

# Failing can make you better athlete

BY PHIL WAGNER, M.D.

Special for the Daily News

The reason most people don't get enough out of their off-field training is that they don't make it a big priority. Training sessions that don't include actual sport skills are often regarded as "supplementary," leading athletes to believe that making it to the gym and lifting a few weights is enough. These athletes are missing out on a huge component of all sports. The strength and coordination you build with off-field training sessions can have a tremendous impact on your game-day performance. So how do you make your training sessions (and all your practice sessions for that matter) more productive?

This is the topic of a new book by New York Times bestselling author Daniel Coyle called "The Talent Code." In the book, Coyle delves into why some people seem to be naturally better at so-called "talents" than others. Proficiency at music, art and especially sports is often seen as a "talent," some-

thing you inherently possess. Coyle would argue that great skill in sport and music is made, and he started by exploring "talent hotbeds," small places in the world that produce an unlikely amount of world-class performers. He visited Brazilian soccer academies, Russian tennis centers and small classical music academies in upstate New York. What he found, with the help of neuro-scientists, is that there is a specific way that the brain learns complex skills.

The human nervous system communicates via neurons, tiny cells that transmit information. Neurons are responsible for almost every mental action — memory, emotion, sensory perception and muscular action. Neurons work quickly, like flicking a light switch, which does not help for learning complex actions. Fortunately, a substance called myelin can help us there. Myelin is a fatty substance that forms a sausage-like casing around neurons. The myelin helps control the signal that passes between neurons, making it stronger, faster, and

more repeatable. Essentially, the more myelin you have, the better your signals travel, and complex actions become more perfected and repeatable. Myelin basically takes you from a dial-up to a cable modem. Great, you say, so the old saying holds true: practice makes perfect. Yes and no. Many people are aware of Malcom Gladwell's book, "Outliers." In the book, Gladwell studies people who have become extraordinary at what they do, from computer programmers to The Beatles. What he finds is that all of them have one thing in common — they have spent at least 10,000 hours perfecting their craft. So all you need is 10,000 hours, right?

Coyle goes a step further, attempting to learn how the brain can best produce the myelin that makes it so good at complex actions. What he finds is that we need to reach a state he calls "deep practice." According to Coyle, during deep practice, you use your time more effectively and small efforts produce more lasting results. The secret is small mistakes. The brain makes greater changes when it is forced to slow down and correct errors. Operating at a point just beyond your ability can force your brain to

adapt, creating stronger and more lasting neural pathways. The key is choosing a goal just beyond your reach; completely failing doesn't lead to deep learning.

So how does this relate to your training? The more you can push yourself, and operate just beyond your ability, the "deeper" your learning will be. That's why intense, concentrated training sessions can have such a huge impact on on-field performance. It's why at SPARTA, we see squatting as a skill, just like pitching or hitting a backhand. The more precisely we can make athletes reach beyond their ability, the more quickly they will improve, and the more their training will translate to improved sport performance. So the next time you're on the way to the gym to just "get in a workout," consider how much it's actually helping you. And consider a new training environment that will help you push your boundaries and create lasting improvement.

*Dr. Wagner is the Director of SPARTA Performance Science in Menlo Park. For info on this, or to learn more about SPARTA, visit [www.SpartaScience.com](http://www.SpartaScience.com).*

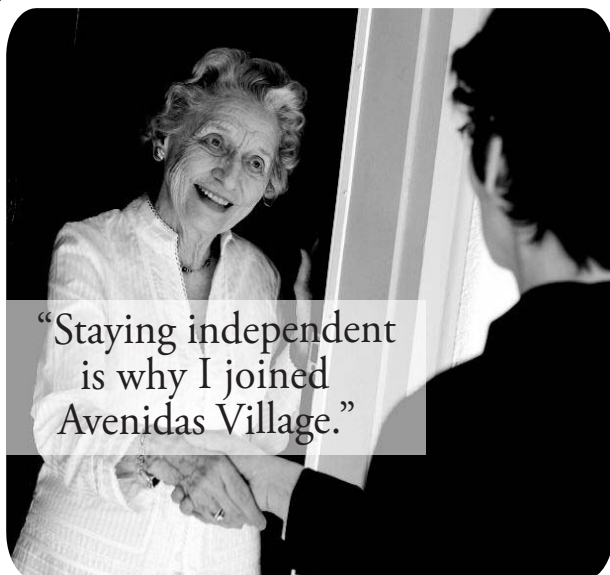


## TV/RADIO

**TODAY**  
**BASEBALL**  
 ■ Marlins at Giants, 12:30 p.m., CSNBA, 680  
 ■ A's at Red Sox, 4 p.m., CSNCA, 860, 1190  
 ■ Dodgers at Mets, 4 p.m., ESPN  
**CYCLING**  
 ■ Tour de France, 5:30 a.m., VERSUS  
**THURSDAY**  
**BASEBALL**  
 ■ Padres at Giants, 7 p.m., CSNBA, 680, 1010  
**CYCLING**  
 ■ Tour de France, 5:30 a.m., VERSUS  
**GOLF**  
 ■ Euro PGA: Barclays Scottish Open, 7 a.m., GOLF  
 ■ Nationwide: Wayne Gretzky Classic, 10 a.m., GOLF  
 ■ LPGA: U.S. Women's Open Championship, 11 a.m., ESPN  
 ■ PGA: John Deere Classic, noon, GOLF  
**MOTOR SPORTS**  
 ■ LifeLock.com 400, practice, 2 p.m., SPEED  
 ■ Dollar General 300, final practice, 4 p.m., ESPN2  
 ■ LifeLock.com 400, qualifying, 5:30 p.m., SPEED  
**SOCCER**  
 ■ Gold Cup: Mexico vs. Panama, 7 p.m., 14  
**WNBA**  
 ■ Monarchs at Storm, 6 p.m., ESPN2

## Hoelper, Miller were Ocean Division's best

Two standout prep softball players were left off the Daily News' list of 427 athletes named to spring all-league teams. Sequoia-Redwood City senior Molly Hoelper was the Peninsula Athletic League's Ocean Division player of the year. The catcher, who is headed to UC Davis in the fall, hit .397 with 19 RBIs and 10 steals. Woodside sophomore Ashley Miller was chosen as the PAL Ocean Division pitcher of the year. The sophomore left-hander had a league-best ERA of 0.78 and also led the Ocean Division in strikeouts.



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