

Phys Ed: How to Overcome Fear on the Slopes

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Peter Olenick, a 25-year-old freestyle skier and gold medalist in the Big Air skiing competition at last weekend's 2010 Winter X Games, vividly recalls the first time he tried the Whiskey Flip, his self-invented marquee trick, a twisty, somersaulting double flip executed 20 feet or so above the halfpipe's lip. "It was terrifying," he says. "I didn't even know if it could be done. But I'd been doing it over and over in my head, so I figured I could make it go right." Some deep breaths, some mental finger-crossing and "I just kind of hucked it," he says, landing cleanly, exhilarated. A second attempt was even "scarier. Now my body knew what was happening. But I did it. Fear kind of keeps all of us going."

Fear may be the signature emotion of the Winter Olympics, prickling the skin hairs and sharpening the senses of all those athletes moving fast over slick, unforgiving surfaces. "Everybody feels fear out there, and I mean everybody," says Ross Hindman, the founder and program director of the International Snowboard Training Centers in Colorado and California, which specialize in training midlevel and elite snowboarders. Fear affects those of us too who recreationally strap on skis, snowboards, skates or, more rarely, a skin suit in advance of a bobsled run. "The issue is how you deal with fear," Mr. Hindman says.

A study first published online in December by the [journal Nature](#) suggests one method of dealing with fear, at least the kind caused by the painful tumbles so common in winter sports. The method has long been practiced in sports but not always, the study suggests, to fullest advantage. In the experiment, conducted at New York University, volunteers were conditioned to be afraid of blue squares flashing on a computer screen when the sight was paired with a mild shock to the wrist. The next day, researchers tried to extinguish that fear by having the volunteers watch the squares without being shocked. The hope was "to rewrite the emotional component" of the fearful memory "with something that makes it feel safe," says Daniela Schiller, a postdoctoral fellow at New York University and lead author of the study.

"That's kind of like what we do sometimes," said Mr. Olenick, the freestyle skier, when told of the technique. "You watch video of yourself" — flailing, crashing, lying inert at the base of the halfpipe. "Then you can start imagining how you'll do it better the next time."

What Ms. Schiller's team found, though, was that such facing up to and revising memories of a frightening event has to be done within a particular time frame to be effective. Only if the memory is uppermost and fresh in your mind can it be rewritten. In the N.Y.U. study, this was apparent in a subset of the volunteers whose memories of the shocks were reactivated by being exposed to the blue squares again only minutes before the extinction process. They had the fearful memory vividly before them, so when they started seeing blue squares stripped of menace, they rewrote their feelings about blue squares. They were no longer afraid of them. Volunteers who were not made to replay the fearful memory just before the extinction process didn't permanently lose their fear. It returned the next day.

Revising a fearful memory is a mental, neurological process. You are calling up from memory circuits the unpleasant vision of yourself tumbling down the mountainside and overlaying it with a vision of yourself staying upright. If you can't practice the technique right there on the slope, that's probably O.K., Ms. Schiller says. The key seems to be reliving the experience (as quickly as possible) and then, without delaying or turning away, rethinking it. You have only a short window in which a memory is "vulnerable to revision," Ms. Schiller says, before it's returned to long-term brain storage.

This technique won't, by the way, rid you of the memory. "We think that you can't change the content of a memory," Ms. Schiller says. "But you can change the emotions around it." You can make that fall, in memory, tolerable.

And if trepidation still dogs you on the slopes or, as it does to me, keeps you from approaching situations where you could fall, there's always foam. "Protective pads," says Jeff Mugleston, the manager of the renowned snow sports school at Taos Ski Valley in New Mexico, "are a huge confidence booster. Helmets, wrist guards, kneepads, butt pads. We recommend people load up" when they are learning new skills and tricks. The pros don't stint, either. "Shaun White had a whole halfpipe built with a foam pit in it," Mr. Hindman says, in order to practice safely the 30-some-foot-high twists of the now-famous Double Cork trick.

"The best thing about fear," Mr. Mugleston concludes, "is that it makes you act smarter."