

SLEEP- Baseball Research 3-5-12 KS

Sleepy baseball players take a hit in batting average, study finds

June 14, 2011 | By Karen Kaplan, Los Angeles Times/For the Booster Shots blog

<http://articles.latimes.com/2011/jun/14/news/la-heb-baseball-player-sleep-study-20110614>

What makes baseball players like Jose Reyes of the New York Mets and Adrian Gonzalez of the Boston Red Sox such good hitters? It might have something to do with the time of day (or night) when the umpire yells, “Play ball!”

You see, professional ballplayers are just like the rest of us – some of them are morning people and some of them are night owls. And as anyone who has ever had to drag himself to a 7 a.m. breakfast meeting after staying up to catch the end of “The Colbert Report” knows, it’s hard to perform your best when your work hours are in conflict with your natural sleep cycle.

Now [Dr. W. Christopher Winter](#) of the Martha Jefferson Hospital Sleep Medicine Center in Charlottesville, Va., has quantified this effect in baseball players. He asked 16 players from seven teams – including the Dodgers, the Angels and the San Francisco Giants – to fill out a form called the Morningness-Eveningness Questionnaire (MEQ for short) and then matched their responses to the batting stats accumulated in the 2009 and 2010 seasons.

Games were divided into three categories for the purposes of the study: those that began before 2 p.m., those that began between 2 p.m. and 7:59 p.m., and those that began after 8 p.m. But the start times weren’t necessarily the ones printed on the ticket – they were adjusted to account for the jet lag that players experience as they travel from Seattle’s Safeco Field to Camden Yards in Baltimore. Altogether, Winter tallied 2,149 innings of “early” games, 4,550 innings played during “midday” and 750 “night” innings.

Not surprisingly, the morning players did better (as measured by combined batting average) than their night owl counterparts in day games, outbatting them by a margin of .267 to .259, Winter found. The opposite was true for night games – the night owls outbatted the morning types, .306 to .252. For the midday games, the night owls had the edge, with a combined batting average of .261 versus .252 for the morning players.

Winter, who presented the results Monday at [Sleep 2011](#), the annual meeting of the Associated Professional Sleep Societies, said his findings could revolutionize the way managers consider their lineups.

“Currently, selecting a player for a game situation usually involves factors such as handedness, rest and possibly previous success against a certain team,” he said in a news release from the American Academy of Sleep Medicine. “Now the time of day in which the game is occurring and a player’s chronotype might be a wise factor to take into account.”

At last year’s Sleep meeting, Winter [reported](#) that pitchers who were morning people pitched better in games that began before 7 p.m., while the opposite was true for pitchers who prefer to stay up late.

What Do Sleep and Baseball Have in Common this Week?

Dr. Michael J. Breus

Clinical Psychologist; Board Certified Sleep Specialist

<http://www.huffingtonpost.com/dr-michael-j-breus/what-do-sleep-and-baseball-69942.html>

Aside from the exciting Sox vs. Cardinal baseball that went on last week leading up to the World Series, the drama surrounding Cleveland Indians pitcher Paul Byrd caught my attention in particular. Byrd acknowledged using human growth hormone for a medical condition, but what got my eye wasn't related to the fact HGH is a banned drug in professional baseball (since 2005) without a doctor's prescription. It's about something else I read that I bet most people didn't stop to think about.

For starters, [Byrd admits he took the substance](#) on the advice of three different doctors treating him for a deficiency in this hormone. His pituitary, the gland responsible for making human growth hormone in the body, allegedly isn't up to speed. But I'm not going to comment on any of that; don't look to me to speculate on his medical records, needs, or the fact his taking HGH is under fire in a sport constantly scrutinized for illegal use of performance-enhancing drugs. No, I'll leave that to the sports journalists, news commentators, and pundits.

It was what Byrd wrote about unwittingly that pricked my ears right up: ..."the sporadic periods of fatigue and lack of sleep have really bothered me on the baseball field..." Clearly, Byrd is under-slept and his pituitary is under-performing. A connection?

I can't imagine what it must be like to be a top professional athlete or under the pressure of a baseball player like Byrd who can make or break an entire season -- not to mention a chance to win the World Series -- for teammates and fans. It doesn't surprise me that sleep gets thrown out the window. But here's a friendly reminder: human growth hormone, a key ingredient we all need routinely to grow new cells, repair tissues, recover our bodies from the daily grinds, and essentially be (and feel) rejuvenated, gets released naturally by the body during sleep. It's not so easy to herald this secret ingredient to youth and vitality during our waking hours.

In my latest book, [Beauty Sleep](#), I refer to human growth hormone as "Dr. GH" because it's as close to having a cosmetic surgeon on call (and in your pocket) as you're going to get in your life -- without any cutting, nipping, or real tucking necessary. A free asset in all of our bodies that can truly work wonders when we nourish and supports its functions. Which starts and ends with a good night's sleep.

