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Ideas & Trends

## When Sports Becomes a Head Game

By [BENEDICT CAREY](#)

THE snowboarder Shaun White shot like a champagne cork to victory in the halfpipe, but these Olympic Games, which end today, brought far more bitters than bubbly for the American team, from the skier [Bode Miller's](#) mishaps and the hockey captain Mike Modano's moaning to the skater [Sasha Cohen's](#) stumble.

The slips, slides and misses, in part, may reflect conditions: the state of the snow, the weather, equipment problems. Yet when athletes blow a performance, they know it. And the more important the event, the more deeply troubling the experience. For many athletes, researchers say, any hope of a comeback will depend at least as much on psychological tinkering as training technique.

Athletes and coaches have always had pet theories about why people falter under pressure, and some of these notions have proved to be more than superstition. By the time they get to the Olympics, after all, athletes have practiced so much that their reflexes are almost automatic, so factors like anxiety, focus and confidence become more important.

"To motivate athletes we have encouraged visualization, or shown them highlight films of their past successes, maybe set to music," said Hap Davis, a psychologist at the Canadian Sports Center in Calgary.

That makes some sense, research suggests, because such techniques can both banish lingering doubts and provide valuable distraction.

In studies of golfers and soccer players, Sian Beilock, a psychologist at the University of Chicago, has shown that elite athletes perform superbly when distracted but begin to make mistakes as soon as they are told to pay more attention to their movements. "I think what happens in high pressure situations is that the athletes start paying attention to things they're not used to thinking about at all," she said. The result, she said, is that in these stressful situations "they can feel as if they are performing a different skill."

But a flat-line mental state may be harder to induce than once assumed, psychologists are learning.

Big losses in particular — flaming out in a crucial competition — may carry a deeper emotional charge that alters future performance. Amateur athletes in particular have invested their identities in their sport. A single bad performance can end everything, instantly drying up support from sponsors and coaches.

In a study to be presented before the Cognitive Neuroscience Society meeting in April, Dr. Davis led a team of researchers who had 13 elite Canadian swimmers watch a video of a recent race in which they had faltered badly. Two racers had underperformed in Olympic races in Athens. The other 11 had failed to make the Canadian team altogether, despite top ratings entering the qualifying race.

While watching the videos, the racers showed peaks of activity in several areas of the brain that have been implicated in depression, and blunted activity in the areas that prime people to perform, the study found. "I think with some athletes we need to address the emotions and feelings connected to the loss directly" to restore performance, Dr. Davis said.

One way to do this, the study suggests, is with a type of talk therapy often used to treat depression.

Asked to recall what they were thinking during the races, the swimmers revealed self-defeating thoughts: "I had a bad start — I never win after a bad start" or "I'm getting no kick from my legs."

The researchers helped the athletes dispute these assumptions directly, reminding them that swimmers often win after a bad start, in fact, and that racers get far more power from their arms than from their kick.

After a 20-minute session addressing these thoughts, the racers watched the same video of their blown race and showed significantly more activity in the areas of the brain involved in motor control, and less in those involved in depression.

Few know the feeling of devastating loss better than Dan O'Brien, the decathlete who, in 1992, after winning the world championships, failed to make the United States Olympic team altogether. He missed a qualifying pole vault.

In an interview, O'Brien, who now runs a gym in Scottsdale, Ariz., said he watched the film of that vault at least once every week while training

for the 1996 games. "What I wanted to do is desensitize myself, so there was no surprise, no shock next time I competed," he said. "I wanted to make absolutely sure I wasn't scared to talk about it or of reliving it. I wanted to take that performance out of the equation altogether."

He got his redemption, winning gold in Atlanta. Others, like [Michelle Kwan](#) and Sasha Cohen, have not, and, given their investment, they may now carry a traumatic memory they will be forced to confront again in the next big competition. They may want to learn from O'Brien's example.