

## *The Picture of Success: Dr. Isador Lieberman*

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## **The Picture of Success: Dr. Isador Lieberman**

By Elizabeth Hofheinz, MEd, MPH

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If you're ever flying to a conference with Dr. Isador "Izzy" Lieberman and there's an emergency, he'll know how to get you off the plane. That's because this renowned orthopedic surgeon was once a flight attendant. Dr. Lieberman, now a physician at The Cleveland Clinic in Ohio, looks back on his early years: "I was born in Toronto to dedicated, hard-working parents. My father was a carpenter, then an owner of clothing stores, while my mom was a seamstress. Until I began medical school, I spent most of my young adult life working in the family store alongside my dad. My parents' most valuable lesson was that I should be resourceful. Time and again I saw them take a minimum of materials and turn them into something useful. That has flavored my attitude on life, such that I approach things with an attitude of, 'Take what you have and make it better.'"

And the time spent handing out pillows and blankets? Says Dr. Lieberman, "Through both my university years and part of medical school I worked as a flight attendant for Air Canada in order to supplement my income. It was quite a fun job that allowed me to see the world and learn how to interact successfully with a variety of people. Whether dealing with the public on board

an airplane or seeing patients in my office, it's all about expectations. You have to try to anticipate what customers/clients/patients expect and do your best to meet these expectations or explain why that's not possible."

From his first-grade project on surgical instruments to his work on kyphoplasty, Dr. Lieberman has always showed an interest in the medical world. "My mother used to love pulling out the little manuscript I wrote on surgical instruments in order to show the connection between my early and later lives. Once I headed for the University of Toronto Medical School in 1982, my longstanding interests were taking shape. I thoroughly enjoyed medical school and would return in a heartbeat if it only paid. A group of six of us students developed a close bond and still keep in touch to this day. Going through medical school taught me that surgery was definitely the right career path for me. I have always gotten a 'charge' out of the technical aspect, as well as seeing a problem and trying to sort it out."

But one can operate on many things...how to choose? "Like many students," says Dr. Lieberman, "I had to work my way through several specialties before I found my professional home. When I did trauma surgery in Toronto, I found it to be quite an adrenaline rush. Despite that, however, I really waffled and continued on to try eye surgery as well as cardiac and vascular surgery. Maybe it goes back to my first-grade leanings, but I recall that during my internship I was the most impressed with orthopedics because of the tools involved. I spent an entire year as a surgical intern, which really affirmed that orthopedics was for me. I fell in love with the mechanical nature of orthopedics and the fact that it is so diverse. You must be meticulous about physiology and biomechanics and interact well with human beings. Of all the medical specialties few are like that. Radiology is technical, but you don't interact with patients. A psychiatrist interacts with patients, but there is no technical component to the field. Orthopedics has it all; you can do a different operation every day of the year."

Unlike medical school, even if they offered him a generous salary to return to residency, he probably wouldn't accept. Dr. Lieberman: "I stayed on at the University of Toronto for my residency. While it toughened me up, it's not something I would want to repeat, as my first two years were particularly difficult. It was my first real exposure to, shall we say, some people's surgical egos. Low on the totem pole—and made to feel it—I pushed ahead with a grinding schedule with no work-hour or caseload restrictions. To a certain extent this hazing has justification. While the toughness it instilled in me has been useful in certain circumstances, the experience also made me realize that I

wanted to do things a bit differently when I had the opportunity. Now that I have residents and fellows, I ask them, 'What do you think I do for a living?' Their response is something like, 'Surgeon, doctor.' I say, 'No, I am a diamond maker.' Of course, I get the 'deer in the headlights' look. My response is, 'How does nature make a diamond? It takes a lump of coal, applies heat and pressure over time, and turns it into a diamond. You're a lump of coal and I'm applying the heat and pressure.' My goal is to challenge them. Anyone can be trained to operate, but you have to learn how to think. When a surgeon is faced with a problem and needs to sort it out, he or she needs to be able to think through and define the problem, derive concrete solutions and execute them. I try to always challenge the residents and fellows, and expect them to challenge me back. I want them to understand the privileged position they are in: people are entrusting them with their lives and they need to rise to the challenge."

So who was Dr. Lieberman's diamond maker? "During my senior year in residency I was able to mature towards the surgeon I am now. One person who helped with that process was Dr. John Kostuik, a brilliant, no-nonsense surgeon. I was so impressed by the gravity of the surgeries he would take on that it tipped me over into spine surgery. There was no sense of hesitation in him—he would operate on anything from the base of the skull to the great toe and anything else in between. Another influence on me was Dr. John Graham, a cigar-smoking, unsung orthopedic hero. I recall a kid coming in from a bad car accident with the most unbelievable fractures. Without blinking an eye, John operated, and the next X-ray showed a perfect anatomical reconstruction. To a certain extent I patterned myself after him as far as surgical skills and decision making."

