Hypertrophy Cluster Training

by Daniel Roberts

The most complete training and nutritional protocol available! Commit yourself to it and the physical changes that will be realized truly have to be seen or experienced to be believed — big gains in size and strength, huge decreases in body fat, or both!
KEY PRINCIPLES OF GROWTH

There's a reason why the book *Eat Less and Exercise More* never made it to the top of the bestseller lists, yet “Lift Progressively Heavier Weights and Eat Consistently” is the mantra of every successful lifter. People do not like the simple reality about what it takes to improve their bodies.

The depressing truth is that the majority of gym goers and Internet posters have just not achieved the overnight growth they expected.

They agonize over the most intricate details of time under tension, insulin regulation, muscle protein synthesis, carbohydrate source, protein source, nutrient timing, testosterone and growth hormone spikes, cortisol manipulation, being anabolic, rep ranges, exercise selection and so on.

All that this vacillation accomplishes is to prevent them from acknowledging that their own lack of commitment and consistency is the reason they don’t even look like they lift. I blame the Internet as well as our innate desire for a shortcut, there’s too much information at our fingertips. Combine ignorance with wanting to believe and you’ve got a recipe for zero results and 90% of all the posts on bodybuilding websites (the 10% being Wannabebig).

So here we are, with what we believe is the best muscle building program out there, but we can’t in good conscience just pile on more info. Rather than ram it down your throats with promises of huge gains, we’re going to give you the science behind why it works, rather than ram it down your throats with promises of huge gains, we’re going to give you the science behind why it works, so you’re not only armed with a program for getting as big as you possibly can, but you’re also able to critically evaluate what everyone else out there is trying to sell you.

“I would not give a fig for the simplicity this side of complexity, but I would give my life for the simplicity on the other side of complexity” (Oliver Wendell Holmes), which is a cool way of saying — the more I learn, the more I realize that only a few things truly matter.

We’re not going to stop you jumping straight to the HCT-12 Training Program. After all, if you want to be the biggest you’ve ever been, you’re going to have to put it into practice, but like Oliver Wendell Holmes said, if you bear with us, and push through to the other side, everything in the bodybuilding world will become a lot simpler, and your physique will never be the same again.

WHY DO WE GET BIGGER?

The human body, your body and mine, are the result of millions of years of evolution. In the 100,000 years or so that we’ve been around, our environments have changed, but the internal mechanisms responsible for growth and the stimuli to which they react have not.

The mechanisms that allowed us to adapt to our surroundings, to the tasks that kept us alive and nourished, have not changed, and will not change in your lifetime. So barring external agents that can manipulate our DNA and/or hormonal status (i.e. drugs), what works for getting people bigger is the same now as it was and always will be.

Muscle growth (hypertrophy if you will, but let’s keep it simple) is an adaptive process that is stimulated by a very specific set of demands, they apply to you, me and every able bodied person on the planet. You’re just not that special!

We’ll get to the mechanisms of growth shortly, but just so we’re clear, the process of adaptation is an evolutionary survival trait. We react to stressors both acute (short term) and chronic (long term), with acute and chronic processes. When cold, we get goose bumps, our hairs stand on end trapping air for insulation, and then we shiver to generate heat if this isn’t helping. When hot we sweat, to cool our skin through evaporation.

When regularly faced with a heavy enough object that makes us struggle to move it, we develop bigger, stronger muscles to make sure we can move it with less effort next time. And that is it, Specific Adaptation to Imposed Demand, as it applies to growth.

UNDER THE MICROSCOPE — WHAT MAKES MUSCLES GROW?

Your muscles are comprised of Motor Units (MU) — the collective term for the motor neuron (a nerve) and all the muscle fibers it innervates/controls.

The motor neuron is connected to the spinal cord which in turn connects to the brain; collectively, the Central Nervous System. Include muscle in there and we get the Neuromuscular System, in this context we’ll simply refer to this as the Nervous System.

When the Nervous System (in response to a load) sends a signal to the muscle to contract, the motor neurons instruct the attached muscle fibers to shorten and tighten, creating tension.

The greater the load, the greater the number of motor units needed, the greater the contraction, and the greater the tension (it is this ‘tension to which the term Time Under Tension refers).

When muscle fibers contract they deplete cellular energy, and if they contract hard enough and long enough cellular energy depletes completely (AKA fatigue). Wernbom et al show that cellular energy expenditure affects growth, possibly because the reduction in cellular energy renders the muscle fiber stiffer (less elastic) increasing the potential for damage.

What that means to us is that not only does the load need to be heavy enough to create the requisite tension, but that the...
load needs to be lifted repeatedly enough (i.e. fatigued) to fully stimulate growth.

When enough tension is applied to the muscle fibers for enough time, chemical messages are sent to the nucleus of the cells (where your genes are) within the muscle, and instructions (held in your genes) are sent back detailing how to create that particular muscle protein from the amino acids in the blood, this is called muscle protein synthesis. Amino acids from the bloodstream are integrated in to the muscle fibers to increase their cross-sectional area, increasing their strength potential, so that the stress of the next training session won’t be as disruptive.

The size of the muscle is determined by the total size (or cross-sectional area) of all the muscle fibers within it and the cross-sectional area of a muscle fiber is directly proportional to its strength capacity. A bigger muscle is a stronger muscle. Growth is the result of adding new proteins to the muscle and keeping them there.

Muscle Protein Synthesis increases over a few hours after lifting, peaking at 24 hours and returning to normal over the next 48 hours, so 72 hours after lifting promoted Muscle Protein Synthesis, it reverts back to normal.

The body is in a constant state of flux, and in the muscle this pits Muscle Protein Synthesis (anabolism) against Muscle Protein Breakdown (catabolism). For most non-lifters the effects of this competition are evened out over time with neither overcoming the other. In other words, they neither build nor lose muscle (homeostasis).

Growth depends on Muscle Protein Synthesis outpacing Muscle Protein Breakdown, or if you like, the rate of anabolism has to be greater than the rate of catabolism (Tipton and Ferrando 2008). This small lead accumulates over the weeks, months and years to make your muscles visibly bigger.

Lifting increases Muscle Protein Synthesis, so does eating protein (amino acids). Lifting with amino acids in your bloodstream (after eating protein) increases it further; the effect is synergistic and they do this through the same pathway. This pathway or signal chain is called Akt-mTOR (Goldspink and Yang, 2001, Goldspink 2002, 2003, Ratkevicius, 2008).

Of the two, tension has the largest effect on Muscle Protein Synthesis. This may seem obvious but then some people do believe that just eating protein will give them big muscles. It won’t. They need a reason to grow.
If the stress imposed by lifting is progressively increased the muscle will further adapt (by getting bigger and therefore stronger), but if that stress isn’t repeated, then new muscle isn’t required, so it will be lost to Muscle Protein Breakdown. Similarly if the stress is repeated but does not progressively increase then the muscle will go through a process of accommodation, and will become more efficient. For the body, efficient means less energy consuming and the muscle will remain capable of performing the task but become smaller.

