



TENNISNUTRITIONSECRETS

Superfoods



Quinoa



Quinoa has become popular recently, and for good reason – not only is it an excellent gluten-free alternative to rice or pasta with incredible versatility, it contains a huge range of nutrients including carbohydrates, proteins, manganese, magnesium, iron, zinc, potassium and calcium. Quinoa has all nine essential amino acids, which are the amino acids humans are incapable of producing themselves – and therefore necessary for protein and muscle building. Although many of us are only now hearing about quinoa, knowledge about its benefits is nothing new: even the Incas knew that it helped their warrior achieve better stamina.



Sweet Potato



Sweet potatoes are a mine of antioxidants, necessary for mopping up the excess free radicals created by metabolic processes during exercise. Not only are they a fat-free source of the antioxidants vitamin E and vitamin C, they also contain more beta carotene than any other fruit or vegetable. Sweet potatoes are therefore excellent for muscle recovery. As if this wasn't enough, sweet potatoes also contain high levels of iron, which are necessary for red blood cell production and therefore effective oxygen transport in the body.



Broccoli



Broccoli is a rich source of potassium and folate, and also contains good levels of fiber and vitamins A, C and B6. But perhaps its most important nutrient is one most people have never heard of – sulforaphane. Studies suggest that sulforaphane may help combat a wide range of cancers, including prostate, liver, lung, bladder, skin, and stomach. Its cancer fighting properties don't end there: it also contains chemicals that help increase tumor suppressant factors in the body.



Spinach



Spinach is a green leafy vegetable that packs a big nutritional punch. Abundant in fiber, phytonutrients, antioxidants, vitamin K (which helps build the strong bones), and vitamin A (for the skin). Spinach is a superfood for athletes interested in managing and reducing inflammation and free radical damage. Additionally, Spinach is full of iron, which is essential fight fatigue by bringing oxygen to the body.



Kale



Belonging to the cabbage family, kale is abundant in vitamins: A, K, B6, calcium and iron. Like spinach, it's packed with antioxidants that can reduce inflammation in the body. Carotenoids and flavonoids, which are two powerful antioxidants that protect against harmful free radicals causing oxidative stress are found in kale as well. The high fiber content can lower cholesterol as well.



Eggs



The most important property of eggs is that they contain very high quality, easily digestible protein, including all nine essential amino acids. But it doesn't stop there – eggs also contain high levels of vitamins, minerals, Omega-3 fatty acids and antioxidants. Eggs are an essential part of the diet of an endurance athlete, helping build strength and power while also aiding muscle recovery. And fortunately, they are cheap, easy to prepare – and tasty!



Almonds



The results of a recent study suggested that athletes who consume almonds tend to burn reserved carbohydrates preferentially to fat during high-intensity exercise, potentially offering benefits for athletic performance. The researchers believed that these benefits were likely due to almonds' unique nutrient profile, incorporating a combination of protein, fiber, good fats and vitamins.

Athletes consuming almonds also enjoyed increased capacity for vitamin E and other antioxidants.



Almond Butter

Nut butters are an excellent addition to a healthy diet, as they are a great source of dietary fibre and protein. However, not all nut butters are created equal and almond butter offers more health benefits than its popular counterpart, peanut butter. Almond butter contains



high levels of vitamin E – 1 tablespoon provides almost a third of your daily requirements. It also contains about twice as much magnesium and iron as peanut butter. Magnesium is important for normal muscle and nerve function and is also involved in a variety of metabolic processes in the body, while iron is required for oxygen transport by red blood cells and helps activate cellular antioxidants. Almond butter also contains significant levels of calcium, potassium and folate. Using almond butter instead of peanut butter is a simple substitution that can make a big nutritional difference. Be careful when choosing nut butters, as some can contain high levels of added salt, sugar and additives.



Avocado



Fresh avocados are an incredible source of nutrition, containing thirteen essential nutrients that the body is unable to synthesize itself: vitamins A, C, D, E and K, and the B vitamins thiamine, ribo-flavin, niacin, pantothenic acid, biotin, vitamin B6, vitamin B12 and folate. Avocados can also enhance the absorption of other fat-soluble nutrients consumed at the same time. Avocado contains only healthy fats, an important source of concentrated energy for athletes, and are free of both sodium and cholesterol.



