

Understanding the Preparedness-Readiness Curve

As a young professional entering the field of strength and conditioning it is a very exciting time. The field of human performance seems to be growing and evolving at an urgent pace; online articles are posted daily, youtube videos provide instant access to lectures and exercise demonstrations, and forums are now filled with legendary coaches and eager young minds interested in changing lives and sharing their experiences. With such an abundance of information available at our fingertips, it can become a confusing task for the strength and conditioning coach to decide what their role in athletic development really is.

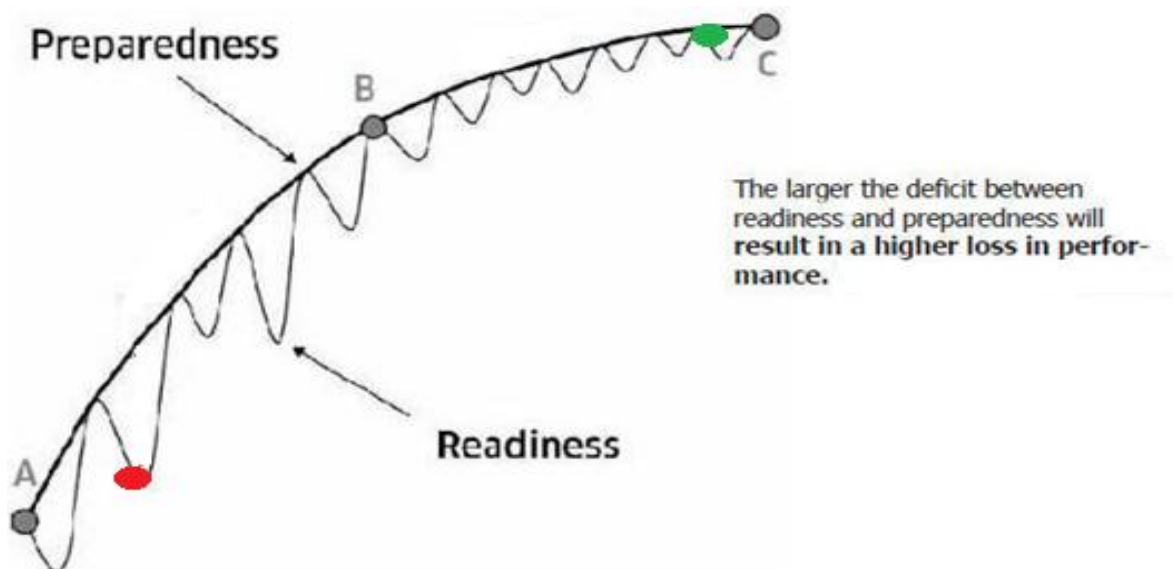
To my friends I am merely a meathead obsessed with training; while inquiring about what it is that I do one buddy even said, "so you like spot people right?" Although I laughed and played along, this is an unfortunate stereotype, and one that severely underestimates the education and understanding of athletic development that a good strength and conditioning coach should possess. If we, as professionals in human performance, want to wave goodbye to the notoriously uni-dimensional perception of the strength coach's role, we must take on the responsibility of truly educating ourselves on each of the factors that contribute to the development of a dominant athletic competitor. I've slowly started to see that taking care of my athletes in the weight room is really only a small piece of the performance puzzle.

In my mind, our goal is always to increase athletic performance, but I find that even this is a broad goal. Through reading and experience, I have learned many methods of assessing and training performance components such as speed, agility, strength, endurance, power, and flexibility, but have only recently begun to develop an appreciation for the impact of variables like sleep, nutrition, stress management, and general health of the individual. While I still believe that quality training is key to athletic development, I have started to place a much larger emphasis on education of other lifestyle variables. In order to assess and provide a plan for an athlete on a more holistic and multi-dimensional level, I have started to think of my role as a performance coach along two dimensions: preparedness and readiness.

The first parameter that I consider, preparedness of the athlete, includes all the general physical components of an athlete's given sport. This performance component can represent long-term (career) or short-term (preseason to in season) training, and is made up of general qualities including skill of the sport, training history,

previous injuries or limitations, nutritional status, and overall general health. Preparedness often takes a good deal of time to develop, and means helping your athletes to understand what proper posture and technique feel like, what it means to eat well, strategies for improving sleep habits, and why recovery days are so important. I consider my preparedness curve to be the foundation of habits that I wish to instill within my athletes - if followed regularly, these habits should produce a happy, healthy human even after a sports career ends.

