

The Underground Combat Files

Featuring Combat Training Experts:

Alwyn Cosgrove

Brian Grasso

Tony Reynolds

CJ Murphy

James Smith

& Zach Even-Esh

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Training For The Stand Up Game

An Exclusive Underground Interrogation with Alwyn Cosgrove

JF: Alwyn, first of all I want to thank you for taking the time to do this interview. Could you briefly tell us a little bit about your background in martial arts and some of your more memorable experiences?

AC: I started real young in Judo and then progressed to ITF Taekwon-do when I was 11 or 12. ITF TKD is a bit different than most of the TKD in the US – it's a hard stand-up system. I competed at national level and international level from about 87 to 95 (when I moved to the US). I competed on and off after I moved here and retired after winning the California State heavyweight title in 2000.

I competed only in continuous sparring, the open circuit (again – continuous kickboxing only) and in kickboxing events. I never did any point sparring 'karate kid' stuff. MMA and K1 weren't really around when I was in my prime but I KNOW that's an area that I would have been attracted to.

Memorable experiences? I had a blast fighting people, Jay and I met a bunch of people who have remained close friends to this day. The influence of my instructor Derek Campbell helped shape the person I am today. I am forever in his debt.

As far as fighting memories goes – on the one end I can remember winning my seventh national title, going into double overtime with the defending European champion at the time (before beating him). On the other end I can remember being punched in the spine by a fighter. The only thing was – he went through my solar plexus to do it!

JF: What I would like to do in this interview is to have you take us through the entire training process of a martial artist. Let's start with the initial

assessment. A competitive martial artist walks into your training facility; what is the first thing you are going to look at and what kinds of assessments will you use in your initial evaluation?

AC: I'll have a look at him physically and structurally. Interview him – see why he's there (ASK the athlete why they have hired you). All the time I'm looking for the things that will make the biggest difference. It's unlikely that I'll have much time to train him, so I need to get as much bang for my buck as possible.

For instance – if, on a hypothetical scale of 1-10 a fighter needs a 9 for endurance and an 8 for strength, and my guy arrives at a 4 and a 7 – then endurance work is where I need to focus our efforts – that will provide the best return for our time investment.

So my initial evaluation will include some postural and functional evaluations, as they'll tell me a lot, but also just asking the athlete about their own perceived strengths and weaknesses will help fast-track us.

JF: Are there any common imbalances or injuries that you see in martial artists?

AC: To be honest Jay it's the same as most athletes- tight hip flexors, weak posterior chains, and weak upper backs. You and I once talked about evaluating young athletes and agreed that they are all too weak, too fat, too small and too slow. I can do a full evaluation and tell you exactly what muscles and joints are in what shape, but essentially it's the above. That's why they came to see me. In the world of fighting – hitting first, hitting hard, hitting often and hitting until there's nothing left to hit is the "secret."

JF: How do you first go about correcting these?

AC: It's simply stretching the tight muscles and strengthening the weak muscles. The program is usually going to consist of a lot of single leg movements and a lot of

pulling based movements. Nothing magical in the early stages – it’s all about “realigning the wheels” before we put in a bigger “engine”. So we work on flexibility, mobility and stability before we work on strength and power. Then we work on work capacity. Until I get the physical structure of the athlete in the condition I want, energy system work is secondary.

JF: What are the most important prehab movements or exercises for martial artists? What should they focus on?

AC: A good general list would be to work on hip flexor range of motion, upper back strength and gluteal firing. If you were to go through a checklist – you want

Ankle – mobility

Knee – stability

Hip – mobility

Lower back – stability

Upper back – mobility

Shoulder girdle – stability

Most programs tend to completely fuck up that relationship between the joints.

JF: You and I are both opposed to early specialization so let’s start with a 17 year old martial artist and progress up to a competitive national champ in his mid to late twenties. How would you first set up a training program for the younger martial artist? How many days per week, how would you split the workouts and what would be the focus?

AC: You and I have discussed this stuff at length Jay so I’m sure you could answer this one. I’d start the younger athlete likely on a three days per week lifting schedule. The split would either be a full body (with squat and deadlift on separate days) or an upper-lower rotation (depending on where they were in their other training). The third day could be a rotation back to the first workout in the week or a separate workout in itself.

As the athlete matures I'd move into more of an ME/DE type routine. I tend to periodize this type of work in and out of the program as we approach competition etc. Although we will always do a heavy lift each week and an explosive lift, the emphasis tends to vary. I don't think I ever do both equally at any point during their training.

The biggest difference is that the younger athlete's program would be far more generic. As the athlete is with me for longer – we can start to really individualize the entire program a wee bit more.

A macrocycle would probably begin with unilateral work and some anatomical adaptation stuff – moving into hypertrophy, then a strength phase and then an explosive power phase.

I know that the WSBB method is real popular right now, but I question its use with a fighter. A fighter is running, sparring, doing drills and can't recover from two max effort and two dynamic effort sessions per week. We can learn a lot from powerlifting but we have to adjust the routines. Remember – for a fighter weight training IS the GPP phase. We cut back on the weight room work as we get closer to fights.

JF: What are the most important muscle groups or movement patterns for martial artists to target in their training?

AC: Like all sports I suppose it would be the triple extension – the same movement pattern you need for sprinting, vertical jump etc. Power production.

JF: What is the best way to improve kicking power?

AC: Two things – power through the core and stability of the supporting leg. The strength of the kicking leg doesn't play as large a role as people would think. The upper body is largely the same – you need to be able to generate power from your

support (i.e. both legs this time) through the core, through the shoulder girdle and out to the hand. Any break down in the chain reduces your power.

If the support system isn't strong – your power gets shut down.

If the hips or shoulder girdle isn't stable – power gets shut down.

If the rotator cuff isn't strong – that's another power leak.

If the core can't handle the torque – shut down again.

You need a linked system in order to apply your strength in a fight.

JF: What do you do to make your martial artists faster and more explosive?

AC: Same as any other athlete Jay – get them strong, get the excess body fat off them and then work on speed development. The cornerstone of speed work for a fighter lies in developing his posterior chain and all the antagonistic muscles.

The antagonists are the muscles that work as the braking system for the action. You quite simply cannot develop full speed until you have the ability to decelerate the joint action safely – your body won't let you.

It would be like taking your car out on the road and hitting the gas to the max. How hard would you hit the gas, if you knew your brakes weren't working? Not too fast huh?

The body is the same – it only allows you to move so fast without the ability to decelerate that same movement pattern. So actually training the antagonists typically has a bigger effect on speed than training the agonists.

JF: What about energy system training? What kind of methods do you like to employ here?

AC: High intensity baby. That pretty much sums it up. All my fighters do some form of interval training to max out their conditioning. As far as possible I like that type of training to mimic their actual event – so a kickboxer would do his interval training while doing padwork or bagwork. I'm not a huge fan of doing running, but it definitely has it's place.

We also do a lot of stuff with complexes, and bodyweight circuits for conditioning.

A lot of guys stick to running or jumping rope for conditioning. This is at best a short-sighted approach. It is not uncommon to see well conditioned fighters who have used running to develop their “cardio” fatigue rapidly in hard matches. The reason for this is although their cardio system is well conditioned the effect of lactic acid on their localized muscle groups is devastating. If we do not condition the muscle groups themselves to handle high levels of lactate, the cardio system will feel fine, but that area will lock up and shut down. Kickboxers call this “heavy legs”. Motocross athletes experience the same phenomenon but call it “arm pump” – where despite feeling fine – the forearms become so pumped up and unable to move that the rider is toast anyway!

All energy system work should be done wearing your mouthpiece. I've seen guys get in great shape, but then appear to have lost it all once their mouthpiece is in place. Having a large chunk of plastic in your mouth can really restrict airflow and sap your wind. Train with it in place.

I think there is a great place for sandbag training or strongman medley stuff in this area too.

JF: Assuming you have trained properly and focused on injury prevention, there is still always a chance of injury. If this occurs, do you have any tips or methods you could share about how to treat some of the common injuries seen in martial arts?

AC: Most of the injuries that you'll see are impact based. And good training still reduces those – you get your guys faster and they don't get hit as much! The non-contact injuries should be reduced as much as possible. I am not a believer in the school of thought that injuries are inevitable in hard training. An injury in this case, is a sign that you have done too much too soon. With most contusions and bruising – it's the basic R.I.C.E protocol.

JF: How important is nutrition to martial artists?

AC: Aside from overall health (which I feel is the basis of a performance pyramid – we can't ignore that) then it tends to be the basics. BASICS. I have read internet forums and posts where guys are debating the details. Yet most athletes I meet aren't eating enough protein, aren't eating any vegetables, are usually dehydrated and not consuming any water and are probably eating 1-2 meals per day! (As a side note – there is no research to suggest that higher meal frequency contributes anything over a lesser frequency. But time and time again I see a definite advantage in reality. I really don't give a shit what the research says in that case. Research doesn't pay my bills – results do).

