

Tongkat Ali: Get your Long Jack Back

written by Mike Roberto | June 3, 2015

Plant-based herbal medicines have a very long history of use. Occasionally, some of them get re-introduced to the Western world, mixed with our modern science, and the results are nothing short of fantastic.

Curcumin is one such natural compound we've discussed (for joints). But when it comes to *male virility* and *muscle-building*, none have been underestimated more than **Tongkat Ali**, especially when extracted properly.

TL;DR

This is a long and thorough article. Here are the major points:

- Tongkat Ali has several benefits, including:
 - Sexual health benefits
 - Improvements in Testosterone levels
 - Muscle-building (and fat-burning) *results*
 - Reduction of Stress
- Poor extract quality and scammy supplement companies have held this ingredient back for years
 - Because of this, we only recommend LJ100-based Longjack supplements, and the best value is Nutrex Research *Tested*.
 - Dosing is 2-3 caps per day, 5 days on, 2 days off.

What is Tongkat Ali?



A flowering Eurycoma Longifolia plant, courtesy Wikimedia

Eurycoma longifolia Jack, otherwise known as *Tongkat Ali*, is a plant native to

South-Eastern Asian countries and is one of the more popular herbal plants. It's also known as *Malaysian Ginseng* and *Longjack*, but Tongkat Ali is the most common term used for it here in the states. In Malaysia, *Ali* translates to "walking stick", which is a reference to the plants long twisted roots.

Tongkat Ali Uses

Tongkat Ali has been used for a variety of different reasons. It is commonly used to

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- increase **male virility** and **sexual prowess**,[1]
- antimalarial, antidiabetic, antimicrobial, and antipyretic properties[2]

The roots of the plant contain several compounds which may have **sexual and testosterone enhancing effects**. These compounds are what supplement companies typically extract out of the plant for supplemental use, and that will be the focus of this paper. Not all extracts are equal.

How does it work?

The primary bioactive compound in Tongkat Ali is believed to be the *quassinoid compounds*. These are a group of natural chemical compounds classified as *diterpenoids* and *triterpenoid* structures.

Quassinoids are bitter principles found in plants that are in the *Simaroubaceae* family.[3-5] Several quassinoids have been isolated and identified in Tongkat Ali.[6] The most promising of these include *eurycomanone*, *eurycomalactone*, *euryconolactone (A-C)*, *eurycomanon*, and *eurycomanol*.

Of these, eurycomanone and eurycomanol are believed to be the main bioactive quassinoids. [7] However, currently no relevant studies specific to exactly which quassinoid is the one responsible for the effects some experience from Tongkat Ali supplementation. Despite this, some supplement manufacturers do extract specifically for quassinoids or glycopeptide fractions.



You can see why Tongkat Ali translates to *walking stick*, as shown at the Singapore Science Center. Image courtesy Wikimedia.

Glycopeptides are a form of bonded amino acids chains and like quassinoids, are promising but at this time no relevant specific studies have been done on them.

Extract strength makes a world of difference

The most promising extract of Tongkat Ali is *LJ100*. This extract is a 100:1 patented blend consisting of the two more promising bioactives, eurypeptides and glycosaponins, in a 22% and 40% ratio respectively.[8]

Our interest in this often-overlooked herb peaked with the release of Nutrex Research's *Tested* – a Tongkat Ali formula that contains just the potent extract and is backed up by a nice dose of the mineral *boron*, which also assists with free testosterone.

The studies behind it were quite impressive, and the more research we did, the more impressive it became. What you're left with is this article here, and we get more into the details of this product in our Tongkat Ali supplements section later on.

The Tongkat Ali Benefits

In some countries, it has traditionally been used as a tea to treat various ailments such as *headaches*, *fevers*, and *ulcers*. In addition to this, it is believed to be anti-tumor and antimalarial,[9] but research here

Some insider info: Eurycomanone

Bonus info: **Eurycomanone** is a unique Quassinoid that *only* exists in Tongkat Ali (so far as we know). Therefore, the industry

is limited and beyond the scope of this article.

In Indonesia it is called *Pasak Bumi* and is used as a treatment for dysentery and malaria.

uses this as a fingerprinting test to determine whether what you purchase is the species of *Eurycoma Longifolia*.

