

JAY DONALD MABREY, MD: a conversation with the editor

Jay Mabrey (*Figure 1*) was born in Lawton, Oklahoma, on December 13, 1954. He spent his early years in Norman, Oklahoma, and moved to Warren, Ohio, when he was 13. He graduated from Cornell University cum laude in biological sciences in 1977 and from Cornell University Medical College in 1981. His 2-year general surgery training and 4-year training in orthopaedic surgery were at Duke University Medical Center in Durham, North Carolina. Dr. Mabrey practiced orthopaedic surgery at the Winn Army Community Hospital in Fort Stewart, Georgia, from 1987 until 1990 and then returned to New York City for a fellowship in biomechanics and total joint surgery at the Hospital for Special Surgery. He then moved to San Antonio, Texas, working initially at the Brooke Army Medical Center before working full-time for the University of Texas Health Science Center at San Antonio. During his tenure in San Antonio, he also served as chief of orthopaedics at the André L. Murphy Veterans Affairs (VA) Medical Center from 1996 to 2002.

In July 2004 Dr. Mabrey moved to Dallas as chief of the Department of Orthopaedics and the George Truett James Orthopaedics Institute of Baylor University Medical Center (BUMC). In recent years he has specialized in hip and joint replacement surgery, and that work has led to numerous publications in peer-reviewed medical journals as well as chapters in various books. A major research interest in addition to hip and knee joint surgery has been analyzing the human gait. He and his wife, Deborah, are the proud parents of two sons, both of whom are in college. BUMC is fortunate in having Jay Mabrey lead the orthopaedics department. Additionally, he is a very nice guy and delightful to be around.

William Clifford Roberts, MD (hereafter, WCR): *Dr. Mabrey, I appreciate your willingness to talk to me and therefore to the readers of BUMC Proceedings. We are in my home on July 27, 2005. To start, could you talk about your early life and your parents?*



Figure 1. Dr. Jay Mabrey during the interview.

Jay Donald Mabrey, MD (hereafter, JDM): I was born on December 13, 1954, in Lawton, Oklahoma, at Fort Sill, where my father was stationed with the artillery. We moved from there to Norman, Oklahoma, where my father completed his graduate studies in biology at the University of Oklahoma (OU). I went to grade school and junior high in Norman. The last house we had there was the Delta Chi house across the street from Owen Field. On game day, when the Sooners played, I parked cars in the front yard. That's how I got money to build the plastic airplane models that later got me interested in engineering and eventually orthopaedics. I never saw an actual OU game. My grandfather often took me to watch their closed football practices, and I saw Bud Wilkerson, the coach. One of my earliest images of sports medicine is Bud Wilkerson's cutting the shoulder pads off of a player who had heat exhaustion. Later, my brother, who also grew up in Norman, "walked on" as a defensive end for OU and played for 2 years under Barry Switzer, who later coached the Dallas Cowboys. My brother now is in real estate in Dallas.

WCR: *How many siblings are there?*

JDM: One brother and one sister, Catherine, who is now in Colorado. I am the oldest. After the seventh grade, I moved to Warren, Ohio. My father was transferred there, and I went to Howland High School (*Figure 2*).

WCR: *Where is Warren, Ohio?*

JDM: In the northeast corner of Ohio next to Youngstown, not far from Pittsburgh. We got plenty of snow during winter.

WCR: *You lived in Warren until you went to college?*

JDM: Yes.

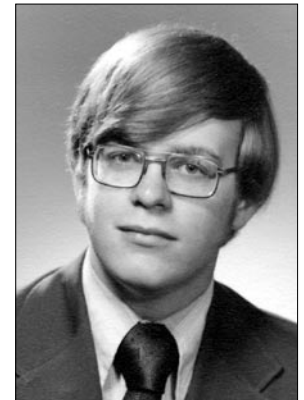


Figure 2. As a high school senior, 1973.