Anyway – get back to basics. Despite lacking the above, most of the athletes and clients I meet are still wondering about how many grams of creatine to take per day, and whether CLA is useful. If you get the basics down – you are 90% there, I don't give a shit what else there is. Same as training I suppose. Most people don't have the basics down.

The biggest part for fighter-specific nutrition is keeping the fighter close to his weight class. Making weight is an art and science in itself. So nutrition for a fighter is about supplying enough energy for training, enough nutrients and calories for appropriate recovery, but always keeping an eye on their weight class. It's one of the rare situations where knowledge of the sport, and the weigh-in procedures, reconstitution etc could make or break your entire success.

JF: What kind of recovery methods do you use after training and practice or competition?

AC: I am a huge fan of a post workout shake first of all. I'm not convinced that there is any benefit to a shake over a solid meal, but I am a huge believer that an ice cold frosty milkshake is usually more appealing after sparring or weight training than a plate of salmon and green beans.

I am also a huge believer in the foam roller. It's a \$15 massage. We call it the poor man's massage therapist! 10-15 mins nightly can do wonders to speed up your recovery. In fact if you don't have a foam roller in your living room somewhere – you probably aren't training too hard.

Stretching is great. I'm not going to get into the debates as to which type of stretching is the best – let's just say that most people aren't doing enough – so anything will be useful.

And if you have access to it – a hot tub, or even just a hot bath can really relax the muscles. It's also great mentally to wind down.

JF: How important is the mental aspect to competitive martial arts?

AC: Huge. Standing across the ring from someone who has the sole goal of hurting you and knocking you out is a unique situation. It's the ONLY activity in which the ultimate goal is to render the opposition unable to continue.

And no matter how far behind a fighter is, there is always the hope that one perfectly delivered strike will knock out an opponent; thereby winning the fight. Combat sports are perhaps the ONLY activity whereby one of the participants can be hopelessly outclassed and even further behind, and yet at a stroke - Win. Decisively. With 5 seconds to go in basketball, if you're down by ten –it's over. With 5 seconds to go in a fight – you can still get the knockout.

But it's not just your mindset – it's what you DO with that mindset that determines everything else.

My instructor used to say – The winner and the loser of any fight feel exactly the same inside – it's what they DO that makes them different.

Anyone who tells you they aren't nervous or scared before a fight is lying.

There's a point in every fight where a fighter takes a step backward and takes a big breath and you see the doubt in his eye. He starts to realize he bit off more than he could chew and he questions what he's doing there and how he can get out. At that point he either shakes that thought out of his head and grits his teeth, or he crumbles. But EVERYONE has that thought.

JF: Is there anything you recommend to martial artists about how to improve their mental focus or anything like this? Any books to read or methods you recommend?

AC: The best book I have read recently that touches on the topic is actually the autobiography of Teddy Atlas – it's called Atlas – from the streets to the ring. It should be mandatory reading for any fighter or anyone working with fighters.

JF: What are some of the greatest lessons you learned from martial arts?

AC: Everyone can talk the talk – but very few can step up and deliver. Let's just say that in fighting – when all is said and done – more gets said!

Martial arts taught me how to fight. Not just in a physical sense – but in a mental sense. When I had to face cancer I really believe the lessons I learned in that little gym all those years ago are what made the difference. A fighters mentality. Who

knows where I'd be without that.

To learn more about Alwyn Cosgrove and his training methods, check out www.AlwynCosgrove.com.

Training Young Wrestlers

An Exclusive Underground Interrogation with Brian Grasso

JF: Brian, first of all thanks for taking the time to share your knowledge with us here today. Today we're going to talk wrestling and how to properly train to excel on the mat. The first thing I want to ask you Brian is what do you think are the most important characteristics or traits you must possess to be a great wrestler?

BG: Being a former competitive martial artist (who trained with and competed against wrestlers), I can say that the most innate characteristic of a quality wrestler is an indomitable spirit. That 'never surrender' attitude is something that seems to exist in many wrestlers and is a quality I learned to respect (and get frustrated by!) very much.

Having said that, I have long maintained that strength kills. We have approached an age of sport-based training that seems to have de-emphasized the importance of strength. While I don't discount for an instance the necessity for advancing other biomotor skills, I think that training 'trickery' has begun to dominate our industry and a simple regression back to the basics would be wise. In that, developing high levels of functional strength is something I think many wrestlers would be wise to adhere to. That is not to say that young wrestlers should pound the weights with endless reps and sets, but a progressive approach to developing quality strength includes assessing weaknesses and creating a plan within which to improve them.

JF: How would you go about training for or improving each of these qualities?

BG: Depending on the age of the wrestler, I would begin with basics. In young athletes (6 – 9), then most efficient means of developing strength is via rudimentary elements of running, jumping, climbing and crawling. These are natural and innate movements that young people gravitate towards when adults aren't in the way trying to dictate training agendas.

There are several efficacy-based reasons you start with these exercises. Firstly, there is a lack of isolation in any of these activities, which promotes functional awareness and allows for the body to develop through natural mobility-stability interplay. This factor can not be understated – in today’s sport industry, young athletes are being exposed to isolative efforts of training which can lead to lifelong deterrents given the extremely plastic nature of the nervous system at this age. Secondly, in running, jumping, climbing and crawling examples, you have a natural contralateral movement-base, which is essential for adequate motor development. Again, it cannot be understated – young athletes are first and foremost kids and must be treated as such. In this age bracket, the focus must be on developing the complete athlete/person and not the wrestler.

Around the ages of 9 – 10, I generally start teaching bar/lifting skills. These are supplemented with adequate amounts of both unilateral and bilateral body weight based exercises as well. There is a strong industry feel that one should master their body weight before attempting to lift external loads – and I could not disagree more. Performing advanced bar exercises (i.e. Olympic lifts, squats etc) are skills that are best taught in the pre-adolescent ages, again from a plasticity standpoint. That is not to say that I load kids down with heavy external resistance, but I do TEACH the mechanisms of force production, summation of forces and other sequencing realities while the kid is holding a light external load. This allows children to better learn the specific skills of bar work, which will be used later on in our training and also increases elements of other biomotor ability. For instance, teaching a bilateral bodyweight squat is one thing, but when you add a 7-pound bar (as a back squat or front squat), you challenge the nervous system to respond to the increased dynamic. For example, balance points change; shoulder ROM changes; there is a difference in the thoracolumbar fascia pull – these are all things that serve to elevate a child’s development.

JF: How important is nutrition to the wrestler?

BG: Critical... if for no other reason than the fact that wrestlers are notorious for dropping weight nearing competitive events... and this is a habit best avoided in general.

JF: What about hydration and why do so many young wrestlers suffer from dehydration? How can we prevent this?

BG: Well, certainly a change in the coaching mentality would help. Practices with young athletes should always contain built-in water breaks every 10 – 15 minutes. That seems excessive to some coaches and therein lies part of the problem. Kids are more susceptible than adults to dehydration and this must be monitored from a prevention standpoint, not a reactive one.

Education is another issue. Too many coaches in all sports view their role as developing great sport specialists and nothing more. As a coach however, you have the ability to teach lifelong knowledge that should include nutrition and hydration-based realities.

JF: What are your feelings on cutting weight for young wrestlers? Should young kids be trying to cut weight or should they always wrestle up a weight class instead of down?

BG: Double edged sword – I do not feel as though young wrestlers should ever get into the habit of cutting weight, however I don't like the idea of having smaller wrestlers have to compete against larger kids, either.

This goes back to education. Young wrestlers learn the whole 'cutting' aspect from someone. If coaches worked more proactively at teaching youngsters how to eat, drink and train right, this conversation may become a moot point.

JF: Could you briefly lay out an example of how you would set up an off-season training program for a middle school wrestler?

BG: This may be a boring answer for you, Jay, but to me a middle school wrestler should be playing other sports during the wrestling off-season. That is the essence of true development as a complete athlete – anything less than a full multilateral effort in the early years of life amounts to a limited athlete.

Certainly there is nothing wrong with supplementing other sports with quality strength training, however. Specifically, young athletes in this age group should be encouraged the process of strength skill development. I would suggest a two-day per week routine that consisted of the following –

- a. Movement preparation (multi-planer/directional movement patterns)
- b. ROM drills (hip/shoulder circuits)
- c. Torso activation
- d. Primary skill lift (squat variation etc)
- e. Tertiary lifts (supporting the posterior chain specifically)
- f. Static/active flexibility and more ROM drills

I use a lot of hybrid lifts with younger athletes (when you couple lifts back to back, for example hang clean, front squat, push press). This cuts down on the load the athlete lifts because they can only lift as heavy as there weakest exercise.

