

How Ratings Change As We Age

Analyzing 7 years of data

No one wants to know they're aging let alone losing whatever skills they've had. The good news is that it doesn't look like players lose as much disc golf skill over the years on average as you might think. In fact, many players can continue to improve. Improving disc technology may have much to do with that. The bad news is that you're still getting older.

Now that we have several years of relatively stable ratings data that includes almost every event that could have been rated, I thought it might be interesting to see where we are on longer term ratings trends. I decided to limit the analysis to longer term male PDGA members (not enough female data) who have played as pros.

To be included in the data analyzed, a player had to be a PDGA member for at least three years before his initial rating value would be used in this study. For example, if we're tracking a player's ratings from the end of 2000 to the end of 2004, he would have to have a PDGA number lower than 13052 which was the last number assigned in 1997. The idea is that every player included had at least three years for his rating to stabilize and likely more since many played as ams before going pro. I only included players who had event activity in at least the first and last year of a 4-year period which were either 2000-2004 or 2001-2005.

I determined the average ratings and ratings changes for players who after the 4-year periods were ages 32 in either 2004 or 2005, and ages 39, 44, 49, 54 and 59. We were already down to 10 guys who had appropriate data at age 59 so I didn't go any older. The average rating of each older age group in 2004-05 gets progressively lower than the next younger group. Surprisingly, the average player rating within each age group has *increased* over these 4-year periods. I determined that changes in the ratings system calculations over this period has inflated ratings about 10 points for long term active players. So, this adjustment has been included in the calculations.

There's an additional element besides disc technology that probably has a small effect to increase average ratings. One would expect those who remain active and competitive over the 4-year period are likely better, healthier players on average than those of the same age who could not be included in this study because they dropped out or reverted to am status.

Here is the data table. The Ratings Changes columns show the raw mathematical change in the **Avg. 4yr** column. The values in column **Adj. 5yr** show my adjusted figures if we assume the ratings system has inflated the ratings over 4 years. Using my adjusted values, players would barely start to decline in their late 30s. Then, they would decline at a rate a little less than one throw every five years thru their 40s and 50s.

The actual ratings difference of 40 points between the 49 and 59 age periods is greater than the “one shot (10 pts) per 5yr decline” would explain. A possible explanation could be that the 49-year olds may be better players than those 59-year olds were at age 49. Based on that, we would expect that the current group of 49-year olds (those that will stick around for 10 more years) will have an average rating closer to 925 than 905 when they get to age 59.

The Standard Deviation information indicates that 2/3 of men will have a ratings change within +/- 2 throws after 4 years regardless of their age.

Several people have proposed that the Master age be boosted again by 5 or 10 years. There's no indication that ratings actually decrease or need to decrease before age 40. The data would indicate that the average skill/rating of the player pools starting at age 40 decreases by about one throw every 5 years. It also looks like the rate of ratings decrease remains the about the same from age 40 to 60.

So, the average skill difference between age 40 compared with age 49 is about the same as the difference between age 45 and age 54, or age 50 and age 59. However, the question would be whether there was any justification to force players from 40-44 to continue competing with the Open division when it appears this group would be giving up a throw per round on average.