

# Better sleeper, better player

There is ample evidence that sleeping well is beneficial for your chess. Yes, you can work on your game with a good night's sleep. Or a power nap. **JENNIFER VALLENS** tells you how to improve as a player by closing your eyes.

*'Let him sleep, for when he wakes, he will move mountains.'*  
... Or push wood.

**D**oes chess play affect your sleep or does sleep affect your chess play? Research points to both. How many of us come home from a long day at the office and decide to unwind before bed by playing a few hours of chess online? Do you find that afterwards you have trouble sleeping? Well, there are reasons for this...

Doctors recommend settling your mind before bed to ensure the best quality of sleep. But when we are up late at night playing blitz (or watching live games), our minds are doing anything but relaxing. In fact, the mental stimulation required for playing these games is detrimental to getting a good night's sleep.

When you play chess online before

bed, you are putting yourself in a state of hyper-arousal which can affect your ability to reach a deep sleep and may cause insomnia. The two main types of hyper-arousal related to insomnia include stress and over-stimulation. Playing chess before bed results in both, creating a mind that is 'wired and tired'. The mind becomes overwhelmed and the fight between needing to be in a relaxed state for sleep is fought against the energized state needed for action and creativity.

For this article I interviewed several chess players. GM Elshan Moradiabadi, born in Iran and now representing the USCF, told me that no light and no electronics before bed are his way to ensure a good night's sleep. He couldn't be any more on

track. Perhaps the single biggest contributor to our collective sleep problem is the use of artificial lighting and electronics at night. Modern light bulbs and electronics (especially computer monitors), produce *large* amounts of blue light and 'trick' our brains into thinking that it is daytime and therefore affecting our circadian rhythm.

Your circadian rhythm is your internal biological clock and is set by exposure to light. When it gets dark in the evening, a part of the brain called the pineal gland secretes the hormone melatonin. This signals to our bodies and brains that it is time to get tired and go to sleep.

## Need for sleep

While the function of sleep is still being researched and hypothesized,



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From an early age on World Champion Magnus Carlsen has been trying to sleep at least nine hours a day during tournaments.

what is not open for debate is that sleep deprivation is dire for proper brain function. Hundreds of established studies indicate that sleep loss severely impairs various cognitive functions and behaviour. Response time, memory recall, reasoning skills, your decision-making capability, your mood, they all go down if you don't sleep enough. Negative effects from poor sleep can start after just 16 hours without sleep, and they get substantially worse as time goes on.

Needless to say, the benefits of sleeping well during a tournament cannot be overestimated, especially if you play two games a day, as is often the case in US Opens. American GM Aleksandr Lenderman fully agrees: 'I make sleep a very important priority

during a tournament, probably the most important. Even still sometimes it's hard to get more than 7-8 hours of sleep per night, but I want to make

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sure 7 hours is the absolute minimum I get. And certainly I try always to nap during tournaments when I get a chance, ranging from 30 minutes to maybe a maximum 2 hours if I'm really tired.'

Extreme focus and careful planning are qualities that are critical in playing your best chess. Magnus Carlsen in his *13 Chess Tips*

*That Every Chess Player Needs to Know* recommends getting enough sleep. He maintains, 'From when I was young, till the age I am now, I always tried to get at least nine hours of sleep, every day when I'm playing

tournaments. It's vital to keep a clear head.'

In contrast, Master Brian Wall from Colorado proudly claims, 'Robert Ramirez and I always insisted on drinking and carousing before any tournament with zero negative effects.' My guess is that if Wall really had zero negative effects, he also had some luck on his side. Normally speaking, when you deprive yourself of sleep, you lose focus and your ability to make sound decisions. Interestingly, a tactic used in combat is to deprive soldiers of sleep so that they will not fight orders or question authority. Sleep deprivation is also used by the CIA as a torture strategy used in terrorist interrogations, and it is also widely implemented among religious cult leaders as a method to brainwash their victims. Lack of sleep reduces people's ability to make sound decisions.