JF: How, if at all, would this change for the high school wrestler and finally the college wrestler?

BG: As the athlete climbs the ladder of one particular sport, there training becomes more specific to that sport. That is what we are missing in the sport-training world at large – elementary, middle school and young high school athletes should be considered ‘developmental’. In essence, we should be teaching them basic skills that can and will be applied to any sport and lays the foundation for eventual specialization.

JF: Great info, Brian. Thanks again for sharing it. Where can everybody find out more about you and what you do?

BG: My pleasure, Jay. Folks can visit my website for more information –
www.DevelopingAthletics.com.

Training For Mixed Martial Arts

An Exclusive Underground Interrogation with Tony Reynolds

JF: Tony, first of all I want to thank you for doing this interview. Let's start by talking a little about the needs of a successful combat athlete. What qualities does one need to possess to be a successful combat athlete and why?

TR: I think these attributes are somewhat similar to those of successful athletes in other sports.

First a successful combat athlete must possess superior levels of two crucial "Mental" attributes.

1. **Intelligence** -the ability to learn or understand or to deal with new or trying situations...A successful athlete must be able to quickly learn and retain effective knowledge to cope with a dynamically changing sport.
 - a. This could be extrapolated to include the ability to successfully apply newly attained knowledge to manipulate one's environment or to think abstractly, which leads to...
2. **Intuition**- Instinctive knowing-The act or faculty of direct perception or sensing of information resulting in the gaining of direct knowledge or cognition without evident rational thought or inference. In other words, a successful athlete **MUST** possess a razor sharp instinct.

Second, a successful CA must possess superior command over three of the 5 emotional mechanisms

1. **Anger**-Uncontrolled anger can easily result in impulsive and reckless reactions to one's environment. Although a certain level of anger may be necessary to help support the aggression necessary to compete at elite

levels, it must be kept under control and channeled effectively.

2. **Apprehension**- Apprehension is strongly related to fear, anxiety, guilt, and embarrassment. Although discernibly different, these “feelings” all lead a measurable level of concern that results in the person feeling uncomfortable about potential danger or injury. Apprehension typically leads to loss of initiative and ultimately places the CA into a constant defensive position fueled with a lack of cognitive clarity. Typically, apprehension is reduced with training and competitive experience.
3. **Confusion**- Confusion is nothing more than a state of cognitive ambiguity and is typically the result of either unforeseen confrontation or lack of clarity between choices. While in a state of confusion a CA will be unable to effectively call on intelligence and intuition, and without an appropriate level of intelligence and intuition, the athlete will experience increased levels of confusion.

As you can see there is a strong relationship between the emotional and mental components whereas lack of emotional control can negate the effective utilization of intelligence and intuition.

Third, a CA must possess combinations of elevated levels of several physical attributes:

1. **Muscular strength and endurance** -this includes but is not limited to the ability to adequately produce and effectively reproduce the following strength/force characteristics:
 - Absolute force
 - Rotational force
 - Counter or neutralizing force
 - Stabilizing force
 - Dynamic and off balance force

- Explosive force
- 2. **Cardiorespiratory endurance**-or the ability to adequately deliver essential nutrients, especially oxygen, to the working muscles of the body and to remove waste products during prolonged physical exertion
- 3. **Mobility/flexibility**-or the ability to move through adequate (as defined by the demands of your sport) ranges of motion freely without pain or apprehension.
- 4. **Efficient coordination of motor skills**- or the skillful and effective interaction of movements

Fourth, a CA must be able to expertly utilize several different psychomotor abilities. Psychomotor ability engages a response involving both an immediate sensory experience and a motor skill.

I want to mention that I got the following information from a website and cannot find it again to give it proper credit. (Therefore, if this is your info, thank you)

1. **Perception**- The ability to use sensory cues to guide physical activity:
Distinguish, identify, select
2. **Set**- The readiness to act; requires the athlete to demonstrate an awareness or knowledge of the behaviors needed to carry out a skill: Assume a position, demonstrate, show
3. **Complex overt response**-The ability to perform the complete psychomotor skill correctly: Carry out, operate, perform
4. **Adaptation**- Can modify motor skills to fit a new situation: Adapt, change, modify, revise

5. **Origination**- The ability to develop an original skill that replaces the skill as initially learned: Create, design, originate.
6. **Perceptual abilities**-Kinesthetic, visual, auditory and tactile discrimination and coordinated abilities
7. **Skilled movements**-Simple, compound, and complex adaptive skills:
Assemble, calibrate, construct, dissect
8. **Perceptual abilities**-Kinesthetic, visual, auditory and tactile discrimination and coordinated abilities

Fifth and final, we come to skill. Skill is an athlete's ability to choose and perform the right techniques at the right time, successfully, regularly and with a minimum of effort.

A skill is a proficiency, facility, or dexterity that is acquired or developed through aptitude, training, or experience that results in the ability to produce solutions in some problem domain. At higher levels of proficiency, a CA should be able to selectively utilize individual and combination skills that involve cognitive thought process, interpretation of information, and a consequential motion.

JF: If a combat athlete comes to train with you what are the first things you look for in your initial assessment?

TR: Our training tends to get quite intense, so the first thing I look for are issues that may potentate injury. This includes a postural assessment, joint range of motion exam, and dynamic movement profile when necessary. Initially, I am looking to see if there is a reason for me to refer the athlete to a physician or physical therapist.

I am also looking for strength and flexibility imbalances that may result in injury and/or hinder performance. My theory is that you CAN build a massive house on a

shaky foundation, but it WILL eventually crumble and fall. Therefore let's address fundamental "foundational" issues first, and then start the building process.

Once we get through the preliminary assessments it is time to qualify and quantify athletic abilities. First, I will qualify speed, quickness, and power. These assessments are informal and observational. I like to assess them in their environment and make training decisions based off of what I perceive.

Once their movement is qualified, I use various types of weight throws, movement drills, and conditioning drills as a means to quantify their abilities.

In some cases I will do a battery of strength tests, (squat, push up/bench, hyper extension hold, pull up/down, pillar holds, etc) but am doing this less and less. I do not utilize percentage training as a rule, so I do not feel this type of testing is absolutely necessary.

Finally, I will assess their nutrition. I start with the typically anthropometric and basic daily activity assessment and feed it into my nutrition software to get their estimated metabolic requirements. Additionally I will have them fill out a short food log so we can see if their needs to be any adjustments in their current nutritional programming.

JF: How would you set up a typical training program for an MMA type athlete? How many days per week, what type of split, etc.?

TR: I do not have a rigid template that I try to fit everybody into, rather I let their assessments, testing, and input dictate these variables.

Therefore the initial planning stage is extremely individualized and depends on several factors:

1. Testing/assessment results
2. Their MMA training schedule
3. Their competition schedule

4. Their work capacity
5. their work/school schedule
6. Any miscellaneous issues not listed above

In a perfect world I would see them 4-5 times a week. The content of each workout would depend upon their requests and the results of our assessments.

If they need to focus more on strength/power we would do a split of M/TH-lower body, T/Fri-upper body, and wed would be SAQ/Conditioning.

If they want to do more SAQ/C we might do something like the following:
M-Lower Body, T-SAQ/C, W-Upper Body, TH-SAQ/C, Fri-Upper Lower Combo

We typically try to implement an “absolute strength” and a “speed strength power” day. However, this is ultimately decided by the requirements of the athlete. We may spend more or less time on a particular attribute.

JF: How much attention do you give to strength training and how much attention do you give to conditioning? Is one more important than the other?

TR: “One” is more important than the other...the “one” just depends on where the athlete is deficient. This will be determined during the testing and assessment phase.

I have found that a soundly designed strength training and/or SAQ program will help elevate conditioning levels. Additionally, the MMA training the athlete undergoes will also help elevate conditioning. Therefore, it is rare that I purely focus on conditioning drills and tend to keep our rest intervals short during strength training.

JF: What are the most important muscle groups or movement patterns, etc. that MMA athletes should focus on in their strength training?

TR: If you analyze the types of forces produced and received during a fight you will notice that most efforts expressed involve a lot of rotation, are unbalanced, and involve pushing or pulling a moving load. However, you look at the vast majority of exercises traditionally done in the weight room and you will see that they are very stable, bilaterally/symmetrically oriented, and vertically loaded.

We know that the vector of the force and the configuration of the body when it receives or produces the force is going to determine the body's muscular recruitment patterns. Therefore, it is sensible to training loading patterns that emulate those experienced during a fight.

I am a big fan of horizontal and rotational loading using cables, bands, body weight, heavy sandbags/tackling dummies, and training partners. I think these types of implements allow us to load in any and every plane and create rotational strength.