HOW HEAVY SHOULD THE WEIGHT BE?

I detailed above that the higher the load, the greater the tension, the greater the number and size of the Motor Units recruited to lift the load and the greater the potential growth.

In the gym, that load works out to be between 70% and 90% of 1RM (Rhea et al. 2003, Peterson et al. 2004, 2005 and Wernbom et al. 2007), which translates to a rep range of roughly between 15RM and 5RM. So getting stronger anywhere between 70% and 90% 1RM (15RM and 5RM) is going to effectively stimulate growth.

We can however narrow it down further by looking into the two factors responsible for strength production:

1) Muscle Fiber Recruitment - We covered this above in Motor Unit Recruitment.

2) Rate Coding - In part this was covered above. Messages sent by the Nervous System control muscle contraction. Rate Coding refers to how fast those messages are sent. The faster they’re sent, the stronger the contraction.

Up to about 80-85% 1RM, you’ll be relying on Motor Unit Recruitment. Above that, Rate Coding Kicks in (i.e. no further Motor Units will be recruited), the fibers will just be made to contract harder. So at around 80-85% 1RM you’ll recruit every Motor Unit you have, which for all intents and purposes means all the muscle fibers. Below 80-85% 1RM, the largest Motor Units are activated only as the muscle fatigues (toward the end of the set). Given the largest MUs have the greatest potential for growth; it makes sense to recruit them from the first rep. So that narrows our rep range even further to between 5RM-8RM.

We’ve defined the minimum tension (weight/load) required for growth, but we also know that this weight needs to be lifted a certain number of times. Based on decades of training and scientific data to corroborate what we already knew, we get a sliding scale of about 60 total reps per body part at the lighter load of 15RM all the way down to 15 total reps in the 5RM range.

In summary, the effective rep ranges are between approximately 4RM and 15RM for between fifteen and sixty total reps respectively per body part.

Because the goal is to maximally stimulate every fiber, our program utilizes the rep range where all muscle fibers are used right from the first rep, which is 5RM to 8RM (anything heavier tends not to introduce fatigue in the way it is required). Being more specific our program focuses on 6RM.
We know that getting stronger anywhere between 1RM and 15RM will make you bigger, and spending time in the lower and higher rep ranges will provide major benefits. For example, a focus on strength in 1RM to 4RM range will carry-over to the higher rep ranges, a focus on the higher rep ranges will improve energy supply and waste removal for the muscles. This means that every program is a compromise. You can’t focus on all the rep ranges all the time and expect to progress, but our program does focus on the rep range that produces the most growth, most of the time.

One interesting and notable exception to the rules above is if you are particularly strong. I don’t have a definition for strong, maybe it’s absolute, maybe it’s relative, but there’s a big difference between repping out 20 reps with something small and pink and a couple hundred pounds or more (depending on the exercise) a la Kroc rows.

This doesn’t violate the principles above however, perhaps the minimum intensity threshold is met with any reasonable rep range if you are as strong or nearly as strong as you can humanly get (i.e. your strength deficit is small), but you have to have spent years of effort and got that strong first. Either way, if when attempting high rep ranges like this, people don’t gasp in awe at the weight you’re using, safe to say, you should stick within the recommended rep continuum.

Growth is stimulated by adequate load and work. Muscular failure doesn’t really come into it. The loads we’ve discussed have been between 5RM and 15RM, which by definition is the maximum amount of weight that could be lifted for either 5 repetitions or 15 repetitions. A true 5RM (or 15RM for that matter) does not reach failure; you succeed in lifting the weight but could do no more. Failure attempts to go beyond this and have you really struggle for that sixth rep but not succeed. Some advocates push you even further than that, with forced reps, etc.

**TRAIN TO FAILURE OR NOT?**

You fail for different reasons. At the heavy end of the scale (1-3RM), you fail because you cannot sustain the neural drive (the messages your nervous system sends to the motor neuron in the Motor Unit), not because the muscle is fatigued, there isn’t enough time for that. Up towards the lighter end (15RM or more), metabolic effects (cellular energy depletion and waste product build-up) cause you to terminate the set. In between these two points you get a sliding scale of both.

Is there any point to failure? According to the research, there is not much difference between getting close and actually failing (Drinkwater et al. 2007) but failure does negatively affect hormonal and neural status, making inroads into your recovery. Depending on the program you choose, it is your call.

However, I do think that it is critical to have experienced training to failure as part of your education as a lifter, at the very least as a way of understanding your body and recognizing the difference between when you are giving up and when your body has given up.

Some programs advocate failure. It is the goal. Some push beyond it with rest-pause, forced reps, etc. Some programs avoid failure and some lie in-between.

We recommend stopping when you know another complete rep (or maybe two) isn’t in the cards. Because the load is heavy enough to maximally stimulate the muscle from the first rep and the number of reps high enough to provide the appropriate fatigue, there is no need to eat into your recovery by going to failure.

**HOW OFTEN SHOULD I TRAIN A MUSCLE (FREQUENCY)?**

Based on the research into Muscle Protein Synthesis and Adaptive Remodelling we know that after 72 hours pretty much everything has returned to normal, which gives us a guide as to when a muscle is ready to be trained again. Keep in mind, it is a guide and is not absolute.

Between once every 5 days and twice a week is about right (Wernbom, Rhea et al) if you’re training within the appropri-
ate parameters. Some can tolerate more, some tolerate less, but most of us sit squarely in the middle. As you get very strong, the number of times you can train a bodypart weekly is likely to decrease.

We give you three variants of the program; two where each bodypart is trained on average every 1.5 days and another where you train each bodypart twice a week. Both will get you bigger than you have ever been before, but which you choose is dependent on your time constraints and ability to recover. On the face of it, the more frequent variation is better (because the muscles are being stimulated 25% more often) but if you can’t recover from it, it isn’t better at all.

Spend any time looking into the rep ranges, number of sets and frequency of most popular programs (which I have) and it’ll be pretty obvious that while there are lots of successful and very different looking programs, dig a little deeper and you’ll find they all share the same principles.

**GETTING STRONGER MEANS GETTING BIGGER**

Getting really strong (I have no definition, just think record breaking strong) is not a case of simply having big muscles; it’s about thick, strong connective tissue and joints, favorable muscle insertion points and leverage, nervous system efficiency and so on. So not everyone has the capacity to break world records — big deal.

Arguing that getting stronger does not mean getting bigger is forgetting the physiological basis for increasing the cross-sectional area of the muscle (growth) and that is increased strength production. Beyond enhanced nervous system efficiency, strength comes down to structural changes. You are going to need to get bigger to get significantly stronger.

