

The Benefits Of Maca Root Supplementation for Athletes and Bodybuilders

BY [EDWARD CLEMENTS](#) ON DECEMBER 16, 2012

Maca root is an adaptogenic herb, from South America. Some benefits of maca root are that it's reputed to boost energy levels, improve stamina, promote a clear mental focus and restore optimum hormone balance.

After examining the available research on the benefits of maca root, reading hundreds of positive testimonials written about it, and finally trying it myself, I feel that maca root is a super-food that could massively help bodybuilders, sportsmen and pretty well anyone!

Maca root – nature's answer to Viagra?

Before getting onto some slightly less well known benefits of maca root, let's discuss its main claim to fame – maca root is a potent aphrodisiac for men and women!

There are stacks of anecdotal reports on the internet of men and women who've felt the benefits of maca root as their levels of sexual desire soar.

Men are experiencing stronger and more frequent erections and performing better with maca root. Virtually everyone who takes it experiences these benefits of maca root to some degree, and even men over the age of seventy, who had lost their sexual appetites, have been able to jump back onto the band wagon again thanks to maca!(1)

There's been quite a lot of research performed on maca root to test it's aphrodisiac qualities, and it seems that most of the extravagant claims made about the benefits of maca root have been validated.

Recent studies have found that 'both acute and chronic maca oral administration significantly improves sexual performance parameters in male rats'(2), and that maca 'improved sexual performance parameters in sexually inexperienced male rats'(3). One study showed nearly a 100 % increase in sexual frequency in male and female rats and a 180 percent increase in semen production in males!(4)

OK, you're probably thinking, 'I don't really care about a load of horny rats...' Fair enough, the results of animal studies don't always mean anything in human terms... but the benefits of maca root have been validated in recent human studies, too:

In a four month, controlled study performed on adult men aged between 24 and 44, 'treatment with Maca resulted in increased seminal volume, sperm count per ejaculum, motile sperm count, and sperm motility.'⁽⁵⁾ Other studies have shown benefits of maca root to be significantly increased levels of sexual desire in both men and women.⁽⁶⁾

I don't know anyone who doesn't want a higher sex drive, and given sex drive is considered by many as the most accurate measure of health and predicted life span, if maca root can work so well at improving sexual desire, and can even cause physical changes such as a higher sperm count, then I think we should be enjoying the benefits of maca root!

There are plenty of other powerful herbal aphrodisiac's out there, some of which, like maca, have performed very well in human trials.

You do not necessarily have to choose between taking maca or another product. Taking a herbal blend containing maca could give you the benefits of maca root as well as slightly different aphrodisiac effects from other herbs.

If taken with other powerful stimulants there's a chance maca could cause over stimulation at a normal dose. If this happens it's no big deal, simply reduce the dose or take a couple of days break from maca and then resume...

Garry P. Gordon, MD, former president of the American College for Advancement in Medicine, claims maca is "nature's answer to Viagra". There haven't been any direct comparisons done between the benefits of maca root and Viagra but, if maca is nearly as effective as Viagra, it should be your number one choice as maca doesn't cause the side effects that Viagra does.

Benefits of Maca root for Diabetics?

Maca root isn't generally reputed as being a herb that can help to control diabetes, but a 2007 study found that 2 weeks of maca supplementation to subjects fed a high sucrose diet 'significantly improved glucose tolerance, and lowered levels of glucose in blood.'⁽⁶⁾

Diabetics and those in a pre-diabetic, insulin resistant state have impaired glucose tolerance – maca root was able to greatly improve this condition even when eaten as part of a terrible diet similar to the typical modern diet!

These results should raise a lot of eyebrows within the Sporting and Bodybuilding worlds as improved glucose tolerance is the aim of pretty well every successful diet program out there!

While having improved glucose tolerance will benefit you in virtually every area of your life, the main reason better glucose tolerance will greatly benefit sportsmen and bodybuilders is through its link to improved insulin sensitivity.

Let's look at why (most of the time) we want to improve our insulin sensitivity:

1) **Less fat and more muscle:**

With glucose rising less dramatically after meals less insulin is required to store the energy consumed. Despite insulin being an anabolic hormone, most of us need to control it because, if it's spiked too often, you will likely end up with chronically high insulin levels. This situation, which many people in the western world are in, maximises the risk of fat gain and increases your chances of getting all of the modern chronic diseases such as heart disease, liver disease, hypercholesterolemia etc.