We try to use these types of drills to cement together the results of the more vertically oriented traditional weight room exercises. (So yes, we do squat, bench, deadlift, etc)

JF: Are there any unique exercises or anything that you use in your training for MMA athletes that you could share with us?

TR: As I said in the previous answer, I really like rotational and horizontal loading for MMA athletes. A fighter must be strong and explosive in multiple directions, not just vertically. I also think that training for increased impulse is also very important (none of that super slow bull shit!!!).

Therefore I examine the athlete's sport and determine what types of motions seem to be explosive (take downs, throws, lifts, repositioning, etc) and try to safely recreate these movements in the weightroom.

Although not extensive, here is a short list of exercises that I like to use with my fighters:

1. **Stability Ball Pike Push Ups**- Assume a pike position with the feet on the ball and perform a push up using different hand positions (in-line, staggered, etc). You can also start in the bottom of a push up position and move into the pike.
2. **Pb Hip Turns** – knees on the ball, hips flexed to 90 degrees, hands on the ground, rotate laterally until the thigh is on the ball. Return to start and repeat on other side.
3. **1 Arm Rotational Body Row** – place a barbell in the rack at the athlete's waist height. Have the athletes hand under the bar holding on with only 1 hand. With the knees bent to 90 degrees, the hips neutral, and the supporting arm straight, have the athlete maximally rotate down with the shoulder of the free arm. Reverse and maximally rotate up while rowing the body toward the bar with the supporting arm. Slowly lower and repeat. You can move the feet out to make the drill harder.
4. **Stability Ball Lateral Rolls** – have the athlete assume a push up position on the ball with a neutral spine/pelvic alignment. Maintaining this posture (very important), have the athlete roll the ball laterally 5-10 yards and back.
5. **Zercher Squats** – Holding the barbell in the crook of the arms (at the elbow) have the athlete set the hips back and squat down. Once parallel (or more or less depending on mobility) round the back taking the shoulders in front of and between the knees (staying flat footed). Return to a neutral spinal alignment and stand back up. Repeat
6. **Db Hand Walks** – assume a push up position on dumbbells. With the feet at approx 2x biacromial breadth, lift one dumbbell up into a full rowing motion

- without rotating the hips. Step over the opposite elbow and place the dumbbell on the ground in front of its starting place. Toe walk forward slightly and repeat on the other side. Cover 5-10 yards.
7. **Seated Barbell Rainbows** – Start in a seated position, leaned back, with the feet flat on the floor, knees and hips flexed. Hold the end of a barbell (on the sleeve) over head with the other end resting on the floor. Have the athlete rotate his shoulders, arms, and end of the barbell down toward the ground on the side. Return to the top (under control) and repeat on the other side.
 8. **Loaded Push Arch** – have the athlete assume a push up position. Manually apply pressure to the athlete's shoulders. At a moderate speed, move the pressure around changing the angle of your pressure. Have the athlete perform a push up. Keeping the athlete's hands in place, have him step is feet 1 step to the side and perform another push up. This will place the athlete's torso at an angle from the hand placement. Have the athlete step another step to the side and perform another push up (he may be able to do the 3-4 times) Stepping back 1 step at a time and performing a push up each time have the athlete return to the center and repeat to the other side.
 9. **Banded Sprint Starts** – Attach Jumpstretch bands (light intensity) to a low stable anchor. Have the athlete place the opposite ends of the bands over the shoulders like a back pack. Place a db bench 4-5 feet in front of the athlete. Have the athlete assume a 3 point stance, and explode forward one step and chest first onto the bench. Under control, he should slowly return to the starting position.
 10. **Rope Pull Ins** - have the athlete sit, and or stand facing you. If he is sitting you may want to place some heavy dumbbells in front of him for foot blocks. Using a 30+ foot piece of rope, have the drag you in with a hand over hand rowing motion.

11. **Sandbag work:** Take an old green military duffle bag and fill it full of sand (according to desired weight). You can do some of the following and be creative and come up with some of your own:
- a. Bear hug the bag and perform squats, twisting squats, good mornings, lunges, twisting lunges, get ups, chops, etc
 - b. Straddle the bag, grab it with a hand on each side, squat, explode up, twist and throw it over the shoulder
 - c. Lay supine on the floor with the bag at arms length, bridge up and perform a bench press motion, return to the start
 - d. Lay supine on the floor with the bag laying over head on the floor, bridge up and pull the bag to full arm extension over the chest
 - e. Lay supine on the floor with the bag at arms length, bridge up and move the sand bag in multiple directions
 - f. Start by hugging the bag and laying face down. Quickly turn over and pin the bag. Quickly reverse it back.

12. **1 Arm Db Bench-Sit** on the physioball that puts your thighs approximately parallel to the ground. The ball should be on a slip resistant surface and clear of any obstacles. Holding the dumbbell at the centerline of your body, start to slowly roll forward. As you roll forward lean back and let the ball roll up your back. Roll forward until your head and shoulders are supported by the ball. Elevate your hips until you create a flat table from your knees to your shoulders. Start with the Dumbbell at arms length. Slowly lower the dumbbell allowing the upper arm to create a 45 degree angle from the side of the torso and keeping the weight directly over the elbow. Press the dumbbell up returning it to its original position and rotate your dumbbell side shoulder up into the air. NOTE: Keep your hips tall during the duration of the exercise. Minimize ball movement. Keep your glutes and your abdominals contracted through out the duration of the exercise.

13. **1 Arm/Leg Low P Row**-Adjust the pulley so it is located low as possible. Grasp the D-handle in your right hand and face the pulley. Stand on your left

foot while keeping a neutral spine. Squat down by pushing your hips back. You should remain flat footed and your knee should not move in front of your toes. You will maintain this squat for the duration of the exercise. You should start with your arm fully to your front. Pull the D-handle back keeping the elbow in line with the hand and the cable. Squeeze your shoulder blade back as your elbow reaches the back side of the movement (remember to keep the elbow in line with the hand and cable). Return to the starting position and repeat the arm action. Match the rep numbers on the other arm and leg.

14. **Alt. Medball Push Up**-Start in a push up position with one hand on a medicine ball. Perform a push up. After the completion of the rep, roll the ball to the other hand. Perform another push up with the other hand on the ball. Repeat. Try to roll the ball quickly between hands.

15. **Bear Crawl**-Attach a rope around your waist or to a shoulder harness. Have your partner hold the other end for resistance. Start on all fours. Take maximal sized steps forward in a bear crawl fashion. Keep your hips low and drive your knees forward and your feet back as you drive back and through the ground.

16. **Glute Ham Raise**-Adjust the foot plate so that you have to push the balls of your feet into the plate to drive your knees into the SIDE of the pad (not the top). Start with your upper torso perpendicular to the ground. Aggressively push into the plate. Tuck your chin to your chest, contract your abdominals and lock your shoulder blades in place. Lower your torso by extending at the knees. You should not flex or extend at the hip or through the spine. Lower under control into full knee extension and your body is parallel to the ground. Aggressively push your toes into the plate, squeeze your glutes, and flex at the knee joint to return to the top. Avoid hyper extending the spine. Repeat

17. **Low Pulley Squat** (or Dead lift)-Attach a D-handle to a low pulley. Face the pulley and grab the handle with both hands facing down. Squeeze your

- shoulder blades together, contract your abs, and assume a neutral spine. Start the exercise by pushing your hips back and your knees open. Continue the motion by bending at the knees, not allowing them to move forward. Sit slowly until your thighs break parallel. Drop your shoulders forward as low as you can comfortable. Reverse the motion, push through your heels and stand back up. Do not let your knees drop forward when you begin to stand up.
18. **Medball Hand Walk**-Assume a push up position beside the medball with your hands directly under your shoulders. Your hips should be in line with your shoulders and your ankles. Maintain a neutral pelvic alignment not allowing your lower back to over arch or flatten. Maintain this torso posture throughout the duration of the exercise. Step laterally onto the ball one hand at a time until you are in a push up stance on top of the ball. Step off to the other side of the ball with both hands. Reverse the motion leading with the other hand.
19. **PNF on Physioball**-Assume a push up position on the ball. Your hands should be directly under your shoulders and angled slightly out to take pressure off of your wrist. Widen out your foot stance if you need more control. Maintain a pillar posture throughout the duration of the exercise. While maintaining the push up position, have your partner lightly tap the medball around in multiple directions. Focus on trying to maintain the ball in a central location.
20. **Pull Through**-Using a single handle on a low pulley, grab the handle with both hands with your palms facing up and walk out about 4 feet from the pulley. Keeping your back tight and you abs contracted reach through your legs as far as you can. Pull through and stand up.
21. **Reverse Band Low Walks**-Have your partner grab one end of a heavy jumpstretch band. Stand in the band facing your partner with the band around your lower back. Squat down into a hips parallel squat with your feet shoulder width apart. Lean back onto the band so your partner is supporting

some of your weight. Push with one foot and extend that leg completely. As you are extending that leg step back with the other leg. Repeat on the other side. Your partner should be resisting you, forcing you to pull them. Remember to keep your hips down and to full extend the effort leg. Continue to walk back for the prescribed number of steps or distance.