Olive Oil



Effective energy production requires two basic components: carbohydrates and fat. For optimal performance, it is important to have a balance of both – but not all fats are created equal, and some can have negative effects on our health. Olive oil is an excellent fat source, as it contains mostly monounsaturated fatty acids, which help maintain low cholesterol levels and good cardiovascular and bone health. The omega-3 fatty acids it contains have excellent anti-inflammatory effects that can help with recovery, and its polyphenols help maintain bone density. Olive oil is also the only known source of oleocanthal, whose strong anti-inflammatory effects mirror those of ibuprofen (Nurofen).



Coconut Oil



Coconut oil contains high levels of healthy fatty acids, including one notable mention: lauric acid. Lauric acid is a medium-chain triglyceride (MCT), a type of fatty acid that is easily digestible and able to be metabolized rapidly for energy. According to a 2009 study, lauric acid may improve endurance and energy metabolism during exercise, potentially aiding weight loss. Indeed, coconut oil consumption has been linked with reductions in body fat percent-age.



Ghee



Ghee is a purified form of butter that contains huge amounts of healthy essential monounsaturated and polyunsaturated fats, including omega-3 and omega-9 fatty acids. It is also rich in vitamins A, D, E and K, and does not contain unnecessary additives. Butter and many oils can slow digestion, while ghee has the opposite effect, helping to activate digestive enzymes. When you consider all these benefits, it seems obvious that ghee is a much better alternative for butter for athletes who want to maintain a healthy weight and great nutrition.



Cultured Vegetables



Fermentation of vegetables is a process whereby natural bacteria convert carbohydrates in vegetables into lactic acid. This acid acts as a natural preservative, and also produces B vitamins, omega-3 fatty acids, probiotics and enzymes as byproducts! It is thought that the probiotics may play a critical role in making these fermented vegetables more digestible.



Coconut Water



Coconut water contains the sugar and electrolytes that are critical for replacing athletes' hydration deficit after exercise. It can be used as a natural substitute for a sports drink and is an excellent source of potassium, but it has less sodium and calories so may not completely meet an athlete's needs after a hard workout.



Green Tea



Green tea contains caffeine, which helps combat fatigue and stimulates adrenaline release, so it seems logical that it can help with athletic endurance, though studies have found that it does not necessarily increase speed. Green tea also contains antioxidants that aid in recovery. Research has also demonstrated beneficial effects on fat oxidation in the body. It appears that certain chemicals in green tea, called catechins, can promote weight loss by increasing the rate at which we burn calories and fat – particularly when combined with caffeine.



White Tea



White tea leaves have a very different taste to green and black teas – and different benefits. Because white tea undergoes very little processing, it retains more polyphenols, which are powerful antioxidants. It is for this reason that many advocate its anti-aging and anti-cancer effects. White tea also has less caffeine than either green or black tea. Studies have demonstrated links between white tea consumption and low blood pressure, low cholesterol, improved cardiac health, reduced dental plaque, and weight loss.



Stevia



Stevia is an excellent alternative to sugar when a sweetener is required. Though its popularity has peaked recently, it has been used for many millennia. Stevia is absorbed much more slowly than sugar, and helps maintain much more stable blood sugar levels – a property that is especially useful for diabetics. It is extremely low in calories, making it an excellent choice for those wishing to lose weight, particularly when those sweet cravings kick in. It is also thought that Stevia may improve mood, energy levels and mental acuity.



Goji Berries



Goji berries contain 19 amino acids, including nine essential amino acids; 21 trace minerals; and abundant protein, vitamin C and antioxidants. They are also rich in 'glyconutritionals', compounds that can reduce cholesterol and body fat and increase muscle mass, while also improving wound healing and easing symptoms of autoimmune diseases and allergies. Goji berries are also a unique source of solavetivone, a compound with amazing anti-fungal and anti-bacterial properties. Finally, goji berries can have strong anti-inflammatory properties due to their beta-sitosterol content, which can aid in muscle recovery.