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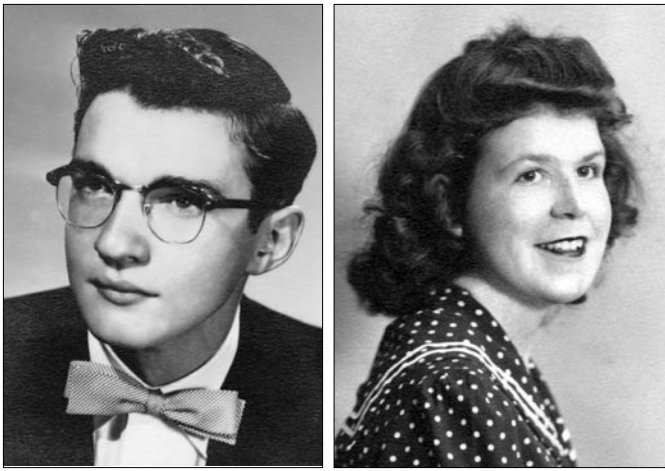


Figure 3. High school photos of father, Joe Donald Mabrey, and mother, Jean Mabrey, in the 1940s.

WCR: *What did your father do?*

JDM: He was a high school science teacher initially (Figure 3). Then he was a salesman for several tire companies. He occasionally mined for gold in Honduras. Later, he returned to Honduras as the local director of the Peace Corps. He lived in Tegucigalpa, the capital of Honduras, for several years.

WCR: *How old was he when he joined the Peace Corps?*

JDM: He was in his late 30s or early 40s. He did a lot of different things.

WCR: *Did the family go to Honduras?*

JDM: No. My parents were already divorced by that time. My mom stayed in the USA. In Honduras, my dad married a nurse, Ione, whom he worked with there.

WCR: *You were primarily raised by your mother?*

JDM: Off and on. I lived with my mom for some time. During high school I was with my dad in Warren. It was after I left for college that he moved to Honduras.

WCR: *How old were you when your parents divorced?*

JDM: Ten.

WCR: *Your sister was 4 or 5?*

JDM: Yes.

WCR: *How did your family survive? Did your mother work?*

JDM: My mother was a nurse anesthetist, one of the first in the USA (Figure 3). She did her training at Barnes Hospital in St. Louis. While doing a PubMed search recently for articles authored by Mabrey, my mother's name came up. She had authored an article in the early 1950s. I went to the medical library and found a copy of the article she had written while she was in nursing school. It had to do with handling the patient with a difficult airway during anesthesia.

WCR: *Are your parents living?*

JDM: No. My mother died in 1995, and my father died in 1983 at age 50 of a dissecting aortic aneurysm. My father returned to the USA (Minnesota) from Honduras, took a government job, and put his second wife, Ione, through medical school. I had just finished medical school when he died suddenly. I put myself through Cornell with an academic scholarship and through medical school with a health profession scholarship from the army.

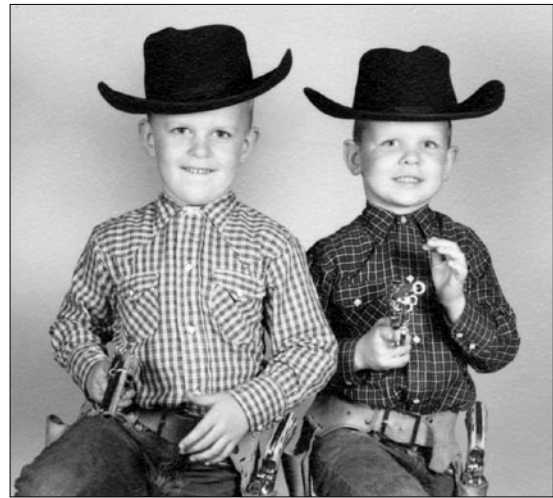


Figure 4. With brother Jim (on right), growing up in Oklahoma.

WCR: *What kind of physician did Ione become?*

JDM: A family practitioner.

WCR: *What was your home like when your parents were together?*

JDM: Both of my parents worked a lot. My brother and I were often left to our own devices (Figure 4). Before we went to grade school, we grew up on a farm outside of Norman so we didn't have other playmates. We found all kinds of ways of getting into trouble and getting lost on the farm. We had the whole place to ourselves. When tornadoes were close by, the whole family would gather in the living room and we kids got under blankets to protect us from flying glass.

WCR: *How many acres did you have?*

JDM: Probably 10 or 15 acres. I'm not sure what my father farmed. We had a few livestock.

WCR: *You moved to Warren at the beginning of eighth grade and lived mainly with your father?*

JDM: Yes. Eventually my mother moved from Oklahoma to Cleveland so she could be closer. She ended up doing anesthesia at one of the VA hospitals in Cleveland.

