



# Vitamins

**The majority of fighters use supplements at some stage in their career. The problem is that no one wants to waste their money on unnecessary pills. We know that many fighters get deficient when they are training hard and need supplements, but only three nutrients can be reliably tested. They are iron and vitamins D and B12.**

BY RYAN HARROD AND PETER LEWIS

## Iron

Iron deficiency is very common in women, especially in female athletes. This is especially the case when women are trying to reduce weight and have cut down on animal products. It is important to know that animal and dairy products are fattening, but lean meat is a good source of protein and iron. The best lean meat is kangaroo. It is low in fat but rich in iron and other nutrients.

Iron deficiency is a major problem for fighters because it causes fatigue. It makes it difficult to train hard and reduces your performance in a fight.

Women who are low in iron and cannot absorb enough from their diet, or are vegetarian, will need supplements. There are many products on the market which are misleading and imply that they contain iron when they actually have negligible iron. These include many 'women's' labeled products. You need about 300mg of iron per tablet to treat iron deficiency. Three products that are good are Fefol, Ferrogradumet and Ferrum H. Unfortunately, they may cause constipation or tummy upset. They should be taken with food and drink lots of water and have lots of vegies to prevent constipation. It is good to have vitamin C with your iron as this increases absorption. Some iron tablets now have vitamin C already added, which is a great idea.

It usually takes months or years to become iron deficient. It is not surprising that it takes weeks or months to fix it with diet and oral supplements. Unfortunately we often find out that women are iron deficient when we check their serology just before a fight. In this situation it is sometimes necessary to use iron injections. This can have the benefit of a rapid improvement in iron levels. The down side is that there is a risk of permanent staining of the skin where the injection is given, ie. in the skin of the buttock. This happens in maybe 5% of patients.

If you are a fighter it is well worthwhile getting your serology and iron tests done together several weeks ahead of your fight

## Vitamin D

We have only started testing vitamin D over the last few years and most doctors have been surprised to find that many patients are deficient. Vitamin D tests are simple and cheap and can also be done along with your serology. Vitamin D deficiency is well known to cause weakening of the bones. Less well known is that vitamin D is also important for your bodies immune system to prevent cancer. Vitamin D is also necessary for wellbeing and vitality. We get vitamin D naturally from the sun. With the fear of sun damage causing cancer many people have gone too far in avoiding all sun and use sun blocks religiously. I do not advise use of sun blocks as they have not been proven safe and some contain toxic chemicals. Common sense is to get small amounts of sun on large areas of the body on a regular basis, but avoid burning. Vitamin D deficiency also takes months to improve naturally and supplements from the chemists are cheap and safe.

## Vitamin B12

There is much controversy over vitamin B12. Historically many fighters have had B12 injections before fights and swear by them. Nonetheless when we test for vitamin B12 deficiency the labs tell us that most fighters are not deficient. There are two possible explanations — possibly, fighters need more B12 when they are training hard and 'normal' levels are not optimal and they may get a genuine boost from an injection.

The other possibility is that there is a big placebo effect with injections and it may be psychological.

- My feeling is that some fighters from vitamin B and B12 injections.
- Severe B12 deficiency is usually associated with malabsorption in the bowel rather than dietary inadequacy; even vegans usually have normal B12 levels in their blood.
- The fight game is unique; you use a high amount of energy on a restricted diet to make weight. This can lead to a deficiency in vitamins and minerals if your diet is not carefully designed or monitored by a health professional.

## Muscle Cramping

Any repetitive use can cause muscle cramps. True cramps are generally associated with vigorous activity of the muscle and muscle fatigue. These cramps can happen whilst exercising or many hours later. Vigorous activity leads to heavy perspiration, hence dehydration, which can lead to true cramps. Replacing water as fast as you lose it is the secret to avoiding cramps. Potassium deficiency does not normally lead to true cramps but can lead to muscle weakness.

## Magnesium as a supplement

Magnesium is an essential mineral in human nutrition and is involved in over 300 biological functions. Although oral magnesium can be used to treat many deficiency states, it can also be used to ease many conditions such as muscle spasm and tension, pain and physical symptoms of stress.