So limit strength isn’t necessarily the goal when trying to get bigger, but getting stronger is. If you don’t get stronger, you won’t get bigger, but opponents of this fact, seem to forget that the 1RM isn’t the only measure of strength. Increasing your reps from six to seven with 200-pounds is getting stronger. Increasing the weight from 200-pounds to 210-pounds for six reps is getting stronger.

If you work to get significantly stronger you will get significantly bigger; it’s the only way the body knows how, but that doesn’t mean strength training. Bottom line — size is a result of long-term strength gains. We understand that, which is why our program emphasizes it.

**PROGRESSION**

Progression is necessary if you want to exceed your current development. Getting bigger means getting stronger and, as we showed earlier, that doesn’t have to mean focussing on increasing your one-rep max.

When you start lifting, strength increases come quickly (or at least they should) and by and large, these increases will occur linearly (i.e. every session you’ll get stronger).

Clearly this isn’t sustainable, five-pound increases on your squat every week would result in a 250-pound increase in a year and within another three years you would be squatting over 1000-pounds. So strength gains become non-linear, you get peaks and troughs, but over time an upward trend is what you’re looking for. Some programs advocate caution, focusing on very small increases on sub-maximal loads allowing for slower more sustainable progress. Bear in mind also that muscular growth, is generally non-linear too. You don’t often see your legs proportionately increasing in size with every addition of ten pounds on the bar.

There are various ways to progress, single, double and triple progression, increasing only the reps, only the weight, only rest between sets and so forth, but I prefer a less formal approach — Autoregulation.

This term may or may not be new to you. It’s meaning is in fact as old as weight training itself. In Mel Siff’s Supertraining he discusses APRE (Autoregulating Progressive Resistance
Exercise) a method whereby your next session’s load is determined by an adjustment table based on your current session’s performance. Charles Staley’s EDT is an example of autoregulation, as is Mike Tsucher’s Reactive Training Manual, but I think ex-Mr. Olympia Frank Zane (in his 1977 Bodybuilding Seminar) explained it best over thirty years ago, when someone asked him, “Do you have a certain poundage you will always try to use each workout?” His response:

“No. It’s all by how I feel. Let’s say I am doing dumbbell presses. Now the first set I’ll start with sixty-pounds for twelve reps, then seventy-pounds for eleven. Maybe to eighty. Now depending on how the eighties feel, I’ll either stay with the eighties and do a couple of sets, or move up to eighty-five or ninety-pounds. IT’S ALL IN HOW I FEEL AT THE TIME. If I am ready for a new weight, then it just happens.”

There are lots of ways to autoregulate, (see the programs referenced above) but for our purposes we’re going to keep it very simple and rely entirely on the cues our bodies give us each time we train. You can either map out progression (i.e. plan to increase the load at a predetermined time), that could be every session, or every fifth week, or you can allow it to happen when your body is ready for it — autoregulation.

An assumption in the predetermined approach is that you can force progression; you can’t. Just because you plan to increase your bench by five-pounds next session doesn’t mean your body will play along. You’ll progress when your body is ready to. All you can do is provide the initial stimulus, eat accordingly and hope your body has adapted in time for the next session.

Planned progression also implies that performance is consistently high, but we all have good, okay and bad days and our performance generally follows suit. With our version of autoregulation we train to the best of our abilities on the day, like Frank Zane explained above, which can sometimes mean performing far worse than the last session but, just as importantly, sometimes means performing far better than expected. Remember it is a trend upwards we’re looking for. You’ll get the full autoregulation protocol, when you get to the HCT-12 Training Program.

W I D E — the great Lee Haney.
PERIODIZATION/ DELOADS
Following on from progression is the subject of periodization. Periodization is planning, planning to train different athletic or strength qualities (strength versus strength endurance versus speed-strength, etc.) at different times without losing (or minimizing the loss of) the training effects of the previously trained quality.

Why? Because the body has a finite capacity for recovery, not every aspect of your sport can be trained with equal focus simultaneously, so you have to plan. Louie Simmons popularized periodization for powerlifters with his Westside Conjugate System.

For our purposes, we don’t need to worry about how our weights work affects our 400-meter sprint time, nor how to plan tapering down to a fight, meet etc. Getting bigger is lifting, which makes things a little simpler. We don’t need to concern ourselves too much with overly complicated periodization.

Our program focuses on 6RM for each exercise. This is the range where the muscle is most exposed to the required stimulus and fatigue. If I had to choose one rep range for the rest of my life, it would be around 6RM. Fortunately we’re not so constrained, and can train above and below this, so we can introduce an element of periodization into the program.

Focusing on the 1-5RM range will get you stronger, making you neurally more efficient and carrying over to the higher rep ranges. As getting progressively stronger is the foundation for growth; this is a good thing. You will, of course, get bigger in that rep range too, so focusing on it for awhile is no bad thing depending on your program. However, we feel that training in the 6RM range that we’ve programmed focuses enough on strength without needing to overlap by going into the lower rep ranges.

Higher reps however, do provide a growth stimulus and improve energy supply to the muscle — also a good thing. They also allow for a break from the heavier weights that 6RM demands, giving the connective tissue (and you in general) a chance to fully adapt before hitting it hard again.

I prefer to refer to this sort of simple periodization in terms of deloads at least in regard to our program. Some programs incorporate deloads but don’t stipulate when you should deload, nor what you should do in that period, leaving it up to the individual. The pitfalls of this approach, are that the very dedicated lifter may by-pass the deload completely, running him or herself into the ground, or that the lazy will look for any excuse to deload. Our program is a little more rigid, enforcing a change in pace.

THINGS TO CONSIDER BUT NOT OBSESS ABOUT
How long should a training session last?
Well if you’ve followed the guidelines then the length of your session is really dictated by the number of sets and reps you do. Basing it on anything else (i.e. acute and transient hormonal fluctuations) is irrelevant. If you’re not group training, lifting equipped, having to warm-up and load over 600-pounds on the bench/ squat/ deadlift like a powerlifter, and if your focus is on size then anywhere between forty to ninety minutes is about right. Our program can be done in under an hour.

FULL BODY VERSUS SPLIT
The point is to train the whole body over a given period of time, typically a week. Don’t well-designed Full Body programs do that, and doesn’t a well conceived split?

Both factions of supporters cite imbalances (focus on chest and biceps for splits, and a small arms on Full Body splits), lack of results (most idiots cluttering up the gym are on a split, no really big guys or pros use a FB) but ultimately and as I state in the intro, this is down to user error (lack of consistency and effort). Most people in the gym don’t look like they lift and are by and large going through the motions, irrespective of what approach they SAY they use.
If your goal is size and you are following a proper program, then a split is the way to go. It allows for the appropriate frequency and spreads the workload across more days, allowing better focus and recovery. Our program is a split.

**EXERCISE SELECTION**

First off, there are thousands of exercises to choose from, so there is no way you can use them all, and you could spend every single day for the next few years just trying them out.

