



One More Time: The TRUE Workout Shake

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I hate to say “I told you so”, but there are times when you just have to and this is one of them. There is no longer a debate whether pre- and post- workout feedings enhance exercise-induced results. More and more and still more studies keep cropping up that not only continue to validate this now established fact, but also document the proper formulas.

And the formulas are all relatively the same—within the range of 1.5-4 parts carbohydrate (CHO) to 1 part protein (CHO range is based on the activity being studied), and low to no fat. These ranges are what all scientists use in studies because this is the basic ratio that produces the best results – i.e. faster recovery and more muscle and strength gains from your workout. AND the carbohydrates are primarily simple, fast-acting sugars. DO YOU GET IT YET?

I told you so

So quit buying that “other stuff” even if it is on sale – or at least don’t use it for the purpose of maximizing the post workout metabolic window of growth (see sidebar for more on metabolic windows)*. The “other stuff” is okay when you need to add protein, fat and calories to your daily food consumption, but never use it anywhere near your workout times.

All right, I am finished scolding everyone who gave into great marketing instead of heeding real science and following my advice two years ago. With that in mind I have resurrected my 2006 newsletter that launched the Apex ready to drink (RTD) Workout Shake to reiterate why it works best for most of the exercise/athletic population (see sidebar for more endurance-type activities)**. And what better time to revisit this newsletter than now? We’re releasing a delicious new flavor, Mixed Berry, and we’ve improved the clumpy, I mean Creamy, Vanilla flavor (if you somehow get a clumpy shake, please contact our Customer Service team right away and we’ll send you a replacement).

So here you go: a reintroduction to the TRUE ready-to-drink workout shake, which is why it’s called *The Workout Shake*. In order to be an actual pre- or post-exercise formula that can deliver the desired outcome of producing better workouts, more muscle/strength and faster recovery, well-established scientific criterion must be met.

In the past, the proper product would have been a tough sale

No one dared to properly formulate a pre/post RTD for the simple reason of economics. Manufacturers of existing RTD shakes (including the best selling one) “sell out” to good marketing. What I mean is that unfortunately, until

recently, the average gym goers/exercisers (not the well-informed athlete) have generally looked for “higher protein” formulas when choosing a quick snack before or after training. Worse, many of this health club group would also want the formula to include a low carbohydrate count. So people basically ended up drinking a protein supplement, which of course delivered little to nothing of what they actually needed.

Worse yet, total calories consumed may have been even higher than if they had chosen the proper formula. So, at the end of the day they got exactly the opposite of the desired outcome: they consumed calories that delivered less energy and did not fire up their muscle-building machinery, as opposed to taking in the same or fewer calories that could have produced everything they needed. *Unnnnnn-believable!* But that’s how you end up with backward formulas in the gym coolers. The makers cater to what they believe you want, not what you need, because it’s too costly or impractical to properly educate everyone, and in the end, great marketing + bad science = wrong outcome!

The right energy formula

The basic ingredients that can deliver the desired results are no secret. Anyone can pull up volumes of recent peer review literature that clearly spell out what exercisers need to recover faster and produce more energy in order to have the potential to perform at a higher level. With everything else equal, including total calories—this formula may not only boost performance and muscle gains but can lead to greater fat loss. The not-so-secret “sauce” starts with a carbohydrate/ sugar profile that can enter the body quickly, act fast, but continue to support energy levels throughout the training period. Therefore, you need a high dose of simple carbohydrates (primarily sucrose, which is ½ glucose, ½ fructose) mixed with a moderate dose of protein and relatively low fat.



Besides supplying necessary amino and fatty acids, the simultaneous ingestion of the formula’s protein and fat helps manage the speed in which the carbohydrates enter the body, allowing the recipient higher but consistent energy levels throughout the desired period. *Ahhh, but*

there's more. By consuming the right ingredients before the workout, we can also enhance the recovery and muscle building process.