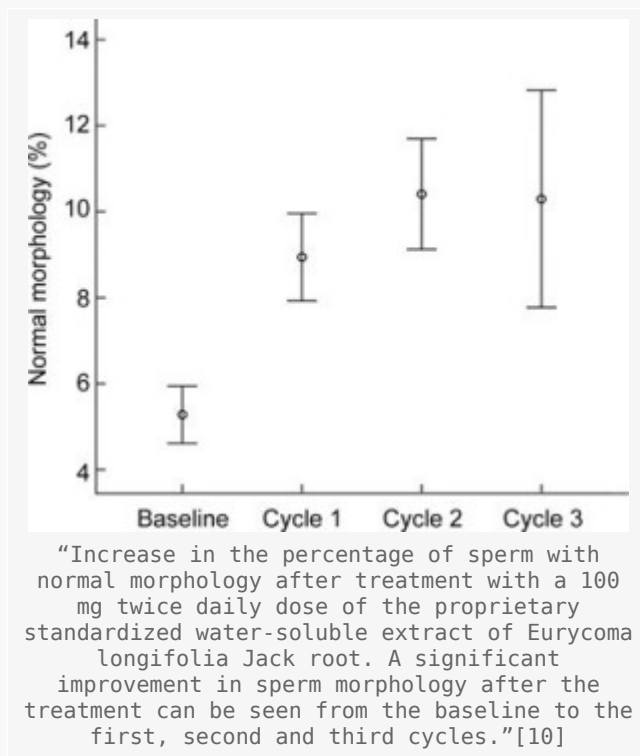
While its use does vary from country to country, in Southeast Asia it is almost *universally* used as an aphrodisiac and to treat impotence – that much is basically undisputed, as you’ll see in the research below. This is the more traditional role of Tongkat Ali use by humans.[2]

Western Uses:

But here in the states, the plant extract, especially the roots, are commonly used for **enhancing libido & testosterone levels in men**, as well as **body composition changes** (both muscle gains and fat losses).

• Sexual Health Effects

Recently there has been a significant increase in demand for Tongkat Ali, and as a result tons of supplements containing the plants extract have appeared in the market. The vast majority of them advertise it for Tongkat Ali’s aphrodisiac properties.



While many types of treatments are largely considered to be “folk medicine” here in the west, Tongkat Ali seems to be an exception, as scientific literature suggests it is effective in this area.

- A 300 mg extract of Tongkat Ali were given to study participants over the course of 12 weeks and showed an **increase in libido in the range of 8.4-10.8%**. [10]
- Complementary to its aphrodisiac effects, supplementation with Tongkat Ali may also positively affect **the ability to form erections**.

In one study researchers used castrated rats, as a control for the influence of testosterone, and found an increase in the frequency of erections when they were supplemented with Tongkat Ali extract [11].

While the pro-erectile effects of Tongkat Ali are far from conclusive, they are more than promising at this time.

Meanwhile, several studies, albeit animal studies, have shown the administration of this extract does in fact increase male sexual performance. [11,12]

How? We're not 100% sure

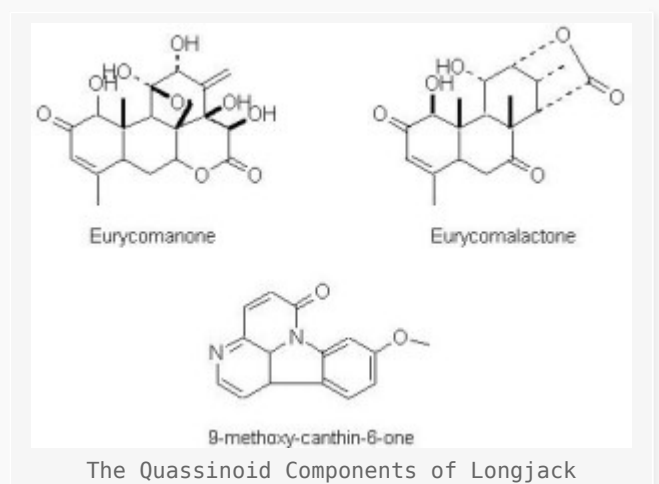
For the most part, the mechanism behind this is currently unknown but it is *hypothesized* that the glycoprotein content, and to some extent the eurypeptide content, is the source of the pro-aphrodisiac effects of Tongkat Ali. [13]

Regardless, it works quite dependably – several studies done using rats have demonstrated Tongkat Ali to be a reliable aphrodisiac. [12,14]

All in all, this is a good start for Longjack, but we want more. Let's go get it:

• Effect on Testosterone

In addition to male sexual health, it is speculated that **Tongkat Ali may increase testosterone**, the male androgen.



