
LEGENDS IN UROLOGY

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I grew up in Montreal, Quebec, Canada, the third child of loving parents whose education ended with high school. My father and his brothers owned a women's clothing manufacturing business, but he never pressured his children to consider taking over. I had the luxury of attending summer camp in Vermont, where I was eventually recruited to attend and play NCAA Division I college ice hockey for four years at Brown University. Since the expected route for me was to attend McGill University like my older brother and all my male cousins, this was the first time I truly was paving my own path.

At Brown I majored in electrical engineering, but my honor's thesis was in biomedical engineering (that major wasn't yet available). My advisor explained that if I pursued biomedical engineering as an engineer, I would always be serving a physician, but if I went to medical school, I would be the one in charge. Then my older brother, a surgical resident at the Royal Victoria Hospital in Montreal, convinced me that medical school was my best option. My girlfriend, now my wife of almost 50 years, who I first met in the cafeteria at Brown, laughs that I left for spring break as an engineer and came back as a pre-med student. How prescient this was all to be.

I moved back home to my parents' house while in medical school at McGill, with Sue relocating to Montreal, until we got married after third year. I thought I wanted to go into gynecology, however my father-in-law, a biochemistry professor at Boston University School of Medicine (BUSM), was not able to arrange an externship in gynecology but did so in urology during my fourth year of medical school. After that experience, I remember the excitement of receiving a formal invitation to be a urology resident at BUSM under Carl Olsson.

Two weeks into my residency, my son Bryan was born prematurely, a surviving twin. Traumatic for a couple living a normal life, I was on year one, day 17 of my urology residency. It was a Friday, and I was first call that weekend. The late Dr. Brewer Auld was my chief. He had 3 children and had been a nephrologist for years in Nova Scotia when he decided to do a residency in urology. Brewer looked at me and told me that he would take call—that I should stay in the hospital with my wife and son. I have never forgotten Brewer, and that was a lesson in compassion that I have tried to pass down.

After my residency Dr. Olsson left and Robert J. Krane was named the new chair of urology at BUSM, and my life changed. Bob shared a passion for urologic research and became my mentor, changing both the direction of my life and, in truth, the direction of sexual medicine. During my fellowship in urodynamics—I was always fascinated by water flow—Bob offered me a faculty position and said, "Irwin, you are going to become the world's expert in vasculogenic impotence." I essentially responded sure, but what is that? Bob arranged for Vaclav Michal, a microvascular surgeon from Prague, Czechoslovakia who had developed revascularization surgery for erectile dysfunction, to train me on that technique, and that was probably the beginning of my reputation as a world's expert in erectile dysfunction.

**Medicinae Doctorem et Chirurgiae Magistrum (translated: Doctor of Medicine, Master of Surgery)

If you want to trace the serendipity in my life, it was the opportunity to work under Bob Krane who always made sure I was protected—that I could focus all of my patient care and research on sexual dysfunction, that allowed the opportunities to occur and my pioneering work in the field to happen. Sue's father, Herbert Wotiz, mentored me on how to write an NIH grant, specifically NIDDK, which earned him a dual appointment in urology, and me a prestigious three-year NIDDK "Career Investigator Research Award". When Herb retired from BUSM I inherited his research lab his last graduate students. Abdulmaged Traish and Noel Kim have been my colleagues both then in the lab and more recently working on new projects in women's sexual health. Today my sons are carrying on this tradition: Andrew as an associate professor of molecular biology and urology at UCLA performing innovative prostate cancer research, and Bryan as a pediatric interventional cardiologist at Pittsburgh Medical Center where he is director of the pediatric cardiac catheter lab, performing clinical research and developing new techniques to save lives. And there is a long list of fellows that I have trained over the years who have served as department chairs, journal editors and leaders in various societies.

In 1983, I was preparing to present at the Urodynamics Society during the AUA meeting in Las Vegas. Next to me in the men's room, just before the meeting started, was an older gentleman in a jogging suit. It was only a few minutes later that this man walked on stage to present....Giles Brindley showing off the results of a pharmacologic erection. He had self-injected in the bathroom in the stall next to me. Having to speak after he walked around the audience offering attendees an opportunity to feel his erect penis was a "hard" act to follow. But the following week Bob and I started to offer intracavernosal injections to our patients.

I had been fascinated with what made an erection work, and focused basic science research in that direction. I also utilized my biomedical engineering background and worked with a university engineer, determining for the first time that a penis needed 1kg of axial rigidity to penetrate the average vagina. The fact that an erection could be generated pharmacologically with an agent that promoted smooth muscle relaxation set aside the misconception that erection took place from arterial polsters. We were producing much research that helped drive the field of erectile dysfunction forward. My lab had 25 continuous years of NIH funding, during which time we helped identify nitric oxide as the agent for smooth muscle relaxation, the concept upon which PDE5 inhibitors is predicated.