WCR: *How far is Cleveland from Warren?*

JDM: Less than an hour.

WCR: *You mentioned that you made a lot of plastic models.*

JDM: Mainly airplanes, mostly World War II types. I put together a couple of tanks and aircraft carriers also. They were all over my room.

WCR: *You were working with your hands early on.*

JDM: Yes. I used to build tree forts. This was before the Occupational Safety and Health Administration told you what you could and could not build.

WCR: *How did you handle moving from Oklahoma, with its moderate weather, to Ohio, with its cold weather?*

JDM: I don't miss the cold. As a kid, I thought snow was fun. As an adult I have less tolerance for it. It wasn't much of a problem for me. Actually, the winters in Oklahoma can get pretty cold. When the snow blows across the plains of Oklahoma, it just blows and doesn't stay.

WCR: *How big was Warren, Ohio, when you lived there?*

JDM: About 80,000 to 100,000. It is bigger now.

WCR: *What about Norman, Oklahoma?*

JDM: Norman back then was a small university town, probably about 50,000.

WCR: *What did your father do when you moved to Warren?*

JDM: He was a manager at Pennsylvania Tire. My brother and I worked there after school in the summers. Our job was to stack the tires when they came off of the trucks.

WCR: *How high was the stack?*

JDM: We used to get up to about 15 feet. Some racks we built in the warehouse were 25 feet high. It was quite a job. We would come home black from having stacked tires all day.

WCR: *Initially in Warren it was your father, you, your brother, and your sister?*

JDM: No. My sister stayed with my mother, and eventually my brother did too. My brother went back and forth quite a bit.

WCR: *Just you and your father were there most of the time?*

JDM: Yes. We were almost like bachelors in a way. Eventually, he got a teaching job, but the teaching job was a few miles away so most of the time he wasn't around. I did most of the housecleaning and the cooking.

WCR: *What was your father like?*

JDM: He could be funny at times. He insisted that if you worked on a project, it be your work; he didn't like the idea of copying someone else's work. One time I entered a contest to draw a house. I sketched the house. I was about 9 years old. My father commented that it was nice but I shouldn't have traced it. I had to prove to him that I didn't trace it, that I really drew it out. He finally came around, but I have always had a sense that if I do something it has to be my work. If I use someone else's work, then they get full credit. That is one of the things I like about writing papers. You can give people full credit where it's due. I always make sure that colleagues on a project get recognized appropriately in manuscripts.

WCR: *Did your father leave the tire company when he started teaching again in Warren?*

JDM: Yes.

WCR: *He liked teaching?*

JDM: Yes. He was quite a popular teacher. He taught science, which allowed him to demonstrate experiments in the classroom.

WCR: *What science did he teach?*

JDM: Biology. When he was doing his graduate work at OU, he took a taxidermy course. He trapped animals and brought them back and stuffed them. We trapped bats, skunks, wolves, possums, and ground squirrels. The idea was to dissect them and make them presentable. I guess it was part of getting things ready for a museum. I remember going out early on cold mornings to check the traps. Our house in Norman had these animals scattered about. My father studied bats, and we would go to caves and collect different kinds of bats. He collected some live animals. We had a tarantula, which my mom didn't like much. We had a number of snakes, none poisonous. We had a box snake and a bull snake; the latter have markings similar to a rattler. We had it on the porch in a screened cage. My mother finally figured out that neighbors weren't visiting



Figure 5. Grandfather, James T. Mabrey (far right of first row), in the Oklahoma oil fields, 1929.

her anymore because they would see a snake sitting there and turn around and leave. We had ground squirrels that occasionally escaped from their cages. We also had various guinea pigs and any number of fish tanks. My father usually collected the mammals because those had to be trapped. My brother and I got the reptiles because they were easier to acquire. We had salamanders, particularly a yellow and black one that we kept in a terrarium.

My brother and I collected turtles. Box turtles were nice because they didn't need a lot of water, so we collected those and raced them. Once in a while, we would find a snapping turtle. The snapping turtles were the best; you just had to be careful not to get in front of one. My brother caught one that was almost the size of a garbage can lid, and we kept it in the backyard. It got out, was crossing the road, and was big enough to stop a car. It reared its head as a car came by, and apparently the turtle bit into the car. That was our favorite turtle.

WCR: *Did you ever get bit?*

JDM: I didn't. My brother did when trying to kiss a small snapper. It grabbed onto his lip and wouldn't let go. It is true: they really don't let go. We also found huge horned toads.