If you are using a magnesium supplement, magnesium citrate is the form the body is most able to process. The two brands that I have found to give the best results are Ultra Muscize by Bioceuticals and mag complex by Nutri medicine.

Magnesium can be found in many foods such as legumes, dark green leafy vegetables and nuts.

## Coenzyme q10

Has been very expensive up until now, but luckily for all of us the prices have just plummeted in the past few months. For the best results there are two schools of thought. Some say coq10 should be consumed with food, preferably the fattiest meal of the day as it will bind to fat to be absorbed. The other theory is that Q10 is best taken early in the day as it improves energy levels and keeps some people awake. It is also most effective if absorbed as a sub-lingual lozenge under the tongue over a couple of hours. Physical activity greatly reduces the levels of coq10 in the muscles and extensive exercise reduces it even more markedly. Supplementation allows the levels to normalize and your cells can once again produce energy.

Coq10 improves heart function and lowers blood-pressure, it can be used to treat migraines and increases energy levels

The typical dose for performance enhancement is 100-200 mg per day and pharmacy's are now selling bottles of 50 100mg tablets for around \$35-\$40.

## Vitamin B

B vitamins are important for energy. When the body is exposed to extreme stress, for example leading up to a fight, the B vitamins are rapidly depleted. This is also true for other stresses such as drinking alcohol — hence, Berocca is helpful the morning after. B12 is the most important of the B group for fighters. It is stored in the liver in large quantities. Effects of B12 depletion will only show over extended times of exertion. Unfortunately blood testing for B12 deficiency is inadequate and potentially delays diagnosis of deficiencies.

The reason I speak so much about B12 as opposed to the B complexes is because it is considered to be a very safe supplement. Prolonged use of B6 at levels of 100-150 mg per day has been show to produce symptoms of toxicity, such





## DOCTOR'S CORNER



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### DR PETER LEWIS

Dr Lewis is internationally recognised as a medical authority in the martial arts field. He has also been studying and teaching martial arts for 34 years.

Dr Lewis is best known as a ringside physician. He is often seen on televised shows in many countries. He has worked in 28 cities internationally, 22 of these on World title standard events. He has performed every ringside role, including doctor, referee, judge, rules co-ordinator, timekeeper, commentator, ringside announcer, matchmaker, trainer, cornerman, cutsman and has competed in karate, taekwondo and kung fu. He has had the pleasure and honour of looking after some of the most important fights and fighters in history.

Dr Lewis is also well known as an international lecturer and writer on martial arts medicine. He has consulted at ReCreation Medical Centre for 24 years.

He has also recently established a new clinic at Malvern Martial Arts, which is especially for martial artists. Dr Lewis works with a team including a nurse, physio, chiro, podiatrist, psychologist, exercise physiologist, dietician and masseurs who all have extensive experience in martial arts.

Malvern Martial Arts are holding a sports medicine seminar on 31 July, contact [info@malvernhealthandfitness.com.au](mailto:info@malvernhealthandfitness.com.au)

as numbness, muscle weakness and bone pain. Excess in B12 are excreted in the urine and produce no side effects.

B12 is one of the cheaper supplements at around \$12-\$20 for 100 tablets 1000umg sub-lingual (under the tongue).

### Creatine

Creatine naturally occurs in the body, produced in the liver and is stored in the muscles. It is involved in muscle contraction. For those of you with some knowledge of this, it is essential in converting ADP to ATP (being the primary source of energy). By supplementing with creatine it has been shown to fuel up the natural energy stores, making more energy available to the muscles when under duress. It has also been show to buffer lactic acid during intense exercise. Power gains while using creatine have been proven to be substantial with changes seen in the muscle fibres increasing in size and positively affecting the use of protein and carbohydrate. Creatine also increases exercise related lean body mass, some of this gain is associated with the retention of water in the muscle. This brings us to the down side of creatine. Even though it can allow you to train harder, longer and more powerfully it will cause you to retain up to 2 kilo's of water within the muscle. Except for the super-heavyweights this creates an issue for cutting weight as the hangover period to come back to normal creatine levels is typically one month after stopping the supplement, and hence water will be retained for this time span.

