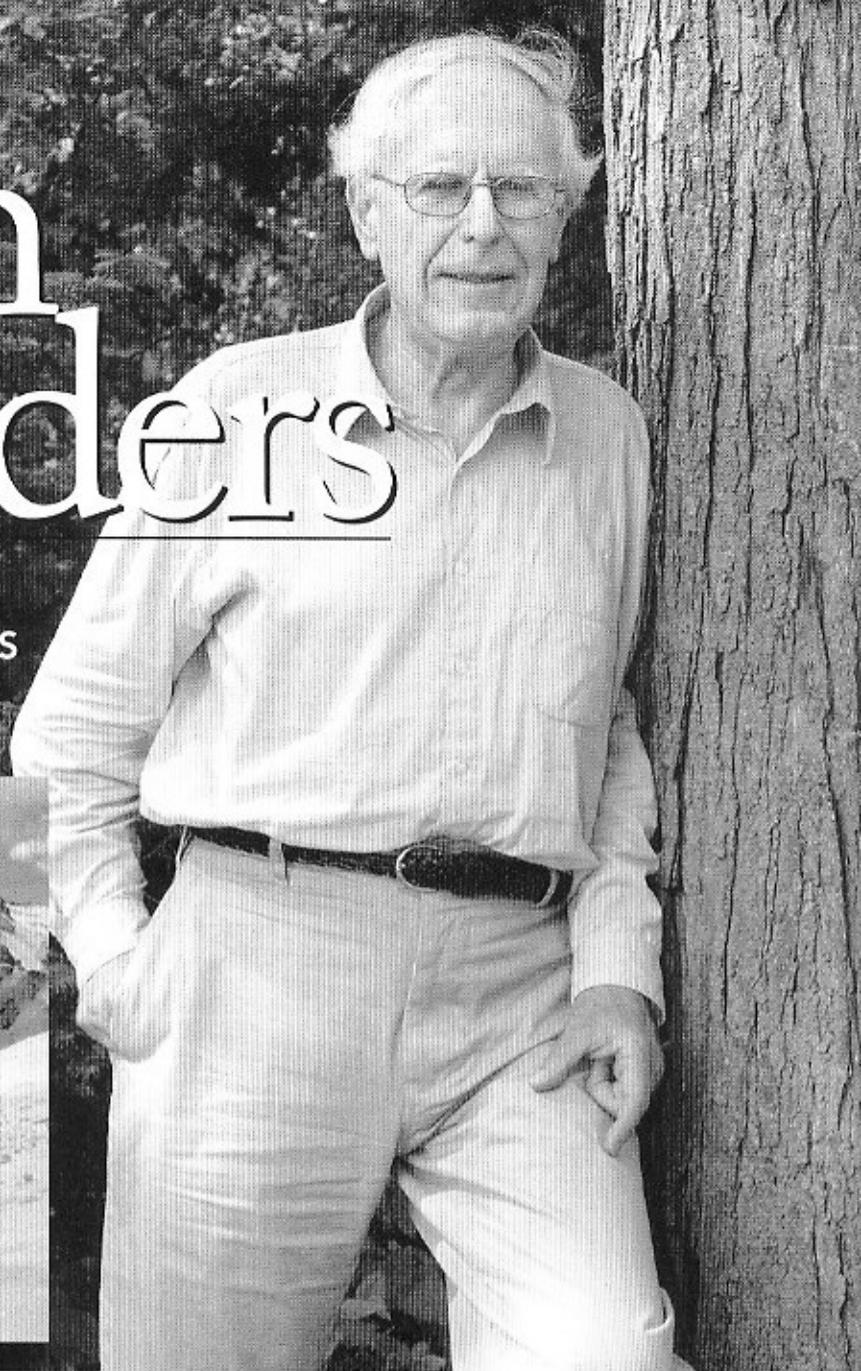


# Tough Shoulders

A TORN ROTATOR CUFF DIDN'T KEEP THIS SKIER OFF THE SLOPES FOR LONG



Zdenek P. Bazant, PhD, has been an expert downhill skier since his childhood in Czechoslovakia. Each year, the 65-year-old engineer and former part-time ski instructor and his wife Iva Bazant, MD, make trips to the Alps and the Rocky Mountains to conquer double black diamond ski runs.

Dr. Bazant is an internationally renowned engineer who has published six books, hundreds of articles, and received four honorary doctorates for his groundbreaking discoveries in solid mechanics. He is the McCormick School Professor and Walter P. Murphy Professor of Material Sciences and Professional Engineering at Northwestern University. He is a member of the National Academy of Engineering and of the National Academy of Sciences. His work has been the basis for changes in building codes around the globe.

