



Muscles, Size, Strength & Performance – Maximized!

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I hope this got your attention because we may have uncovered what everyone has been looking for: a legal, healthy means of getting the body to produce (and keep producing) everything it needs and more related to size and/or performance. And when I say more, I mean I don't know where progress would stop for hard working athletes/exercisers if they stay healthy and continue the newly discovered protocol. **We may have stumbled onto the "Size & Performance Holy Grail."**

If you don't like science lessons, or you are the kind of person who says "don't tell me how the watch works, just show me what time it is," simply skip all the way to the last section: The Seasonal Anabolic Stacking Procedure. Follow the stack, work out, and you will continue to grow and perform to a potential you may never realize (only because we aren't sure where or why progress would stop). Otherwise, read on - it's an amazing story.

History

Last year, I was asked by prestigious, academic publisher CRC Press to write a chapter on the topic of amino acids, their combinations, and their use by athletes or exercisers with the intent of improving training outcomes. The book is titled *Sports Nutrition: Fats & Proteins* and will be released early this year (go to www.crcpress.com and search for the title).

As much as one might resist having to take on huge projects like this request, we always know something good comes from the *process* (e.g. research, analyzing & synthesizing data, etc.), not necessarily the completed task – especially when you consider there is no compensation. It's just one of those things we don't turn down because of the credibility it adds to the Apex "resume" and all we're connected to.

Anyway, during this process we uncovered something everyone else missed, and I can only imagine the reasons for the oversight: the scientists performing the different clinical trails never had my vantage point. I had all current research from all over the world related to protein synthesis, performance, recovery and muscle hypertrophy in one place – spread all over my office floor! The real geniuses (e.g. head research scientists) were simply isolated from much of their peers' data. This data, when seen from my view, would have had them "connecting all the dots" and they certainly would have beaten me to the astounding conclusions. In other words, they only had their individual pieces of the puzzle, and I had all of them.

The Size & Performance Puzzle (what we knew, what we didn't and what we know now)

We absolutely knew that, when compared to a non-supplemented state, creatine supplementation works to enhance size & strength gains through the addition of the

energy substrate (creatine monohydrate) in muscle cells and by increasing cell volume.

We already knew that immediate pre- & post-training carbohydrate and protein feedings acutely stimulate muscle protein synthesis (MPS). They also reduce muscle damage during the 60-minute post-training period to a far greater extent than normal feeding patterns, even when overall daily calories and protein intake are equal. What we *didn't know before* was whether or not MPS activity (size contribution) taking place within 60 minutes post-training (activated by these feedings) would have happened at some other point in the day if you did not engage in the practice. For example, would you simply have more muscle-synthesis activity throughout the rest of the day in order to "catch up" on what was missed during the post-training 60-minute "window"? **Now we know you don't.**

We also knew that specific amino acid feeding alone stimulates MPS *independently* from all mechanisms, including exercise, hormone levels, cell volume, etc. But we didn't know what *combination* of amino acids (AA) would deliver the greatest result. Could the AAs simply come from whole proteins, or is there a delivery pattern, including timing and an ideal amount, that would have a greater affinity for muscle or deliver a stronger MPS signal? **Now we know there is. Keep reading--the puzzle pieces keep coming.**

We also knew hormones make a unique contribution to MPS, and their control can be managed by diet content and feeding patterns (especially insulin, which facilitates AA transport) in order to maximize insulin's role in anabolism. What we didn't know was how to manage the delicate balance between insulin and all the other aforementioned MPS mechanisms. Managing this balance would allow us to create a perfect muscle-building "green house effect" that would always be in place if called upon by unaccustomed stimulus. And that's when pieces began to fall in place.

The next piece is big: Something we didn't know but that's been very recently documented is the fact that negative protein balance caused by exercise (muscle damage) remains constant throughout a prolonged training regime. Therefore, unaccustomed exercise always "opens the window" for anabolism. Or, in other words, unaccustomed training continuously sets muscles in motion to remodel bigger and to get stronger in order to handle the changing loads. In this case, if exercise-induced progress stops, an adaptation must be in play simply because something (or things) the body *always* calls for during intense training is missing.