Secondly, it should be obvious, that as progression is key, you should be favoring (not completely excluding) exercises that allow you to progress (i.e. shoulder press versus something that for one reason or another you’re simply not going to get a hell of a lot stronger with, such as the lateral raise).

Traditionally, these exercises are barbell or dumbbell based, but the fact is you could do as well with progressively heavier rocks, but they’re a pain to hold and don’t come in small weight increments; so impractical and not versatile. Bars and dumbbells are versatile and adjustable.

Let’s not forget machines either, they allow progression in small increments and the good ones allow a lot of weight and feel really good. And as I said above, tension on the muscle is tension; barbell, rock, tire, machine. If it progresses over time, you’ll grow.

If you’re particularly strong and not concerned anymore with loading 400-pounds on the bench press and just after size then you have paid your dues, a machine might be better. Yes, you are a special little flower after all. This is one of those areas in lifting where you get to say, “I’m different, I prefer Hammer Strength shoulder press to military press, and I feel it more in my shoulders.”

There is no ONE perfect exercise for everyone that will proportionally develop the target muscles, and while any variation of a press (barbell, dumbbell, machine, rock, neighbor), will place tension on the pressing muscles, your special individual body type will determine what pressing muscles are under most tension and which therefore will grow the most.

So after some experience, (and by experience I mean seen significant growth using one approach, not brief passing attempts at lots of approaches), feel free to see which variation of a lift gives you the best effect. Our program is based on compound barbell and dumbbell movements, but you have the option of choosing preferred machine variants.

**ISOLATION EXERCISES VERSUS COMPOUND EXERCISES**

Again, I’m not fussy. Liberally apply common sense and most of your exercise choices will be compound movements, with some strategically placed isolation exercises. It could not actually be any other way. I doubt you could effectively train the whole body without resorting to compound exercises. If I’m wrong, someone please tell me how?

Should isolation work (or focus work, as you can’t truly isolate a muscle) be excluded? Maybe; if you’re a bewildered novice faced with thousands of exercises, then keeping it very, very simple is best, which is why Full Body approaches are so often advised for beginners.

This leads me on to the asinine argument of functional vs non-functional muscle/strength/exercises. Loosely speaking, the contractile components (myofibrils) make up approximately 80% of the muscle fibre, the other 20% is sarcoplasm; a watery substance comprised of the same sort of stuff required by every cell to function.

You may have come across discussions on myofibrillar versus sarcoplasmic hypertrophy and how bodybuilders tend to be weak and puffy (they are not) and powerlifters dense (sometimes they are, sometimes they are not). Well these two terms are trotted out as a reason for that.

Given that approximately 80% of the muscle fibre is contractile protein, anyone (bodybuilder or powerlifter) whose muscles have grown will have hypertrophied the same tissue. The other 20% is speculative. Aside from one Russian rat model translation, sarcoplasmic hypertrophy does not exist. I’m not saying there isn’t a mechanism for the growth of non-contractile tissue, possibly to keep up with the energy...
demands of contractile tissue, but as it makes up less than a fifth of muscle fiber and therefore a fifth of your growth potential, I know where I’d focus my time.

If you can point me to a large bodybuilder who is weak relative to his size, then I can point to the same bodybuilder and guarantee he is significantly stronger than when he started — he just didn’t have a great capacity for maximum strength development.

As stated above, it would be the devil’s own job to fully train the body through isolation work only, so beyond that extreme, anyone who is well developed from top to toe, isn’t going to have arrived that way through machine flyes only and is going to be very much stronger than average, very much stronger than when he started and able to express that strength in meaningful/functional ways such as lifting sofas, shopping, insert spurious “bodybuilders can’t do this activity” here, etc.

If being able to run ten miles, jumping through flaming hoops while bench pressing on the off chance you will one day need to pull kids from a burning building is your goal, or you’re after more non-specific feats of strength then maybe you should be focusing your training on all eventualities. Good luck with that.

In our program we’ll use whatever comes to hand, focusing on compound movements, but not neglecting body parts that respond optimally to a combination of compound and isolation (arms for instance). In the program, we give you clear guidelines about what exercises to use.

**CONCLUSION**

You made it through!

The lesson you should have learned is that muscle growth boils down to a few simple principles that every program must obey. If you dig deeper and the foundation of a program is not constructed from these principles, you’ll know with certainty that it will not work.

The internal processes of muscle growth are seriously complicated, people devote their lives to it, but the external processes that kick it off, the things in your control can be distilled down to a few principles: Get stronger in the right rep ranges, eat appropriately, commit to the program and consistently work hard at it. This is advice often thrown at the inexperienced or confused but, without context although well meaning, is worthless.

Two of the greats, Gary Strydom and Lee Haney.
So you've read the Hypertrophy Cluster Training - Key Principles to Growth and you've gotten this far. You understand what makes muscle grow and what makes a program successful. Here is HCT-12 Training Program. We will start at the beginning and leave no detail unexplained.

**WARM-UPS**

They can be boring. Mobility drills, treadmill or bike — anything that prolongs the time between walking through the door and the exercises that'll actually make you bigger can be irritating. That said, you would be an idiot not to get prepared for the session ahead and doubly so if you didn’t ensure good long-term joint and muscle function. This is why we recommend (at the very minimum) the following warm-ups.

Note: If you’re interested in a more comprehensive warm-up then check out Nick Tumminello’s Warm-Up articles (Lower Body Warm-Up - 10 Minutes to Better Performance! & Upper Body Warm-Up - 10 Minutes to Better Performance!)

**UPPER BODY WARM-UP**

- Shoulder Circle Big/Little forward and back. 30 sec each
- PNF diagonals - 15 reps each orientation
- Wall slides - 10 reps
- Tumminello's LYTP Shoulder circuit 8-12 reps each letter
- Explosive Press-Up (either on the floor or diagonal against a wall. Clap press-ups without the clap!) - 6 reps
- Dumbbell/Kettlebell Snatch – 6 reps (weight is not the aim here, speed is, especially explosion when direction changes, at the bottom of the movement - change from eccentric to concentric. Think Bruce Lee's one-inch punch!)

**LOWER BODY WARM-UP**

- Leg swings front and back - 15 either side
- Leg swings side to side - 15 either side
- Glute Bridge - 10 reps
- Dumbbell/kettlebell swing - 6 reps. Again speed is the aim here (10-20kg dumbbell/kettlebell)
- Moving from Warm-Up to Lifting

You should be warm and fired up for the session ahead by now. This is where it gets interesting. There is only one exercise per bodypart and each exercise is worked up to a 6RM (which is approximately 80% 1RM) for the day followed by six rest pause reps done in a cluster, so 6 + 2 + 2 + 2. Each day, imagine that you have only a rough idea of what your 6RM is and you intend to beat it. Let’s say your first exercise is the barbell bench press. Start with the bar for a rep or two, just to get a feel for the movement and how you feel doing the movement. Increase the load, do another rep, increase the load again, do another rep until you’re ready to start working in sets of six. These single reps are just to get a feel for the movement and the weight on the bar and also for getting up to a decent weight without tiring yourself out.