The physical effects normally develop within 1-4 weeks of use.

The typical dose for an athlete is 5g four times a day for seven days, followed by 8g a day for one week to six months, following by a four-week break before beginning again.

Care should be taken when supplementing with creatine, as it has been know to have some adverse reactions including; nausea vomiting, diarrhea, muscle fatigue, pain and cramping and dehydration. People with kidney issues should not use this supplement.

### Fight Game

Even though the fight game is unique and fighters may need the occasional helping hand supplement wise, it should in no way replace a good, balanced and healthy diet. You need to eat a lot of fresh fruit and vegetables, fish, lean meats and drink plenty of water. If you are taking vitamins and minerals while on a very low carbohydrate diet make sure that you have your supplements with your meals, so they can be absorbed by the body (there are exceptions to every rule).

One last point on supplementation; after a weigh-in, if you have dehydrated yourself, there are a couple of products on the market specifically designed to treat dehydration. Both Gastrolytle and Hydrolyte are much more effective at treating dehydration than water or your normal energy drinks. This is also more important than trying to do IV fluid replacement, which is probably of very limited value if you have a 24-hour weigh-in time. **IK**

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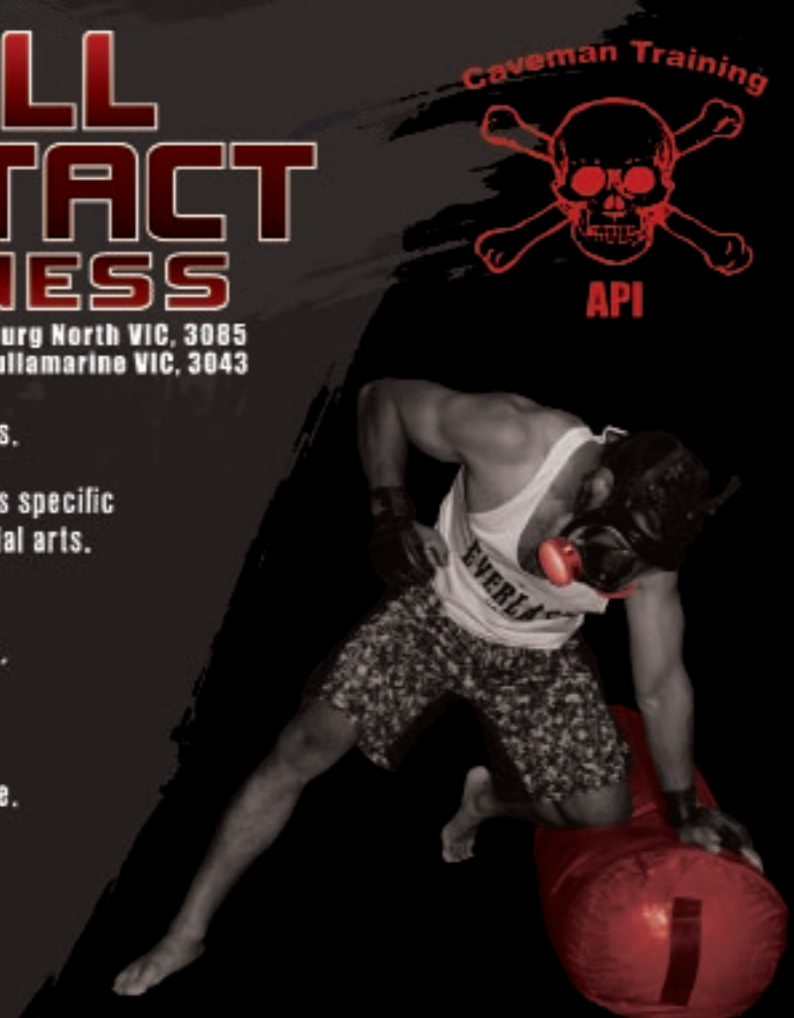


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