It is thought that this increase might be what is responsible for the enhanced male sexual potency one experiences from Tongkat Ali. A paper from the University of Malaya first alluded to Tongkat Ali's effect on testosterone back in 2003.[15]

At this time, the evidence for this is limited, but the mechanism as to how Tongkat Ali may increase testosterone levels is plausible.

Research on men *and* women

However, a pilot study was published in the journal of Phytotherapy Research which supports this. In the study, twenty-five physically active male and females were given Tongkat Ali daily for five weeks. At the end of the study researchers noted a significant increase in total and free testosterone concentrations and muscular force:

- **Testosterone increased by 15.1% and 48.6%;**
- **free testosterone by 61.1% and 122%; and**
- **muscular force by 16.6% and 48.6%**

in men and women respectively.[16]

The possible science behind the rise in testosterone

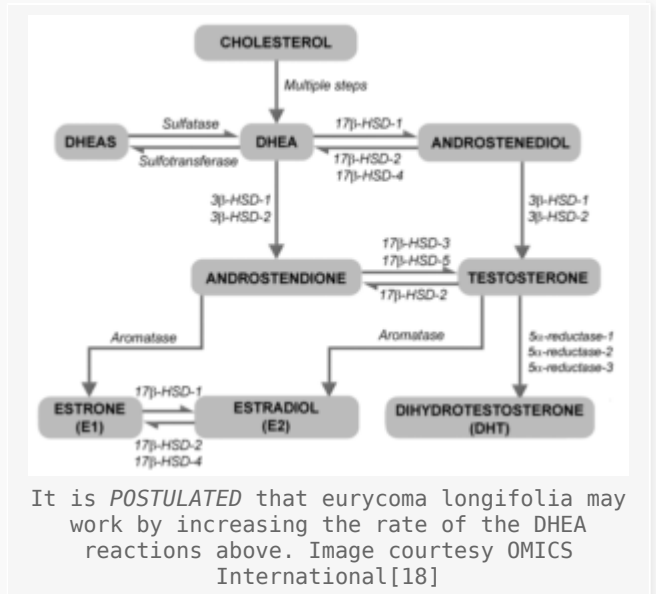
It is *believed* that the euryptide content increases an enzyme in the testes which in turn increases the conversion rate of precursors into DHEA and consequentially androgens.

Hypogonadic success with Longjack

In a study males suffering from hypogonadism, **Tongkat Ali was effective in improving libido and increased testosterone levels by 46% on average.**[17]

Prior to the study, only 35.5% had normal testosterone levels, but after supplementation with Tongkat Ali, **90.8% of the participants reached normal values.**[17] Mean serum testosterone also rose from 5.66nm to 8.31nm.

Consider use during PCT



Because of the above study, it appears the best time for one to use Tongkat Ali would be during post cycle therapy (PCT).

Why? Because after using exogenous hormones, your body's natural production of testosterone plummets, making this a crucial period to return to baseline. During this time, the body is essentially similar to a hypogonadic one making Tongkat Ali a great PCT ingredient.

Unfortunately, when the studies results were attempted to be replicated using *healthy* males, no increase in testosterone was found.[10]

However, in that study, a weaker 20:1 extract of Eurycoma longifolia root was used, leading us to wonder if 100:1 extract is what's truly needed to get a statistically significant serum testosterone rise out of healthy males.