22. Rope Pull Downs-Attach some weight to the end of a very sturdy thick rope. Hang the rope over the chin up bar of an anchored squat rack. The weight should be inside the rack and you should be seated outside the rack with your feet against the front. Grab the end of the rope that is not attached to the weight. Lean back slightly and pull the rope down hand over hand until the weight comes close to the chin up bar. Drive your elbow back behind your body on each pull. For heavy weights, you can pull with both hands at the same time. Be careful not to pull the weight over the bar. Reverse the motion hand over hand until the weight is touching the ground. Do not drop the weight done. The goal is to raise and lower the weight as many times as you can in the given amount of time.

23. Seated Zercher-Use a sturdy bench/box that puts your thighs slightly below parallel when seated. Hold the bar in your arms across the bend at the elbow between your biceps and forearms. Sit on the box and assume a wider than shoulder width stance with your head up. Start the exercise by bending at the hips and leaning forward taking the bar beyond your knees. Toward the bottom of the movement round your back and take it as close to the ground as you can. Straighten out your back and return to the start position.

24. Chops-Attach a triceps extension rope to an adjustable pulley. Pull the rope through so the attachment is at one end. Adjust the pulley so it is located as high above shoulder height as possible. Face to the side so the pulley is to your left. Reach across your body with your right arm and grab the end furthest from the attachment with a palm down grip. Grab next to the attachment on the rope with the left hand using a palm down grip. You should

have approximately a shoulder width distance between hands. Walk laterally away from the pulley until the weights are no longer touching. Assume a slightly wider than athletic stance with your knees slightly bent and your hips pushed back. Your feet should be just behind the pulley. Start by rotating at the hips and waist toward the pulley keeping your feet facing forward. Keeping your arms slightly bent rotate to the right and down at a 45 degree angle. The right foot should stay planted and the left foot should pivot toward the right foot. As you rotate slightly bend the right knee. Perform most of the rotation through the core not by moving the arms at the shoulders. Return to the starting position.

25. **Twist**-Attach a triceps extension rope to an adjustable pulley. Pull the rope through so the attachment is at one end. Adjust the pulley so it is located at chest height. Face to the side so the pulley is to your left. Reach across your body with your right arm and grab the end furthest from the attachment with a palm down grip. Grab next to the attachment on the rope with the left hand using a palm down grip. You should have approximately a shoulder width distance between hands. Walk laterally away from the pulley until the weights are no longer touching. Assume a slightly wider than athletic stance with your knees slightly bent and your hips pushed back. Your feet should be just behind the pulley. Start by rotating at the hips and waist toward the pulley keeping your feet facing forward. Keeping your arms slightly bent rotate to the right. Your arms should travel in a horizontal plane. The right foot should stay planted and the left foot should pivot toward the right foot. Perform most of the rotation through the core not by moving the arms at the shoulders. Slowly return to the starting position.

26. **Rev Chop**-Attach a triceps extension rope to an adjustable pulley. Pull the rope through so the attachment is at one end. Adjust the pulley so it is located as low as possible. Face to the side so the pulley is to your left. Reach across your body with your right arm and grab the end furthest from the attachment with a palm down grip. Grab next to the attachment on the rope with the left

hand using a palm down grip. You should have approximately a shoulder width distance between hands. Walk laterally away from the pulley until the weights are no longer touching. Assume a slightly wider than athletic stance with your knees slightly bent and your hips pushed back. Your feet should be just behind the pulley. Start by rotating at the hips and waist toward the pulley keeping your feet facing forward. Keeping your arms slightly bent rotate up to the right at a 45 degree angle. The right foot should stay planted and the left foot should pivot toward the right foot. Perform most of the rotation through the core not by moving the arms at the shoulders. Slowly return to the starting position.

JF: What are some of your favorite methods of conditioning for MMA athletes?

TR: When I do, I like to turn conditioning sessions into a competition, and when at all possible, I like to do this outside.

Here is a sample conditioning circuit I might use (Very strongman oriented):

1. Hand over hand rope pull drag in- I have a 50 foot rope and the athlete pulls a weight sled in, sprints back, and pulls it in again. We shoot for 150-200 feet
2. Dumbbell stair climb-take 5 sets of heavy dbs and run a pair at a time up to the top of the grand stand. This is approx 3 flights of stairs
3. Bear walk dragging a sled from the ankles-50-100 yards
4. Truck Pull-100 yards
5. Deadlift Up the Stairs-200 lb weight...straddle it..deadlift it, set it on the next step. Step back over it, and repeat
6. Crab walk race-Start in a crab walk position with 10-15 heavy chains draped over you mid section. Crabwalk out 10 yards and drop one chain. Crabwalk

back 10 yards and drop another chain. Repeat until no chains are left.

7. Heavy chain drag backwards over 50 yards

8. Keg toss sprint and toss over 100 yards

JF: How would you typically taper the training or deload an MMA athlete before a big fight? How soon would you do this and would reduce volume, intensity, etc. and how?

TR: This somewhat depends on the recovery abilities and efforts of the athlete. Typically I will very slightly reduce training two weeks out and cut it totally 1 week out. I find that cutting back sooner tends to lead to detraining and many times “psychological” issues with the athlete.

JF: How important is nutrition for MMA athletes and what kind of diets do you typically recommend for these guys?

TR: Without proper nutrition, you are fighting a losing battle (which is something I know all too well). You truly are what you eat, so I try to educate as much as possible. We do the typical 5-6 meal split, and we try to avoid fatty/greasy over processed foods.

I still believe in a rounded diet, not in any type of right wing left wing plan. I try to preach proper timing of proteins and carbs, i.e.-easily digestible combo 2 hours prior and a protein/carb within 30-45 minutes post.

JF: What about around or during training for MMA? Should they be taking anything before, during or after intense grappling or striking workouts?

TR: Hydration is always a major concern. The athlete needs to drink plenty of water before, during and after, and on hard training days they can supplement with an

electrolyte replacement drink (i.e. Gatorade). I typically suggest they try to drink at least a gallon jug of water throughout the day on days they are going to be training heavy. This may vary depending on the athlete's size and training intensity

A simple trick is to weigh before and after training. If you are lighter, it is due to fluid loss. You need to replace enough fluids to return to your normal body weight. I do not suggest slamming a bunch of fluid quickly to get your weight up, rather drink them as tolerated.

JF: Is there anything else you would like to add?

TR: Just a few of my favorite phrases:

1. If you want to be it, you got to live it- this means do not expect elite results from half ass effort. If you want to be the best you need to invest yourself on all levels every day.
2. Don't paint with a hammer-learn how to use the tools you have as effectively as you can. If you do not have the right tools, go get them!!!
3. Take nothing for granted-god giveth and god taketh away...therefore you need to work your ass off to ensure success. Do not expect it to be easy.

To learn more about Tony Reynolds and his training methods, please visit www.PssAthletics.com.

How to Dominate The Squared

Circle

An Exclusive Underground Interrogation with CJ Murphy

JF: Murph, thanks so much for taking the time out of your busy schedule to do this interview. Let's start with a little bit of your background as it relates to combat sports. Tell us a little bit about what disciplines you have trained in.

CJ: Jay, I began training in martial arts in the 80's. I love the 80's; I was the King! At least I was then. Anyway, I really don't do much MA training anymore for many reasons. I have trained many styles over the years, including boxing, kickboxing, Muay Thai, JKD, Modern Arnis, BJJ, and I've dabbled in some others. I feel my MA resume is very well rounded and I've had some great coaches.

JF: Can you tell us how you trained for combat sports when you competed and what mistakes you made, what you learned from your mistakes and what you would do differently now?

CJ: When I was training in combat sports, I didn't really coordinate the two 100%. Way back in the day, we used to train every body part twice a week in the gym, a la Flex Magazine, kick box/sparring 4 days a week, and sprints/stairs 3 times a week. Classic overtraining. I don't think I really need to explain all those mistakes to you.

As I gained more experience as a coach, I started to put more attention into how to mesh the 3 components together (weight room, conditioning, MA training). I have written several articles on how we do this but here goes in a nutshell: Train the correct energy pathway, train your heart rate. What I mean by that is if you have a 3

minute round and a 1 minute rest, you need to get your heart rate back to normal in that 1 minute.

I think to finish up with your question, "What would you do differently now", I think this will be different every time you ask me. We are always learning and evolving so I'm sure six months from now we will be doing something differently.