WCR: *By the time you got into science classes in high school and college, you were pretty informed about various animals.*

JDM: I loved science. I loved doing the dissections. It was like second nature. I finally got to understand all the scientific names of the animals. We collected these living things without knowing their names. Eventually, I figured out what we were collecting.

WCR: *Did your father take you fishing or hunting?*

JDM: No, but our great uncle and my father's father did.

WCR: *He lived in Oklahoma too?*

JDM: Yes, eventually. My grandfather was born in Maypearl, Texas, located about 20 miles south of Dallas. He was brought up before the Depression. He worked on the oil rigs (Figure 5) and eventually worked for Cities Service.

WCR: *Did your father have siblings?*



Figure 6. With father, Joe Donald Mabrey, and grandparents, Mae and James T. Mabrey.

JDM: No. He was an only child (*Figure 6*).

WCR: *It sounds like you and your father got along quite well.*

JDM: Pretty much so. Our birthdays were also close together. Mine is December 13 and his was December 25. His name was Joseph Donald. My grandmother mentioned that the choices were either Joseph (like Joseph and Mary) or Noel. My grandmother's family came from Tennessee, and she alleged that her family was related to Andrew Jackson.

WCR: *Was alcohol in your home growing up?*

JDM: No.

WCR: *Did your father smoke?*

JDM: Occasionally. Back in the 1950s and 1960s, it seemed like everybody smoked a little bit to be social. He did smoke cigars. I still have a big cigar ashtray that he had given my grandfather with a monogram "M" in the middle of it. We use it now as a candy dish. In Honduras, the cigars were very much like those from Cuba, and my father liked that.

WCR: *Did you ever visit Honduras while your father was there?*

JDM: I did in the late 1970s when I was in medical school. I spent about a week there. We spent a few days in Tegucigalpa and then flew to Roatan, on the east coast of Honduras. It has now become a diver's paradise and is more developed than it was 25 or 30 years ago. From Tegucigalpa to Roatan we flew in a DC-3 over banana plantations and saw much of the greenery of Honduras. During midflight, a gentlemen came out of the cockpit and began serving drinks. We realized he was the pilot who had put the plane on autopilot. We landed in Roatan on a small beach airstrip.

WCR: *It sounds like you were an independent young fellow growing up.*

JDM: I had to be.

WCR: *When you were in Warren, you did all the cooking?*

JDM: My father did some cooking. It was "guy cooking," nothing too fancy. We ate out fairly often also.

WCR: *You must have been a good student all the way through. Did school work come easy for you?*

JDM: Yes. It was always a little bit of a challenge. I kept a 4.0 grade-point average in high school except for one B, and



COLUMBUS BOUND — Howland speech and debate teams will vie for state honors for the second year in a row at Ohio State University as six students qualified in District K competition at Austintown Fitch High School last week. Seated, left to right, are Val Burr, debate; Diane Anderson, speech, and Lisa Stevens, debate; standing from left, are: Jay Mabrey, debate; Jim Tims, speech, and Mike Pernice, debate.

Figure 7. On the state championship debate team, 1973.

that was in driver's education. I think that I had a tendency to take turns too fast for my instructor.

WCR: *Were you an athlete in high school?*

JDM: I threw shot and discus.

WCR: *What was your best throw?*

JDM: I don't remember. I was not the best shot-putter or discus thrower on the team. Most of my extracurricular activities revolved around speech and debate. I was on the debate team and I also did some extemporaneous speaking. We ended up state champions or close to it one year (*Figure 7*).

WCR: *Did you and your father debate topics much?*

JDM: No. I did all of that with my schoolmates.

WCR: *What would be a typical debate topic?*

JDM: One year it had to do with the environment—"Resolve that the federal government eliminate dependence on oil," or "Resolve that the federal government maintain a clean environment." The topics were specific, but the debate branched out to all sorts of areas. The third year was education. Researching the topic gave a broad perspective. As a consequence, my knowledge of education, the environment, and government increased substantially in those 3 years. We collected research notes on 4" x 6" cards and kept them in file drawers. I started out with one file drawer my first year and by the third year had accumulated enough information for three double file drawers, each about 2-feet deep. All three weighed 60 to 70 pounds. The debaters carried their own file drawers to the debates. We didn't have laptops or searchable databases then.