- **Anti-Estrogenic Effect**

Testosterone isn't the only hormone that may be positively affected by Tongkat Ali supplementation. Tongkat Ali also appears to be posses antiestrogenic effects.[19-21]

In one study, researchers injected female rats with testosterone, which unsurprisingly led to irregular estrous cycle, thus affecting the ovarian function. The researchers gave the rats a quassinoid rich extract of Tongkat Ali and saw improvements in estrous cycle.[21] The researchers attributed the amelioration of the adverse side effects from the testosterone to the antiestrogenic effect of Tongkat Ali.[21]

- **Ergogenic Effects (Muscle-Building!)**

The benefits don't stop at sexual health either. According to a study

presented at the joint conference of BASEM and BASES, **Tongkat Ali may also possess ergogenic effects** as well.[22]

In this study, the researchers recruited 14 males and had them perform circuit training over the course of five weeks. Participants were given either a placebo or Tongkat Ali extract.

After the five weeks the participants in the group receiving the Tongkat Ali experienced a greater increase in lean body mass compared to the placebo group. Both groups gained strength however, the Tongkat Ali experienced significantly greater strength gains [22].

Meanwhile, fat mass went down in the longjack users!

Results from the study:

- **4% gains:** *Non-fat* mass increases from 52.26kg to 54.39kg (vs nothing significant in placebo)
- **Body fat decreased significantly – by 9%!** (from 31.3kg to 28.44kg)
- **Strength gains: 1 Rep Max increased 6.7%** (73.71kg to 78.71kg, but it doesn't state what exercise).[22]

Placebo's 1RM went up 2.77%: nice, but not as nice.



We're always on the lookout for natural muscle gains. Pictured: Amin Shahr

The success of this study leads us to wonder if this can be used for more than just muscle-building supplement use...

• Body Composition Effects: More Muscle, Less Fat

Reiterating the data above from the study presented at the joint conference, researchers also noted that the participant group that received Tongkat Ali showed improvements in lean mass gains, body fat levels, overall strength (1RM), *and* arm circumference over the placebo group.[22]

In a separate study, this one a randomized, double-blind, placebo controlled study, 26 men were given either Tongkat Ali or placebo for 12 weeks. At the end of the study the researchers observed **a trend of decreased fat mass** in overweight participants who were in the Tongkat Ali group.[23]

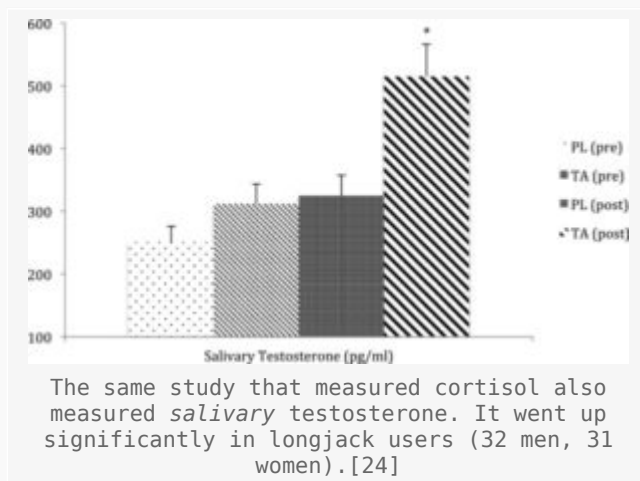
Stack this with your fat burner?

Their findings of decreased waist and hip circumference suggest Tongkat Ali may actually be useful for weight loss[10], yet it's practically *never* advertised as such!

This means that you could consider stacking it in with your weight loss supplement stack / fat burner, since it almost definitely won't already contain any.

Regardless of the whole testosterone discussion, for most of us, it's these body composition changes – appropriate “gains” (and losses!) – that we ultimately seek. Longjack has long been overlooked for this purpose, and we explain why that is when we start talking about supplement quality later on.

• Effects on Stress



Supplementation with Tongkat Ali extract may also have a positive effect on stress.

One study showed a **16% reduction in cortisol levels** (and also a **37% increase in testosterone**) after treatment with Tongkat Ali extract.[24]

The treatment group also experienced a 11% drop in tension, 12% drop in anger, and a 15% drop in confusion, compared to placebo.[24] Literally a decisive man-maker: calm, cool, and collected.

In a separate paper published in the International Society of Sport Medicine, thirty (30) male subjects were recruited from a mountain biking event. Fifteen of them were given Tongkat Ali and the rest placebo. The researchers collected saliva sample before and after each lap the participants made for a total of 8 saliva samples.

