

DON'T BE MISLEAD BY RANDOMNESS

BY GARY HORVATH

HAVE YOU EVER BEEN FRUSTRATED BECAUSE YOU HAVE GOOD AND BAD DAYS ON THE COURT?



The reason this happens is regression to the mean. Don't be fooled by it!

Here's the way it works. Suppose your serving percentage for the season is 90%. Over the course of the season your daily serving percentage will vary, but your long-term average will be 90%.

In theory this means you will serve better than 90% half the time and the other half you will serve at or below that level. You will feel like a rock star on the days you serve 98%. On the days you serve 82% you will feel like selling your paddle and taking accordion lessons.

Regression to the mean is prevalent in team sports and most coaches are confused by the randomness associated with the concept.

Consider a basketball player who is a 70% free throw shooter.

He has a hot streak and makes 9 out of 10 free throws. The coach pats him on the back and gives him more playing time.

As should be expected, the player hits a cold streak and makes 5 of the next 10 free throws. The coach notices the decline from 90% to 50%. He yells at the player, benches him, and makes him run wind sprints at the next practice as a way of "motivating" him to do better.

Eventually the player will be allowed to play again and he will make 7 of the next 10 free throws. The coach notices the improvement from 50% to 70% and immediately associates yelling at the player, benching him, and making him run wind sprints as the motivation that caused the improvement.

WRONG! The coach should be benched and yelled at for failing to understand the randomness of regression to the mean.

Out of the last 30 free throws, the player has made 21 for his season average of 70%. The player had streaks where he was above the mean, below the mean, and right on the mean.

As a player, there are several things you can do to avoid being fooled like the basketball coach.

- 1 Work with a PPTA professional who understands the concept of regression to the mean.
- 2 Develop a practice routine that includes match-like play and relevant training.
- 3 As you practice, you will improve your consistency, thus reducing the range of the fluctuations in your daily serving percentage.
- 4 Stay calm, don't be fooled with randomness. Enjoy the days when you serve above

your seasonal average and don't sell your paddle and take-up accordion lessons on the days you drop below it. Accepting the daily fluctuations is one of the challenges of competitive sports that can be minimized, but not eliminated.

- 5 Over time, with quality instruction and match-like practice sessions, you should be able to raise your season serving average from 90% to 92% or even higher. Remember, this is a long term proposition. ■

For additional information about regression to the mean and other subtleties of playing and coaching sports, visit the blog Growing the Game Together by John Kessel, Director of USAV Grassroots Volleyball, <http://www.teamusa.org/USA-Volleyball/Grassroots/Grow-The-Game-Blog>.



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