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## Recharging Your Battery

When a race is coming up, you probably make a priority out of adhering to your training schedule. Athletes spend so much time focusing on training, exercise techniques, cross training and diet that they can lose focus on one of the most important things -- doing nothing at all. Sleep is a beneficial part of an exercise regime and should not be ignored. It is the time when the body recovers from daily activities and exercise, which helps promote overall health and can improve performance.

Most people think that sleep is a time when the body decreases its functions and slows down. This is partly true, but it is much more complicated than that and there are many biochemical, immune and neurological processes that occur during sleep to keep your body functioning at its best.

First, we need to understand the sleep cycle. There are 5 stages of sleep. Stages 1 and 2 are the lighter stages of sleep when the body is relaxing, heart rate and body temperature are decreasing, and sleep is initiated. Stages 3 and 4 are deeper stages of sleep and stage 5 is the Rapid Eye Movement (REM) stage. Dreams typically occur in the REM stage. Most individuals will spend about 75% of the time in stages 1 through 4 and 25% in stage 5.

The deeper stages of sleep are the most important. This is when the muscles relax, tissue heals, repair occurs and the brain gets its best rest. If you are very tired and constantly yawning during the day, it is probably because you spent much of your night in the lighter stages of sleep. And a poor night's sleep can affect many aspects of your daily life, including exercise performance and motivation.

The physiological benefits of sleep are well known. Sleep can improve how your brain functions in terms of memory, concentration, processing speed and focus. Sleep boosts your immune system, which helps fight infections. A lack of sleep alters hormones, which can increase appetite and food intake. Poor sleep can also put you in a bad mood, which may lead to stress eating and weight gain. And it can be detrimental to your heart as increased stress hormones can boost your blood pressure and make your heart work harder.

Researchers have conducted studies on the effects of poor sleep or sleep deprivation on athletic performance in running, soccer, tennis, basketball, baseball, weightlifting and other activities. They determined that a lack of sleep affects speed, accuracy, reaction time and strength in endurance sports. It also is detrimental to mood and motivation. Other research has shown that a lack of sleep contributes to increased injuries, even more than overtraining.

What is the ideal amount of sleep? This depends on the individual. Some people say they can function on four hours of sleep. Others need more than nine hours. We must go back to the stages of sleep and scientifically look at how much time is spent in each stage of sleep. Science says the typical hours of sleep someone needs in order to function at peak performance is about seven to nine hours per night. This is the amount that an athlete, or even a non-athlete, should aim for nightly. Some high performing athletes may need even more sleep for their body to recover from intense training and restore their peak function. If you feel that you can function normally throughout your day's activities and exercise without

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feeling tired or fatigued (without the use of caffeine), you are likely getting the right amount of sleep.

Here are some recommendations to aid in quality sleep:

- Maintain a regular bedtime routine by going to bed around the same time and getting up at the same time.
- Avoid naps during the day because they can alter sleep cycles.
- Avoid intense exercise late in the evening.
- Keep your bedroom dark, quiet and cool.
- Avoid screen time (computers, phones and TV) 1-2 hours before sleep. If you use a screen before bed, decrease the blue light it emits because it can decrease the natural melatonin that aids in sleep.
- Avoid caffeine before bed.
- Avoid alcohol before bed.
- Avoid high fat foods in the evening. If you are hungry, opt for high protein foods because they can improve sleep.

Make sure you pay close attention to your sleep routine. It can have notable positive -- and negative -- effects. Many tools, including smart watches and rings, can track the quality of your sleep. As the great Jim Carrey said in the movie, "The Truman Show": "In case I don't see ya, good afternoon, good evening and good night!"

If you have any questions or concerns regarding an injury or pain, please reach out to one of our experienced sports medicine physicians at Corewell Health Medical Group Orthopedics at (616 )267- 8860. You can also find more information about our orthopedic program and providers on our [website](#).

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