WCR: *How many were on your debate team?*

JDM: Each debate was between two students on each side, but there were 12 to 16 students on our debate team and about 20 or 30 on the speech team. Speech consisted of dramatic



Figure 8. Maternal grandparents, Marie and Louis Kastens, on their arrival to the USA from Germany.



Figure 9. Great-great-uncle Jay Mabrey (top right) and great-grandfather William Joel Mabrey (bottom right).

interpretations, humorous interpretations, and extemporaneous speeches. We all went to the same competition together. I nearly always came back with a trophy.

WCR: *What made debating and public speaking appealing to you?*

JDM: It was the logic of it all. I didn't start out as a great speaker. I never finished the very first speech I gave for the team because I was so nervous. I was close to tears. My debate coach, Dick Ries, came over and said, "You are just going to have to go back and finish your speech. If you don't do this now, then you will never do it." I went back and finished it and I was more relaxed. The first year was a little rough, but I got more confident with time, and the nervousness essentially disappeared. By the time I finished speech and debate as a senior, I was good at making an argument on my feet and speaking in front of a group of people and working without notes if I had to. I would not have ever been able to do that without that kind of training.

WCR: *What was your mother like?*

JDM: She was conservative and focused on making sure everyone in the family was taken care of. She was a great cook. When we were together in Oklahoma, meals were great. When my mother was training in St. Louis, she lived with an Italian family, so she returned with many Italian recipes. Her spaghetti, potato salad, and fried chicken were superb. We had a lot of Jell-O. That was "the" dessert back then. She told me that when I was born she was at work as a nurse in the hospital and basically walked to the obstetrics ward and checked in.

WCR: *She was a strong woman?*

JDM: Yes. She was raised on a farm with my maternal grandparents, who were German immigrants (*Figure 8*). My mother had three or four sisters, all brought up on the farm. My maternal grandfather was a farmer and also worked for John Deere. Most of the toys that came from that side of the family coincidentally were John Deere tractor models. We had a John Deere harvester and a combine. I wish I would have kept those toys. We spent half of the summers with my grandparents on the farm. We ate a lot of corn!

WCR: *Both grandparents on your mother's side and your father's side were alive as you were growing up, and there were some aunts and uncles as well?*

JDM: Yes. I'm named after my great-great-uncle Jay on my father's side (*Figure 9*). He is the one who took my brother and me fishing. He lived in Muskogee, Oklahoma.

WCR: *How did it come about that a young man from Warren, Ohio, got into Cornell University?*

JDM: I ask myself that same question all the time. Ironically, the one B I got was in driver's education, and my driving instructor, Alex Vuchak, was also my guidance counselor. He was a fair, honest individual. When it came time to apply for college, I applied to Ohio State like everybody else in my class. This was back when Woody Hayes was king and the Buckeyes were national champions. It was considered fashionable to go to Ohio State. Mr. Vuchak suggested I consider a smaller college in Ithaca, New York. I had never heard of Cornell University before. He said, "You should really try it because it fits your



Figure 10. Graduation from Cornell University in Ithaca, 1977.

capability.” I said that I would give it a try, and I drove there for an interview.

WCR: *How far is Ithaca from Warren?*

JDM: It was about 8 hours. I went to Cornell to look at the campus, and it was a typical day at Cornell—rainy and cold. I thought the campus, however, was neat. It came down to cost. I already had a scholarship to Ohio State that would cover some of my expenses. Nevertheless, I applied to Cornell and got in and then applied for financial help. The financial aid package that I got from Cornell as an out-of-state resident was better than the one from Ohio State University, despite my being a resident of Ohio. I ended up going to Cornell, and I’ve never regretted it (Figure 10).

WCR: *What did you like so much about Cornell?*

JDM: When it wasn’t raining, it was a beautiful campus. Even when it snowed it was beautiful. The quality of the professors was incredible. I had freedom to pursue any line of study, although I focused on premed early on. It was challenging because everyone else there was a lot smarter than I was, a difference from high school. I picked a variety of classes. I ended up taking a senior-level genetics course as a freshman because I had placed out of the other biology courses that were required. Rather than wait, I thought I would just take genetics, and it was one of the most difficult courses I took. I got an A but not without a lot of effort.

