

**On the Firing Line** (Thirty Eighth in a series)

## **Asleep On The Trigger**

©2008 JP O'Connor

### **“Sleep? Who needs sleep?”**

Sleep is a very low priority in the minds of many folks. Even as awareness grows in the minds of athletes and coaches of the need for and value of proper breathing, hydration, and nutrition, sleep is almost ignored. Even worse, there are many misconceptions about sleep, causing decisions to be made that are detrimental to ultimate performance. Sleep is a basic need that is equally as important as air, water, and food, whether for survival, or for sport performance.

In a recent article in Olympic Coach magazine, Mark Rosekind, President of Alertness Solutions discussed sleep and its effect on athletes. This article summarizes his findings and suggestions.

The National Sleep Foundation conducted a simple test to determine knowledge of sleep concepts. About 82% failed! They failed spectacularly with an average score of 42%. Flipping a coin would have at least given a higher score! This indicates that most of what people think they “know” about sleep is incorrect. There are 4 fundamental concepts that everyone should know about sleep and circadian rhythms.

**Sleep Need** – The human organism needs about 8 hours of sleep every night. The amount needed by a particular individual is genetically determined and generally varies between 7 and 9 hours. There is no “training” that will allow individuals to reduce their own sleep requirement.

People between the ages of about 11 or 12 up through about 22 or 23 – in the age ranges covered by junior high or middle school, high school, and college – all require about 9 to 10 hours of sleep each night. The very age groups that get the least amount of sleep actually require the most sleep!

**Sleep Debt** – Lost sleep builds up and accumulates as a “sleep debt” that is unhealthy and that degrades alertness and abilities.

**Circadian Rhythms** – Our bodies and minds work best on a regular rhythm of sleep and wakefulness. Upsetting this internal rhythm affects health, alertness, performance, and even our moods.

**Perception Is Not Reality** – Our ability to perceive our own level of fatigue does not reflect reality. We think we are awake and alert and say that we feel fine. Yet actual ability and performance show the huge negative effects of fatigue or upset of circadian rhythm. We believe that these factors do not affect us because of this gap between our perception and the reality of our significant impairment.

Because we do not understand these concepts, and especially because we are unaware of (or let our ego tell us we can ignore) the negative effects of sleep deficit, we allow ourselves to undertake sleep behaviors that are actually quite detrimental.

Staying up all night to cram for an exam is a prescription for failure. Students who have a nice supper (not too light nor too heavy) and then spend 1 or 2 hours reviewing their material, followed by a good night of sleep, perform much better.

Many athletes report “I perform better when I don’t have enough sleep.” One high school athlete, along with several friends and parents (who monitored for health and safety), actually did a study in an attempt to test that hypothesis. The results seemed to “prove” they were better off with some sleep deprivation. However, the study design did not account for or control additional factors.

For intermediate level shooters, who often have a great emphasis on outcome and are thus susceptible to “match nerves” and choking, a sleep debt dulls the active thought part of their mind. The usual negative chatter is diminished or absent and no longer interfering with the performance because they are too tired to think. Thus, a higher score is achieved. These athletes lose a bit of “sharpness” in the performance, but gain much by not freaking themselves out. Even many “advanced” shooters fall into this same category, their protestations notwithstanding. Unfortunately, for them, this relationship does not hold true at the very highest levels of performance and use of this “technique” slows their progress. Shooting is a very complex sensori-motor task requiring a very alert mind.

Numerous studies show degradation in performance, judgment, reaction time, attention, memory, learning, communication skills, and other factors. These degradations vary from 10 to 50% in most cases. How many students or athletes are willing to take a 10 to 50% drop in their test score or shooting score? Performance during the lowest circadian point in the night is reduced 30%. This is not a great time to study!

It does not take much sleep loss to reduce abilities. Loss of 2 hours of sleep equates to the impairment of 2 or 3 beers or about a .05% alcohol level in the blood. A 4 hour sleep deficit equates to the impairment of 5 or 6 beers or about a .10% level. One is seemingly legally “drunk” at that point, at least in terms of impairment! Paradoxically, one feels alert yet performance is measurably impaired.

Rosekind has the following sleep suggestions:

**Good Sleep Habits** – Following good sleep habits should become a part of everyone’s daily routine in order to obtain optimal sleep.

- Protect sleep from intrusions
- Keep a regular bedtime and wake time whenever possible
- Use a pre-bedtime routine to prepare for sleep
- Use the bed and bedroom for relaxation and sleep
- Avoid work and worry in the bed and bedroom
- Learn and practice a relaxation technique for sleep
- Avoid caffeine, alcohol, and exercise within at least 2 hours of sleep
- Get the sleep you need – make sleep a priority

**Environmental Factors** – Evaluate and address the following bedroom factors in order to allow optimal sleep.

- Noise – background or intrusive events
- Temperature – cooler is better than warmer
- Light – dark room, dim night light
- Alarm clock – reliable and effective
- Determine personal comfort of mattress and pillows
- Consider privacy and security

**Strategic Naps** – A planned nap is a very powerful alertness strategy that can significantly enhance alertness and performance. Note that naps are not a substitute for a proper sleep strategy. They are a helpful component.

- Short naps – should last 30 to 40 minutes in order to avoid deep sleep
- Long naps – about 2 hours and will need more wake up time
- Avoid long naps too close to planned bedtime
- Always allow at least 10-15 minutes of wake up time.
- Use eye mask and ear plugs if needed

Because our perceptions of the effects of sleep deficit do not agree with the proven realities, we often vastly underestimate the negative effects and thus do not obtain nearly enough sleep. As we obtain sufficient sleep, our performance is enhanced – as is our mood. You are encouraged to give this topic some thought.

## Reference

Rosekind, Mark, *Peak Performance Requires Optimal Sleep and Alertness*, Olympic Coach magazine, Vol. 20, No. 2, pp 4-7

---

The “On The Firing Line” series is published by the national governing bodies for Olympic shooting in Japan and the USA, and has been adapted for archery as “On the Shooting Line” published by USA Archery. Olympic Coach Magazine, the National Association of Soccer Coaches, and others have referenced selected articles. The entire series is available online at [www.pilkguns.com](http://www.pilkguns.com).

Permission is granted to distribute FREE copies for non-profit educational purposes provided the article is kept unedited in its entirety with all notices, copyright, and other information contained in the document. Any other use requires advance, specific, written permission from the author. The author may be contacted at [jpoc@acm.org](mailto:jpoc@acm.org).

*Based in the Atlanta, Ga., area, JP O’Connor ([jpoc@acm.org](mailto:jpoc@acm.org) and <http://www.america.net/~jpoc/>) is involved in rifle and pistol target shooting as a competitor, is a former Assistant National Coach – USA Paralympics Shooting Team, is a Level 3 coach, serves on the National Coach Development Staff, and coaches the rifle and pistol teams at North Georgia College & State University. He enjoys working with a number of pistol and rifle athletes from around the country, ranging from beginners to the highly advanced, in clinics and one-on-one private coaching, all on a volunteer basis. He also works with musicians and athletes in a variety of sports.*

(Biographical information as of October 2009)