



By Tyler Inman

What if I told you there was a performance enhancing substance that was safe, legal, and promised to increase your speed, power, strength, and coordination while simultaneously reducing your risk of injury?

You must choose.

This is your last chance. After this, there is no turning back. You take the blue pill and the story ends.

You take the red pill...

Andre Iguodala, who won the 2015 NBA Finals MVP with the Golden State Warriors, chose the red pill on occasion that season. [Here's what happened](#) when he played basketball the

day after taking the red pill:

- He scored 29% more points per minute.
- He played 12% more minutes.
- His free throw percentage increased by 9%.
- His 3-point percentage increased by 2%.
- He committed 45% less fouls.
- He turned the ball over 36% less.

You probably know this already, but Iguodala didn't actually take a pill. Instead, the statistics above represent his performance when he slept at least 8 hours the night before a game. Sleep of the proper duration and quality *is* the magic red pill. In fact, sleep is arguably the most powerful performance enhancing "drug" in the world. Sleep is not just vital to [peak cognitive performance](#), it is absolutely necessary for peak physical performance.

But the Andre Iguodala story is not science!

If you're not compelled by the Iguodala anecdote, perhaps the following [sleep research](#) conducted at Stanford University will build more confidence. Researchers monitored the sleep and basketball related performance of 11 players before and after a sleep extension period. After sleeping an average of 110 more minutes per night:

- Players sprinted significantly faster during suicide sprints (baseline to half-court and back to baseline, then to full-court and back to baseline).
- Free-throw percentage increased by 9%.

- 3-point field goal percentage increased by 9.2%.
- Players reported increased vigor and decreased fatigue during play.

Other research examining sleep and physical performance in a laboratory environment indicate that a lack of sleep [decreases muscular endurance](#), significantly reduces the time it takes to reach [physical exhaustion](#), and even limits the body's ability to [cool itself via sweat](#) during exercise.

A method to cut injury rates in half.

Strategies for generating and maintaining peak athletic performance could be divided into two categories: training and prevention. Elite athletes already performing near peak levels likely focus far more on injury prevention and recovery techniques than grueling workouts.

Soldiers should not abandon efforts to improve performance, but should take a cue from elite performers and place increased focus on injury prevention and recovery. After all, preventable [musculoskeletal injuries](#) account for over 70% of medically non-deployable Soldiers. A [2014 study](#) of adolescent athletes clearly indicates how sleep can contribute significantly to our injury prevention efforts. In this study, researchers confirmed that a chronic lack of sleep predicts a significantly higher injury rate. Less than 1 in 5 athletes that slept 9 hours per night suffered even a minor injury; but **with 6 hours of sleep or less, more than 7 out of 10 athletes were injured** during a given sport season. Injury rates in the well slept athletes of less than 20% soared to over 70% in athletes with chronically poor sleep.

Sleep more, waste less.

Muscle growth occurs when muscle protein synthesis (MPS) is greater than muscle protein degradation (MPD). Soldiers tend to focus on the left side of the equation - building muscle, running faster, doing more.

MPS > MPD = Muscle Growth

Preventing muscle degradation is equally important, though. Much like you can't outrun poor nutrition, you can't out lift poor sleep. [Weight loss research](#) indicates that allowing greater than 8 hours of sleep opportunity preserves muscle while heavily shifting weight loss towards fat. To the contrary, when afforded less than 6 hours of sleep opportunity, muscle is the primary source of weight lost, not fat. One potential causality: the body perceives poor sleep as stress, and in stressful situations, the body tends to hold onto fat while ditching the more calorically demanding muscle. When attempting to increase physical performance by building muscle, we should focus just as much on the right side of the equation as the left side of the equation.

5.5 hours of sleep opportunity = 70% of pounds lost from lean body mass - muscle, not fat.

8.5 hours of sleep opportunity = over 50% of weight loss from fat while preserving muscle.

Sleep less, eat more.

Sleep helps mediate critical hormones, including those responsible for satiety and hunger. In fact, many sleep researchers believe chronically poor sleep contributes significantly to obesity in Western societies. The following evidence all demonstrate that poor sleep habits will result in weight gain and unfavorable body mass:

- Sleep deprivation [increases desire](#) for high-calorie foods.
- Sleep deprivation [increases caloric intake](#).
- Sleep deprivation [alters appetite-regulating hormones](#). The hormone that makes you feel satisfied measurably decreases. An entirely different hormone, one that makes you feel hungry, increases significantly.
- Poor sleep spikes blood sugar and influences [ineffective management of calories](#).

Sleep, the magic red pill.

Few performance enhancement strategies can claim the depth and breadth of improvements promised by routinely sleeping 8 hour per night. In the pursuit of peak physical performance, there are no shortcuts, but effective sleep strategies are as close as it gets to a “magic pill.” Whatever your recipe for success — hard work, persistence, effective time and talent management — proper sleep is sure to positively influence physical performance outcomes.

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