### Sleep cycle

A full cycle of sleep has 5 stages. Stage 1 starts in a very light sleep, the kind of sleep you fall into during class or at a board meeting. It lasts about 10 minutes before entering Stage 2. In Stage 2, your heart rate begins to slow and body tempera-

ture drops preparing you for a deeper sleep. Stage 3, also called slow-wave sleep, is the start of a deep sleep cycle. During this cycle, your body repairs and regrows tissues, builds bone and muscle, and strengthens your immune system. When you are awakened in this stage, you often feel groggy and disoriented. Stage 4 places you in a very deep sleep. Your heart rate and breathing begins to quicken and finally you land in Stage 5, REM (Rapid Eye Movement) sleep. This is where our dreams occur. EEGs show how your brain is just as active in this stage as if you were awake. Your body however, is in a state of paralysis.

The whole sleep cycle takes somewhere between 90-120 minutes. On a typical night you'll cycle through four or five times, although not necessarily in the same order. Sleep specialists believe that in stage 3-5, your brain is busy cementing new memories and 'cleaning house' of information that we no longer need.

There is something to be said for the saying 'Sleep on it'. If you are able to adequately cycle through all stages of sleep, you might even solve your chess problems because your brain is still active and is working even when you are sleeping. Frank Marshall, the

legendary American champion and the founder of the historic Marshall Chess Club in New York in 1915, used to keep a pocket chess set with him in bed at night so that he might record a game or position from his dreams.

Sabina Foisor, the 2017 US Women's Champion, indicates she has trouble falling asleep only if she has just missed a simple win in more than one place. She tends to analyse the position in her mind a lot... 'Losses from a winning position are the worst. I'm always having nightmares relating to the position, but I think I work it out during my sleep and feel completely fine the next day.'

### Athletic performance

In recent years, it has become clear that the quality and quantity of sleep obtained by elite athletes can be the edge between winning and losing on game day. 'The Tour is won in bed', said Joop Zoetemelk, a retired Dutch professional road racing cyclist who won the Tour de France in 1980. He credits a good night's rest as being a vital ingredient for winning a race as difficult as the Tour de France.

Fatigue Science co-founder Pat Burne developed the Readiband, a watch that uses technology to characterize sleep/wake timing through the measurement of wrist movement. The Readiband has been employed by several professional sports teams including the Seattle Seahawks, the Seattle Mariners, the New York Giants and The Dallas Mavericks. These coaches see the value of tracking sleep data to strategize how to improve athletic performance.

Further studies conducted by Stanford University's Center for Sleep Sciences and Medicine have proved the effects of extended sleep on athletic performance. Some of their findings show that Stanford's swimming teams increased their sleep goals to 10 hours a night for 7 weeks, which led to improvements in speed, reaction time, turn times and kick strokes. Out of the water,



## ‘When Boris Spassky was young, he would often excuse himself from chess study to take a short nap and come back relaxed.’

swimmers reported reductions in their levels of daytime sleepiness, improvements in their mood, more energy and less fatigue. Similar results were documented by the Universities’ tennis and basketball teams.

Can the same be said for the mental sport of chess? Unequivocally, yes.

Many chess players make a point to maximize the amount of sleep they get, waking up only shortly before their round begins. Magnus Carlsen is certainly not the only grandmaster who often wakes up only an hour before the game. At the recent Zurich Chess Challenge, where some of the rounds started at 12.30, Hikaru Nakamura, fighting a jet lag, even woke up as late as 15 minutes before he got ready for the round.

But set your alarms folks or you risk oversleeping. Capablanca overslept before a game against Edward Lasker in New York in 1915, and got to the game after one hour and 15 minutes had gone off his clock. Fortunately, the players had a royal two hours for the first 30 moves, and Capablanca, opening with 1.e4, proceeded to outplay Lasker. Not everyone, however, is so lucky. In the 2005 Super-Final of the Russian Championship, GM Alexander Morozevich finished one point behind the winner Sergey Rublevsky. He may have thought back to his game in Round 3 against Dmitry Jakovenko, which he lost by forfeit when he overslept and did not appear at the board.

### Power naps

Sleeping well while traveling for tournaments can be quite a challenge. You have the issues of jet lag affecting your circadian rhythm, paired with sleeping in hotel rooms with limited

control of room temperature, light and noise. And you may have a sporadic chess round schedule, not to mention the anxiety inherent in competitive play, which is especially difficult if you have double rounds in a day.

