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Author(s): Kelley, B.G.

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Section: Fitness

A FAST NEW FIX FOR SPRAINS AND STRAINS

If it passes the test, you'll soon be able to spring back from injuries in no time.

After keeping the volleyball in play with a diving setup, Chris-tine McGeough scrambled to get back into position--and never made it. The 20-year-old Temple University volleyball player pushed off on her right foot, felt her ankle roll, and screamed. She'd suffered a nasty sprain.

"I was real frustrated. The doctor said I would be out from four to six weeks," says McGeough. So when Temple sports medicine director Ray Moyer said she might quicken the healing with an experimental therapy using pressurized oxygen, McGeough went for it. "I was willing to do anything to get back fast."

Within 48 hours, McGeough was squeezing into a piece of machinery with the sleek looks and aerodynamic lines of a Lamborghini for the first of three treatments of *hyperbaric* therapy. Temple's chamber is one of seven now used by sports medicine clinics and professional teams in the United States and Canada. After donning a tight-fitting mask, McGeough was sealed nearly glove-tight inside the compartment, where she tried to relax to the piped-in sounds of Pearl Jam. "It's like you're in an airplane with your ears popping all the time," she says. For 90 minutes, she breathed pure oxygen. The air around her was more than twice normal pressure.

Bingo. "The swelling started to decrease almost immediately," she says. "By the third treatment I had a pretty good range of motion." And in two weeks, Christine McGeough was back playing volleyball. "The chamber cut my down time at least in half," she says.

McGeough isn't the only one investing faith and time in *hyperbaric* medicine. Employed since the 1930s for treating divers suffering from the bends, hyper-baric chambers--aka decompression chambers--are now being used for relieving chest pain in heart attack patients, raising energy levels of AIDS patients, and more. Admittedly, the parade into the chambers can look funny at times; to keep his boyish look, Michael Jackson has been known to bed down at night in pressurized oxygen. But the promise that a special new version of the chamber heals injuries faster actually has some support.

In 1993, 24 Scottish rugby players suffering sprains, strains, and bruises to the ankle, knee, thigh, and calf were treated with oxygen therapy as well as the usual elevation, ice, and tight wrap. The average injury healed 67 percent quicker than normal. That same year, the Vancouver Canucks became the first pro team to use a chamber, and head trainer Larry Ashley estimates that the team's injured skaters missed 28 fewer games during the season than they would have if they'd stuck solely with the standard ice treatments. Vancouver missed fewer games than any other National Hockey League club.

"Winger Martin Gelinis suffered a severe quadriceps contusion"--that's a thigh bruise--"and it looked as if he would be out seven weeks," says Ashley. "After two weeks of two-a-day sessions in the chamber, he was back on the ice." Ashley rattles off other magic-bullet recoveries: Cliff Ronning dislocated a shoulder and was told he'd be out six weeks but was back in three. Geoff Courtnall was back playing five days after straining a knee ligament.

Such miracle recoveries from sports injuries make more than just team owners take notice. Ten million Americans a year injure themselves working out, says Gabe Mirkin, a sports medicine researcher and coauthor of *The Complete Sports Medicine Book for Women*, and 6 million miss at least one week of exercise as a result.

So far, there are no chambers anyone with a sprained ankle can walk off the street to use, but that should change soon. Already, the Dallas Cowboys and San Francisco 49ers have rented sports-injury chambers. The chambers' main distributor, Oxy-Med, has orders for seven more this year, and therapies used by professional teams invariably spread to the rest of us. "I expect *hyperbaric* therapy to be standard treatment for injuries by the year 2000," says Douglas Clement, the Canucks' physician.

Such locker-room buzz aside, Temple's Moyer says there's a strong scientific rationale behind *hyperbaric* therapy. "Injuries need oxygen to heal. But usually not enough oxygen gets delivered to the damaged area because swelling compresses the blood supply. By sending more oxygen to the injured area, there's a good chance that recovery will be faster."

At least in theory, here's what happens: At higher atmospheric pressure, extra oxygen is forced into the capillaries lining the lungs and into the bloodstream. Studies show that someone in the chamber has up to 15 times the usual amount of oxygen in his blood. What's more, says Alfred Bore, chief of cardiology at Temple University Hospital, all that oxygen constricts capillaries, reducing blood pressure in the swollen area. Built-up fluid then drains away.

Researchers at Temple and the University of British Columbia are now conducting controlled studies to see if the theory is right. They are running dozens of injured athletes through a chamber--in half the cases, they don't turn it on--and comparing recovery time. The Canucks' Clement, one of the Canadian researchers, will say only that his study shows "a trend toward a faster rate of return" for athletes

treated in the chamber.

But athletes, trainers, and Oxy-Med aren't waiting around to see how big or small the trend is, which is why some think they're jumping the gun. "People are leaping right over the question of whether it really works or not," Bove says. "So far, there's no clinical evidence that proves pressurized oxygen helps heart attack patients, AIDS sufferers, or people with athletic injuries."

Gabe Mirkin, the sports medicine author, believes the therapy is "bunk." He doesn't think extra oxygen in the blood actually gets to an injury. Why? Because only the blood's messenger cells, hemoglobin, can actually deliver oxygen to tissue, and, he says, hemoglobin is already at 98 percent carrying capacity for oxygen molecules. Instead of mucking around in useless therapies, says Mirkin, injured athletes should rely on the time-proven protocol called RICE: rest, ice, compression, and elevation.

Even those who favor *hyperbaric* therapy agree with Mirkin about RICE. Consistently, studies have shown that RICE cuts swelling, letting more blood get to an injury. "There's nothing like it," says Temple's director of physical therapy, Jeff Ryan, who has treated thousands of injuries. "It just works."

It's also practical, says orthopedist Paul Marchetto, who's in charge of Temple's study. "*Hyperbaric* therapy requires three treatments at 60 to 90 minutes a shot and won't be covered by insurance," he says. "Right now, for most people it's not going to make sense."

But Marchetto knows human nature, and hints that people will flock to chambers even if scientists don't. "When it works for one person, others are going to try it. If you believe it might make a difference in getting you to your alumni 10K race or big tennis tournament, you'll consider it--even if it is a placebo."

Christine McGeough, for one, is already telling friends that *hyperbaric* medicine works. "I saw and felt a difference in my ankle," she says. "It wasn't in my head."

And if a legitimate study showed *hyperbaric* therapy to be hardly worth the trouble? Would she still use it the next time she was injured?

"You bet," she says.

By Bruce G. Kelly