WCR: *You really had to study hard for the first time?*

JDM: For school, yes. I worked hard in debate, but in high school I did not have to exert myself too strenuously. In college, I had to study. I had physical chemistry, organic chemistry, physics, calculus, and quantum physics. I was busy. I tried college-level debate my first semester there but that proved too time consuming.



Figure 11. One of the many concert posters created while at Cornell; it has since become a collector’s item, and a copy (in color) recently sold at auction for \$3400.

WCR: *Did you work while you were attending college?*

JDM: Yes. “Work study” was part of my financial aid package. I did my work study in the laboratory of Howie Howland. I was attracted to his name on the list because my high school was named Howland. I worked in his lab for a year or so and learned how to program in BASIC. I wrote a few computer programs to help him with some of his research. My programs were all on punch tape. This was before any type of personal computer. We used a PDP-11 machine, which was special because it had more memory than you could imagine—16K! That was considered more than you would ever need for any computer.

WCR: *Was this your first exposure to computers?*

JDM: Pretty much. I hadn’t had much exposure in high school. Some friends in high school were taking courses at one of the universities, but the high school itself didn’t have anything. I kept up my programming skills. I worked in the laboratory for the first year and ended up becoming a resident advisor, one who supervised younger students in the dorms, for the last 2 years I was at Cornell. I also became interested in graphic design (Figure 11).

WCR: *What percentage of your total expenses were covered by financial aid?*

JDM: At least half. The tuition at Cornell in 1973 was \$3500 for the year. My younger son applied to Cornell, and the tuition now is \$40,000 a year.

WCR: *How big was Cornell University when you were there?*

JDM: About 4000 students. The College of Arts and Sciences had only about 400 students.

WCR: *How big was your high school?*

JDM: Nearly 900 students.

WCR: *How many were in your graduating class?*

JDM: About 200.

WCR: *You mentioned that you became a premed student very early in your college career. How did you get interested in medicine?*

JDM: I can't say that I was actually interested in medicine, but I was focusing on something to do with biological sciences. I had not decided to go to medical school at that time. It seemed to me that if I stayed on that track I'd have a lot of options. Even towards the beginning of my junior year I was still entertaining the thought of going to graduate school and doing basic research. As I did more labs, I realized that all the test-tube experiments weren't as interesting to me as I thought they would be. I was more interested in working with my hands, physical things, as opposed to thinking too hard. I started focusing more on premed about the beginning of my junior year.

WCR: *Has anyone in your family been a physician?*

JDM: No.

WCR: *You were the first to consider medicine?*

JDM: Yes. My mother told me stories of her experiences with anesthesia, but that didn't inspire me to go into medicine.

WCR: *Were there any teachers in grade school, junior high, high school, or college who had a major impact on you?*

JDM: Mr. Reed from grade school did. He was a fair but strict teacher. He had a paddle (this was back when corporal punishment was legal) that he referred to as the "fiji," which was the fraternity he belonged to in college. The reason I remember that is there was a famous scene in the movie *Animal House* where Kevin Bacon took a couple of whacks with a big paddle. I studied that paddle and thought, "That's just what Mr. Reed's paddle looked like." He didn't use it very often, but when he did it was probably deserved. In high school, Dick Ries, my debate coach, and Alex Vuchak, my guidance counselor and driver's ed instructor, had significant influence. In college I had Walter La Feber, who taught contemporary American history. I thought his style was really impressive. Most of my science classes were in large lecture halls, so it was hard to be inspired by someone who was teaching 300 students all at once. My advisor in college was Dr. Wilson, a biochemist. I did a lot of my senior lab work in his laboratory. He had a bit of a sibling rivalry with his brother, a physicist, who had won a Nobel Prize.

WCR: *How did you get back and forth from Warren, Ohio, to Ithaca, New York?*

JDM: My dad drove me to college the first couple of years, or I would find a ride with a fellow student.

WCR: *Your parents must have been proud of you for getting into Cornell.*

JDM: Yes, they were.

WCR: *Did Cornell have fraternities?*

JDM: Yes. I pledged but ended up not going into a fraternity. Instead, I was a resident advisor in the dorms.

WCR: *What did you do in the summer when you were in college?*

JDM: Most of the summers I went back to Warren, Ohio, and worked at Mosquito Lake State Park as a lifeguard. When

it was raining I worked with the ground crew cleaning the park, chopping down trees, and doing other manual labor. My father's summer job when he was teaching was working as a park ranger at the same state park. That was my connection there.