What the researchers found was that the **cortisol levels in the Tongkat Ali group was 32.2% lower** and the **testosterone levels 16.4% higher** when compared to placebo.[25]

Where has this stuff been all my life?!

For a natural extract, the benefits are downright ridiculous, which leads us to wonder why it's taken the sports nutrition industry so long to jump on board. The answer to that question leads us to the next section: product quality.

Tongkat Ali Supplements: The full story

When it comes to the tongkat ali supplements available for purchase, **product quality has historically been a serious issue**. Products just never seemed to work as well as indicated in the research studies cited above and below.

Unfortunately, the behavior of a few dishonest companies and suppliers tarnished the ingredient's entire reputation for a while. That story is told in the sidebar to the right, but out of that mess came **LJ100**, which was formulated after too many scam extracts appeared on the market, misling both consumers and the honest supplement brands we enjoy working with.

Introducing **LJ100** – Quality Tongkat Ali 100:1 Extract

LJ100 is the first commercially-trusted, science-backed Tongkat Ali extract. It's a true 100:1 standardized to 40% Glyco Saponins, 28% Eurypeptides, 30% Polysacharides, and Eurycomanone.

LJ100 has more human research behind it than any other extract (much of it cited in this

The story behind Tongkat Ali scams, and the birth of a *real* extract

Some suppliers have claimed 100:1, 200:1, and even 400:1 extracts. But when asked "*What kind of alcohol is used in the extract?*", you get generic (and slightly frightening) responses like "*The kind they use in the hospital*". That doesn't make sense, however, because that potent of an alcohol-based extract would potentially have toxic levels of quasinoids!

So toxicology tests were then requested for safety reasons. At that point, the supplier then admitted defeat: "*Do not worry – the 400:1 extract is actually a 5:1 extract*". They hate it when you actually know what you're talking about.

document), and was created by the original researchers at MIT and University Malaya. It was born out of near necessity by HP Ingredients[26], as discussed to the side.

For instance, HP Ingredients claims that the incredible ergogenic effects research study discussed above (with 4% non-fat gains, 9% body fat losses, and 1 rep max increase of 6.7%) was performed using LJ100.[22]

Recommended Tongkat Ali products

Of the companies selling LJ100, **Nutrex Research** is by far the one with the most professional experience and trust in the community.

There are two things that set them apart:

1. Nutrex Tested is offered at a consumer friendly value, yet with the doses required to match the most successful studies for body composition improvements (the kind most of our readers want!)

It has a legit 200mg per capsule and is backed up by boron, a mineral many of us are deficient in. This is compared to other products who offer as little as 25mg per capsule or 50mg (at just 30 caps per bottle) for roughly the same price.

2. Nutrex Research uses Informed-Sport Informed-Choice testing, which means that Tested is *tested* for banned substances! This is demonstrated right on the label.

You can compare prices on this product below, or sign up for price drop updates to catch the next hot deal:

Nutrex Tested – Deals and Price Drop Alerts

Get Price Alerts

Get Tested Price Alerts Get Nutrex alerts Get Tongkat Ali price drops

It gets worse before it gets better

Meanwhile, there are other scammers that sell **1:50** and **1:100** extracts – note that this is a *reverse* ratio – the numbers are *backwards!!* In these cases, you're getting 1 part extract, 50 parts *maltodextrin!* Yet another scam!

Then, to top it off, other prominent contract manufacturers are supposedly using raw root powder and simply selling it as extract. We cannot publish findings, but a 20:1 extract was found to be 1 part extract, 8 parts maltodextrin.

With that discovered, HP Ingredients created LJ100, and we recommend Nutrex Research *Tested* capsules due to their strict testing (it's Informed-Choice tested for banned substances) and overall value.