If unaccustomed activities continue to set the stage for change (progression), why do we come to plateaus?

To answer this question we had to go back to the beginning. We know exercise induces protein synthesis, and it's clear that eating properly, combined with immediate pre- & post-liquid carbohydrate and protein feedings along with creatine loading, enhances training results. Obviously these practices are performed regularly by most strength and size athletes, but still everyone plateaus eventually. Finally, right there in front of us, created by collective research, were all the pieces to the complete MPS puzzle. This left us with one final question: now that we know the opportunity to grow and get stronger through unaccustomed training continues to exist, why do athletes, who diligently incorporate all *known* methods of maximizing muscle size and performance, eventually stop progressing? Was there a "piece" still missing, or were the known pieces just not arranged properly? The answer is both.

Assembling the puzzle

Okay, since MPS can be continually stimulated through training, then a plateau means one or more MPS mechanisms is "spent" or at its threshold. But whatever is in play that halts progression, whether hormonal or dietary, can surely be confronted and potentially overcome **by stimulating all MPS actions** throughout the entire day.

Through our research we discovered that MPS can be stimulated in many ways, and the various mechanisms described above have been shown to not only interact but function independently and may have additive effects. So that was the first part of the solution to avoiding plateaus: **properly incorporating/arranging all MPS dietary influenced activities** (primarily to harness insulin's amplifying anabolic powers). Once armed with the revelation that the "never-ending exercise-induced window for change" when missed is never compensated for later, another piece to the puzzle revealed itself. Although well-timed pre- & post-training liquid meals were part of the solution, upon further review it became evident that even when engaging in this practice results would eventually stabilize while the "window" is still being opened. Therefore, it became a matter of discovering what else the body needs at these crucial times that could continuously fill the muscles' requirements in order to progress. What exact materials does the body call for? How should they be consumed in order to allow the muscle-building machinery to remain turned on without other parts of the body using or disposing of them?

Thinking back to all the new research, we remembered that AA feedings by themselves at specific times made a separate and unique contribution to protein synthesis, but *what combination* of AA would keep delivering?

So we went back and analyzed (and agonized) over 20 years of studies related to protein synthesis, amino acids & exercise and there it was! **It had been clearly demonstrated that the presence of a specialized grouping of AA at certain times, in specific amounts, in the skeletal muscles' extra-cellular space, in a precise pattern that mimicked their use and incorporation in skeletal muscle structure was the most productive combination.** We believe we not only found the missing piece, but also its place in the puzzle: separate, timed feedings of this pattern

of AA would make the final, missing, and ongoing MPS contribution.

Therefore, combined with the proper arrangement of all the other MPS dietary influences, we surmised that through the incorporation of this specialized AA blend, the recipient would be afforded their best chance at never reaching the end of training-induced progress. In other words, when the "window is open", the materials and signals to remodel will be ready. We give you:

Apex Anabolic Amino Extreme – The Missing Piece

Goal: Supply the proper amino acid combination that has been shown to increase exercise-induced protein synthesis (when compared to normal feeding alone or other AA combinations). Then deliver it at ideal times in order to maximize "intense training-induced specific windows" of opportunities for anabolism throughout the day. Proper ingestion would maximize the unique muscle protein synthesis mechanism that's activated through the feeding of specialized amino acids (AA). This would potentially lead to greater strength and size gains, especially when exercise-induced results have stabilized (i.e. reached the training plateau).

Rationale: it has been well demonstrated that a specific pattern of specialized AA feeding stimulates protein synthesis independently of all other mechanisms.

Benefit summary:

Continual Recovery Signaling

- Highly anabolic: signaling protein's synthesis by being present in the blood stream at ideal times and in proper proportions
- Components incorporated into muscle proteins
- Greater increases in muscle protein synthesis
- Greater increases in lean mass
- Greater increases in strength
- Accelerates changes in body composition

The Amino Extreme product is a must for every serious size and/or performance athlete or exerciser who wants to continue to progress – *ESPECIALLY* as we peak or age. These are periods when the body becomes more resistant to change and progress, and/or performance declines. Now you think that's big news – and it is – but when you put it *all together?* Game Over.

