Decreased alertness, slowed decision-making, increased reaction time, irritability, microsleep, or outright falling asleep — the impact of sleep deprivation on human performance should be well-known by now, even if it is frequently minimized or ignored. What is often overlooked, or at least is not always emphasized in discussions of sleep deprivation, are the benefits of quality sleep.

While among the most important benefits of sound sleep are the prevention or reversal of sleep deprivation effects, there is also a significant enhancement of performance and health. Just as there is a difference between being sick, not being sick, and being healthy, there is an important difference between being sleep deprived, not being sleep deprived, and experiencing quality sleep.

There are aspects to sleep which highlight the need to guard it. (It is said that the cornerstone of superathlete Tom Brady’s training regimen is sleep, and he respects it by often going to bed at 8:30 p.m.)¹ The need for sleep is, to a great part, genetically determined. And while there are those who operate well on a few hours, most adult individuals require seven to eight hours for optimal function.² Adolescents require even more sleep.³

Further, the need for sleep cannot be modified. While it is possible to function well on reduced sleep for a while, or at least function on reduced sleep, when constraints are lifted, individuals return to their typical sleep pattern. Unfortunately, it also appears that sleep cannot be stored or banked. While having had quality sleep and being well-rested can help initially deal with a period of restricted sleep, sleep cannot be spent as needed across an extended period. Finally, a complicating factor is that our ability to recognize our own deficits in performance and behavior when sleep-deprived becomes impaired.

“We’re teaching our players: Sleep is a weapon.”

Sam Ramsden, Director of Player Health and Performance, Seattle Seahawks
with that lack of sleep. (We also then
don’t appreciate our deteriorating per-
formance being pointed out to us!)

The benefits and impact of quality
sleep can be divided into several differ-
ent but overlapping categories:

• Physical skill performance
• Cognitive skill performance
• Emotional control and behavior
• Overall health.

PHYSICAL PERFORMANCE

It should be well-recognized that rest
or recovery periods are central to effec-
tive physical strength and conditioning
training regimens. Physical overtraining
leads not only to decreased gains, but
also to decreased performance, mood
and motivation. Sleep is an essential
component of physical recovery. En-
doctrine specialist Dr. Nicky Keay has
called sleep “a recovery strategy vital to
support both health and performance.”

Sleep also enhances the learning of
motor skills. A unique study at Stanford
University looked at the effects of in-
creasing sleep for members of a college
basketball team. The results showed
that with extended sleep, the players
showed faster sprint times, increased
free throw accuracy and increased
three-point shot accuracy.

COGNITIVE PERFORMANCE

Just as with motor skills, sleep enhances
cognitive learning and performance. Sleep helps consolidate,
or ingrain, learning and replenishes
neurotransmitters that help all brain
processes. Attention, accuracy, vigi-
lance and decision-making are aided
by quality sleep.

Memory and recall may also be im-
proved by sleep. It is significant that
the International Association of Chiefs
of Police recommends in its guidelines
for managing officer-involved shoot-
ings that officers not be extensively
interviewed about an incident (other
than public safety statements) before
rest and a sleep cycle.

MOOD AND EMOTIONAL CONTROL

Sleep has an important connection to
mood. In fact, negative mood changes
like irritability, lowered frustration
tolerance, decreased motivation and
depression are often the first effects seen
with poor sleep or sleep deprivation. It
has been said that without enough sleep,
we all become “tall two-year-olds.”

Scores on the “Profile of Mood States”
questionnaire show increasing nega-
tive mood indicators, as do subjective
reports of decreased well-being, with
poor sleep. Mood is maintained more
consistently with quality sleep. This is
especially important in mission-critical
team operations where communication
and coordination are essential.

OVERALL HEALTH

Sleep is restorative not just for
performance but also overall health. It
facilitates healing and repair of the
body’s tissue and cells. Sleep also plays
a major role in maintaining hormonal
function and balance, which affects
hormones that influence appetite and
weight, insulin regulation and muscle
mass. Maximal immune system func-
tion is affected by sleep quality.

Quality sleep is related to reduced
injuries and longer careers. The percep-
tion of and ability to deal with pain are
affected by rest and sleep.

It should be noted that excessive
sleep has been shown in some studies to
be related to negative health con-
sequences such as heart disease, back
pain, diabetes, obesity, headaches,
dementia and death. However, these
findings are not consistent and may
be accounted for by other intervening
factors such as depression.

Any discussion of the benefits of
sleep must include a comment on napping.
While the nap is often maligned as a
sign of weakness or laziness, the
reality is that more and more research
suggests napping is valuable for
maintaining and restoring function,
especially in sleep-depriving environ-
ments. Naps of five to 15 minutes in
length have been shown to have posi-
tive effects lasting one to three hours.
However, for naps to be effective, rules
from “nap science” need to be respect-
ed, such as limiting naps to about 20
minutes to prevent entering deep stages
of sleep or avoiding nap times such as
late morning or early evening.
While life circumstances, work schedules, the awareness (or lack of it) by police departments or police teams can all be challenges to promoting and guarding quality sleep, quality of sleep ultimately requires individual commitment and responsibility. First, with chronic sleep disruption, it is always important to rule out medical problems that may be affecting quality of sleep. Beyond that, maintaining sleep quality requires discipline. This point was clearly seen in the studies of the impact of reduced/limited working hours for physicians in training. Concern about sleep deprivation in medical residents led to regulations limiting the number of hours worked to allow for more time to sleep. One unfortunate finding in the studies which evaluated this change, however, was that residents didn’t consistently sleep more with their extra time. Instead, they studied, recreated, spent more time with their families — all important activities, but ones still detracting from total sleep.

While the advice to “sleep ‘til you’re hungry and eat ‘til you’re sleepy” may seem like an attractive philosophy for life, it is not realistic, healthy or productive. Short of that, what is required is awareness and an action plan to avoid sleep deprivation where possible, and maximize quality sleep consistently.

The content of this article is that of the author and does not necessarily represent the official opinions, positions or policies of any organization with which he is associated.

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FOOTNOTES