

# WHAT IS PRE- WORKOUT

Everyone from the mates to magazines now recommend pre-workout. If you are new to pre-workout we recommend that you need to shop with experts who will take the time to explain what the label means or visit a PT. When it comes to pre-workout it can assist with weight loss to weight gain, improved performance, energy and recovery. So what are you really looking for and what does it mean?

Before we go any further, health professionals will often say pre-workout supplements are a waste of money and they can be. The problem for beginners and intermediate trainers is they often over look what the bodybuilders and athletes know.



**1. YOU NEED A SUITABLE GYM PLAN TO MAXIMISE PRE-WORKOUT SUPPLEMENT USE.**

**2. YOU NEED MACRO FRIENDLY MUSCLE BUILDING FOODS TO COMPLEMENT TIME IN THE GYM.**

After a big day at work or backing up after a day on the tools, a pre-workout will maximise your time in the gym” after that you need a plan for best results. The formulation for popular pre-workout powders is they contain performance based ingredients like Creatine, Beta Alanine, Arginine and Caffeine. There is an abundance of scientific research to validate the use of these key ingredients.

Back in the old days before the first pre-workout bodybuilders drank coffee to deliver increased intensity and focus to their workouts. Then came the thermogenic tablets revolution that added the same benefits to each session. Now days with this old-school knowledge combined with researched science formulated pre-workouts contain caffeine and have the added benefits of ingredients proven to assist improve muscle growth and strength.

You can train without a pre-workout the world wont end. If you want to build muscle or shred fat fast, pre-workouts are designed to assist you maximise your time in the gym.

Creatine found in most good pre-workouts is a substance found naturally within the human body. Although found in numerous organs, the majority of creatine is stored within skeletal muscle cells. Put simply, creatine is used to restore the levels of Adenosine Tri-Phosphate (ATP) in cells. ATP is a vital energy source for muscles and creatine is needed to maintain adequate ATP levels. The remarkable thing about muscle creatine stores is that they can be increased simply by supplementing the diet with additional creatine (1). Therefore, oral consumption of creatine increases and saturates the muscle content of creatine, which regenerates ATP so your muscles can keep on working.

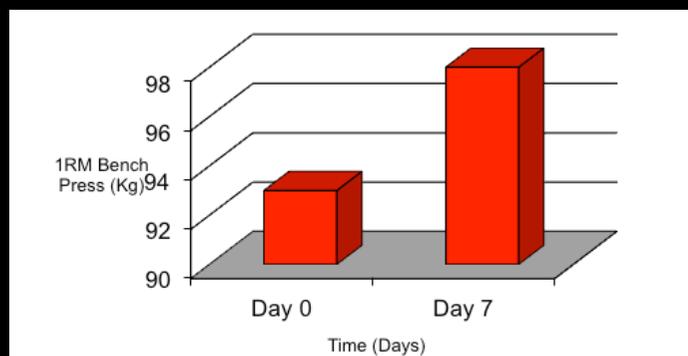


Figure 1: Strength changes after 7 days creatine supplementation.

A number of studies have suggested that creatine may enhance muscular strength within a very short period of time. One study compared the maximum amount of weight able to be lifted for one repetition in the bench press exercise prior to and after seven days creatine supplementation (2). This strength based test commonly referred to as a “1RM” is a measure of maximal muscular strength. As shown in the graph below (figure 1), after only seven days creatine supplementation muscle strength had increased significantly.

Numerous studies have reported that, when combined with a resistance training program, creatine can enhance the gains in fat free mass and lean body mass to a degree that is significantly greater than would be associated with training alone (3-13). This is likely attributed to a combination of factors including:



## 1. CELL VOLUMISATION

Creatine causes the water inside the muscle cell (intracellular fluid) to increase, which causes the cell to swell (7, 14). This is believed to be an anabolic signal, which may promote protein synthesis (15). Cell volumisation can be indirectly detected by an increase in muscle cross sectional area within a matter of days after beginning creatine supplementation (16). This may be subjectively felt as a “tightness” or “pump” in the muscle by many users.



## 2. ENHANCED TRAINING CAPACITY

Creatine enhances the resynthesis of the cells energy source, Adenosine Triphosphate (ATP). This can allow a higher training intensity to be maintained, which may ultimately lead to a greater stimulus for muscle growth (17).

Beta Alanine is found in various human studies. Beta-alanine supplementation has been shown to increase exercise performance, including increased time to exhaustion (18), peak power output during a sprint (19), training amounts for the bench press exercise (20), the total number of repetitions performed, as well as an increase in the change in mean power (21), as well as fatigue threshold and physical working capacity at neuromuscular fatigue threshold (18, 22, 23). The positive effect Beta Alanine has on exercise performance may be due to the effect beta-alanine has on muscle carnosine levels in all fiber types (24, 25, 26, 27), helping to buffer the muscle from pH changes due to lactic acid production, or improved lean body mass (28).

Caffeine is available in so many foods and beverages these days. This widely used stimulant, has been included to help fight fatigue, enhance focus and improve your sense of performance. Athletes in a wide variety of sports regularly use caffeine as an ergogenic aid. There are three main hypotheses of how caffeine helps enhance physical performance and stamina.

- 1.** Caffeine causes the body to burn more fat and fewer carbohydrates
- 2.** Caffeine enhances the athlete's mental focus by stimulating the central nervous system
- 3.** Caffeine may have the ability to strengthen muscle contractions



A separate author offers a fourth hypothesis, suggesting that the thermogenic properties of caffeine offer benefit to strength-power athletes by altering body composition (29). Clinical research shows that taking caffeine can increase muscle strength and physical endurance (30, 31, 32, 33).

Backed by research the perfect pre-workout supplement may help you push through training plateau's, boost the work capacity of muscles, increase strength and enhance recovery and contains less than 1g of carbohydrate per serve.

You would assume the best pre-workouts in the world have nothing to hide for drug tested athletes and people who are tested at their workplace. This is a common mistake that has resulted in the suspension of many elite athletes. Prohibited substances may appear on the label, but under a different name than what is on the list. For example, a product may contain an ingredient called geranamine. This word doesn't appear on the WADA list, but its chemical name does, methylhexanamine. In this case athletes could unknowingly use a supplement they believe is safe only to fail a drug test because they didn't do their homework. Additionally, some raw materials or manufacturing plants may have low levels of cross-contamination or naturally occurring steroidal compounds from some herbal ingredients. Body Science pre-workout KOS PRE WORKOUT has been tested for banned substances using ISO 17025 accredited methods. The Informed Sport supplement guarantee is against and made to the highest quality in GMP / HACCP certified manufacturing facilities.



**BUY NOW**

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