JF: Let's take a hypothetical situation and go through the entire training process briefly. For this example we will use a 21 year old, welter weight boxer. He shows up and wants you to train him. What is the first thing you are going to look for in your initial evaluation and what methods will you use to gather this information?

CJ: Well Jay, it depends on what he wants for training. As you know, I am a fairly experienced boxing coach, so I'll assume you are asking for his complete training cycle. As far as what we look for, first we would sit down and talk with him. I would ask what his previous experience is, how many fights, wins, losses. I would find out as much as I could. The best way is to ask! We would need to know if he is amateur or pro, whether he intends on turning pro, as amateur boxing is scored a little differently than pro boxing and needs to be coached accordingly. We would also need to take him into the gym and evaluate his boxing fundamentals, work ethic, conditioning, and also a strength evaluation in the weight room.

JF: How would you set up a training program for this fighter?

CJ: His training would be set up according to what his needs were. Let's say he had the greatest boxing skills in the world but was as weak as me. We obviously would put our focus on his work in the weight room. It goes both ways, however. If he was extremely strong in the gym, but had poor conditioning and boxing fundamentals, we would bring up the weak areas.

As far as days per week, etc., I think 3 days of each component is a good start. 3 days of gym-conditioning work and 3 days of boxing will allow his body to get used to training. As he progresses, it would get more intensive.

As for training, we would primarily do full body workouts consisting of everything but the kitchen sink. We would use Olympic Lifting, Powerlifting, Strongman, odd objects, bodybuilding, yoga, and more, in different phases of training. It sounds a little unusual, but it works well. Like a Westside hybrid.

JF: How important is strength and how important is conditioning? Do you stress one more than the other?

CJ: Neither is more important. They say of two fighters with equal skill, the stronger one wins, but what if the stronger one is in piss-poor shape? Who wins then? You need to build a fighter who is just as fresh and ready to go and the end of the last bell as he was at the beginning. He also needs to be stronger and have better skills than the opponent. This is the make-up of a dominant athlete and we try to maximize both strength *and* conditioning here at TPS.

I see conditioning as a huge weakness in many fighters. Guys are getting gassed too soon. I see this a lot with BJJ athletes transitioning to MMA. The conditioning is just not there for many.

JF: What are the most important muscle groups or movement patterns that boxers should focus on in their training? What areas are most injury prone and need to be addressed? What could they do to improve their punching power?

CJ: Boxers are no different than any other athlete when it comes to strength training overall. What I mean is the need to have balanced, total body strength, and the need to be explosive. Sounds like most other sports, right? I've seen some pretty ridiculous training techniques geared specifically for boxers. In my experience, a

program that addresses the required attributes (strength, conditioning, flexibility, endurance) will work without special bells and whistles. As stated in my article “Sports Specific” (on totalperformancesports.com and elitefts.com), you need to develop the correct energy pathways first and eliminate weaknesses. As I have said before, I feel conditioning is probably lacking in most boxers and by that I mean the ability to go balls out for two minutes and then have the heart rate return close to its resting rate in under 1 minute for the desired number of rounds.

As far as movement patterns go, obviously they need the ability to use their hips for power while punching. Movements such as tire flipping, high pulls, etc., teach them to activate large areas of the body simultaneously. Medicine balls are an excellent tool to help them develop as well.

I see a lot of boxers with elbow and hand injuries. This is usually due to poor boxing techniques, improper hand protection and hyperextensions. These really can't be fixed in the weight room and are more boxing technique specific.

JF: What are some of your favorite conditioning methods for boxers?

CJ: I like med ball complexes, Strongman style medleys, and prowler/sled work for conditioning.

JF: So you do you strongman training methods with boxers?

CJ: Yes, we do use Strongman style training with boxers. Tire flipping, lighter Atlas stones, farmers walks, and medleys are outstanding when performed properly.

JF: How would you adjust their training as the fight nears? Especially the last few weeks, what would be different?

CJ: As the fight nears, weight training tapers off and technique & sparring increases. It's no different than any other sport. You need to lay the foundation work in the beginning and taper off as the event draws near.

JF: There are a lot of old myths and superstitions that are still prevalent in the boxing community. Which of these do you feel needs to be done away with? What conditioning methods do you feel are outdated and useless?

CJ: One of the stupidest things I've ever seen comes from USA Boxing. I was at a seminar and the instructor said that boxers need to do tons of bicep and wrist curls because all of the punching power comes from the arms and biceps. I almost puked my Skoal out of my nose!

Many boxing coaches shy away from weight training but it's usually the older ones. One thing I do see that is still prevalent is hours upon hours of long, slow distance running. Why do coaches do this?

JF: How would you address nutrition with a boxer? Do you have any set formula you use to determine their caloric intake or do you just go by feel and make general recommendations?

CJ: At TPS, we use Dr. Fred Hatfield's Zig-Zag diet for our athletes. We estimate caloric intake and hourly energy expenditure and feed them based on lean body mass. It sounds complex but it is fairly simple. Keep your protein intake consistent and add complex carbs based on what you will be doing over the next 3-4 hours.

JF: How would you adjust your training and/or nutritional recommendations for a boxer who is at the top of his weight class but still needs to get stronger and more explosive? Is there anything you would do differently and anything you wouldn't do?

CJ: The Zig-Zag is infinitely adjustable for anyone. We check body composition anywhere from 1-3 weeks and adjust calories to suit the goals. Getting stronger and more explosive is done in the gym, not the kitchen. I can't say what I would or wouldn't do because everyone is different.

JF: What about if it's a heavyweight who needs to drop 15-20 pounds in order to improve his speed and endurance?

CJ: Weight loss is easily manipulated with the Zig-Zag diet. We would try to get the athlete very close to fighting weight through caloric manipulation as far out from the fight as possible. I'm not a huge fan of dropping a lot of weight at the weigh-in.

JF: Is there anything else you would like to add?

CJ: I'd like to thank you for the interview and ask the readers to check out my site, www.TotalPerformanceSports.com for some great training information.

Becoming An Ultimate Fighter

An Exclusive Underground Interrogation with James Smith

JF: James, I'd like to start by thanking you for taking the time to speak with us here today. Let's get right into it by addressing the strength needs of an MMA athlete. How important is it for these athletes to improve their relative strength? How much will it help their performance and why?

JS: The importance of relative strength for an MMA athlete is one of many abilities that must be maximized in order that the fighter may realize the highest degree of his potential. The degree to which the development of relative strength will heighten the fighter's performance is ultimately a function of how deficient the fighter is in this ability. For a fighter with a great relative strength deficit the improvement in this ability will dramatically heighten their demonstration of sport form. Alternatively, for a fighter who already possesses great relative strength any further improvement in relative strength is unlikely to positively impact the demonstration of sport form by any significant margin. Of course, we must remain mindful of technical preparedness- if the fighter is unskilled he can be as strong as he wants yet would be unwise to expect high results.

JF: Are there any strength markers or minimum numbers that you would like to see MMA athletes shoot for?

JS: No. No markers would, in my view, illustrate any relevant correlation to sport form. The fighter's goal, in my mind, must simply to be heighten their special strength preparedness as it specifically relates to their discipline. To assign any particular value to a barbell exercise is not meaningful due to the relatively distant relationship between barbell exercises and proficiency in MMA.

JF: Do you think MMA athletes could put too much emphasis on strength and if so how could that hurt their performance?

JS: Yes, too great an emphasis placed on limit strength development poses a negative impact to the perfection of sport form for a fighter. The training associated with limit strength development is very CNS intensive. This particular demand placed on adaptive reserves may very well impair the fighter's ability to recover between workouts.

JF: What are some of the best exercises or movement patterns for MMA athletes to focus on in the weight room to improve their speed?

JS: Well speed-strength is the quality we must address. This defines the heightened ability to move one's own bodymass or a relatively light load with the greatest possible speed. Consequently, any strike, throw, takedown, and so forth are first and foremost a demonstration of speed-strength which is then followed up by a demand placed on strength-speed and limit strength.

To develop speed strength, as it specifically relates to fighting, one must utilize movements which approximate those demonstrated during contests and practice those movements by exerting maximum force either bodyweight only or against a relatively light resistance. The relevance of limit strength here may be significant, as a fighter largely deficient in limit strength can practice unloaded movements as fast as he wants and may not observe any significant improvement in speed-strength. The two abilities, up to a point, are mutually dependent.

JF: What methods or exercises would you use to make an MMA athlete faster and more explosive?