Then work your way up (ramping) in sets of six reps to a weight that you just manage to complete for six good reps or if you prefer a weight that you know you couldn’t have gotten seven reps.

Here’s an example:

- Bar x 6 reps (warm-up)
- 135lbs x 1 (feel set)
- 185lbs x 1 (feel set)
- 225lbs x 1 (feel set)
- 240lbs x 6 (work set)
- 270lbs x 6 (work set)
- 300lbs x 6 (work set)
- 320lbs x 6 (work set)
- 340lbs x 6 (work set)

This was the previous best but the last rep felt easy, so go for another set
- 350lbs x 6 (work set)

Barely got the sixth rep. Rack the bar. Rest as long as you need before attempting two more reps, approximately 30-60 seconds. Rack the bar, breathe deeply for another approx thirty-seconds and try for another two reps. Repeat. And that’s it.

That’s the outline; we’ll clear up a few specifics now.

**How many sets should it take to hit my 6RM for the day?**

This is the autoregulation aspect of the training. Some days will be easy while others will feel tougher for the same weights and increments. This is the autoregulation aspect, the bio-feedback, the working to your strengths and hitting a higher 6RM on a good day, or hitting the same as you did last time, or even falling short on a bad day and working with whatever 6RM you hit so as not to grind out a session when your body is obviously not up to the task.
This is how each exercise is performed. It is a case of feeling out and working with your absolute best for that training session, working with your body to give it the greatest possible stimulation for growth when it can take it.

Once past a certain amount of training experience, strength gains are not linear, so all you are looking for is a trend upwards. So, over the course of four weeks, you may experience all of the above, but the cumulative result will still be upwards progress.

With that said, the aim is still to attempt to break your records every session. Autoregulation isn’t an excuse to quit when it gets tough. Autoregulation allows your body to make the decisions, not you. So if your body’s ready to hit a PR that session, make sure you put in the effort so that it can. If it is not ready then there will be no PR, but it won’t be for lack of trying. You can’t force progression, but you have to give it a chance to happen. If you are not willing to push for a record every time you hit the gym, this program is not for you.

Do not work your way up in tiny micro-increments. If you are particularly strong, you’ll be there all day going up in five-pound steps, but by the same token don’t jump up too quickly. Just feel your way up. So some days, you could be more, the same or fewer sets. I know this is open to interpretation, but it is easier in practice than on paper, which is why you’ll need to play around with it, and get a feel for how to train this way, before settling in to the program properly. We are with you every step of the way. Don’t panic!

**REST PERIODS**

On this you have to listen to your body, autoregulate, but I put a hard stop of two minutes between ramping sets and thirty-seconds between clusters. If you’re on fire that day, make the rest periods as short as you want to.

**EXERCISE PERFORMANCE**

Legendary lifter Doug Hepburn liked to master the weight. That is about as simple a prescription as I can give. At 6RM the weight is going to be moderately heavy, but you should be attempting to move it as powerfully as possible.

When lowering the weight, keep it under control. If you need to stop and push the other way you could. Don’t artificially extend the time you’re lowering it.

For the concentric portion, taking the bench press as an example, when the bar is at your chest, imagine trying to push it forcefully, like shoving someone away. It won’t actually move like you’ve pushed someone off you, but as long as the intent is there don’t worry. This will feel quite different if you don’t already lift this way.

These prescriptions apply to all except calf exercises. Here we recommend a slow negative (5-seconds minimum), a pause of a second or so at the bottom (in the stretch position) and a powerful concentric (as described above).

**EXERCISE SELECTION**

I’m sure you all know enough exercises to populate any program for the next hundred years, but here are our suggestions. You don’t need to follow them slavishly but do use common sense. A leg extension is not the equivalent to a squat or leg press.

First, a word of caution… there is going to be some overlap on exercises. That is just what happens when you have a body that never contracts a muscle in complete isolation. Some muscles are going to get worked alongside the target muscles; it cannot be helped.

A very obvious example is squats and deadlifts. In the program I put squats ahead of rack pulls for the very good reason that, whichever way round you put it, one is going to negatively impact on the performance of the other. You could use a deadlift variation from the floor, but only you can tell how that will be impacted by the squat. If I were to choose a full deadlift, I’d put it first and leg press (not squat) afterwards.
The same goes for chest and shoulders. This is where you get to choose your priorities. How you place exercises is up to you. But again, if you’re confused by what you should do, we’re here to advise.

Some people get really precious about bodypart exercises and splits, so we’ve cunningly disguised our bodypart exercises and gone all-functional by naming them movement-based exercises.

Remember, one exercise per bodypart/movement. We advise that you stick to one exercise per cycle for each program. You can change exercises in the deload week and keep them for the next cycle, or if you feel you’re progressing with the same exercises, keep them.

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<tr>
<th>Bodypart/ Movement</th>
<th>Exercise</th>
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<tr>
<td>Vertical Pulling</td>
<td>chin-up, pull-up, rack chin, pull-down</td>
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<td>Horizontal Pulling</td>
<td>one-arm dumbbell row, barbell row, low pulley row, Hammer Strength version</td>
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<td>Horizontal Pressing</td>
<td>incline bench press, flat bench press, dumbbell bench press (flat or incline), most Hammer Strength versions</td>
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<tr>
<td>Vertical Pressing</td>
<td>standing barbell press, standing dumbbell press, most Hammer Strength versions</td>
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<td>Triceps</td>
<td>dips, close-grip bench, reverse-grip bench on Smith machine, overhead dumbbell or cable triceps extension</td>
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<tr>
<td>Biceps</td>
<td>barbell curl, dumbbell curl, hammer curl, concentration curl, drag curl</td>
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<tr>
<td>Quad dominant</td>
<td>back squat, front squat, leg press</td>
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<tr>
<td>Hip dominant</td>
<td>deadlift, rack pull, Romanian deadlift</td>
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<tr>
<td>Calf Exercises</td>
<td>standing calf raises on machine or Smith machine, calf press on leg press, seated calf raise</td>
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<tr>
<td>Abdominal Exercises</td>
<td>cable crunch, ab wheel or barbell rollout, sprinter crunch, woodchops</td>
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German monster from the eighties, Achim Albrecht.
### Program One: A-B-A
An A-B-A split, so week one A gets trained twice, B once and vice versa in week two and repeat.

#### Week 1

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Program One Summary: Intensity – approx 80%; Frequency – 1.5 times per week; Total number of reps – approx 35

### Program Two: A-B-A-B
An A-B-A-B split, so week one A gets trained twice, B once and vice versa in week two and repeat.

#### Week 1

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Program Two Summary: Intensity – approx 80%; Frequency – 2 times per week; Total number of reps – approx 50

Casey Viator knows intensity!
**PROGRAM THREE: 5-DAY CYCLE**

No different to the others except, the days are further split, but follow a five-day cycle, not seven, so you’ll be spending different days in the gym. We have laid it out over four weeks so you can see just how it works.