The right recovery formula

Although recovery primarily takes place after the workout, you can help speed and improve the process before you start by ingesting the same ingredients 10-40minutes before the workout as you do immediately following (always make sure your pre-training full food meal is eaten 2-3 hours before exercise unless you train first thing in the morning and time does not permit). We all should remember that insulin is king when it comes to building muscle (See September 2005 newsletter, [Maximize the Power of Your Own Anabolic Hormones by Harnessing the Magic of Insulin](#)). Not only does this hormone start and continue the entire muscle-building process, but insulin also helps minimize the damage caused by exercise, allowing the body to spend more time building muscles rather than constantly repairing them. By ingesting the right drink pre-exercise, carbohydrates (CHO) not only supply workout energy but also kick-off the helpful insulin release that will work to mitigate the exercise-induced damage. And by repeating the same basic formula post-workout, a renewed insulin release initiates and enhances the muscle-building hormone cascade thus recovery and results.

When liquid is better

Although you can get the same CHO, protein and fat mix in bar form, which will digest much faster than traditional foods, all studies that demonstrated the best outcomes were designed using a liquid delivery system for these macronutrients.

Liquid form would certainly get into the system faster than all other forms, but it may also be more effective in driving insulin to the necessary levels that can improve the entire anabolic process. That said, any of the Apex bars do meet the necessary "quick digestion criteria" and are often more practical based on venues. And the bars can still deliver the majority of the desired results provided the above formula outline is met.

RTDs are also a convenient method of acquiring pre-workout nutrients when time is a consideration, as in early morning workouts (from bed to the gym) or straight from the office to the gym, because by ingesting the liquid form, the contents are almost immediately at work in the body.

So there you have it, plain and truly simple: mix predominantly CHO with moderate protein and low fat into an acceptable calorie range, deliver it in a liquid matrix and you have exactly what you need—the perfect pre- and/or post-workout RTD shake. Finally! (Add your Anabolic Stack as laid out in my March 07 newsletter, [Muscles, Strength and Size Maximized](#), and you'll think you are taking something illegal).

The Workout Shake is now available in Mixed Berry (early March), Rich Chocolate and Creamy (not clumpy) Vanilla flavors. Even if you don't think you like berry, you have to try the new Apex flavor -- it is GREAT and kids love it. And it's perfect for your youth athlete.

Until next time,
--NEAL

Metabolic windows of growth

Virtually all studies have demonstrated that "immediate" pre- & post-training carbohydrate and protein feedings stimulate muscle protein synthesis (MPS) and reduce muscle damage to a far greater extent than normal meals/feeding patterns. Meaning that along with eating properly throughout the day, you build more muscle and strength by adding these feedings because muscle cell nutrient uptake is at its highest point of the day immediately post-workout, and therefore this "window of opportunity" requires a perfect fast-acting formula.

We also only recently discovered that although the post training metabolic window is active for as much as 60-90minutes, its maximum activity (greatest nutrient uptake capabilities) takes place immediately at the end of the training session. From that point on, the longer you wait to supply the proper nutrients or the more time they take to get to the affected tissues, the less muscle building or recovery takes place during this period.

****Exercisers who use Long training sessions and endurance/aerobic athletes** would use the Apex powders for the pre- and post- feedings so they can add ingredients (e.g. juices, fruits, etc.) that increase the carbohydrate (CHO) to protein (P) ratio up to 4:1 (the longer and/or more aerobic the workout, the greater the CHO:P ratio) because of the glycogen/energy needs of these types of athletes.

Nutrition Facts	
Serving Size 1 Container (330mL)	
Amount Per Serving	
Calories 250	Calories from Fat 45
% Daily Value*	
Total Fat 5g	8%
Saturated Fat 2.5g	13%
Trans Fat 0g	
Cholesterol 15mg	5%
Sodium 320mg	13%
Total Carbohydrate 34g	11%
Dietary Fiber 1g	4%
Sugars 33g	
Protein 20g	40%
Vitamin A 25%	Vitamin C 15%
Calcium 50%	Iron 0%
Vitamin D 15%	Vitamin E 15%
Thiamin 20%	Riboflavin 40%
Niacin 15%	Vitamin B6 20%
Folate 15%	Vitamin B12 30%
Biotin 15%	Pantothenic Acid 20%
Phosphorous 60%	Iodine 50%
Magnesium 10%	Zinc 5%
Selenium 15%	Molybdenum 5%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.