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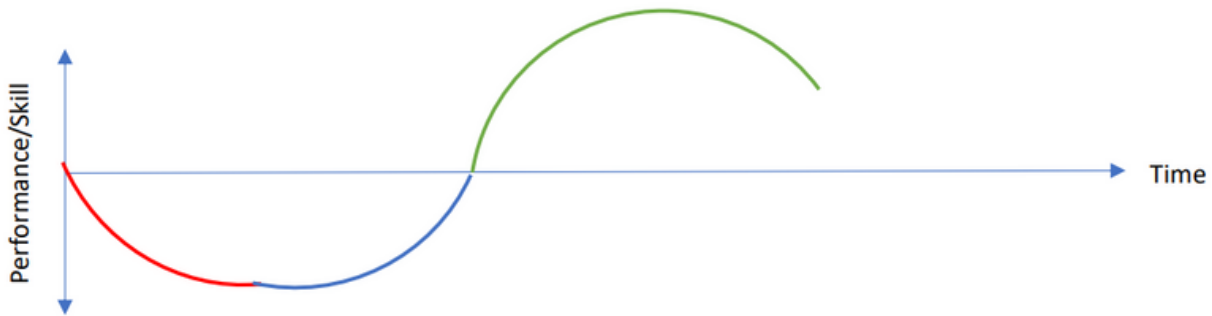


TOPIC ARTICLE

"Recovery – The Importance of Sleep and Nutrition on Performance and Injury Prevention"

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Athletes across the country are working harder than ever and spending a lot of time and money to get an edge over their competition. Unfortunately, most young athletes are missing the most important piece of the equation, recovery. We often think of recovery only as a way to decrease our risk of injury (which it absolutely does), however; recovery also determines how much and how quickly we improve our performance as well. To understand this more, let's very briefly touch on the SRA principle.



Stimulus - The stimulus (represented by the red line) is the training you put in to improve a skill. For example, if you want stronger biceps, the stimulus would be biceps curls. As you introduce a stimulus to your body, you begin to fatigue and therefore, performance actually decreases initially. Going back to the bicep curl example, if you continue to rep out as many biceps curls as possible, your last few reps would be very difficult and your form would begin to breakdown because your biceps are becoming fatigued. If you continue to train in a state of fatigue, your performance will always be less than optimal due to a constant state of fatigue.

Recovery - What you do for recovery (represented by the blue line), ultimately determines how much of an adaptation you make (how much of an improvement you make) and how quickly you make that improvement. Sticking with our biceps example, if day 1 you can do 10 curls, and then over the next 3 days, you do nothing for recovery (poor sleep, bad nutrition, etc.), then day 4 you do 10 curls again and then 3 days of poor recovery and you continue this cycle for the next 4 weeks, you may only be able to do 12 curls after 4 weeks of training (an

improvement but a fairly small one). Now instead, you do 10 curls day 1 and then focus on recovery the next 3 days (great sleep, nutrition, etc.) and continue that cycle for 4 weeks. After 4 weeks, you can now do 18 curls, a much bigger and quicker improvement than the same training routine with poor recovery. Now expand on that for years of training.

Adaptation – This is represented by the green line and shows how much of an improvement you make to your training.

Now that we have a very brief understanding of the SRA principle, we can begin to understand why recovery is so important. When we train, our body fatigues. When we try to perform in a state of fatigue, our performance is going to suffer, and we are going to be at an increased risk of injury. Furthermore, it is going to take us far longer to reap the fruits of our labor and essentially, without a focus on recovery, we are wasting our time and money.

We can now begin to look at different types of recovery and which ones are the most beneficial. More and more companies are understanding the importance of recovery as it relates to injury mitigation and improved performance and are jumping at the bit to sell athletes and their families on the “best” recovery gadget: Cryotherapy, red light therapy, compression puffy pants and sleeves, red light therapy, hyperbaric chambers, massage guns, etc. While many of these gadgets are effective forms of recovery when used appropriately, we are missing the lowest hanging fruit (no pun intended). The most important aspects of recovery, and it isn't even close, are sleep and nutrition. If you do not have your sleep and nutrition dialed in, nothing else matters. No amount of money, fancy gadgets, or time you put into training matter if you have not built a solid foundation of nutrition and sleep.