JS: Understand that my selection of means will vary for individual fighters, however, in order to provide a general response here is a list of useful exercises:

- The practice of actual components or permutations of sport form (strikes, throws, takedowns, transitions, escapes, and so on)
- Explosive throws with medicine balls, kettle bells, sandbags, etc
- Jumps with and without external resistance- single leg, double leg, landings, depth jumps, repeated jumps/bounds, multiple directions, and so forth

- Explosive lifts and calisthenics performed bodyweight only or with various weighted implements
- Very short sprints and change of direction drills
- Basic exercises to develop strength

JF: What muscle groups are most susceptible to injury and should be addressed in the weight room for prehab purposes?

JS: Perhaps more so than any specific muscle group one must pay attention to the joints and connective tissues associated with the ankle, knee, hip, wrist, elbow, shoulder, neck, etc. This list is long.

JF: Let's shift gears now and talk about conditioning. What are some of the best conditioning methods for MMA athletes?

JS: A subject highly open to interpretation. Let us simply be clear on this: Understand the energy system demand placed on the fighter and know how the fighter must be specifically prepared for specific demands placed on their muscles. Energy system training alone is insufficient. The activity must approximate the demands placed on the fighter during contests. In this regard, one must have an adequate understanding of the biomechanics and kinesiology associated with fighting.

JF: Could you share any of your favorite recovery methods that would help out a hard training MMA competitor who is usually training for a minimum of three hours per day?

JS: Ideally- massage, soft tissue manipulation, electrical muscle stimulation, ice, sufficient rest and sleep, and so on- the whole deal.

JF: Let's take a hypothetical MMA athlete, twelve weeks out from a fight, who trains an hour per day kickboxing and an hour per day grappling. How often should he lift and how often should he be doing extra conditioning work? How long should each of the workouts last?

JS: I'll answer it this way- perform no more than two to three comprehensive weight training workouts every seven days, perform general conditioning farther out from the fight and specific conditioning closer to the fight, the workout will last as long as it has to in order to complete the work. Keep in mind, however, that a higher quality training effect is usually obtained when mental concentration is high. For this reason, a marathon workout presents a greater risk for less than optimal results especially when the training is moderately to high intensive to the CNS.

JF: How would you apply the high/ low concept to this or is it not applicable in this situation?

JS: It is absolutely applicable. In this instance the coach must have sufficient knowledge as to how one qualifies intensive means. In this regard, I must note that I wrote and published a manual which outlines this precise subject. The manual is entitled "High/Low Sequences of Programming and Organizing Training" and it is available through elitefts.com.

In short, the drills which demand the most explosive movements, movements against high resistance, full speed rolling/sparring, and so on would be reserved for high days and any lighter intensity technical drills, conditioning, restorative means, and so forth are performed on low days. High/Low provides and accounts for recovery between intensive workouts.

JF: What are some of the biggest mistakes that MMA athletes make in their training?

JS: Planning the training without a sufficient understanding of the physiological effects of the means.

JF: Is there anything else you would like to add?

JS: So let it be written...So let it be done

JF: Thanks so much James. Where can people learn more about you and your training methods?

JS: You're very welcome Jay.

I am part of the Q and A staff at www.EliteFTS.com and I have my own website www.powerdevelopmentinc.com. Additionally, my two training manuals "High/Low Sequences of Programming and Organizing Training" and "Speed Training Considerations for Non-Track Athletes" are available through EliteFTS.com.

The Evolution of a Mat Warrior

An Exclusive Underground Interrogation with Zach Even- Esh

JF: Zach, I want to thank you for taking the time to speak with us today. Let's start by discussing the training of a young wrestler. What are the biggest mistakes that young wrestlers make? What are the biggest mistakes that coaches of young wrestlers make?

ZE: Dude, as always, my pleasure Jay. You've been a great role model for me and you've helped me every time, so how could I say "No"?

With young wrestlers, I'll try to break this down into some age categories, because from my experience, I have seen a large number of wrestlers start as young as four years old. So, we might say, **"What mistakes do the parents of young wrestlers make?"**

I'm going to bullet point these to make it easier for the reader:

Elementary Age Students (5 – 11 years old)

- Wrestling year round / no down time or as we might say, periodization or cycling of intensity
- ONLY wrestling / no participation in other sports (organized or recreationally)
- "Conditioning" their kids through running, calisthenics (calisthenics with incorrect technique and inappropriate practices: too much volume, too much repetition of same movements / similar movement patterns)
- Inappropriate emotional training: Taking the sport too seriously at this young age. Parents often yell at these kids making them feel inadequate for losing or not performing at a higher level.

Middle School Students (12 – 14 years)

This group of wrestlers tends to do more of what they did as younger athletes. Why? Because their parents are often the one's pushing them to do this crap training, and, their wrestling coaches are often (I am not speaking universally here, but the majority) are stuck in the stone ages.

So once again, more of the same....

- Wrestling year round
- No or little participation in other sports or movement activities
- Possibly beginning “weight training” – often on machines and other guided resistance
- Training through injuries, not seeking out appropriate therapy and corrective measures

In high school (ages 14 – 18).....

- High intensity training year round
- Wrestling year round
- Specialization in wrestling and NO other activities included
- Not listening to the body
- Training with injuries for extended time periods
- Excessive distance jogging
- Excessive live wrestling

The list goes on and on, but as you can see, it's MORE of the same as they get older. The Coaches at all levels need to become well versed in the emotional / psychological aspect of training as well as the performance aspects.

Learning how to correctly and appropriately train young wrestlers according to age (physical and biological) and physical preparedness will easily skyrocket the performance of a wrestler.

I have seen and heard insane methods. Wrestlers preparing to enter a national tournament and live wrestling all the way up to a few days before the event and distance running, thinking that the hard work will reap rewards in a day's time!

JF: If you were coaching your own wrestling team right now, how would you structure your practices and what things would you do differently from most?

ZE: I would alternate conditioning being first / last each practice, unless I felt one had to be prioritized more so. If possible with the extra coaching staff, I would split the group up according to levels of physical preparedness, and we can zero in more so on weak areas. Attacking weak areas would be critical.

A training plan would be written out (but not in stone) according to matches and tournaments to help myself and the other Coaches view the varied intensity scheduled for each day. This would not (READ: can not) be written in stone because all athletes, especially high school / collegiate have great fluctuations of energy and motivation; this can be read more so on a day to day basis and can not be planned ahead of time.

Intensity would be varied according to verbal / non-verbal feedback from the athletes. The key here is trusting one another, having a solid Coach – athlete relationship, which opens up a great communication line allowing us to train them optimally! There would definitely be a deload period before the end of the season as the team preps for the qualifier tournament.

The wrestlers who do best are not always the best wrestlers; they are also the healthiest physically and mentally. Those who train hard, and not smart, often burn out before the end of the season (which is when it truly counts) and / or acquire some sort of an injury which hampers their optimal performance.

Most teams train six days a week. I would vary the volume of each workout w/regards to time and intensity. Some sessions may only last 45 minutes, others two

hours. There might be a week of six days training, next week might be four days only.

Every week would have one day in the weight room hitting two lifts, usually a full body lift and a lift for posterior chain, and then finishing off w/ prehab and rehab work. All athletes would utilize prehab / rehab methods. ART through their own therapist or possibly having a volunteer team Doc who can perform ART.

Mobility work would be included, all warm ups would be dynamic: gymnastics and various animal based movements and jumps would be included. Gymnastics training would be a huge part of what we do. Movements such as cartwheels (one and two handed), round offs (one and two handed), forward and backward rolls, shoulder rolls, dive rolls, partner wheel barrow walking, bear crawls, crab walks, hopping, jumping, partner carries on back and in zercher position, wheel barrow walks up stairs, bear crawling up and down stairs, jumping and hopping up stairs.

Conditioning methods would always vary. It might be small teams playing full court basketball or indoor soccer. It might be a bodyweight energy system training circuit. It might be a circuit mixed with high speed drills, a calisthenics circuit and then sprints.

Rope climbing would definitely be a must have movement!

High speed drilling would be a major component of each practice as a means of improving technique and conditioning and strength endurance. Take downs would be drilled very often with lifts to strengthen the entire body (simulating squatting / deadlifting).

All the variation would keep the kids motivated and less likely to acquire overuse injuries or mental burn out. On the flip side, we would have a core: core moves that are drilled during warm ups and practices where they become highly proficient at these moves.

Extending the philosophy of a core I would also like to be flexible as I've seen so many wrestlers create their own style of wrestling, one that looks odd and awkward and maybe even incorrect, but I would allow them to create their own style. I've seen this work very often and it also makes wrestling FUN!

Wrestling is such an emotional sport you want to make it as fun as possible. The training can be very hard and effective yet still be fun!

JF: What is your opinion on younger wrestlers and weight classes? Do you think that it's a problem for developing kids to try to stay in the same weight class? Do you think they would be better off wrestling up a weight class?