To gain improved glucose tolerance is the reason people choose to follow low G.I. or low carb diets, limit carbs to post workout, take supplements such as chromium, lipoic acid etc. – if this study can be replicated, and benefits of maca root are significantly improved glucose tolerance levels, then it should be part of every active person's supplement arsenal.

2) Easier dieting because of decreased hunger and cravings:

Improved glucose tolerance means more stable blood glucose levels, and stable blood glucose levels means less feelings of hypoglycaemia, less intense hunger pangs and the ability to go for longer without eating – naturally this will benefit anyone who is dieting.

Similarly, a stable blood sugar level tends to lead to better emotional stability. Without large peaks and troughs in blood sugar you will be able to make better food choices and will hopefully find it easier to control the urge to binge on junk food.

Also, in the long term, avoidance of great spikes in insulin will mean nutrients involved in insulin action, such as magnesium, are spared, leading to better micronutrient status. Unfulfilled nutritional needs is another reason why you might feel the urge to binge. EG. Magnesium deficiency is probably the main reason people experience such intense cravings for chocolate.

3) Marked improvements in important health parameters:

It's worth pointing out that this particular study also found 'Maca significantly decreased the levels of VLDL (very low density lipoproteins), LDL (low density lipoproteins), and total cholesterol, and also the level of TAG (triacylglycerols) in the plasma, VLDL, and liver.'⁽⁷⁾

This means that maca is quite significantly improving a number of important human health markers – while it's slowly gaining popularity at the moment, these results suggest it's worthy of almost cult food status!

An interesting question that arises from these results is whether maca's beneficial effects on glucose tolerance are causing the improvements in the other parameters, whether all improvements are independent of one another, or whether the improved glucose tolerance is a result of another variable changing i.e. is improved liver health meaning glucose is being utilised more effectively?

It's clear that more studies are needed to address these questions.

Also, an incredibly important question is whether the benefits of maca root on these health parameters will continue if you stop taking maca, or is maca just correcting health problems in a very quick time span?

Many people take maca at around 3 teaspoons per day for a few months to resolve their health problems and then feel they only need to take it occasionally to feel the benefits of maca root – this suggests to me maca is capable of making long lasting improvements.

Maca root for arthritis:

Maca is a traditional Peruvian remedy for arthritis and joint problems. This is one potential benefits of maca root supplementation that has hardly received any attention from modern researchers at all, but, if true, then maca could help a whole lot of sportsmen and bodybuilders out there.

To date, there has only been one study performed on maca to examine this claim, this being done in test tubes on human cartilage – findings were that benefits of maca root were increased NO (nitric oxide) levels in the cartilage. (NO is thought to naturally increase circulation and to decrease inflammation.)

I don't normally pay much attention to studies performed in test tubes as there's no guarantee at all that the results will translate to real life; however, when you hear of the benefits of maca root as a traditional remedy for arthritis, and it shows positive results in this study, I think it might be worth trying if you're not having success in controlling your symptoms.

I wouldn't buy maca solely for this purpose, as there are other great natural supplements out there helpful for arthritis, but given the other benefits of maca root I'd get it anyway and see if the arthritis improves as well!

Maca root could improve your workouts!

Increased stamina:

Many users report increases in stamina after taking maca root for only a few days. These increases in stamina may be a product of the more stable blood sugar levels maca produces

coupled with the strengthening effect it has on the adrenals. Having stable blood sugar levels and healthy adrenal function means that more energy will be available for exercise when you otherwise would be getting low.

Obviously, increased levels of stamina are going to help endurance athletes such as runners and cyclists. Slightly less obviously though, better stamina levels are going to help you in your fat burning efforts by helping you to keep going at whatever cardio routine you're doing for longer, or by making the cardio seem easier, allowing you to do it at a quicker pace – therefore you burn more calories and lose more weight.

Increased stamina is going to make your annoying, unavoidable daytime chores less of an effort and leave you with more energy to hit the gym in the evening (or whenever). Maca might give you the extra lift you need to do a great workout.