With the FDA approval of sildenafil in 1998, my professional life totally changed, but not the way you may think. As first author of the landmark manuscript on sildenafil published in the *New England Journal of Medicine*, my office began receiving multiple phone calls, from women! "You have a pill to treat ED in men—what are you going to do for me?" Six months after referring these women to the gynecology department, the chair reached out to tell me he had no idea what to do, but he was sure I could help these women with sexual dysfunction. I had become a full professor of urology at 40. Now at 48 I was named professor of gynecology as well. I recognized that I really needed to learn more about how women functioned sexually (besides querying my wife) and worked with our continuing education department to invite experts in various aspects of women's sexual function and dysfunction to come together to teach a course. This was an opportunity to brainstorm and truly develop an understanding of female sexual dysfunction.

Within 3 years the course I had started was converted into a society with by-laws, a board of directors and annual meetings. Today the International Society for the Study of Women's Sexual Health (ISSWSH) holds an annual meeting with invited speakers and abstract presentations, conducts courses, offers online webinars, and has a vibrant list-serve. ISSWSH is a society predicated on the fact that we need experts in all disciplines, not just urology, to truly understand and manage various sexual dysfunctions in women, and that all members have equal import, this wasn't a society just for physicians. As a society ISSWSH is considered the leading authority on women's sexual health, and I am proud not only of having founded this organization, but of having spear-headed some of its most influential projects, most recently a process of care for persistent genital arousal disorder / genito-pelvic dysesthesia.

Just like ISSWSH, I believe that sexual medicine healthcare requires a biopsychosocial team. At 55 I retired from BUSM and spent two years looking for my next place in life. During that time, the International Society for Sexual Medicine (ISSM) ended its contract with Nature to publish *International Journal of Impotence Research* (IJIR), and initiated a new journal owned by ISSM. Having been editor of IJIR, ISSM installed me as editor-in-chief of the new

publication, *The Journal of Sexual Medicine*. One of my most proud accomplishments was launching this journal successfully, getting it listed on PubMed and receiving its first impact factor.

In 2007 Sue and I relocated from Boston to San Diego where we opened San Diego Sexual Medicine, our “dream” biopsychosocial sexual medicine practice including a sex therapist and physical therapist. As a private practitioner I am in control, but as a former academician well known in the field, I am still respected as a researcher, advisor and consultant. I have published over 350 peer reviewed manuscripts and edited 7 books in sexual medicine. Sue took responsibility for the clinical research program, her first foray into research other than benchwork, and over the years we have completed both sponsored research and our own studies, submitting as many abstracts to conferences as most urology departments. I continue to publish manuscripts and train fellows every year. I do know none of this would have happened without my wife Sue—in San Diego or in Boston. She says I dream with my head in the clouds, and she has her feet on the ground and makes it happen. We balance each other’s strengths and weaknesses—from my fear of heights to her not going into cold water—but mostly we just bounce ideas off each other. We write together and exercise together. And we work together since moving to San Diego. These days our daughter Lauren works in a similar fashion with her husband at their company Keeks Creative.

Ironically people had looked at me with sympathy at the first AUA after I left BUSM, but with envy within two years of my opening my new practice. I was honored to be awarded the Gold Medal by the World Association in Sexual Health for lifetime achievement in 2009, but all I could think was that I wasn’t done—I had more years to go and more discoveries to make. I have since been presented with the ISSWSH Award for Distinguished Service in Women’s Sexual Health in 2012, the SMSNA Lifetime Achievement Award in 2013, the ISSM Lifetime Achievement Award in 2014, and the SUPS Living Legend Award in 2020. Clearly, I am not working every day to win awards, but am rewarded when my patients’ sexual health complaints resolve.

More than 40 years after completing my residency, I am excited to wake up every day, listen to my patients and figure out new methods to diagnose their problems or unique ways to treat them. I think I am most proud of this because it is through listening carefully to my patients that I come up with new concepts, run them by colleagues, and ultimately develop new management strategies for sexual dysfunctions. Why retire when I have this to look forward to? Besides, this year my bride became president of my beloved ISSWSH, the first society president without an advanced degree, and I am so proud to have been part of her journey. I would be a community urologist, probably retired by now, if it weren’t for the support from Sue during those early years. Neither one of us would be where we are without the other.

I think if I were to give advice to a young urologist, I would say to follow your passion. Find what you love, do that and do it well. If you get up each day looking forward to seeing your patients, you’re doing something right. If this makes you happy, you can chalk your life up to being a success. It should never be about the model of car or brand of clothes or size of your house. Find a way for satisfaction outside of work as well—a good exercise regimen is vital to your mental and physical health—and a good partner to come home to and to love. And I can’t end without saying, and good sex. Sue always says I practice what I preach. I hope to continue to do that as long as I am breathing!

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