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Program 3 Summary: Intensity – approx 80%; Frequency – 1.4 times per week; Total number of reps – approx 35
WHICH PROGRAM IS FOR ME?
In simple terms, they are pretty much identical: one exercise per bodypart, ramping up to 6+2+2+2 for twelve total reps at 6RM for the day. So the last twelve reps are all above 80% 1RM and a few of the preceding ramped sets will be between 70% and 80%.

In summary, that is (give or take) twenty-four reps above 70% 1RM and twelve above 80% 1RM per bodypart. If you recall what was written above, that sits right in the rep totals and intensity requirements for growth. But we gave you three for a reason. Here’s why;

Program 1 – Three days is easy to schedule into anyone’s lifestyle (at least if you’re serious about putting on muscle).

Program 2 – A fourth day, and each bodypart is trained twice per week. If you can handle the additional frequency (and only you can tell that) and fit in the extra day, then this is for you.

Program 3 – This splits the bodyparts down further, giving you less to do each session, but allowing you to focus more on each exercise. The frequency is roughly the same as Program 1. If you can fit this into your schedule and prefer spending less time in the gym per session, then this is for you.

Ultimately you get out what you put in. If you apply yourself to them consistently, all three will get you bigger than you’ve ever been before. Choose one.

THE DELOAD WEEK
This applies to all the programs but at different times. Program 1 and 2 get one at the end of the fourth week. Program 3 gets one at the end of the fifth week.

The aim of the deload week is to back off a little and work a slightly different aspect of growth that occurs when the load or intensity is lighter and requires fatigue to really kick in, while giving your connective tissue and joints time to adapt to the previous weeks (connective tissue adapts at a far slower rate than muscle tissue).

The deload week is illustrated in the graph at the top of the opposite page.

One exercise per bodypart again, except this time the rep range is fifteen reps for two sets. Again, you are not going to failure, just work up to a weight you can hit fifteen reps comfortably for two sets. Do this for a week and then restart your program of choice at week 1.

OTHER ACTIVITIES
Like warm-ups (possibly even more so), cardiovascular or energy systems work is at the bottom of the likes list. However, just like a proper warm-up, cardio is important for longevity and doing it, in whatever form you like best (or hate least), also improves your ability to lift. If you get breathless and nauseous doing biceps curls, then you know what we mean.

This is a program for muscle gain, so the recommendations are about thirty minutes two or three times a week. More specifically, for the guys with very little muscle and very little fat, at most one session of thirty minutes a week. For the guys carrying a lot of extra body fat, two or three sessions a week. For the guys in-between, don’t neglect it and don’t go overboard; one or two times per week for you.

Here are two great articles detailing how to implement Kettlebells (Kettlebells for the Uninitiated) and Complexes (Complexes for Fat Loss) for conditioning. Be aware that any loaded exercise will impact on your recovery, so follow the guidelines carefully. Our bodies are awesome machines, but they are not perfect, so while concentrating on building as much muscle as you possibly can, you are going to have to minimize the time and effort you put into other activities or risk compromising your results. Don’t spread yourself too thinly.

If you’re ready to commit to this and work hard, then you’re going to need the other half of the “secret” to getting big; food! - Hypertrophy Cluster Training - Nutritional Program

Fibrous detail like this makes Joel Stubbs the proud owner of one of the most amazing backs ever — striated cannonball delts, powerful traps, wide meat-drape lats, thick rhomboids/ mid-back and Christmas tree spinal erectors.
DELOAD WEEK

One exercise per bodypart again, except this time the rep range is fifteen reps for two sets. Again, you are not going to failure, just work up to a weight you can hit fifteen reps comfortably for two sets. Do this for a week and then restart your program of choice at week 1.

### Week 1

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Four decades later and the physique (if not the trunks) of Mr. Universe Bill Pearl is still impressive!
Having read the Hypertrophy Cluster Training - Key Principles to Growth and the full details of the HCT-12 Training Program you are therefore ready for the nutritional program.

The aim of any diet is to provide the necessary calories and macronutrients to support your goals. Determining the amounts is the tricky bit and it is highly individualized.

I wrote two articles (Nutrient Timing - When Science and Marketing Collide & To Bulk or to Cut, That is the Question - or is it?) which better explain the methods outlined below and the science behind them for anyone interested in digging a little deeper.

There are in my experience, three dietary approaches, which I have outlined separately below:

1) The lifter with over 20% body fat. For these guys, simply making better food choices and not getting caught up in the details will take them into the next group.

2) The sub 20% to 10% body fat lifter. The recommendations below are for these guys.

3) The sub 10% body fat lifter. The basics still hold true for these guys, and clearly if they’re muscular too, they’ll likely know what they’re doing! They’ll be stricter in their approach (if remaining at that condition is the goal) and more than likely some manipulation of the variables (carb cycling will be required). We have had some great guys write some awesome articles on this very subject, so I’ll refer you them if you are in this group or want to get in it - Wannabebig Diet and Nutrition articles.

### STARTING YOUR IDEAL NUTRITIONAL PROTOCOL

Establish your daily calorie needs. If you know this, then move on. If not, you have two choices:

1) Use the multipliers below to determine current maintenance and add or subtract by 5-10% depending on whether you plan to lose or gain weight.

2) Choose a target bodyweight and multiply by the same figures below.

This might look simplistic, but you can either spend the next hour going through various convoluted equations and come to the same answer or just pick one of the following, and multiply your current or target bodyweight by either, depending on your activity level:

- **14** - Low Activity (1-3 hours a week)
- **16** - Medium Activity (4-7 hours a week)
- **19** - High Activity (8-11 hours a week)

So, if you are a 250-pound guy looking to hit 235-pound, training four hours per week, 3760 kcal (235 x 16) is your target intake every day. Or, if you don’t want to eat for your target bodyweight, preferring to utilize your maintenance plus or minus for your intake, you can still use the process above but use your current bodyweight. So, if you are 250-pounds training four hours per week, your maintenance is 4000 kcal (250 x 16). Add or subtract by 5-10% depending on whether you want to gain or lose weight.

Monitor your progress every couple of weeks (remember that these equations are based on an assumption that you’re average). If you need to put on weight to reach your goal and you are not, increase the calories by 250 kcal and monitor progress for two weeks. Similarly reduce by 250 kcal if you need to lose weight and progress is not being made.
SETTING PROTEIN, CARBOHYDRATE AND FAT INTAKE

1) My preference is to set protein intake as constant, between one to two grams per pound of lean target or current bodyweight. Your fat intake should cover your requirements for Essential Fatty Acids (approx 20 grams). Beyond that, it is your choice how many carbohydrate calories you displace with fat, based on your individual tolerance for carbohydrates.