Our second determinant of performance, readiness, can be thought of as more acute measures, like current injury and nutrition status, recovery from recent training or games, recent sleep and mood patterns and so on. These athletes should already have a solid preparedness foundation, and now slight adjustments can be made to keep an athlete in top shape for a particular event. Proper pre-event meals, tapering training programs, and reducing life stressors are all factors that can be adjusted to control readiness. These strategies will rarely be followed long-term, but employed at particular times of the year in order to yield the highest result that the individual's preparation will offer.



Let's talk about preparedness and readiness using an example. If we look at our curves (see figure above), we can see that when both the

preparedness and readiness curves are low (red dot), performance will predictably be low as well. Similarly when both curves are high (green dot) then performance will be optimal - we have an athlete who is prepared and ready, a winning combination. Imagine Dave, an overweight young basketball player who is relatively new to the sport with a minimal training age, will represent the red dot - even if Dave is maximally ready (he has a great night's sleep and mom makes him a fantastic pre-game meal), it is unlikely that he will put up a national caliber performance any time soon. His preparedness is simply too low. Conversely the green dot is Usain Bolt, the best Olympic sprinter in the world. Bolt's preparedness is extremely high, but the top of the world is a very competitive spot to be. With perfect readiness, Bolt has the potential to produce record-breaking times. However a terrible night's sleep, residual muscle soreness, or even being in the wrong state of mind could result in poor performance and end up sabotaging the outcome of a race.

So we have Dave, who is low in preparedness and his readiness level makes a very small difference to his performance. I would argue that what would help Dave improve most as a basketball player would be to improve his preparedness. Dave needs regular work on a general base of habits - improving his sport skill and training qualities, while cultivating nutritional, sleep and general health habits along the way. For Dave, even the best recovery strategies and pre-game meals will not be game-changers until his preparedness base has increased tremendously. I should mention that even though addressing readiness components like recovery and pre-game eating are still valuable with all individuals, when you have an athlete with low skill, body composition issues and lacking the physical traits necessary to play the game, then you really do not have an athlete at all.

On the other end of the spectrum, we still have Usain Bolt - he has an extensive training history, good nutrition habits, and is in good health. In other words, this guy is prepared. Continuing education on proper long-term habits is still important, however this guy needs to be in peak condition routinely throughout the year. In the case of Usain Bolt, properly addressing factors of readiness will be most imperative to athletic success. While the same variables will be important - skill work, training, injury status, nutritional status, social and emotional stress, and overall general health - it's important to develop strategies to manipulate these issues on a short-term basis in preparation for an event.

I've become much more efficient since developing an understanding of where the bulk of my limited time and resources should be devoted with each individual. With young or inexperienced athletes, lifestyle

education, a simple program, and lots of skill practice should form the base of your approach. In my humble view, all of the fancy technologies and tools are not necessary here. Certainly they may help with the process of programming and assessment, but building a solid platform through the development of good habits within an increasingly self-sufficient athlete would, in my view, be a more practical approach.

With an advanced athlete, monitoring readiness on a regular basis using sleep trackers (myzeo.com/sleep), heart rate variability (8weeksout.com), testing for nutritional deficiencies or sensitivities (cyrexlabs.com or enterolab.com) or other nervous system assessments such as grip dynamometer, vertical jump or Dan John's tap test can give a valuable indication of how that athlete responds to adjusting different habits. Over time a database of readiness can be created, and it is possible to select routines that seem to maximize readiness within each athlete - a very important strategy when entering a big competition. Not only is experimenting with how to maximize readiness important in terms of physiology and function, but it is also a psychological comfort to an athlete to have a set routine where feeling good and performing well is a known outcome.

In the end, performance is not solely dependent upon the rep schemes we select or the weights we've racked onto our bars. Success in sport is the primary goal, and these performances are dictated by the long-term base of preparedness and the acute state of readiness that an athlete possesses as they step onto the field, court, track, or mat. As a strength coach concerned with the performance of my athletes, I can't ignore the details. If my job is to influence performance, then the role of a strength and conditioning coach must really be to ensure that each factor influencing the prepared and readied state of the athlete is addressed - if the weight room routine is my only contribution, in my eyes I am doing a very small part of my job. To be responsible for multiple factors that may influence performance is a large and intimidating undertaking, however we have such incredible knowledge, resources, and educational opportunities available to us in all avenues that the responsibility is far from impossible. And I don't know about you, but I was getting pretty sick of hearing "so you like spot people, right?" anyway.