I think we tend to forget about Dr. GH in our daily lives as we check off our To Dos and sacrifice sleep for seemingly getting more done. We resort to countless (need I mention pricey) beauty products, fad diets, day spas, drugs, and over-the-counter lotions and potions. We down too much [caffeine](#), too, as we chase the next source of high energy. All in pursuit of youth. In pursuit of vibrant health. In pursuit of home runs.

My message is clear: You've got home runs lying in wait deep inside. Byrd's latest media frenzy should be a reminder to us all to get our shut-eye. Youth and performance is not about injections, pills, and potions. It's about tapping our inner source of endurance that's already in circulation when we surrender to good sleep. Too bad not all game plans call for sound sleep.

Sleep Preferences Predict Baseball Success, Study Says

Early birds bat better in the morning, night owls in the evening.

Christine Dell'Amore
National Geographic News

Published June 15, 2011

<http://news.nationalgeographic.com/news/2011/06/110615-sleep-major-league-baseball-science/>

What times major league baseball players hit the hay can predict when they'll hit it out of the park, preliminary research shows.

In a recent survey, scientists found that players who reported being morning people tended to bat best in the morning, and as the day wore on they lost their edge, said researcher [W. Christopher Winter](#). The reverse proved true for night owls.

While people might think the new research "would be classified in the file as, Wow, you need a research study to prove that?, no one's really looked at it" before now, said Winter, medical director of the Martha Jefferson Hospital Sleep Medicine Center in Charlottesville, Virginia.

(Read about [mysteries of why we sleep](#) in *National Geographic* magazine.)

Everyone has natural sleep patterns called circadian rhythms, which dictate whether they rise early or late—somewhat like being right-handed or left-handed, Winter explained.

These rhythms tend to shift earlier as we age—hence the stereotype of grandma and grandpa eating their early-bird dinner special at 4:30 p.m., he said.

"Circadian timing influences every aspect of our physiology, including our behavior and physical performance," [Jeffrey Ellenbogen](#), a neurologist at Harvard Medical School who was not involved in the new research, said by email.

"And just as genetics governs different hair color for different people—brown, red, etc.—our genes partly determine our individual differences in peak performance at certain times of day."

Early Birds vs. Night Owls at Bat

For the baseball experiment, Winter and colleagues gave 16 players from seven major league baseball teams—with an average age of 29—a standardized sleep

questionnaire.

The survey, which reveals a person's circadian rhythm, had been tailored for the study. Nine players ended up being evening types and seven were morning types.

The scientists then analyzed the players' statistics from the 2009 and 2010 seasons and compared them with the games' start times.

Start times were adjusted to account for when players crossed into different time zones, Winter noted—for example, if a Baltimore Oriole traveled to Los Angeles to play in a 2 p.m. game, the start time would have felt like 5 p.m. for that player.

The results showed that early birds had a higher batting average (.267) than evening types (.259) in games that started before 2 p.m.

Similarly, night owls were better at bat (.261) than morning types in games that started after 2 p.m., said Winter, who presented his results Monday at the [SLEEP 2011](#) meeting in Minneapolis, Minnesota. These results were repeated in later surveys not presented at the meeting.

"For everything the body does, there is a natural peak and trough," he said, and it's likely that people at the height of their wakefulness perform better athletically.

That doesn't mean a night owl is forever caged in a later sleep pattern—there are ways people can manipulate their circadian rhythms.

Because our internal sleep rhythm is determined by when we experience lightness and darkness, exposing ourselves to light earlier in the day can shift our sleep cycle earlier, for instance.

Also, drinking alcohol has been shown to disrupt sleep cycles in the same manner as jet lag, according to the National Institute on Alcohol Abuse and Alcoholism.

Harvard's Ellenbogen added: "Paying attention to these individual preferences, and the factors that influence them—like jet lag or light exposure—we can maximize our abilities, on and off the playing field."

(Take [National Geographic magazine's sleep quiz](#).)

Sleep a "Dynamic Force"

The new sleep finding applies to nonathletes as well, Winter emphasized. For example, he suspects a study of schoolteachers' performances in the classroom may produce the same results, though it's more difficult to quantify teachers' success.

Overall, people are starting to realize that our sleep preferences and habits affect our lives and behavior much more deeply than thought, he added.

(See "Secrets of Sleeping Soundly Uncovered.")





"We really have traditionally viewed sleep as a light switch—that basically when the light is on your brain is working, things are happening, [and] when you go to sleep you turn off the switch. Nothing could be further from the truth," he said.

"Sleep is its own dynamic force—we're really starting to get to the bottom of what's going on in those eight hours, and I believe it is the foundation for the next frontier of athletic performance enhancement."




