



Ketones versus KetoActiv™

Supplementation with the ketone body, BHB has come under much scrutiny in the context of weight loss claims. This is especially so with MCT accompanied BHB supplements. The ketone will carry with it a caloric contribution as will the medium chain triglyceride. High doses therefore add calories to the daily intake that need to be worked off. It's absurd to think you can add extra calories to a diet and expect miraculous weight loss without strategy! Even if consumed on an empty stomach to fuel a fasting workout, high doses exceeding 20 grams of the blend can contribute more than 180 calories; a calorie count that can take over 20 minutes to expend on a stepper machine before you engage in 'burning' fat or glycogen calories stored in the body. Now take a dose that exceeds 40 grams and the extra 'bang' you think you're getting is going to land and stick alright... right where you don't want it to. You'll need to work that stepper for as long as 45 minutes just to overcome these added calories before you start carving down your body.

In addition to the calories, research irrefutably demonstrates that a rise in serum ketones can inhibit lipolysis NOT induce it, so the blanket claims for fat loss by exogenous ketone supplementation are not appropriate [143] [37]. They're downright lies—and certainly in this context MORE IS NOT BETTER. BHB research does not support weight loss with exogenous ketone supplementation; so don't be fooled. Nevertheless, research does support appetite control and beta-oxidation induction with butyric acid (BA) supplementation, a major constituent of the BHB-BA complex in KetoActiv™ [114] [109] [115] [116]. This short chain fatty acid (not the medium chain triglyceride) is also shown to improve markers of cardiovascular and cognitive health [114]. Mice taking butyrate in the diet eat less food; stay spontaneously leaner; have more energy; and stay more active. AND this short chain fatty acid does not induce gastrointestinal distress like the MCT can.

A careful balance is the key: using the exogenous ketone as a factor to bridge energy for the brain during fasting or other reasons for deprivation. However this BHB molecule also serves as a signaling ligand to activate important health-promoting cellular activities. This can fit the training program if power and lean gains are the objective. However, the ligand signaling does not necessarily require the high dose throughout the day when carbohydrate sources may enter the diet. Your cells cannot use the ketone effectively as an ATP substrate if serum glucose

is available. Unless you are on a strict ketogenic diet (low to zero carbs) at the same time forget the high dose exogenous ketone. And then, if you are on the strict ketogenic diet, the other question you have to ask: Do you really need the exogenous ketones?

On the other hand, an activation signal such as the constant 'ping' by butyric acid to turn on fatty acid beta oxidation and keep 'ON' fatty acid oxidation (the 'burning' of your body or dietary fat) for energy is critical. Without this signal from butyric acid to keep the beta-oxidation signal in the 'ON' position, endogenous ketone generation from your own fat stores is very difficult to achieve. The period of time it takes to induce this 'fat burning' and ketone-generating activity while deprived of carbs with a low carb or ketogenic diet is very difficult for the brain. Most people don't make it; and of those that do, few really get results. I've been there regularly to be called the leanest most muscled on stage at what could have been 3% or less body fat if the devices measured accurately at these lower levels. It's never easy but the right supplement support makes it possible.

Your mind drives everything you do; motivates eating; motivates action; motivates completion of everything you strive for. Keeping your brain fully fuelled while serum ketones might fluctuate due to dietary irregularities including variable protein intake is difficult. This can be achieved with the exogenous ketone to help you achieve any goal you strive for. So YES, using the right exogenous ketone source with or without the ketogenic diet in play has value to keep serum ketones stable, but it's also best to keep serum sugar out of the way if the ketone is your target ATP substrate. Butyric acid improves serum glucose clearance to keep the ketone prevalent in serum. Yet another synergist role for butyric acid.

Each dose of the studied BHB-BA complex supplies a low-sodium array of key electrolytes (Mg, Ca, K, Na) as a function of the butyrate salts while delivering the biological value of the butyrate and its sister B- hydroxybutyrate (BHB) ketone body. These benefits exceed and are additive to the energy substrate value both the BHB and BA deliver on their own. Using BHB-BA to fuel a fasting workout gets you the impetus to engage intensely in your workout at the get-go, even in a fasting state; helps inhibit catabolism of lean muscle; keeps the mind in the zone; but within minutes it will have you oxidizing your own fat to fuel the workload instead of the exogenous BHB.

In addition our recent research at Biologic Pharmamedical Research shows that these BHB-BA doses intensely induce Nrf2, a transcription factor that when activated elevates endogenous glutathione peroxidase, hemeoxygenase-1 and other important endogenous antioxidants that work inside your cells.

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