

Supporting narrated video (NV) demonstrations, high-speed video (HSV) clips, technical proofs (TP), and all of my past articles can be accessed and viewed online at billiards.colostate.edu. The reference numbers used in the articles help you locate the resources on the website.

Over the last nine months, I wrote about the wonderful game of 8-ball based on principles and shots from the “[Video Encyclopedia of Eight Ball \(VEEB\)](#),” a five-disc instructional-DVD set I recently created with fellow *Billiards Digest* columnist Bob Jewett. This month, I want to present some interesting statistics dealing with the 8-ball break. In high-level 8-ball, the break shot is critically important, so it can be helpful to know which practices might be best.

Recently, I viewed a large collection of online YouTube match videos to determine break effectiveness of the best 8-ball pro players. I looked only at final and semi-final matches of competitive men-only bar-table events to get stats for the best players. The tournaments from which I collected data were the 2014 US Bar Table 8-Ball Championship, the 2015 US Open 8-Ball Championship, the 2015 US Bar Table 8-Ball Championship, the 2016 Chinook Winds 8-Ball Open, and the 2016 Wyoming Open (Saratoga) 8-Ball Championship. The players involved included Shane Van Boening, Darren Appleton, Skyler Woodward, Corey Deuel, Rodney Morris, Dennis Orcollo, Justin Bergman, Jeffrey Ignacio, Mike Dechaine, and others among the best in the game. The total number of games reviewed was 169. 118 (70%) of those were 1st-ball power breaks and 51 (30%) were 2nd-ball breaks. A racking template was used in 105 (62%) of the 169 games.

Have you heard anecdotal statements like the following?

“The pros make a ball on the break almost every time.”

“A 2nd-ball break is only for people who can’t hit a good 1st-ball power break.”

“A racking template makes the game too easy.”

“The break is a huge advantage.”

Well, the problem with anecdotal statements like these is they are often based on uniformed opinions and hearsay, and sometimes have no correlation with actual facts. That’s why I wanted to analyze actual results, to help bust some of the break myths out there.

Table 1 summarizes some of the data from my study. As you would expect, the top 8-ball pros make a ball on the break a large percentage of the time (about 80% of the time). For the matches I included in the study, both the 1st-ball and 2nd-ball breaks were nearly equal regarding ball pocketing; although, the 2nd-ball break had a slight edge (82.4% vs. 80.5%). Interestingly, the use of a racking template didn’t seem to help like one might expect. In fact, for the matches I included, the player was actually slightly more likely to pocket a ball without using a racking template (85.9% vs. 78.1%). As you would expect, top pros don’t scratch on the break very often; although, a scratch did occur more often with a 1st-ball power break as compared to a 2nd-ball break (7.6% vs. 2.0%). Scratching on the break against a top player is a fatal mistake. Even if the player can’t run out, they can choose the best ball group (stripes or solids), and will always be a favorite to win. I didn’t have enough data to reliably back up this claim, but it seems reasonable (although, one should be careful when making anecdotal claims like this). One advantage of a 2nd-ball break is that it usually results in good 8 ball motion, and sometimes the 8 will be pocketed on the break. The data showed this happening 5.9% of the time (vs. 0.8% for a 1st-ball break). If you play under rules where making the 8 on the break is a win (e.g., in the APA league system), the 2nd-ball break might be a good option because of the huge potential payoff of winning on the break.

Table 1 Ball-on-Break Stats

made ball on break with 1 st -ball break	80.5%
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made ball on break with 2nd-ball break	82.4%
made ball on break using racking template	78.1%
made ball on break not using racking template	85.9%
scratched on 1st-ball break	7.6%
scratched on 2nd -ball break	2.0%
made 8 ball on 1st-ball break	0.8%
made 8 ball on 2nd -ball break	5.9%

Table 2 lists some additional data from the study. This data is important because it involves whether or not the breaker wins. The data shows that top pros win the game about 60% of the time when they break, and it doesn't matter too much which ball they target or whether or not they use a racking template. I would bet most people would predict a much higher breaker win percentage than 60%, but that is still an important advantage, especially for the lag-winning breaker on the final hill-hill game of the match. For the matches I included in the study, the 2nd-ball break actually had a slightly higher win percentage than the 1st-ball break (60.8% vs. 58.5%). And the racking template had practically no effect on the breaker win percentage. The break-and-run (B&R) data was a little surprising. The 2nd-ball break resulted in more B&Rs (56.9% vs. 51.7%). This is counterintuitive because the 1st-ball break usually results in a better ball spread. The racking template B&R results were also a little counterintuitive, with the B&R percentage being higher when not using a racking template (56.3% vs. 51.4%). One would expect a racking template to result in a better break, with a greater chance of making a ball and a more-consistent ball spread, but the data did not show this.

Table 2 Breaker Win Stats

breaker won after 1st-ball break	58.5%
breaker won after 2nd-ball break	60.8%
breaker won using racking template	59.0%
breaker won not using racking template	59.4%
break-and-run after 1st-ball break	51.7%
break-and-run after 2nd-ball break	56.9%
break-and-run using racking template	51.4%
break-and-run not using racking template	56.3%

Were you surprised by any of the results, especially the ones that disproved some of the common misconceptions and myths we often hear? I certainly was. If you like this sort of data, many more detailed break statistics for 8-ball, 9-ball, and 10-ball events can be found on the "[break statistics](#)" resource page in the FAQ section at billiards.colostate.edu. And if you want to see some video demos and read advice for achieving the best break possible, see the "[break technique and equipment advice](#)" resource page in the FAQ section at billiards.colostate.edu.

Regardless of which break you use, the most important factor is to be as accurate and consistent as possible with the hit. You should think about keeping track of your own stats for different breaks on different tables to methodically determine what works best for you. I did this for myself recently and got similar results as the pro data ... my 1st-ball power break and 2nd-ball breaks were nearly equally effective, with the 2nd-ball break offering a slight advantage. I was sure the data would show my 1st-ball power break coming out on top, because it seems more impressive and I seem to make multiple balls on the break often; however, the scientific data did not confirm what I mistakenly believed (or wanted to believe). I think I'm going to work more on practicing and perfecting my 2nd-ball break. Not only does it produce slightly better results, but it is also much gentler on my elbow. Although, on second thought, even though the data shows that a 2nd-ball break might offer a slight advantage, the 1st-ball power break is more fun, and it feels "manlier" to crush the rack, so maybe I won't change after all. I hope you are more logical than I am concerning break shot selection.

Good luck with your game,
Dr. Dave

PS:

- I am happy to announce that my entire collection of instructional DVDs (23 total to date) is now available for streaming via YouTube. For more info, see: dr-dave-billiards.com/stream.html.
- I know other authors and I tend to use lots of terminology, and I know not all readers are totally familiar with these terms. If you ever come across a word or phrase you don't fully understand, please refer to the [online glossary](#) at billiards.colostate.edu.

Dr. Dave is author of "[The Illustrated Principles of Pool and Billiards](#)" book and DVD, and co-author of the Video Encyclopedias of "[Pool Shots \(VEPS\)](#)," "[Pool Practice \(VEPP\)](#)," and "[Eight Ball \(VEEB\)](#)," and the "[How to Aim Pool Shots \(HAPS\)](#)" and "[Billiard University \(BU\)](#)" instructional DVD series, all available at: dr-dave-billiards.com.