ZE: I have this philosophy: wrestle at the weight you weigh in at (especially from the ages through middle school). Once in high school, a true athlete, wrestler or not, should NOT be a fat piece of shit who eats like an idiot and gains excess body fat and weight. Training should be year round with good clean eating. Year round training includes various sports, rest, rehab / prehab and proper nutrition.

For those who train and eat smart year round, they have no problems wrestling at a weight where they feel strong and highly conditioned at. In my opinion, if three square meals can not be eaten, then the wrestling is losing too much weight. Breakfast, lunch and dinner should be consumed every day minimum!

JF: You and I are in full agreement that early specialization is the worst thing a kid can do, so let's take a 17 year old wrestler in the off season as an example. He has chosen wrestling as the sport he is going to specialize in. How should the first few months of the off season training be structured and what would be the focus?

ZE: I suggest taking one to two weeks completely off from EVERYTHING that is physical. Get some massage and other restoration (ART, whirlpool, etc). Slowly begin strength training using light free weights and bodyweight movements two to

three times per week on non consecutive days. Perform this phase for a month. If weather permits, incorporate light sled training as well.

Six weeks post season I suggest delving in another sport, such as gymnastics and judo. These two sports are phenomenal for strength, conditioning and improvement of kinesthetic awareness. One or two sessions of each sport each week is plenty. No wrestling for three months after the season! Most will disagree with me but don't knock it unless you try it.

The gymnastics and judo will also be a form of strength and conditioning so there might be one extra day of strength work using basic free weights or other objects such as sandbags, kettlebells, kegs, etc.

A full body workout like this:

1A) Trap bar DL or Box Squat 5 x 3 – 6 reps

1B) Two hand KB swings 5 x 8 – 10 reps

2A) One arm KB snatch or 2 hand sandbag snatch 3 x 3 – 5 reps

2B) Recline rows using thick rope 3 x max reps

3A) Ab and grip circuit

3B) Mobility work and prehab / rehab work

The focus is going to be healing injuries, addressing weak areas, and improving overall physical preparation. In addition, psychological training should consistently be addressed.

JF: What kind of movement patterns should the wrestler focus on? What are some of your favorite go to weight room exercises for combat athletes?

ZE: A lot I mentioned already. The gymnastics movements are awesome. Partner bodyweight movements I love, such as carries and squats with partners held in various positions: on shoulder, zercher position, etc.

I feel any movements with hand walking are CRITICAL for upper body strength and developing shoulder joint strength. We walk on our legs all friggin' day, watch what happens when your athletes perform wheel barrow walks, walking on parallel bars (find these at parks or buy them used from a gymnastics gym or e bay), bear crawl down stairs, seal walking and crab walking, cartwheels, round offs and handstand push ups.

For free weights, this can be tough, as I love certain movements such as the flat bench, but wrestlers often have beat up shoulders so we use a variety of push ups. Barbell rows, recline rows and pull ups with ropes and towels, rope climbing, trap bar deads, kettlebell swings, sandbag shouldering, keg shouldering, glute ham raises, 45 degree back raises (thanks for selling this to me Jay, ha ha!!), farmer walks with handles, kettlebells, sandbags and kegs, sledge hammer training, kettlebell snatches, ab wheel roll outs and lots of grip work!

JF: What about strongman training and other unconventional methods? How would you use these to train this wrestler?

ZE: I love using strongman methods for combat athletes. Our reps generally stay low on these movements as we focus on strength and / or power here. Lots of sandbag movements as they force the wrestler to struggle just to get the bag off the ground and into position.

Kegs are an excellent method for working the body in a unique manner as the water moves around it forces the wrestler to try to stay in one spot, which really works the core (I hate that word, but sorry, had to use it!).

We do a lot of thick rope training – we attach it to pull up bars, kettlebells, sandbags and sleds. We perform rows, hand over hand sled pulls, sled drags, and pull ups using the thick rope.

If kettlebells are considered odd then we can talk about them as well. Kettlebell complexes for strength / power endurance and mental toughness training are awesome. They work the entire body and we often go for time under tension here – I call it loaded conditioning. We perform two minute rounds just like a match, sometimes we go five minutes non stop! It's insane how motivated athletes can push so hard! This style of general – specific conditioning has proven very effective for their conditioning.

Moving a weighed odd object for the same time (plus some extra for over time) is an excellent way to prep the body for a true match. Also, there is no going half ass on these. Maybe when they drill they can dog it, but with weights, you MUST complete the exercise correctly and at high speeds. There is no other way than to go hard while training!

JF: What are some prehab areas that this wrestler should focus on?

ZE: A must have focus is the upper back. We do a boat load of band work using face pulls and pull aparts for warm ups and in between movements during the workout! Shoulders tend to be a problem so I always refer them to a DC who performs ART. I am no expert in rehab so I make sure, as we all emphasize at Elite, to build my network, this way I can help my athletes become that much better.

We do work on mobility before / after sessions, and this info I picked up mostly from the DVD 'Magnificent Mobility'. A lot of stuff you can grasp ASAP and start implementing right away.

JF: What kind of conditioning methods do you prefer and how much or how often?

ZE: We do some energy system training if they are prepping for a big tourney, but, my clients wrestle a few times a week at club so our main focus is power and strength endurance. Extra conditioning at this age may be overkill.

Although, our training is never performed straight sets; we always combine two or three movements, just to keep the pace high. For example, they might perform a set of three reps in the trap DL, immediately perform recline rope pulls for max reps followed by an abdominal movement for 12 – 15 reps.

I discuss methods they can use during their own practices to improve conditioning such as high speed drilling done for extended time periods. This is an awesome form of conditioning and also allows them to work on the sport skill itself.

It isn't the smartest thing to pile on more conditioning when they are wrestling six to ten hrs a week off season, and then twenty hours minimum in season! It's crazy, but even in season these kids go to school practice and then club practice, sometimes training five hours in one day!

It's a problem because the wrestler's mentality is work harder than your opponent, not smarter. So I combat this by only allowing one session with me per week in season, and each session lasts about twenty minutes, including warm up. Believe it or not, these short sessions work awesome!

JF: As the season approaches, how does the training plan change?

ZE: Two and half months out we begin lowering total training time / volume. Workouts go from one hour to 45 minutes and by November, they are training 35 minutes per session. As always, we communicate heavily before and during each workout and if there is a need to back off and deload that day, we do so and perform light sled work and bodyweight training.

You can tell when your athletes are beat up and need a break. Sometimes they won't admit it, so this is why you must become proficient at verbal AND non-verbal communication. Still, our focus is strength and power endurance since I know all the extra wrestling is their conditioning work.

JF: What would a typical in season training program consist of?

ZE: Warm up with mobility and bands using various pushing and pulling movements, a bodyweight leg complex using squats, reaching and rotational lunges and then we begin with a core lift, using a submax effort method. We definitely want to leave one or two in the tank in season.

So after the warm up the core lift might be a trap DL, RDL, sandbag shoulder, keg bear hug or zercher squat. This movement gets two or three hard sets in the three to six rep range. We often follow this up with a pull up variation for low reps (sometimes adding weight). Last movement might be some extra work for the posterior chain as well as addressing weak areas still.

So, in a nutshell, here's a sample:

- 1) warm up circuit
- 2A) keg squat variation: build to 2 – 3 x 3 – 6 reps
- 2B) pull up variation: ea. set x 3 – 5 reps (weighted if feeling strong)
- 3A) KB snatch 3 x 4 – 6 reps
- 3B) prehab / rehab / mobility work

The wrestling practices are so grueling that less is more when in season training rolls around. Most Coaches make the mistake of doing more of what they already do. For example, taking them into the weight room for circuit training.

Why circuit training? Circuits improve muscular endurance, when the average practice is two hours of pure circuit training (i.e. live wrestling and drilling). It is constant pull, push, rotate, level change / squat and lifting.

JF: What are some of your favorite recovery methods for combat athletes?

ZE: Just taking an entire friggin' day off for God's sake! Nothing wrong with doing NOTHING at least once a week if not twice a week. ART is awesome, especially if one can get it done every week.

Deep tissue massage, or any massage for that matter. The sun salutations performed for Yoga are great also believe it or not! The deep breathing and the movements help clear the mind and may very well be clearing the body of other waste!

Whirlpool is great as well. Wrestling is so destructive, some people handle the years of beatings like nothing ever happened; other athletes seem to not tolerate the beatings as well and amass endless injuries in only a few years. Resting is and should be a crucial part of the total training package.

JF: Thanks so much for sharing with us today, Zach; truly awesome information. Where can people read more about you and your training methods?

ZE: My pleasure dude! Go to www.ZachEven-Esh.com and www.UndergroundStrengthCoach.com

If they want to ask questions the best bet is through my Underground site or the Q & A at EliteFTS. I hope this helped everyone in some shape or form!