

Body Rhythms and Future of Bodybuilding

There are a few body rhythms affecting our bodies. Seasonal rhythms are felt at a specific time of year. We've all had "spring fever" and some of us get seasonal affective disorder, which causes depression during the shortened days of winter. Infradian rhythms last longer than a twenty-four hour cycle. The menstruation in women is a perfect example. Then there's the Circadian rhythm, which follows a twenty-four hour cycle such as wakefulness and sleep. Scientists are studying these rhythms. That research will eventually help bodybuilders to enhance their performance. You see, our biological clocks take their cue from the environment and the pulse of our planet as day turns to night and winter becomes spring. This internal clock is also affected by our genetic make-up, age, and gender influencing how our bodies change from morning to night. It affects our blood pressure, body fat, weight, blood flow, as well as other vital functions. As night turns to day our bodies react. Heart rates quicken and blood pressure increases all in anticipation of increased physical activity. All these functions are regulated by our biological clocks located in the brain, and these biological rhythms are genetically programmed into our cells, tissues, and organs. In the future, when we have a deeper understanding of these rhythms, we will eventually be able to take advantage of our biorhythms to improve our workouts and retain excellent health. There are a handful of researchers looking into body rhythms and its affect on bodybuilding. T Reilly studied the influence of circadian rhythms on exercise. He's noted that the effects of these rhythms on body temperature, cortical arousal, endocrine factors, and muscular peak torque are all enhanced in the PM hours. Therefore, his studies show that greater training loads would be better tolerated in the evening than morning. However, the jury is still out on this one. Are you a morning or night person? Humans have individual differences in the timing of their behaviors that determine their circadian typology. Some people prefer daytime activities—the morning person. Others prefer the nightlife—evening person. At one extreme is the lark and the other end the owl. Most of us fit someplace in between. The lark/owl differ in sleep-wake patterns and biological rhythms as well as preferences for physical and mental activities. Morning people prefer to rise between 5 AM and 7 AM and retire between 9 PM and 11 PM. Evening people prefer to wake up later than their morning brothers. You'll catch them in the kitchen for breakfast around 9 AM to 11 AM and they don't crash for the night until 11 PM to 3 AM. Naturally, this difference in sleep cycle affects training schedules. Various hormones produced by our bodies are affected by circadian rhythms. For example, testosterone (T) and cortisol (C) exhibit circadian rhythm with peak concentrations in the morning and reduced concentrations in the evening and while we sleep. Researchers are discovering that bodybuilders can maximize optimal training responses if they can alter the hormonal environment, for hormonal events play a significant role in signaling the cellular remodeling process of skeletal muscle protein. Here's where things get really technical. Anabolic hormones, hormones, which stimulate muscle growth, such as T and growth hormones, regulate protein synthesis. Catabolic hormones, on the other hand, such as C, regulate protein degradation. The balance between these anabolic/catabolic hormones influences protein turnover. The net result of this complex process is muscle mass. Circadian time structures on hormonal events can depend greatly on an individual's morning-evening preference. Researchers Stephen P. Bird and Kyle M. Tarpinning at Charles Sturt University, Australia investigated the influence of circadian rhythms on hormonal responses to heavy resistance exercises in bodybuilders. They used two different exercise periods on separate occasions, 6:00 AM and 6:00 PM. They wanted to see how hormones responded to a specific weight lifting session. Bird and Tarpinning formed two groups of weight lifters based on their morning or evening preferences. The morning group showed a reduction of C levels during their exercise period finishing 47% below their pre-exercise value. In contrast, C levels for the evening group increased by as much as 32%. Since C has a catabolic role in the breaking down of tissue, body builders have an invested interest in its potential as a tissue break down agent. Also, an increase in T indicates tissue growth or anabolism. Bird and Tarpinning compared the AM resistance-training group to the PM group and reported a significant increase in post exercise T/C ratio. They concluded that this ratio in monitoring overall anabolic/catabolic status may affect the growth of muscle mass. In the future, when there is a deeper understanding of the effect of hormones on our bodies in relation to our body rhythms we could possibly harness this information to mold ourselves into godlike. One little pill at night and we wake up looking like Mr. Universe without pumping an ounce of iron. But until that day happens, back to the weight room.

About the Author

Bodybuilding article about diet and nutritional planning to achieve.

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