Muscle building puzzle is complete, but let's add the final touch

In my office, spread all over the floor, we had finally put it all together: the complete formula to keep results coming until . . . well, let's hope you don't find out *when* unless you've accomplished all your strength, size or performance goals.

But just to be sure we added one more potential enhancement. With all MPS mechanisms identified, and now being activated through strategic dietary and supplement planning, we theorized, based on the existing data, that by increasing blood flow and enhancing training capacity and focus we could enhance the overall effect. At the very least the additional muscle blood flow, using well known natural vasodilator compounds, should increase power with certainly no downside. A complementary product was born.

NO Xtreme

The Goal of this unique product is to provide specific substrates that have the ability to increase blood and necessary nutrient flow to muscles in order to maximize the training response. This leads to greater gains in strength, size and/or performance.

Rationale: the base proprietary blend contains compounds that work synergistically to increase blood flow (vasodilation). The greater blood flow to skeletal muscle would theoretically increase the delivery of oxygen, energy and rebuilding nutrients, while hastening the removal of waste products. This would lead to a potential strength improvement, less muscle breakdown, and greater net protein synthesis, especially if combined with an appropriate “dose and timed delivery” of specific amino acids (Anabolic Amino Xtreme). Synergistic ingredients are known muscle and energy enhancers (e.g. creatine and caffeine).

Benefit summary

- Vasodilation (increased blood flow - the pump)
 - Rapid movement of nutrients in and waste products out of muscles
- Muscle force production
 - Better, stronger workouts
- Recovery
 - Anti-catabolic (decreasing stresses from exercise)
- Enhances nitric oxide (NO) production and the muscle pump
- Enhances nutrient delivery to muscle
- Enhances lactic acid removal from muscle
- Improves workout focus and training capacity

Summary

The formula in a nutshell: unaccustomed training always sets muscle remodeling in motion, and since we now know that many MPS mechanisms are unique and can be additive, one would-- through strategic diet augmentation and modulations--gradually maximize each individual mechanism of protein synthesis. This includes the strategically timed delivery of the newly discovered pattern of AAs into the training-induced “anabolic windows” in order to continue progress (see complete protocol under Seasonal Anabolic Stacking Procedure).

At the very least, you will give your body the nutritional capacity needed to reach new heights. In keeping the muscle building machinery turned on, you’re maximizing the stimulus for each unique mechanism’s (exercise, pre- & post-meal content and timing, hormonal, cell volume, amino acids and vasodilation) contributions to MPS. And if proper training and attitude are in place during this protocol, you may accelerate and continue training-induced results until who knows when? Now you know how the watch works **and** what time it is—flip to the next page for the SASP and go for gold!

--Neal

Seasonal Anabolic Stacking Procedure (SASP)

GOAL: muscle protein synthesis (MPS) can be stimulated in many ways and, as current research has demonstrated, each mechanism may interact and be additive.

The athlete's goal is to safely maximize each MPS mechanism's contribution to adding muscle or enhancing performance in order to accelerate and continue improving training-induced results.

RATIONALE: the rationale for establishing a nutritional strategy (SASP) that can help stave off the inevitable muscle gain or performance plateau is based on the fact that, throughout a prolonged training regime, unaccustomed exercise continues to "turn on the muscle building process". Hence, when in the non-supplemented state (i.e. normal feeding patterns) and a plateau has occurred, a substrate or hormonal adaptation must be in play. Therefore, this continuous "window for growth" provided by intense training affords diet modulations including supplementing food intake with specific compounds that have known effects on each unique MPS mechanism (e.g. cell volume, vasodilation, hormonal interplay, nutrient composition & timing of ingestion), and the opportunity to help overcome training plateaus allowing the athlete to maintain progress.

All the above gives rise to the creation of a dietary supplement regime that can safely promote an individual's internal physiological environment to its highest capabilities of increasing size and/or performance.