Continues Dr. Lieberman, "In 1993 I completed a fellowship at Toronto Hospital under the guidance of Dr. Tom Wright, a gentle giant who gave me the leeway I needed to evolve as a spine and trauma fellow. Following that, Dr. Kostuik organized my clinical spine fellowship at Queen's Medical Centre in the U.K. with Dr. John Webb. Another no-nonsense surgeon, 'Webbie' was also dignified and charismatic. He was supremely innovative and technically superb in a high-volume center. But don't try to match wits with him because you'd lose."

Dr. Lieberman then returned to his roots at Toronto Hospital, where he remained until 1997. "I gained a lot of experience as a trauma and spine surgeon during these years. In 1997, the opportunity arose to join The Cleveland Clinic, something for which I am eternally grateful. Being part of this remarkable institution and having fantastic colleagues has been a professional dream come true. We have more patients than we know what to do with, abundant clinical resources, and spectacular ancillary services including a prototype lab that is on par with those at any major manufacturer. There are six machinists who can take metal and create the most functional orthopedic implant a patient could ever need. We have an innovations department with a team of patent attorneys and a commercialization committee, both of which have the goal of advancing bench-to bedside research. The Clinic has relationships with investors, venture capitalists, and major medical device manufacturers and has set the standard for a collaborative, open environment. Any one of the 1,700 doctors on staff can bring his or her work to the innovation department."

Dr. Lieberman's daily clinical work has led him into the realm of industry. Fortunately, he has an M.B.A. to light the way. "Over the last eight years I have devoted much of my clinical and research work to the areas of vertebral augmentation, kyphoplasty, and vertebroplasty. These are really the hallmarks of my career. I used a programmatic approach, taking clinical experience along with basic science and development work and putting it all together. Along with that, in 2002 my colleagues Ed Benzel and Raymond Ross and I got involved with AxioMed Spine, a company focused on lumbar disc replacement. We are currently doing a pilot study in England, and next year we will undertake the pivotal trial in the U.S. We feel confident that from a physiologic and functional standpoint our design meets the challenges posed by the lumbar spine. Another exciting corporate adventure is actually a Cleveland Clinic spin-off named Merlot OrthopediX. This company supports a suite of patents that relates to a unique bone anchorage device, something we've developed over the last 10 years. We have already done the biomechanical, clinical, and materials work. Once clinicians see this device they realize that it's a completely new concept. Until now a screw has been a screw, but this is an actual anchor."

To stay sharp, Dr. Lieberman maintains a certain attitude as he goes through his day. "As soon as you think something is simple, you're in trouble. In my practice, every day is different. I see a lot of complex spine deformities, as well as tumors. Nothing is simple. That goes for my administrative work too. I serve on The Clinic's board of governors and the conflict-of-interest committee, and I am Director of the Center for Advanced Skills Training. These efforts, as well as my daily practice, have led me to become concerned about the ways that medicine has changed over the last 10 to 15 years. I have witnessed doctors passively absolve their responsibility for the control of medicine and supervision of patient care to non-medical people. That's just wrong. We are the leaders of the healthcare team and have to be at the table with government, insurers, hospital administrators, associations, and scientific organizations—for our patients, and for ourselves. If not, we're not going to be any more than technicians. We will be punching a card and someone

will be telling us what to do. I wasn't there, but I don't think this is what Hippocrates had in mind."

Also serious about his oath as a father, Dr. Lieberman beams when speaking about his family. "My wife and I have three absolutely spectacular kids, all accomplished in their own right. My older daughter is a high school teacher, my son is a cartoon animator in California, and my youngest daughter is in her second year at Syracuse University and is yet undecided on a career. My wife, a teacher, is exceptionally supportive of my work, including my charity work. Every year I travel to Uganda with Health Volunteers Overseas and the Scoliosis Research Society Global Outreach Program. This work reaffirms why I am a doctor, as it involves using the basics of medicine to take care of the less fortunate. I recall one child I treated in Uganda whose family offered me a chicken. How humbling—that was their most prized possession and they were offering it to me. I encourage others to get involved with volunteering overseas...your life will never be the same."

Dr. Isador Lieberman...making diamonds and passing them onto the world.

For more information on Health Volunteers Overseas and the Scoliosis Research Society Global Outreach Program, please visit: [www.hvousa.org](http://www.hvousa.org) and <http://www.srs.org/outreach/>.

For more information about the Uganda Spine Surgery Mission, please visit: <http://www.firstgiving.com/UgandaSpineSurgMission>.