



## Clinical Pre-Workout Report

**How can we make the most effective non-stimulant pre-workout possible?**

This was the question posed at BBP HQ. As with all our formulations, this question was written on the wall for 6 months as a reminder that we must provide only the best to our customers. The ingredients that can boost performance are wide and varied. However, some ingredients have much more efficacy than others. This formulation was created by selecting the ingredients that are shown to be the most effective at boosting nitric oxide levels, enhancing amino acids, increasing power output, and decreasing time to exhaustion.

All ingredient selections and dosages were pulled directly out of scientific literature. Packing an immense 720 grams of amino acids, pure extracts and nootropics, Clinical Pre-Workout is by far the most innovative and comprehensive non-stimulant pre-workout on the market.



Your Partners in Nutrition: **Blackbelt Protein**



## CITRULLINE MALATE (8 GRAMS)

Citrulline malate at a dose of 8 grams per serve should form the base of any clinical preworkout. Unfortunately, most supplements are drastically under dosed. Citrulline malate has excellent research showing that when it is consumed prior to a workout it enhances amino acids, specifically branched chain amino acids (ideally complementing BBP Intra-Workout). Additionally, citrulline malate enhances arginine-derived metabolites such as nitrite, creatinine, ornithine and urea. There are a number of studies showing a significant boost in performance (52.92% more repetitions). When supplementing with 8 grams of citrulline malate vs a placebo, there is a 40% reduction in muscle soreness in the following 24 – 48 hours.

One of the main benefits of supplementing with citrulline malate pre-workout is its ability to increase growth hormone post-workout. When compared to a placebo group, citrulline malate significantly increase growth hormone.

Study 1: <https://www.ncbi.nlm.nih.gov/pubmed/20499249>

Study 2 : <https://www.ncbi.nlm.nih.gov/pubmed/20386132>

## CREATINE MONOHYDRATE (5 GRAMS)

Creatine Monohydrate is the most researched supplement in the world. There have been many studies demonstrating an increase in muscle performance in progressive blasts of shortterm, high force exercise. This has clear advantages for anyone taking part in exercise activity from bodybuilders and powerlifters to sprinters and rugby players.





Note: For optimal creatine supplementation, load creatine monohydrate for the first 14 days. This means consuming four 5-gram servings. If you are supplementing with BBP Clinical Pre-Workout, then you would only need to consume three more 5-gram servings per day. Once the 14 weeks are complete, your muscles will be adequately saturated. From this point,

Study: <https://www.ncbi.nlm.nih.gov/pubmed/22080314>

Study: <https://www.ncbi.nlm.nih.gov/pubmed/20126965>

### **L-ARGININE (6 GRAMS)**

L-Arginine supplementation at 6 grams will enhance nitric oxide production, decrease oxygen consumption and improve time to exhaustion by 24.8%. Unfortunately, most Arginine supplements are three to six times under dosed.

Study: <http://jap.physiology.org/content/early/2010/08/19/japphysiol.00503.2010>

### **SCHIZANDRA CHINENSIS (100MG)**

Schezandra Chinensis has the ability to increase nitric oxide and cortisol in blood plasma. In the below study, researchers were able to show that the increased nitric oxide and cortisol levels improved physical performance in athletes relative to a placebo group.

Study: <https://www.ncbi.nlm.nih.gov/pubmed/10228607>





### **CURCUMIN (80MG)**

Curcumin is the active ingredient in Turmeric and has been shown to have anti-inflammatory and antioxidant properties. Additionally, curcumin offers pain relief and decreased anxiety. It has been included in the BBP Clinical Pre-Workout at a dosage of 80mg for its ability to significantly increase nitric oxide levels (40%) as compared to a placebo group.

Study: <https://examine.com/rubric/effects/view/27/Nitric+Oxide/all/>

### **PHOSPHATIDYLSERINE (750MG)**

Phosphatidylserine is an amino acid derivative compound that is fat-soluble and found in high amounts in the brain. Due to phosphatidylserine ergogenic properties, a relatively small dosage of 750mg over 10 days is able to improve time to exhaustion in cycling by 85% VO2 max without significantly affecting oxygen uptake, fat oxidation rates, or cortisol levels.

Study: <https://www.ncbi.nlm.nih.gov/pubmed/16394955>