US GM Mackenzie Molner from Arizona finds it easier to sleep as long as certain environmental factors are taken care of, like the temperature, sound and darkness of the room. He went on: ‘For this reason I am very particular with who I room with for tournaments I play. I once roomed with a foreign player that told me there is no wind in his country and that it makes him sick. “It” being air conditioning. He wanted it to be 85+ degrees and we spent each night moving the temperature back and forth when we thought the other person was asleep. I really like the guy I roomed with but we weren’t compatible in that sense and I have been more careful choosing my roommates since then.’

Most of the chess players I interviewed said 20-minute naps before rounds were critical to catching up on much needed sleep. Some players even admitted to requesting byes, just to be able to catch up on sleep.

A nap can certainly help prepare you for a round of chess. A nap of ten to twenty minutes is proven to yield mostly Stage 2 of sleep, and therefore enhances alertness and concentration, elevates mood, and sharpens motor skills.

Research on pilots at NASA showed that a 26-minute nap in flight (while the co-pilot was on duty) enhanced performance by 34% and overall alertness by 54%. With those kind of results, it’s no coincidence that some of the world’s top athletes, world

## Dream game

In 1961 David Bronstein reputedly played the following game in a dream and wrote it down after waking up. Unfortunately, he later denied the story.

### NN - Bronstein

May 8, 1961

1.d4 ♘f6 2.c4 e6 3.♗c3 ♘b4  
4.♙g5 h6 5.♙h4 ♖e7 6.♗f3 d6  
7.♖a4+ ♗c6 8.d5 exd5 9.cxd5  
♗e4 10.♗d2 ♖xh4 11.dxc6 0-0  
12.a3 ♗g4 13.g3 ♖f6



14.axb4 ♖xf2+ 15.♙d1 b5  
16.♖b3 ♙e6 17.♖a3 ♗e3+  
18.♙c1 ♖e1+ 19.♗d1 ♖xd1  
Mate.

## Bobby yawned

Everyone knows that you need a good night’s sleep to play at the top of your game, but it’s also important that you don’t fall asleep at the board! The recently deceased Arthur Bisguier wrote about a difficult situation he found himself in during a game against Bobby Fischer in his book *The Art of Bisguier, Selected Games 1961-2003*. ‘Paired against Bobby in the New York State Open that year, I noticed that he was taking a long time to move. Then I saw that he’d fallen sound asleep. In a few minutes the flag on his clock would fall, and he’d lose on time. That’s not the way I like to win games, tourneys or titles. So I made what some called my biggest blunder of ▶

leaders, and brilliant minds have all been avowed nappers.

When Boris Spassky was young, he would often excuse himself from chess study to take a short nap and come back relaxed.

It is suggested that if you are a night owl and like to go to bed late and wake up between 8.30 and 9 a.m., the best time to nap is between 2.30 and 3 p.m. If you are a morning lark, and go to bed earlier, around 9 or 10 p.m., and wake up earlier in the morning, then you may feel the need for a nap around 1 or 1.30 p.m. It is ideal to nap anytime from 1 to 4 p.m., because napping after that may interfere with your night-time sleep. We all have this afternoon dip in our physiology that causes midday drowsiness, diminishing our reaction time, memory, coordination, mood, and alertness. So it makes sense that if you are between rounds at a chess tournament, that your time may be better spent napping rather than analysing and preparing for your next game.

But also if you are playing just one round, taking a nap before the game may be beneficial. In the mid-90s Gata Kamsky was a dedicated pre-game napper. He would not get up late in the morning, but napped before the game. One of his colleagues to subscribe to his approach was Veselin Topalov.

If you are planning a short nap and need an extra boost, studies at Loughborough University suggest it is best to drink coffee right before your nap. Caffeine takes about 20-30 minutes to take effect, so if you drink a cup of coffee before you nap, it will kick in just as you are waking up. And whatever you do, don't forget to set an alarm. You do not want to sleep longer than you intend and end up drifting into a sleep cycle because that could leave you drowsy.

### Chronotypes

Most chess players identify themselves as night owls, mostly due to necessity. Danish grandmaster Bent

Larsen often wrote about his own 'perfect' sleep cycle during tournaments. After a game he would stay awake in his hotel room, typing his chess columns until about 4 or 5 in the morning, then sleep until at least 11 a.m. This was a ritual to him. So much so, that before the tournament would begin, Larsen's competitors would ask the hotel management to not have an adjacent room to Larsen because his typing prevented them from sleeping!