As we go through this process, keep in mind the calorific value of each macronutrient. One gram of protein is the equivalent of 4 kcal. One gram of carbohydrate is also 4 kcal and one gram of fat yields 9 kcal.

In this example, our target is 3760 kcal. Protein is a constant and set at 1.5g/lb which is 322 grams (1.5 x 215) per day. Fat is set at a minimum 0.5g/lb bodyweight, which is 118 grams (0.5 x 235) per day. After these two values are set, it is simply a case of adding enough carbohydrate and additional fat and/or protein to hit the total.

Carbohydrate is matched to activity and tolerance. In this example we currently have 322 grams of protein and 118 grams of fat, which is 2350 kcal (322×4kcal + 118×9 kcal). This is 1410 kcal short of the total. To hit 1410 kcal you’d need approximately 350 grams of carbohydrate. So our guy’s daily total will be 322 grams of protein, 350 grams of carbohydrate and 118 grams of fat, for a total of 3760 kcal per day.

However, there’s no set rule for carbohydrate intake and you could just as easily split the remaining 1410 kcal between fat and carbohydrate.

2) Load your food intake to coincide with breakfast and the workout period (i.e. try and eat the majority of your calories around breakfast and training). See below for details.

3) Divide the rest into as many meals as necessary to hit your daily intake target and consume when convenient.

PRE, DURING AND POST WORKOUT NUTRITION

The objective of any workout nutrition protocol is to maximize muscle protein synthesis (kick-started by your training) and minimize protein breakdown. In other words, increase anabolism and curtail catabolism.

Here are my specific recommendations for pre and post-workout meals. You don’t have to follow them; you could just follow the instructions above and eat normally, but if you do follow them, remember, this eating does not occur in a vacuum. It does count towards your daily total, so bear that in mind when you’re eating the rest of the day.

<table>
<thead>
<tr>
<th>60-90 minutes pre-workout, have a solid, balanced meal:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Protein = 0.25g/lb BW (or Target Bodyweight)</td>
</tr>
<tr>
<td>• Carbs = 0.25g/lb BW (or TBW)</td>
</tr>
<tr>
<td>• Amount of fat doesn’t really matter as long as it fits into your total for the day, or:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>30-60 minutes pre-workout - (and/or sipped throughout the workout), have a liquid or easily digested meal:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Protein = 0.25g/lb BW (or TBW)</td>
</tr>
<tr>
<td>• Carbs = 0.25g/lb BW (or TBW)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Within 60-minutes post-workout, have either a liquid or solid meal:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Protein = 0.25g/lb BW (or TBW)</td>
</tr>
<tr>
<td>• Carbs = 0.25-0.5g/lb BW (or TBW)</td>
</tr>
<tr>
<td>The amount of fat doesn’t really matter as long as it fits into your total for the day.</td>
</tr>
</tbody>
</table>

We’ve refrained from going into detail with food sources and meal plans because quite frankly this information is already covered in our existing nutritional articles.

CONCLUSION

And there you have it, a straight forward approach to eating appropriately for your goals. We encourage you to make nutrition a priority in your life, not only so that you can achieve your specific fitness goals, but also to keep fit and healthy. If you do, you will be amazed at how great you feel and the progress that is possible.

If you want to maximize your gains, you’ll need to take advantage of proper supplementation and this is covered next in Hypertrophy Cluster Training - Supplementation Program.

Sonny Schmidt was known as a big eater.
Now that you’re clear on the Hypertrophy Cluster Training Nutritional Program, we would like to take you through the recommended supplementation program.

Following the training and dietary tenets set forth in the HCT-12 program will result in progress that will surprise most, and utterly amaze some. The physical changes that will be realized truly have to be seen or experienced to be believed. Big gains in size and strength, huge decreases in body fat, or both, would normally be enough to satisfy any sane individual. Well, perhaps we are a bit insane!

Our credo at AtLarge Nutrition has always been optimize your body. Optimize: to make as perfect or effective as possible. We don’t want good results, we don’t want great results, we want optimal results and that can only be achieved with the inclusion of proper supplementation.

So, if you too are a bit insane and want to optimize your body, read on…

**TOP FIVE STAPLE SUPPLEMENTS**

**1. PROTEIN POWDER**
Protein — the name says it all. Literally translated, protein means “of prime importance.” For the resistance trained individual protein takes on an even greater importance than for the sedentary individual. Intense training places a tremendous stress on the body. Muscle fibers are literally torn requiring both repair and potential remodeling in the form of growth so that the body can better withstand the stress of training in the future. Protein plays a key role in this recovery and supercompensation model.

HCT-12 recommends at least 1.5 grams of protein per pound of body weight be consumed on a daily basis. Due to time limitations, some trainees may find it difficult to consume the necessary quantity of high quality protein. Protein supplements are a convenient way to bridge the gap and get the high quality protein needed.

Protein supplements come in various forms: stand-alone protein, meal replacements, and lean mass gainers. Each serves a specific purpose and their inclusion in one’s regimen is a function of the particular trainer’s goal(s).

For HCT-12 we recommend four supplements by AtLarge Nutrition: NITREAN, OPTICEN, MAXIMUS, and NOVUS bars. These award-winning products (the powders) contain blends of whey, casein, and egg proteins that provide for a superior amino acid profile and net retention. They outperform any whey-only powder under any condition.

*Note: We cover which protein supplements are appropriate for your specific goals further below.*

**2. CREATINE MONOHYDRATE**
Creatine is the single most studied and proven ergogenic supplement ever produced. The vast majority of its users ex-
Experience gains in both size and strength. Creatine is not only effective; it is proven safe and may even promote health via its antioxidant properties.

If you want the most from your HCT-12 experience, whether you are looking to gain muscle or lose body fat, a quality creatine monohydrate is a must. We recommend three products from AtLarge Nutrition: CREATINE 500, CREATINE CAPS, and RESULTS (a unique combination of creatine, β-Alanine, HMB, and dextrose).

Note: We cover which creatine supplements are appropriate for your specific goals further below.

3. ETS - EXTREME TRAINING SUPPORT
Unlike the supplement types mentioned above, ETS is a formula unique to AtLarge Nutrition. Its combination of ingredients works synergistically to produce effects that cannot be collectively found in any other supplement. ETS can dramatically reduce D.O.M.S. (Delayed Onset Muscular Soreness), improve generalized recovery, and reduce joint pain. These effects make it a true must have supplement no matter what your goal.

4. MULTI-VITAMIN
Sound nutrition is one of the cornerstones of HCT-12, but even with the best dietary practices the hard training individual can find themselves lacking in optimal levels of specific vitamins and minerals due to modern food processing methods and intense training’s propensity to deplete nutrients in the body. AtLarge Nutrition’s MULTI-PLUS is specifically formulated to address this concern.

5. FISH OIL
Optimal results from training require optimum health, and fish oil and its constituent omega-3 fatty acids have proven health benefits. In addition, fish oil may aid with inflammation thus supporting the heavy workload inherent to HCT-12. AtLarge Nutrition’s FISH OIL supplement is tested for purity, potency, and overall quality.