Improved strength:

Maca was used by troops in the Tahuantinsuyo Empire before battle as a strength aid! I'm not suggesting that maca will allow you to suddenly lift 20 kg more on the bench, but taking it before a workout could help you in a number of ways:

-Carbohydrate taken immediately before exercise is believed by many to improve workout performance by supplying the muscles with the glycogen they need for high intensity exercise such as weight lifting. In addition to carbohydrate, maca root contains easily digestible high quality protein, small amounts of essential fats, and minerals such as zinc, calcium and magnesium, all of which have been shown to improve performance and reduce recovery time when taken before, during and/or after a workout.

-Benefits of maca root are improved mental clarity or focus. We all know that you need to be fully switched on when you attempt a PB in the gym – if you fail once you're done for the day.

-So much of sport or weight training comes down to CNS (Central Nervous System) training. Maca is a tonic for the adrenals that, theoretically, would allow your CNS to recover more quickly from stress therefore allowing you to attempt heavy lifts more regularly without experiencing burnout. A lot of weightlifters are having to give up taking on challenging cycles because of weakened adrenals... you could avoid this horrible scenario by taking maca root.

Benefits of maca root are a more positive mental outlook:

Maca users often report a much more positive mental outlook after only a few days of use, which isn't that surprising given it is recommended by South American doctors for treating depression. Positive people tend to exercise more often than negative or depressive people,

so maca could help you lose weight and gain muscle simply by increasing your motivation to exercise!

Maca root to manage estrogen:

Maca naturally contains DIM (Diindolylmethane), an indole phytochemical that can be isolated from compounds found in cruciferous vegetables such as broccoli, brussels sprouts and cabbage. DIM has been found in animal and human studies to greatly improve hormone balance in both men and women, as well as to protect against some forms of cancer.(8)

DIM works by stimulating a more efficient estrogen metabolism:

It appears that DIM can support specific enzymes that work to increase the levels of good estrogen metabolites and decrease the levels of bad estrogen metabolites in the body. This means that estrogen isn't eliminated, a good thing since estrogen plays an important role in muscle building and is crucial to general health, but is channeled down a more healthy metabolic pathway.

This leads to greater free Testosterone levels!

By limiting the bad estrogen metabolites made from estradiol you increase your level of free testosterone, critical to muscle building, energy levels, sex drive and general health. At the same time DIM limits the production of DHT, a metabolite of testosterone that has been repeatedly linked to increased prostate cancer risk.

By effectively managing estrogen you can expect to immediately look more 'cut', due to less water retention, and can expect all the physiological and psychological benefits of higher free testosterone levels. In the long term, you will be less at risk of contracting estrogen related health problems such as many different types of cancer, and you will carry less body fat and have more muscle mass!

Studies show that DIM becomes much more easily absorbed when cruciferous vegetables are processed and/or crushed – this may explain why cooked maca powder increased rodent body weights in trials significantly whereas raw maca root did not.

Given that the maca you can buy is gelatinised or at least processed and powdered, it is reasonable to assume that it will be a more bio available source of DIM than standard western cruciferous vegetables such as cauliflower or broccoli. Also given that a whole lot of people don't like broccoli, maca offers an alternative, concentrated source of DIM for athletes and bodybuilders.

I've taken a DIM supplement daily for a while now to support a favourable hormone balance. Loads of studies show that DIM offers great protection from unavoidable dietary

and environmental estrogens, so it's not really surprising that maca improves a lot of peoples' hormone related problems.

Side note: There are other theories as to how maca reverses estrogen dominance. For example some scientists believe that the sterols in maca directly convert to Testosterone and Progesterone, and that these two hormones limit harmful Estrogens...

Benefits of Maca root are a higher metabolism causing fat loss and higher energy levels:

Maca is known to cause an increase in body temperature for many users. I have definitely experienced this effect, with my average basal body temperature rising from around 36.8 degrees to around 37.3 degrees after fourteen days of taking 3 teaspoons of gelatinised maca per day.

There are many reports on the web from hypothyroid patients of their body temperatures increasing by as much as 2 degrees Celsius up to and above the normal basal body temperature of around 37.0 degrees Celsius (98.6 degrees Fahrenheit). These dramatic increases in basal body temperature tend to be achieved after a couple of months of using maca root consistently.