Dr. Bazant's skiing career, however, hit a snag on a mogul slope one crisp morning in Breckenridge, Colorado in April 2002. A patch of slushy snow had frozen into hard ice, causing him to tumble forward and slam his elbow into the mogul, resulting in a familiar, excruciating pain in his left shoulder. Upon his return home to Evanston, Dr. Bazant confirmed his suspicions – he had suffered a torn rotator cuff.

Six years earlier, the Prague native had suffered the same injury in his right shoulder.

"I knew it was the same injury," said Dr. Bazant. "I was in pain but wanted to wait and see if time would improve the condition."

After the first injury seven years ago, Dr. Bazant underwent a conventional surgical rotator cuff repair performed by a respected surgeon. In the conventional

procedure, the surgeon must access the rotator cuff by dissecting muscle. Because of the extensive dissection, his recovery was slow and extremely painful.

After his recent skiing accident, Dr. Bazant was referred to Steven Levin, MD, an orthopaedic surgeon who specializes in sports injuries. Dr. Levin, an Assistant Professor of Orthopaedic Surgery at Northwestern University's Feinberg School of Medicine, offered Dr. Bazant an alternate approach to conventional surgery – arthroscopic rotator cuff repair. This minimally-invasive technique has grown fairly common in recent years in many kinds of joint surgeries, but is still rare in repairing torn rotator cuffs because of the technical skills the procedure requires.

Unlike the conventional surgery, arthroscopy is usually an outpatient procedure. The surgeon uses three small incisions – one to insert a lighted arthroscope with a small TV camera, one to expand the joint with fluid and one to insert an instrument to anchor the torn tendon together with a device that eventually dissolves.

"In most cases, arthroscopy is preferable over the conventional method because there is minimal violation of tissue," said Dr. Levin, who earlier in his career worked with the Buffalo Bills. "The patient can go home the same day and can begin therapy to build back strength in just a few weeks."

Dr. Bazant had the surgery last September at Evanston Hospital. He started physical therapy four weeks later.

"By December I could swim the crawl stroke. By the end of January I could do it with no pain at all," said Dr.

## About Rotator Cuff Repairs

**The traditional method of rotator cuff repair surgery can be very painful for patients, primarily because a surgeon must make a significant incision and retract the deltoid muscle to access and repair the injured area.**

Advances in technique and equipment have led two alternatives to the conventional method: a "mini-open" repair, in which an arthroscope is used in conjunction with deltoid muscle retraction; and an entirely arthroscopic procedure in which the whole procedure is performed through small incisions.

Both alternative procedures are performed on an outpatient basis and require about the same rehabilitation period, said Gregory H. Portland, MD, a Clinical Instructor in Orthopaedic Surgery at the Feinberg School of Medicine.

"Patients generally feel less pain after the all-arthroscopic procedure because there isn't that deltoid muscle retraction," said Dr. Portland. "Still, for extremely severe rotator cuff tears, the conventional surgery is sometimes the best option."

But there can be a down side to a less painful recovery period.

"People who have had arthroscopy tend to feel better earlier in their recovery, but healing does take time," he said. "We find that occasionally they're tempted to push the envelope a little too soon."

Bazant. "But the doctor told me I should not ski until the middle of March." So, on March 15, Dr. Bazant headed to the top of a ski run in Obertauern, Austria, and resumed the sport he loves most.

"Skiing is a thrilling sport; the scenery is beautiful," said Dr. Bazant, who in 1959 became a patent-holder in Czechoslovakia for a safety ski binding he invented. He published the first ever scientific article on the theory of safety ski bindings in a Czech magazine a year later.

While Dr. Bazant is known more for his research in fracture mechanics and structural stability than for his skiing, he recently returned from the slopes of Mount Whistler, British Columbia. He plans to head back to the Alps – and Breckenridge – this winter. ■

U.S. News

**Best  
Hospitals**

Evanston Northwestern Healthcare's orthopaedics capabilities helped earn the organization a position among "America's Best Hospitals" in the July 28 issue of *U.S. News and World Report*. Orthopaedics moved up in the rankings to 43 this year from 50 in 2002; Neurosciences, ranked 48 in 2001, moved up to 29 this year. New to the rankings was hormonal disorders, listed at 33. Investigators for the magazine examined 6,003 hospitals throughout the United States.