Nutrition

- Fuel (Grains, Starches, & Fruits) – These foods give your body energy during training and competition.
- Build (Meat, Eggs, & Dairy)- These foods help rebuild muscles and maintain the immune system.
- Prevent (Vegetables, Herbs, & Spices) – These foods help prevent injury, inflammation, & feeling tired.
- Protect (Healthy Fats) – These foods help to decrease inflammation in the body, provide energy, regulate blood sugar, and support hormone production.
- Hydration – Drink enough water to avoid losing more than 2% of your body weight during training... Research shows that losses of 2% of body weight:
 - o Decreases aerobic performance and endurance
 - o Decreases anaerobic performance
 - o Decreases strength and power
 - o Decreases repeated spring ability.

Sleep

Sleep is vital for recovery. As athletes, you should aim for 8-10 hours of QUALITY sleep every night. When we get poor quality sleep or not enough sleep, we begin to see negative effects:

- Performance
 - o Decreased reaction time, strength, aerobic performance, sprint ability, brain alertness and memory, and pain tolerance.
- Health
 - o Increased risk of injury and stress hormones.
 - o Decreased growth hormones.
 - o Heart attacks, cardiovascular disease, diabetes, obesity, and hypertension have all been associated with inadequate sleep.
 - o 4x more likely to get sick if you sleep less than 6 hours.
- Safety
 - o 2x more likely to get in a car accident if you sleep less than 6 hours.

Though sleep and nutrition are by far the most important aspects of recovery, I do think it is important to discuss what I would argue is the next most important aspect of recovery in youth athletes, playing multiple sports. Sport specialization, defined as focusing primarily on a single sport and training in that sport for the majority of the year, is directly linked to increased risk of injuries. The research showing a causal relationship between sport specialization and injury risk is vast and growing. Moreover, emerging research continues to show that sport specialization does not translate to playing at the next level and in fact, more research is showing the opposite. To elaborate, athletes who specialize in a single sport do not necessarily have more successful playing careers than their peers who played multiple sports and many studies show that the athletes who played multiple sports in their youth, have more successful collegiate and professional careers than the athletes who specialized.

Playing multiple sports does a few beneficial things for us. Number one, it helps us develop overall athleticism which is a key in being good at any sport. Number 2, it allows us to train new parts of our bodies and “rest” other parts. Take baseball for example. Baseball is a relatively low demand sport for our legs but a very high demand sport for our shoulder and elbow. If we throw a ball all year long, our shoulder and elbow never get a rest. Our arm will be in a chronic state of fatigue which will increase our risk of a shoulder or elbow injury while also decreasing our performance. However, playing another sport such as basketball allows us to train our legs more, ultimately helping us become a better overall athlete, while simultaneously giving our shoulder and elbow some much needed time off.

When going through your athletic career, you may be faced with a lot of decisions on how to better yourself as an athlete. You may have to decide between two teams, which tournament to play in, if you should do a showcase event, private lessons, buying a new fancy gadget, and many others. As tempting as many of these things are, none of them will be nearly as effective as improving your sleep and nutrition. Do everything you can to perfect these two areas first and foremost. You will be surprised how much improving your sleep and nutrition will improve your performance and help you feel your best while doing it.

Resources

- [R.A.D. System](#)
- [Project Play](#) - An Initiative of the Aspen Institute
- [Pitch Smart | MLB.com](#)

-End-

EMERGENCY

In a crisis call “911” immediately

● If considering self-harm, call “988”
The National Suicide Intervention Lifeline

SEXUAL MISCONDUCT

To speak to a counselor,

Call (800) 656-4673
RAINN

BULLYING/HAZING, VIOLENCE, ADDICTIONS & SUBSTANCE ABUSE

For helpful resources,

thebmsproject.org/Safety

CHILD ABUSE

To report suspected child abuse,

Call (800) 422-4453

Childhelp National Child Abuse Hotline

It is recommended that incident(s) of serious misconduct be reported to law enforcement.
Minors should report incidents of misconduct to their parent(s) or guardian(s).