

# High-Testosterone Competitors More Likely to Choose Red

May 16, 2013

Why do so many sports players and athletes choose to wear the color red when they compete? A new study to be published in [\*Psychological Science\*](#), a journal of the [Association for Psychological Science](#), suggests that it may have to do with their testosterone levels.

The new study, conducted by psychological scientist Daniel Farrelly of the University of Sunderland and colleagues, demonstrated that males who chose red as their color in a competitive task had higher testosterone levels than other males who chose blue.

“The research shows that there is something special about the color red in competition, and that it is associated with our underlying biological systems,” says Farrelly.

The researchers believe that the link may explain why many sports stars wear red clothing — Tiger Woods, for example, famously chooses to wear a red shirt on the last day of a major competition.

Choosing to wear red “may, unconsciously, signal something about their competitive nature, and it may well be something that affects how their opponents respond,” Farrelly explains.

Farrelly and colleagues recruited 73 men to participate in the study, and they were unaware of the study’s aims. The men were told that they would be performing a competitive task and that their performances would be placed on a leaderboard. The participants then chose either a red or blue symbol to represent them in the table and completed the competitive tasks. They also answered questionnaires aimed at gauging whether various personal reasons may have affected their color choice.

To determine participants’ testosterone levels, the researchers took saliva samples at the start of the study, before the participants knew about the competitive task, and again at the end.

The data revealed that men who chose red had higher baseline testosterone levels, and they rated their color as having higher levels of characteristics such as dominance and aggression, than men who chose blue.

Color choice did not, however, seem to be related to actual performance in the competitive task. The researchers believe that direct competition, in which opponents can be seen wearing red or appearing red, may be necessary for the red advantage to occur. Along these lines, previous research has shown that wearing red can be advantageous through its influence on opponents’ perceptions, leading them to view red competitors as being “high quality” competitors.

Co-authors on the research include Rebecca Slater of the University of Sunderland, Hannah Elliott and Hannah Walden of Newcastle University, and Mark Wetherell of Northumbria University.