FAT LOSS PRODUCT SPECIFIC RECOMMENDATIONS
For optimized loss of body fat we recommend the following supplements:

NITOR or THERMOCIN are our thermogenic supplements. Both products will aid you in your quest for a lean, ripped physique via both direct and indirect effects. They both enhance thermogenesis and/ or fat oxidation, and help to blunt appetite. In addition, both products will provide you with extra energy to help offset the reduction often experienced when on a hypo-caloric (below maintenance level) diet.

Nitor is the more potent of the two in all respects, but may not be the best choice for individuals sensitive to the use of stimulants (Thermocin also contains stimulants, but to a lesser degree).

NITREAN provides a high quality, low calorie source of protein. The use of a protein-only supplement like Nitrean can help the trainee consume the necessary amount of protein without exceeding their daily total caloric intake.

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HCT-12 Mass Gaining Stack
4 week supply of Results, Opticen and ETS!
Save a total of $20.00 by using the discount code: HCT12
Click this coupon to BUY NOW!
NOVUS bars contain only 3 grams of net impact carbohydrates. They also pack a whopping 36 grams of protein as well as various vitamins and minerals. This nutrient profile and their amazing taste make them a supplement of choice for anyone on a fat loss diet.

OPTICEN is a highly versatile supplement which has multiple uses for those following a low calorie diet. Its macronutrient breakdown of roughly 43% protein, 37% carbohydrates, and 20% fats combined with its inclusion of 26 vitamins and minerals make it a nearly ideal meal replacement for those seeking to optimize their body composition. In addition, Opticen is specifically formulated to be used as a post-workout supplement.

CREATINE 500 and/or CREATINE CAPS are both Creapure® micronized creatine monohydrate. Creapure® is a German creatine which is one of the purest forms of creatine monohydrate in the world (hence the name). This purity helps to prevent the water retention and poor mixability sometimes experienced by users of lower grade creatine products.

Creatine can serve the vital function of keeping the muscles in an anabolic state during a hypocaloric diet. This allows the trainee to retain, or even build muscle while dieting which makes the entire process easier and more effective. Do NOT cheat yourself out of the benefits of creatine while dieting.

RESULTS is our aforementioned blend of Creapure® creatine, β-Alanine, HMB, and dextrose. It takes the benefits of creatine described above and turbo-charges them! RESULTS is the single most effective lean muscle producing and sparing supplement we offer and should be part of any serious trainee’s arsenal (if you are following HCT-12 you are SERIOUS). The only caveat to its use when dieting is that its 200 calories from carbohydrates need to be accounted for.

WEIGHT GAIN SPECIFIC RECOMMENDATIONS
If you want to get big, REALLY BIG and strong, HCT-12 is the ticket. Add the supplements listed below and people won’t know what to think of the mass monster you have created!

MAXIMUS is our lean mass gainer. What makes it unique is its protein blend of ultra-filtrated whey protein concentrate, isolated casein peptides, total milk protein isolates, whey protein isolates, glutamine peptides, and instantized egg albumin combined with Microlactin® and inulin.

Microlactin® is a special protein that helps to improve recovery, reduce soreness, and reduce minor joint pain. Inulin is a fructan that aids absorption of certain nutrients and promotes a positive nitrogen balance.

MAXIMUS provides growth-promoting calories and nutrients that will help you to progress to new heights in both size and strength.

OPTICEN, as described above in the fat loss recommendations, can serve as both a meal replacement and an ideal post-workout supplement. For mass gaining purposes we recommend it be used primarily as a post-workout shake.

RESULTS is our premier size and strength supplement. If you want to be as big and strong as possible, you need this product. It is as simple as that.

FINAL WORD ON SUPPLEMENTS
HCT-12 is a no hype; no BS program and its supplement recommendations are no different. If you include the recommended products you will optimize your results. Don’t short-change yourself, use AtLarge Nutrition Supplements and optimize your body!

For more info, CLICK HERE
We’ve tried to make Hypertrophy Cluster Training as straight forward and as easy to understand as possible. However there are bound to be a few questions that crop up, so we have put together answers to some of the questions we anticipate will be asked.

Many of these questions came from our test group who were introduced to Hypertrophy Cluster Training 10 weeks before public release so they should be a good indication of the types of questions that will be asked.

We’ll continue to update this FAQ as we receive questions.

Why did you call the program ‘Hypertrophy Cluster Training’ and what’s the HCT-12 about?

HCT-12 is an abbreviated name for the program and is stands for Hypertrophy Cluster Training 12. These days, you have to have the word ‘hypertrophy’ in there! The cluster refers to the rest-pause variation involved, ‘training’ is self explanatory and the 12 refers to the total number of reps in the last work set. And there you go – Hypertrophy Cluster Training (HCT-12)

If during a set ramp-up you miss the six reps in your last work set, do you drop down to the previous work set and then begin the 6+2+2+2 scenario? For example, if I didn’t hit six reps in my last work set of 350 pounds, would I drop to say, 340 pounds and start 6+2+2+2?

That is absolutely correct, the idea is to complete all the reps as prescribed. Overestimating how heavy you can go will occasionally happen, don’t make it worse by grinding out the clusters. You will get the weight next time and you’ll also have the psychological edge of knowing you aced 340 pounds last time.

What if my 6+2+2+2 was easier than I thought and I felt like I had a couple of reps left in the tank? Should I do another +2 on the end of another set or perhaps just wait till next week?

Chalk it up to experience. It isn’t a wasted effort. There will be a training effect. There will also be a psychological effect you can use next time in the gym. You know you had reps in the tank last time.

Can I hit my weaker lifts first?

As stated in the article, the choice of exercise order is yours based on your preferences and strengths/weaknesses. If you would rather do vertical pressing before horizontal, then go for it.

I train alone and it’s not always easy for me to find a spotter and it seems to me that this could cause a problem with the 6+2+2+2 protocol?

This should only be a problem on horizontal pressing movements, in particular the bench press. Either use a bench or rack with adjustable pins or ask for a spot. If you train alone without access to help or equipment that allows you to bench safely, then I cannot recommend that you bench with a bar at all. I suggest using dumbbells instead. This can be a nuisance due to the clusters. You will be fatigued so getting the dumbbells up again will be a pain. Look into Dumbbell Power Hooks.

Can I switch between the programs 1, 2 and 3 and if so, how often?

You can – but I’d have to ask why? Unless you completely misjudged your schedule or simply can’t tolerate the density of work in an upper/lower split, then there’s no reason to switch. There is enough variation available to you within each program – autoregulation, exercise selection, exercise order, a deload week every fifth or sixth week – and so many similarities between them, that the only thing you’d really be changing is the days you are going to the gym. Adjusting too many variables does not keep your body guessing. It just keeps you spinning your wheels.