☐ Also get hot deal alerts

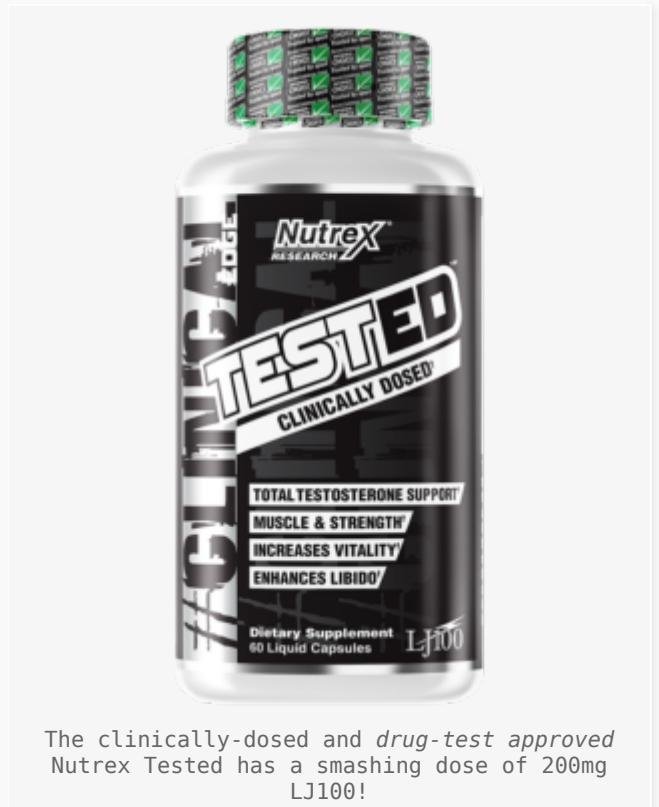
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You can also read more on our LJ100 article for more information.

Recommended Tongkat Ali Dosage



As always, stick with the dosing instructions on the product you buy, and first get written consent from your licensed medical practitioner before beginning any dietary or supplementation program. These statements are not approved by the FDA.

While an *optimal* dose is still unknown, the typical dose of Tongkat Ali extract ranges from 200-400mg per day.[27] This is true for the LJ100 100:1 extract, which has the most research behind it.

Doses are normally recommended to be administered to men in 1-2 doses throughout the day.

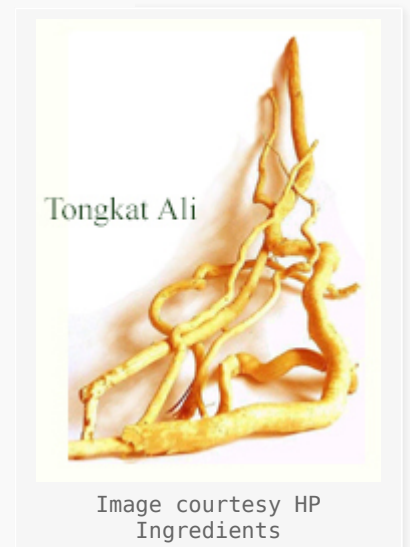
Cycling LJ100 Properly

In terms of *Nutrex Tested*, the instructions are to take two capsules in the morning and two capsules at night. On training days take two of those capsules one hour before exercise if you can (the other two capsules would be on the opposite end of the day).

However, many often cycle it by taking it for five days on, followed by two days off, then repeating the process. This lengthens the effective time and allows your body to continue with its own testosterone production.

In terms of some other products, the maximal acceptable daily intake of Tongkat Ali is up to 1.2g/60kg adult/day, but that was with basic water-based extracts and such a dose would be *far* too much if using a quality extract.[28]

Are there any Side Effects?



While human data is limited, Tongkat Ali supplementation is considered safe if taken in a reasonable manner. A recent study concluded that Tongkat Ali may even be a safe alternative to testosterone replacement therapy![29]

Recent animal study concluded that Tongkat Ali appears to be safe as a treatment for male infertility and general ageing male problems.[30] However, at very high doses, Tongkat Ali supplementation may result in deleterious side effects.[31] In rats, the LD50 for Tongkat Ali has been reported to be >5000 mg/kg.[32]

In one study using humans, up to 600 mg/kg of Tongkat Ali did not result in any negative effects.[33]

But again, don't be stupid or overly aggressive: used a trusted product (not some knock-off crap you see on Amazon), follow the instructions on your bottle, and always do so under the guidance of your doctor.

When used appropriately, Tongkat Ali seriously may just bring your Long Jack

back.

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