Cacao



Raw cacao is one of the richest sources of magnesium known to man, and therefore well worth working into the diet. Magnesium is needed for a wide array of reactions in the body, including many that are necessary for neurological, cardiac and bone health. It also plays an important role in muscle function and, most importantly, is necessary for energy metabolism. Cacao is also a great source of antioxidants, potassium and iron.



Maca



Maca is a vegetable related to the radish that originates from Peru. It improves energy levels, endurance and stamina through a mechanism that is not yet fully understood. Many enjoy it as an alternative energy-booster to caffeine or sugar. Maca also contains significant quantities of high quality protein and fatty acids, and has an ‘anabolic’ effect – meaning it helps to build muscle.



Pumpkin Seeds



Pumpkin seeds are brimming with nutrients. Magnesium helps support energy production, iron maintains healthy red blood cell levels, omega-3 fatty acids provide anti-inflammatory effects and zinc supports the immune system – among a host of other benefits! Pumpkin seeds also contain the amino acid leucine, which promotes fat metabolism and can increase endurance. Like many other superfoods, they are packed with antioxidants, including vitamin E.



Hemp Seed



Hemp seed has a range of benefits, but surely the most impressive is its protein content: up to 25%. This protein is extremely digestible and contains more essential fatty acids to build muscle than any other plant source. In fact, hemp seed protein was used in the 1950s to treat muscle wasting in tuberculosis patients.

Whole hemp seed is also high in fiber, omega-3 fatty acids, B vitamins, vitamin E and other trace minerals. Finally, it contains phytosterols, compounds that decrease cholesterol absorption.



Turmeric



Turmeric contains a compound called curcumin, which has a direct effect on muscle cells to increase their growth and repair. This effect is particularly applicable after exercise. Studies have demonstrated significant, rapid effects of curcumin on muscle cell regeneration as well as potent anti-inflammatory properties.



Ginger



Some athletes struggle with feelings of nausea, dizziness or digestive discomfort, particularly swimmers. A known natural remedy for these afflictions is ginger, which can help maintain normal digestive function and combat nausea. Further, a 2010 study showed that ginger may help reduce delayed onset muscle sore-ness.



Cilantro



Time and again, studies have demonstrated an association between consumption of cilantro and several health benefits. Cilantro may reduce the risk of obesity, diabetes and heart disease. It is thought to promote healthy skin and hair and improved energy levels. Cilantro also has natural 'chelation' properties, which means that it is able to bind heavy metals, and possible antimicrobial effects.



Garlic



Garlic has been found to mildly reduce blood pressure, LDL cholesterol and atherosclerosis (hardening of the arteries). It also aids regulation of blood sugar and reduces the risk of clots forming in blood vessels. Garlic may have some anti-cancer effects, particularly in the digestive system, and it has also been suggested that it may be able to bind and remove some heavy metals from the body. But most importantly, garlic has been proven to increase $VO_2\max$ – the amount of oxygen the body is capable of utilising per minute. This means muscles are able to do more work, for longer.



Cinnamon



Cinnamon has been shown to reduce inflammation, oxidative stress and muscle soreness. For athletes this effect is desirable after exercise, but many arthritis or period pain sufferers have also found it useful. Cinnamon is also rich in antioxidants.



Hemp Protein Powder



Hemp seed is one of nature's best sources of protein, containing all 20 amino acids used to build protein in humans. Three of these amino acids are particularly critical – leucine, isoleucine, and valine. These amino acids, known as the branched-chain amino acids, provide the main energy source for muscles. They are metabolized directly, unlike many other proteins that require additional processing in the liver.



Green Vegetable Smoothies



Green smoothies contain one or more concentrated greens, each of which can offer different benefits. In particular, spinach is rich in antioxidants and has been shown to reduce blood pressure. Both spinach and kale contain omega-3 fatty acids, which can enhance athletic performance. Seaweed is great source of protein, which provides the basis for muscle building and repair – great after a workout. Green smoothies also provide plenty of fiber to promote digestive health, keep you feeling full and promote stable blood glucose. Most greens will also give you a good dose of other vital nutrients such as vitamin A, vitamin C, folate and potassium.



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