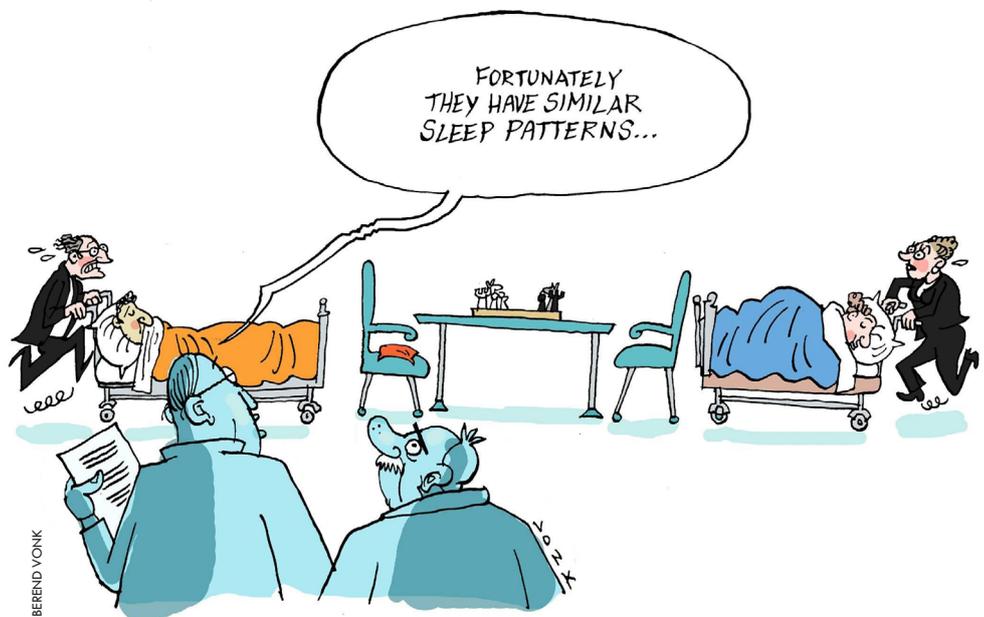
Other prominent night owls are, as already mentioned, World Champion Magnus Carlsen, and former World Champion Vladimir Kramnik. Years after he lost his title, Kramnik once said, half in jest, half in earnest, that he would be World Champion if the match games for the highest title would start at midnight. Carlsen understood what he meant, but told him that he wasn't so sure, as no doubt he would also do very well under these unusual circumstances.

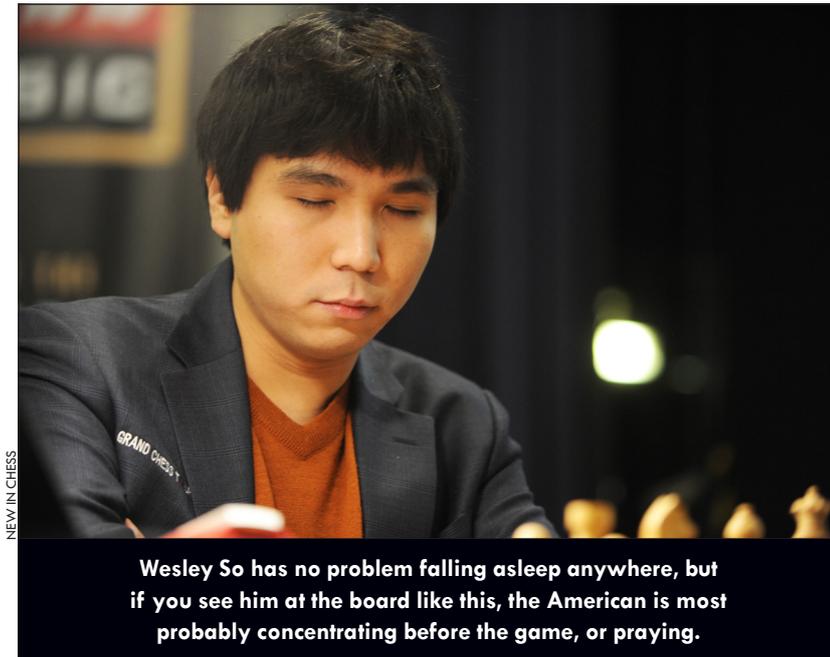
Night owls and morning larks are the two most common chronotypes that we most often refer to. Chronotype is a person's natural preference and propensity to sleep and perform tasks optimally during a 24-hour period. According to Dr. Michael Breus in his book *The Power of When*,

if you fall asleep according to your natural rhythm, your sleep will be of higher quality. You'll fall asleep faster, have few awakenings throughout the night, and maybe even sleep more deeply. But, unfortunately, in real life and the life of a professional chess player, it is near impossible to follow your natural rhythms all the time, as factors that affect your circadian rhythm often interfere with your natural sleep/wake schedule.