Your thyroid is your body's thermostat:

It is generally the case that low body temperature is indicative of poor thyroid function. While you probably wouldn't call yourself hypothyroid unless you found your basal body temperature to be at least a degree below the average 37 degrees Celsius, a body temperature of only half a degree below 37 is a good indication that your thyroid isn't functioning as well as it could be – Broda Barnes MD (a very influential thyroid expert) stated in 1976 that 40% of American people were hypothyroid, that is, had underactive thyroid glands.(9)

As is the case generally with maca root, there are not a wealth of studies and trials done to prove maca's ability to benefit the thyroid. However, one case study on the internet shows a man's T4 (thyroid hormone) level to have increased noticeably with maca according to blood tests(10).

Many people have had to reduce the dose of or stop taking their thyroid medication after a short period of using maca to avoid overstimulation – this indicates the benefits of maca root are increased thyroid hormone output, and therefore you don't require as much thyroid hormone from an exogenous source.

Improving thyroid function and raising body temperature could help sportsmen, bodybuilders and fitness enthusiasts primarily by increasing the rate of fat burning. If your

thyroid is brought back up to speed it means you will be burning more calories 24/7 – a primed thyroid is the key to getting really shredded!

But improved thyroid function also means a better functioning immune system, more refreshing sleep, less headaches and sinus problems, less joint pains, healthier skin, less menstrual problems for women, and the list goes on... Notice how this list mirrors the set of health complaints that maca is reputed to cure – could maca root be improving peoples' symptoms primarily by improving their thyroids?

There are already a number of legal supplements and illegal drugs taken by bodybuilders precisely for the purpose of revving up the thyroid. Examples of legal supplements are plant based selenium, iodine or guggulsterones, and Cytomel is a drug used to treat hypothyroid patients that, although only available by prescription, is used by bodybuilders on cutting cycles.

The theory in the bodybuilding world is that, for every degree your body temperature increases you burn 7 percent more calories, and it looks like maca can get you at least one degree up!

Stimulants such as ephedra, guarana and caffeine, used by bodybuilders to increase metabolism, work by increasing Central Nervous System (CNS) activity through stimulating the adrenals. A lot of doctors feel this will, in time, 'burn out' the adrenals, which would cause a whole lot of problems. Despite the general consensus, I'm yet to see any evidence that coffee will 'burn out' your adrenals, but what is certain is that the body adapts to these stimulants after a period of time and they do become less effective.

Judging by results of thyroid patients using maca root for extended periods of time, it does not look like the benefits of maca root are temporary – if maca is indeed rejuvenating, rather than simply using, the adrenals, then there is no reason why the benefits of maca root should not be permanent.

Side note: There isn't any documentation on whether maca root will raise your body temperature if you already have a normal body temperature. My guess would be that it may move you slightly above 37 degrees, as I've seen evidence that the optimum body temperature is higher than this, but given it is an adaptogenic herb that has traditionally been eaten in high quantities, I doubt it would take you above what's optimal.

For example, whilst consistently being at 40 degrees C might help you burn fat, I doubt it's a particularly healthy situation to be in – at this temp. you'd probably never manage to get to sleep!

How to see if maca root is increasing metabolism:

Basal body temperature test:

-Whilst waiting the couple of days for your maca to arrive, test your temperature using an oral thermometer before getting out of bed in the morning (or eating or drinking anything!). Then work out an average temperature for these three days.

-After a week of taking maca root, take your temperature reading for another three days and see if your average basal body temperature has gone up at all.

-A month after beginning supplementing with maca root repeat this temperature challenge again and note any change to basal body temperature.

As far as possible, try to keep other variables constant:

For example, don't test your temperature a month after starting maca, see a huge increase in basal body temperature, think it was maca but later realise you had also been taking a yohimbe or guggulsterones supplement at the same time – what caused the increase, maca or either of these other two thermogenic supplements?

Bear in mind that, valuable as it is, this test has its limitations. Even a really rough night's sleep can cause you to wake up with a slightly lower basal body temperature. However, if you track your morning temperature regularly you should see a fair trend and therefore will be able to judge if maca root is working for you in this regard.