Stacking Components: Customized Directions

Along with maintaining the use of the appropriate Apex daily multivitamin mineral formula, participants should maintain adequate protein and energy intake: protein at .7-.9 grams per pound of body weight/day (not including the grams of the Anabolic Amino Xtreme); and calorie intake so that the user has no greater calorie deficit than 10-20%. Energy intake approaching maintenance or at a slight surplus when possible will accelerate results. Carbohydrate intake specifications are designed to maximize an individual's natural anabolic hormonal interplay in order to optimize protein synthesis while all assigned nutrients are available.



Apex NO Xtreme Specific Directions

30-40 minutes before workout:

- Under 100LBS: take 1 scoop
- 101-149LBS: take 1.5 scoops
- 150-199LBS: take 2 scoops
- 200LBS plus: take 2.5 scoops
- **Not necessary on non-workout days** if using other products containing creatine. Otherwise, use half the recommended dose on non-training days

Do not exceed 3 scoops (primarily based on caffeine content).

Apex Anabolic Amino Xtreme Specific Directions

Ranges based on size (<150LBS use 6gms dose; >150LBS use 12gms dose); those in between adjust accordingly) or greater stresses such as prolonged dieting, extreme training conditions in which users may increase the dose within the published range (no need for anyone to exceed a 12gms dose).

Each training day only*:

- 10-30 minutes pre-workout: Drink 20-40 grams of carbohydrate (CHO) with 6-12 grams of Anabolic Amino Xtreme
 - Use Apex High Performance or Workout Shake for carbohydrate and added protein source
- Immediately following training: ingest 6-12 grams of Anabolic Amino Xtreme
- 20-40 minutes after post-workout Anabolic Amino Xtreme ingestion, consume a mixed meal drink of 30-50 grams of CHO with 15-30 grams of protein and low fat (2-5 grams)
 - Use Apex High Performance or Workout Shake for carbohydrate and added protein source
- Consume normal post-workout whole-food meal at approximately 2 hours post-training

*Optional for potentially maximizing results: repeat the 6-12 grams Anabolic Amino Xtreme about 1 hour before next meal or before bed.

Apex Volumizer Specific Directions

Take daily throughout the intense training cycle, and always consume doses with meals containing carbohydrates or with carbohydrates alone.



The Seasonal Anabolic Stacking Procedure

Week	NO Xtreme*	Anabolic Amino Xtreme**	Volumizer***	Training Intensity
1	1-2.5 Scoops as directed 30 min before WO			Med
2	1-2.5 Scoops as directed 30 min before WO			Med-high
3	1-2.5 Scoops as directed			High
4	1-2.5 Scoops as directed	6-12gms as directed 30 min before & immediately post WO*		
5	1-2.5 Scoops as directed	6-12gms as directed 30 min before & immediately post WO*		High
6	1-2.5 Scoops as directed	6-12gms as directed 30 min before & immediately post WO*		High
7	1-2.5 Scoops as directed	6-12gms as directed 30 min before & immediately post WO*	6 tabs, 3 before WO, split remaining throughout day with meals	High
8	1-2.5 Scoops as directed	6-12gms as directed 30 min before & immediately post WO*	7 tabs, 3 before WO, split remaining throughout day with meals	High
9	1-2.5 Scoops as directed	6-12gms as directed 30 min before & immediately post WO*	8 tabs, 4 before WO, split remaining throughout day with meals	High
10	1-2.5 Scoops as directed	6-12gms as directed 30 min before & immediately post WO*	9 tabs, 4 before WO, split remaining throughout day with meals	High
11	1-2.5 Scoops as directed	6-12gms as directed 30 min before & immediately post WO*	10 tabs, 4 before WO, split remaining throughout day with meals	High
12	1-2.5 Scoops as directed	6-12gms as directed 30 min before & immediately post WO*	10 tabs, 4 before WO, split remaining throughout day with meals	
13		6-12gms 30 min before WO	6 tabs, 2 before WO, split remaining throughout day with meals	
14	0	0	0	Off
15	0	0	0	Off
16	0	0	0	Medium intensity and hold until next intense training cycle