How Sleep Affects Baseball-Performance

<http://www.thebbr.com/component/content/article/65-mbr-tips/409-how-sleep-affects-baseball-performance.html>






Role of Sleep for Baseball Players

-  Allows body to recover & repair.
-  Optimizes immune-system function.
-  Stimulates release of growth hormone.
-  Improves pain-tolerance.

Consequences of Sleep-Deprivation in Baseball Players

-  Decrease in skill-performance, strength, & speed.
-  Increased risk of injury.
-  Decrease in mental-focus & concentration.

TheBBR Sleep-Guidelines for Baseball Players

-  Sleep 8-10 hours per night.
-  Standardized wake-up time.
-  Take 20-minute nap when possible.
-  Read, listen to music, or take warm shower prior to sleep.
-  Avoid caffeine & high-protein meals prior to sleep.

Learn to practice baseball in your sleep (video)

<http://artofbaseball.net/2011/06/10/lear-to-practice-baseball-in-your-sleep/>

Pro baseball player gets sidelined due to sleep disorder

Written by: David Castillo on May 5th, 2011

<http://www.shiftworkdisorder.com/pro-baseball-player-gets-sidelined-due-to-sleep-disorder-102029.html>

The Brewers have placed Zach Braddock on the disabled list due to his sleep disorder.

According to team officials, Braddock has a serious sleep problem. He has been seeing specialists for the past week and they have confirmed that he suffers from a sleep disorder.

Braddock was sent to the disabled list last Tuesday after playing Monday night against Atlanta.

“It’s just a sleep issue that we’ve had tests on in the past week,” said the reliever. “Right now, the baseball schedule isn’t conducive to figuring it out. It’s the best interests of mine and the team to take some time off and deal with it.”

He concluded: “I’m not a doctor but I’m guessing it’s something I’ve had my entire life.”

Braddock will sit out the next 15 days. This MLB season, he is 0-1 with a 2.79 ERA in just over 9 innings.

Sleep Type Predicts Day and Night Batting Averages of Major League Baseball Players

ScienceDaily (June 13, 2011)

<http://www.sciencedaily.com/releases/2011/06/110613093456.htm>

A Major League Baseball player's natural sleep preference might affect his batting average in day and night games, according to a research abstract presented on June 13, in Minneapolis, Minn., at Sleep 2011, the 25th Anniversary Meeting of the Associated Professional Sleep Societies LLC (APSS).

Results indicate that players who were "morning types" had a higher batting average (.267) than players who were "evening types" (.259) in early games that started before 2 p.m. However, evening types had a higher batting average (.261) than morning types (.252) in mid-day games that started between 2 p.m. and 7:59 p.m. This advantage for evening types persisted and was strongest in late games that began at 8 p.m. or later, when evening types had a .306 batting average and morning types maintained a .252 average.

"Our data, though not statistically significant due to low subject numbers, clearly shows a trend toward morning-type batters hitting progressively worse as the day becomes later, and the evening-types showing the opposite trend," said principal investigator and lead author Dr. W. Christopher Winter, medical director of the Martha Jefferson Hospital Sleep Medicine Center in Charlottesville, Va.

The study involved 16 players from seven MLB teams: the Houston Astros, Los Angeles Angels, Los Angeles Dodgers, Pittsburgh Pirates, St. Louis Cardinals, San Francisco Giants and Toronto Blue Jays. Sleep preference was determined using a modified version of the Morningness-Eveningness Questionnaire (MEQ). It identifies a person's tendency to be either a morning type who prefers to go to bed and wake up early, or an evening type who prefers to stay up late at night and wake up late in the day. Nine participants were found to be evening types, and seven were morning types. Both groups had a mean age of 29 years.

The study used the players' statistics from the 2009 and 2010 seasons, which allowed for the analysis of 2,149 innings from early games, 4,550 innings from mid-day games and 750 innings from late games. Game start times were adjusted for travel using the principle that for every time zone crossed, it takes 24 hours to adjust.

"These results are important as they create an entirely new way to look at athletic talent," said Winter. "Currently, selecting a player for a game situation usually involves factors such as handedness, rest, and possibly previous success against a certain team. Now, the time of day in which the game is occurring and a player's chronotype might be a wise factor to take into account."

Winter noted that he plans to analyze more players and precise batting times to better understand this effect.

Last year at SLEEP 2010, Winter presented the results of a similar study, reporting that pitchers who were morning types performed statistically better overall than those who were evening types. However, in games that started at 7 p.m. or later, pitchers who were evening types performed slightly better than morning types.

Winter added that many MLB teams that have participated in his studies are showing an increasing level of interest in his research after seeing his latest results. With the help of co-investigator Ben Potenziano of the San Francisco Giants, and generous assistance from Ron Porterfield of the Tampa Bay Rays, teams have supplied him with more than 300 player data surveys for analysis.

"Clearly, the teams think it is important," said Winter.