Side bar: If you have a consistently low body temperature it is generally an indication of adrenal or thyroid problems. I tackle these issues in a number of articles on this website. Please skim through these as thyroid and adrenal problems can be resolved quickly once you have access to the right information... You'll feel 100 percent better when you do! [If you want a more accurate but more time consuming protocol for measuring body temperature then try [Dr. Rind's body temp. test](#)]

Benefits of Maca root are increased fertility:

Alright, we've looked at a few of the main reasons why us muscle-worshipping guys would want to add maca to our diets, but we haven't explicitly talked about how maca root can help with girls' hormonal issues.

Maca is recommended to women as being a fertility herb. In fact, this was the main quality attributed to maca root by the Incas, before the Spaniards arrived, and is the reason why it was considered magical and used in sacred rites by them and their descendants.

The sheer volume of anecdotal reports about the benefits of maca root for fertility problems is astounding. It appears maca relieves PMS symptoms such as headaches and depression in as little as a few days and makes menopause a stroll in the park for most women.

Therefore it's not surprising that women's fertility rates improve considerably through using maca.

There are a number of rodent studies showing benefits of maca root are greatly improved fertility, and human studies only reinforce these results. To quote the results of one study done on women in 2008:

'maca reduces psychological symptoms, including anxiety and depression, and lowers measures of sexual dysfunction in postmenopausal women independent of estrogenic and androgenic activity.'⁽¹¹⁾

Maca is worth a try if you ever suffer hormonal problems. Many women feel the benefits of maca root after taking as little as one quarter teaspoon of maca per day.

Safety concerns with maca?

It's worth pointing out that eating very large quantities of maca root could, in theory, cause thyroid problems. Maca contains glucosinolates, like other edible plants in the mustard family, which taken in excess along with a low-iodine diet, can lead to the development of a thyroid condition called goiter (where the thyroid gland enlarges and thyroid hormone production decreases).

But, there have been no reported cases of goiter from eating large amounts of maca. Maybe processing eliminates this risk, or maybe the high concentrations of iodine in maca counteracts the risk – either way I wouldn't worry about this given that maca has been eaten as a staple in Peruvian cuisine for thousands of years with only benefits of maca root being reported.

Final thoughts:

OK, we've talked about the benefits of maca root for you, and I'm sure you'll agree the benefits of maca root look fairly impressive. However, we haven't really gone into depth about what's in maca that is helping so many people.

Whilst studies show benefits of maca root are improved sex drive, fertility rates etc., they don't seem to shed much light as to how maca's working. In fact, many studies seem to indicate that, despite improving hormonal issues, maca doesn't actually change hormone levels at all!

[Ed Clements](#) is a fitness and health writer who offers advice to men and women explaining how to optimise hormone balance through diet, training, lifestyle improvement and through intelligent supplementation.

- References and Footnotes:**
- 1) <http://www.macasex.com/science.html>
 - 2) Hexanic Maca extract improves rat sexual performance more effectively than methanolic and chloroformic Maca extracts. *Andrologia*. 2002 Jun;34:177-9
 - 3) Maca root improves sexual behavior in male rats independently from its action on spontaneous locomotor activity. *J Ethnopharmacol*. 2001 May;75(2-3):225-9
 - 4) <http://www.macasex.com/science.html>
 - 5) *Lepidium meyenii* (Maca root) improved semen parameters in adult men. *Asian J Androl*. 2001 Dec;3(4):301-3
 - 6) The influence of maca (*Lepidium meyenii*) on antioxidant status, lipid and glucose metabolism in rat. 2007 Jun;62(2):59-63.
 - 7) The influence of maca (*Lepidium meyenii*) on antioxidant status, lipid and glucose metabolism in rat. 2007 Jun;62(2):59-63.
 - 8) <http://www.dimfaq.com/site/prostatehealth.htm>
 - 9) Hypo-thyroidism – the unsuspected illness, by Broda Barnes, 1976. Fitzhenry and Whiteside Ltd, Toronto.
 - 10) http://proteinfactory.com/articles/index2.php?option=com_content&do_pdf=1&id=39
 - 11) Beneficial effects of *Lepidium meyenii* (Maca) on psychological symptoms and measures of sexual dysfunction in postmenopausal women are not related to estrogen or androgen content. *Menopause*. 2008 Sep 6.

Source: <http://www.muscle-health-fitness.com/benefits-of-maca-root.html/>