An interesting study was conducted in Argentina, where a team of psychological scientists turned to online chess matches to see how players processed data and made decisions based on chronotype and the time of day.

The team, which included Women's International Master Maria Juliana Leone and Mariano Sigman of the Association for Psychological Science, found decision-making abilities appear to fluctuate across the day. The research team used data collected from chess players who played at least 2,000 online games. Study participants held an average rating close to 1600 and ranged in age from 19-66. Approximately 100 participants were asked to note their time zone and age and to complete a questionnaire to determine their preference of time for





Wesley So has no problem falling asleep anywhere, but if you see him at the board like this, the American is most probably concentrating before the game, or praying.

playing and whether they identified themselves as Larks or Owls. They also completed a short questionnaire about their daily sleep routines, meal habits and wake up times. The original hypothesis was that Larks would play their best chess in the morning and Owls would play their best in the evening. But their findings did not support that.

What they found was a person's chronotype did not appear to have any significant impact on play performance. What they found was unexpected. Their studies showed a consistent pattern of decision-making across the board, independent of chronotype. They found that all chess players who played in the morning played slower and more methodical, while evening play was faster, riskier and more aggressive, resulting in more blunders. WIM Leone concluded: 'Because we found no differences in rating, our results suggested that the efficiency of the decision-making process did not change along the day, but only the decision-making policies.'

So, knowing your chronotype may not only help you coordinate your schedule for getting quality sleep, it may also help you approach your chess game and employ strategies in how you use your time in decision-

making. This can be very useful during a two game a day tournament schedule.

### Resisting the norm

If you routinely fall asleep within 5 minutes of lying down, you are probably severely sleep deprived. The widespread practice of burning the candle at both ends in our society has created so much sleep deprivation, it has become the norm.

Sleep is vital to our optimal health and well-being. Giving yourself a full night of sleep, along with naps, will help your chess development and keep you playing at your very best.

With all this said, if you happen to be a GM rising through the ranks hoping to become the number one chess player in the world like Wesley So, sleep may not even be an issue. According to Wesley's mom Lotis Key, Wesley has no problem dropping off practically instantly night or day, no matter what he is doing, riding in a car, flying in an airplane, in a boat, on the beach, watching a movie... even when excited to play the next day, he will fall asleep easily the night before. 'So yes, I guess, he likes to sleep and I assume it helps his game.' She mused, 'he must have a very clear conscience.' That may be true for him, but what does that say for the rest of us?! ■

► the tournament. I awakened Fischer. Bobby yawned, made a move, punched his clock and proceeded to beat me. It ended up as Game 45 in his *My 60 Memorable Games*. Later I heard that Fischer had stayed up late the previous night playing speed chess for money.'

## Eyes wide shut

Jay Stallings, chess coach and creator of the Coach Jay's Chess Academy chess app, recalls watching IM Igor Ivanov at a Las Vegas chess tournament. 'I watched as he took naps at the board. Whenever his 2100-rated opponent moved, the opponent would do it with as much as stealth as possible, pressing the chess clock as though a sound would surely be the end of the world. Ivanov's eyes would flutter open from time to time, and if he saw his opponent had moved, he would immediately reach out, play his move, hit his clock, then go back to sleep. Despite being down material when I started watching the game, he was able to draw!'

## Expert advice

Some tips on how to get a better night's sleep:

1. Read a book instead of spending the hours before you go to sleep in front of a television or computer screen.
2. Abstain from alcohol in the evening.
3. Identify your chronotype.
4. Choose flights and a nap schedule that will support your natural rhythm.
5. In the evening, wear amber-coloured glasses while at the computer and put down the electronics at least an hour before bed.
6. Exercise during the day.
7. Learn to calm your mind before bed. Take a warm bath, meditate, do yoga and practice breathing exercises.