"Sport Specific Training" Interesting topic and term….

For the past 25 years, I've been fortunate to learn, educate, and coach in both the strength and conditioning industry, and be a part of skills-based spheres of performance enhancement for many sports, including motorsports. I've spent a lot of time staying up late studying, flipping pages in classrooms and plopping my butt in chairs at week-long seminars. I'm also fairly well educated in the skills aspects of many stick and ball sports as well as two- and four-wheel machines.

Quick example: I recently was asked:
"I hear you do sport specific training for football players, that's what we want!"

"Can you get Little Peyton to have a rocket arm with medicine ball work?"

"Can you do football specific ACL injury prevention training because we want to prevent ACL injuries."

How do I answer? Yes, simply because it is more difficult to explain, than talk about what I do, results speak for themselves. "Injury prevention" – what a cool and trendy training term, but there is no such thing as "Injury prevention" training.

Sport specific training has become one of the hippest buzzwords in sports today, largely in part because of the commercialization of the strength and conditioning industry and social media. Isn't someone an expert if they post cool shit on Instagram? The idea of sport specific training is publicized as being able to duplicate or imitate a specific skill or aspect of one's sport or activity in a weight room environment. Sport specific training, as people (athletes, coaches and parents) interpret it is a means of simulating a movement or exercise in the weight room with the intention of it transferring to the playing field, regardless of what that field is. It, at times, is also a protocol of lifting fast to become fast, using low repetitions to bulk up, and performing explosive movements to become explosive, and so on….

Here's a good example: Burpees! Awesome right? No, stupid. Besides testing your mental toughness, and willingness to follow others, they serve no other purpose. There are sooooo many other ways to effectively and efficiently improve your "cardio" than throwing yourself to the floor and getting up repeatedly. Then I get, well they are a good drill for football… really, when was the last time you saw a football player (or any sport) fall to the ground symmetrically and get back up in a controlled and uniformed movement…? When…? Waiting….

The term sport specific in my moderately educated mind means that the training protocol is specific to one's sport or activity. This means the individual should be engaging in perfecting their skill through practice in order to improve. If someone wants to improve their golf swing then they should take golf lessons from a qualified coach and then practice, practice, and practice some more. Our job as strength and conditioning coaches is to prepare the athlete so he/she can compete at the highest level they can, physically.

What makes a certain type of training more sport specific? Strength is strength, power is power, mobility is mobility, etc. Energy systems development is a totally different animal though. Is there a different Deadlift variation for baseball, soccer, basketball, football or even motorsports? Is a Squat different for football and volleyball players? While there are indeed certain exercises that are more advantageous for different sports, there's only so many ways to skin a cat. When it comes to the major (and fundamental) weight room movements, the routines for most sports athletes aren't going to be all that different. Strength training is about developing athletes strong enough to own the fundamental movement patterns, and a good strength and conditioning coach is going to have a set of exercises they believe are the best tools to accomplish this. Simple is usually better, and good coaches aren't going to add a bunch of unnecessary crap to their staple weight room movements just so they can sell the idea they're making them more "sport specific" or attempt to duplicate competition, never happens. Questionable trainers most certainly will, and it's often leads to the harm of their athletes. Swinging a weighted object of any kind in place of the golf club will not develop club head speed or improve their swing. What it will do is create new mechanics for their body to learn and then distort their regular swing. Plain and simple, there is no transference from one activity to another, which is why movement is specific. Why do we see this a lot, because “it looks cool” to most and we live in a “look at me” society. However, as noted, “Innovative equipment and cool looking exercises” can generally be more problematic than effective. For soccer training we don’t kick a heavy medicine ball to build a stronger soccer shot, and we do not need to strap a jetpack form Wiley E Coyote chasing the Road Runner to a track athlete to get them to sprint faster. Basically, the more “innovative” we add (without science), the more rapidly faulty motor patterns arise, and skills-based mechanics go out the window. Not to mention, an athlete will not be able to perform a skill-based movement through its full range of motion! Which leads to a decrease in skill performance, diminished neuromuscular firing, less power output, and increased chance of injury! What, all that new cool stuff you see out there actually HURTS sports performance – Y.E.S.! I get it: cool exercises and equipment turn you into an “Instagram Model/Expert” and it makes parents “oooh” and “ahhh” as well as makes uneducated and untrained strength coaches look like they are doing some Harry Potter magic that makes turds shine and turn to gold.

Again:

– Practicing a sport with a weighted vest doesn’t allow for pristine sprinting mechanics.

– Performing soccer moves with a resisted harness does not allow players to explode with the ball at maximal speed to beat a defender.

