electrolyte levels.

URBAN MUSCLE RESURRECT:

RESURRECT is a recovery formula like no other, combining the most powerful ingredients at doses that will drastically reduce muscle soreness, improve recovery times, improve lean muscle repair and vastly improve performance in endurance trainers.

The performance gained from faster recovery can be measured in speed, strength and endurance....and the ability to back up and do it all again tomorrow!

RESURRECT BREAKDOWN

L-GLUTAMINE - Arguably the most important amino acid when it comes to recovery. L-Glutamine makes up approximately 62% of skeletal muscle and is shared between the recovery

system and the immune system. Glutamine can be synthesized by the body from other amino acids so it is classified as a “non-essential” amino acid, but the fact that the body has to break down or catabolise muscle tissue to do this, is reason enough for this amazing amino to be at the top of your list.

HMB -Hydroxy Methylbutyrate is a metabolite of the amino acid l-leucine and is the strongest of all anticatabolics. However, the actual mechanisms of HMB metabolism are not known. One hypothesis suggests that HMB directly inhibits the catabolism of muscle proteins during stressful events such as exercise. Another possibility is that HMB is a structural component covalently linked to tissues or cell membranes and is destroyed when under stress. Thus, supplementation with HMB may both prevent muscle breakdown as well as accelerate tissue repair after exercise. One thing everyone agrees on is, that HMB works like nothing else to improve recovery times.

BCAA’s - Branch Chain Amino Acids are the "Building Blocks" of the body. They make up 35% of your muscle mass and must be present for molecular growth and development to take place. Besides building cells and repairing tissue, they form antibodies, they are part of the enzyme & hormonal system; they build RNA and DNA and they carry oxygen throughout the body.

TAURINE - is a powerfull cell volumiser and helps shuttle nutrients into your muscles.

Take post-training and 12hrs later.