

# Athlete's joint shots raise profile of therapy

*Debated pain injections may trigger healthy tissue growth*

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SUN REPORTER

ORIGINALLY PUBLISHED FEBRUARY 17, 2006

Bode knows prolo. And he says it really helped him -- even if it did get him into more hot water.

Bode, of course, is Bode Miller, America's most famous rebel athlete of the moment. When he revealed recently that he had tried prolotherapy, it brought attention to this obscure and controversial injection treatment for joint and back injuries.

Last year, to treat lingering pain from a blown-out knee, Miller visited a prolotherapist. The maverick skier says the treatment worked wonders. Several other Olympic skiers have also tried the technique and offered equally effusive praise.

Supporters describe prolo, as it is often called, as a straightforward technique that can yield astonishing results, healing a variety of stubborn injuries, including chronic tendonitis, low back pain and even arthritis. Skeptics say the approach is largely untested.

The treatment is not for the needle-averse. Over several sessions, therapists inject a solution of glucose and local anesthetic into the injured joint. Proponents say the treatment, which can be painful, irritates the body into healing itself, triggering a proliferation of new, healthy tissue -- hence the prolo prefix.

"Prolotherapy is going to be huge in athletics before long," says University of Kansas physical medicine and rehabilitation professor Dr. K. Dean Reeves, a leading light in the small galaxy of prolo research.

Dr. Brian Krabak, a sports medicine specialist at Johns Hopkins Hospital, is on the other side of the debate.

"There's a lot of controversy around it. There aren't any really good studies to show it works," Krabak says. "I definitely wouldn't say it is the next great cure."

## **Pain-free**

But many patients describe amazing results. Marcy Kelly, a 51-year-old accountant from Arnold, says the treatment cured a neck injury that had bothered her since she had two car accidents in the mid-1990s.

Several doctors said her only hope was an operation to fuse three disks. Instead, she began doing research and found Dr. Mayo Friedlis, an injury rehabilitation specialist with offices in Fairfax and Herndon, Va., who has been doing prolotherapy for more than a decade. Between October 2005 and January, Kelly received four treatments.

She says her neck is now pain-free. "It's fantastic," she says.

There are only a handful of careful studies of the treatment; this research has found generally positive results for certain injuries.

"This is completely unsupported by hardcore lab and animal data," says University of Wisconsin researcher David Rabago, a physician who last year reviewed the state of prolotherapy research for a leading sports medicine journal. But he says the treatment is intriguing, and worth further study because so many doctors have reported good results.

Prolotherapy treatments, which are often not covered by insurance, can be expensive. A typical injection session may cost \$200 to \$500; most patients require several sessions.

Prolotherapists say the injections work by inflaming damaged tissue, provoking the body to heal on its own. Some practitioners add other chemicals to the mix, such as glycerine, phenol or cod liver oil, to increase the inflammation.

"We go in and we stir the pot by creating local irritation," says Dr. Paul Tortland, an osteopath in Avon, Conn., who has been practicing the technique for more than a decade. "The irritation stimulates the body's natural repair mechanism."

This theory runs counter to commonly held medical belief, that after a ligament or tendon injury, patients should reduce inflammation as much as possible. Prolotherapists disagree.

"The literature is clear that some inflammation is good," says Dr. Brian Shiple, an osteopath who heads a sports medicine training program for a group of five hospitals in suburban Philadelphia. "Anti-inflammatory medicine can suppress the healing process."

The precise mechanism by which prolotherapy works remains mysterious. Most therapists say the injection triggers an increase in fibroblasts, the specialized cells that make collagen. Collagen is the basic building block for ligaments, tendons and cartilage; in many joint injuries, this tissue is stretched, weakened or damaged.

## **OK in theory**

Some mainstream clinicians say the theory makes sense but needs more testing. One of them is Dr. Andrew Tucker, medical director for sports medicine at Union Memorial Hospital, as well as head team doctor for the **Baltimore Ravens**.

"The concept is decent," he says.

Prolotherapists say the injections are especially effective for persistent injuries that resist more traditional treatment. "Many times, you can rest until the cows come home, and it won't help, because the tendon or ligament is not healing properly," says Tortland, the osteopath.

He and others emphasize that prolotherapy can't help all soft tissue injuries. For example, if a ligament or tendon is completely torn, only surgery can reattach it.

The burst of interest in prolo started two weeks ago, when Miller's treatment was first reported. U.S. ski team officials expressed concern that the therapy was unsafe, and that the injected solution might include illegal or banned substances.

Much of the recent attention has focused on Miller's prolotherapist, Dr. Milne Ongley. An 81-year-old native of New Zealand, he practices in Ensenada, Mexico, 90 minutes south of San Diego. In the early 1990s, he was banned from practicing medicine in the United States after several patients complained that he had worsened their condition. In the 1980s, Olympic high jumper Dwight Stones accused him of mistreating a hamstring injury. Ongley didn't respond to phone calls and e-mails from The Sun.

His supporters say that he is a gifted prolotherapist. "Milne Ongley is a genius," says Dr. Tom Dorman, an internist outside Seattle. "He understands the body in a way that most people haven't put together." Dorman spent years learning prolotherapy from Ongley, and is now considered among the foremost practitioners of the technique.

U.S. ski team officials would not comment for this article on the use of prolotherapy by Miller or other skiers, and wouldn't make them available to answer questions. But ski team doctor Gunnar Brolinson praised the approach. "It can be a very effective treatment," he said, speaking last week by cell phone from the ski slopes in Italy.

Citing privacy regulations, Brolinson, the head team physician at Virginia Tech, would not say whether he has treated Olympic ski team members with the technique. But he did say that some members of the team had undergone the treatment.

Elite athletes in other sports have also turned to prolotherapy. "It's been a career-saver for me," says Tye Harvey, a world-class pole vaulter who was an Olympic alternate for the United States in 2004. Four years ago, he says, his shoulder pain was so bad that he could barely raise his arm above his head. Told by a top doctor that he needed extensive surgery, Harvey instead visited Ongley.

"Within four weeks I was back to pole vaulting," he says.

## **Popularity growing**

Prolotherapy was first developed in the 1940s by American physician Dr. George S. Hackett. Although no firm figures exist, leading prolotherapists estimate that there are probably about 500 practitioners around the country. Many say the approach is growing more popular. "It's increasing substantially," says Friedlis, the injury rehabilitation specialist.

Friedlis was initially skeptical of the technique, which he first saw at a medical conference 15 years ago. "I watched [the therapist] inject somebody's neck with sugar water, and I thought, 'This guy is a charlatan,'" he says.

But as he learned more, he became less dubious. After taking a training course, he tried it on 10 of his patients with persistent lower back pain. "Seven out of 10 were cured," he says. "Not better, but cured."

Despite their confidence, many prolotherapists realize that without large-scale human studies, the therapy will never gain legitimacy with the medical establishment. Friedlis and others have doubts that this research will happen. Most large studies are funded by drug companies seeking approval for a new medicine. Prolotherapy doesn't fit that model, he says.

"This isn't a drug or a device that someone will make billions from," he says. "This is concentrated sugar and hypodermic needles."

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