–Running sprints or doing anything with a Bane Mask is **REALLY STUPID AND ACTUALLY COUNTERPRODUCTIVE!**

How exactly does a strength and conditioning coach make training more sport specific? Simple, these tweaks revolve more around rehab work, power training, and energy systems development/conditioning. Not sport specific mimic training!

Sport specific prehab work refers to the exercises and drills an athlete performs to minimize/mitigate their risk of incurring an injury. This is where the greatest sport specific variation is done in my programming. A pitcher and a linebacker all need to Squat and Deadlift, but a linebacker is more likely to sustain a neck / head injury, while a pitcher is more likely to have issues involving their shoulders or elbows. For this reason, the linebacker will perform more neck strengthening exercises while the baseball player will perform more band work designed to help their body withstand the rigors of a repetitive high intensity throwing motion. There are of course going to be some overlaps, but with my athletes, the prehab work is where you're going to see the most sport-specific variation in the weight room.

Sport specific power training is vital AND specific. There are three major planes of motion, the sagittal, frontal and transverse. These planes encompass any motion, I'm not going to get into that too much here, but power is plane specific, which means power gained in one plane does not necessarily transfer to another. A good training program looks at what planes of motion are most used in the sport, so that the power gained in training will transfer over efficiently. Example, A golfer, baseball or lacrosse athlete should not be exclusively training in the sagittal plane, a high percentage should be transverse plane, because their sport requires rotational power. On the other hand, a volleyball player needs a large amount of power in the sagittal plane, so their program should not consist of mostly transverse plane exercises. The caveat is that sports are dynamic, and no sport occurs just in one plane. Every training program should train power in every plane but emphasize what's needed most in the relevant sport.

Sport specific conditioning (Energy Systems Development)

This is the only true thing you can do that is "Sport Specific." Almost every sport has a unique energy system requirement. Athletes should condition for their sport based on the rate of play. A play in football lasts about 5-10 seconds and then there's typically 30-40 seconds before the next play begins. Soccer, on the other hand, has two 45-minute halves with near continuous play, etc. Different levels have different durations. These sports have drastically different needs from their conditioning programs. There could be plenty of overlap, but football's conditioning program would be lower volume and have a greater focus on speed endurance. The soccer conditioning program would have a greater volume and a greater focus on aerobic capacity.

When someone is telling you they have a sport-specific training program, ask them what exactly makes their training more specific to your given sport. A good sport specific training program looks at the common injuries inherent to the activity and prehabs them appropriately, examines the crucial planes of motion in the sport and prioritizes them accordingly, and considers the metabolic needs of the sport and implements conditioning to enhances those abilities.

Strength and Conditioning Coaches and Skills Coach roles:

The role of the strength and conditioning coach is to get athletes stronger and less prone to injury through proper strength, power, prehab, and energy systems training.

Strength training carries over to the specific sport and is vital. Strength and conditioning coaches that are worth one's salt, don't mimic "skills" in the weight room. Rather, they mimic movement patterns that will enhance a skill. How is this done, well, look here as an example of how a Soccer program should be viewed and programmed.

Example:

-Skill: Kicking a soccer ball

-Movement patterns: hip extension, hip flexion, core stability, hip stability, ankle stability, plantarflexion, transfer of force through the trunk.

-Planes of motions: frontal (plant foot and hip stability), sagittal (kicking leg), transverse (transfer of force through core and hips for shot accuracy).

-Weight Room "Sport specific" exercises: Dead lifts, hip thrusts, single leg hip bridges, plank progressions, psoas activation, lateral step ups, medicine ball rotational slam, single leg bridge variations, to name a few.

What we do in the weight room is already "sport specific" to some degree, as strength coaches provide athletes the fuel that is needed to powerfully and deliberately execute skill-based movements.

In the other corner, the skills coach, (any sport, even motorsports) is the one to help with improving the skills for that particular sport. In other cases, the skills coach helps with the soccer kick, the bat swing, the golf swing, the hockey shot, the tennis serve, etc. It is not the strength and conditioning coach's job to bring the track, court, field, or ice rink into the weight room and duplicate these actions with loaded apparatuses. That is why there are distinguished differences between Certified Strength and Conditioning Specialists and sport specific skill coaches.

Expertise exists in the dictionary for a reason, it's there, honest, look it up!

If we really want to help athletes, the S&C coach should get them strong, real strong, (big difference between strong and big – a whole other topic that is sooooo misunderstood). Improve their movement patterns, implement prehab/injury mitigation protocols, and utilize exercises that maximize & develop proper movement patters and range of motion if we want to be sport specific. Properly develop their energy system and explore ways to help the athlete to improve his/her skills, they must practice and play more of their sport to develop. Success is a PROGRAM, not a training session.

Mic drop right there…...for now!