WCR: *You graduated from Cornell cum laude. What does that mean?*

JDM: I had done an honors project in biochemistry looking at sugar pathways in *E. coli*.

WCR: *Where did you stand in your class when you graduated?*

JDM: I had at least a B+ or A- average. I was in the top 20%.

WCR: *Did you apply to a number of medical schools?*

JDM: Yes. I had learned my lesson. I wasn't going to apply to only one or two. I knew it was competitive. I applied to most of the medical schools in Ohio because I was still officially a resident of that state. I applied to both schools in Washington, DC (George Washington and Georgetown) and, of course, I applied to Cornell. I got into Cincinnati Medical College, George Washington, and Cornell. Those acceptances came all about the same time. When I realized that most of my classmates from Cornell University were going to Cornell Medical School, it seemed logical that that would be a good place for me. I started looking into financial options and elected to go with a military scholarship. I applied to all three branches and was accepted by the army and air force. I didn't get accepted by the navy because they had enough physicians already. I went to the army because I figured they had more hospitals so I might learn more and have more opportunities.

WCR: *You entered Cornell Medical School in 1977?*

JDM: Yes.

WCR: *The army paid for all of your expenses?*

JDM: The army paid for my tuition and books and gave me \$500 a month, which back then covered all of my living expenses. In the summers, I had to go on active duty for 6 weeks. The first two summers I was able to defer that, and I ended up working in the laboratory at the Hospital for Special Surgery. The first active duty was basic training and then I was selected for a special program. Instead of going to the regular officer candidate school, they sent a small group of us to Fort Bragg, North Carolina, where we were trained by the Special Forces. Sergeant Bicker taught me how to be an officer. He was very kind, and his suggestions came in the form of "Lieutenant, if I were an officer, I might think of doing it this way, sir." The guy was old enough to be my father. He had served three tours in Vietnam. He didn't take any flack. That summer I got down to a 30-inch waist and all muscle.

I made one parachute jump. My one jump was out of a helicopter at about 3500 feet. We had to pack our own parachutes—this was part of the Special Forces jump school—and they would make sure it was done correctly. No one really explained that you weren't supposed to keep turning the shroud lines the same way as you laced them back and forth. Apparently, I kept putting the same twist in it every time I folded it back, and that ended up wrapping the shroud lines around each other so that when my parachute opened at 3500 feet, I had about

10 feet of parachute and the rest of it was long cord. By kicking my right leg out I started to spin, and I was able to unwind the parachute with another 2000 feet to go. I had a chance to enjoy the ride a bit. It was a static line jump (no free fall).

WCR: *How big was Ithaca when you were there?*

JDM: There were more people at the university than there were in Ithaca. It was probably 30,000 to 40,000 people.

WCR: *So you had gone from Norman (relatively small), Warren (relatively small), and Ithaca (relatively small) to New York City. How did the city hit you? Had you gone to New York City when you lived in Ithaca?*

JDM: Actually no.

WCR: *Medical school was your first time in New York City?*

JDM: Yes.

WCR: *How did it hit you?*

JDM: I was impressed by the fact that everything was concrete. On Fifth Avenue, you really had to crane your neck to see the sky. You could see the World Trade Center towers from just about anywhere in the city. I fell in love with Central Park, where I often ran.

WCR: *Did you run a lot?*

JDM: Yes. I really enjoyed running. I ran throughout my residency and 2 or 3 years after I finished. When I injured my left knee I had to stop.

WCR: *When did you start?*

JDM: I started running in high school

WCR: *How much did you run a week?*

JDM: Ten to 15 miles a week.

WCR: *You ran for 15 years?*

JDM: Off and on. Eventually I ran in a lot of 5K and 10K races. I never ran a marathon. When I injured my knee, I twisted it and tore my meniscus. It locked my knee into place, and I saw stars. I never quite understood that phrase until I hurt my knee. It's where you almost pass out but not quite. I had been at Fort Stewart for a little less than a year and I was working with two other orthopaedic surgeons. I called them up and said, "I've torn my meniscus. It needs to be fixed because my knee is locked." I drove myself into work the next day, had myself admitted, and did my own history and physical, and my two partners scoped my knee and found that it was a discoid meniscus because it had flipped up and had completely obscured their field of view. They said they couldn't see a thing, so they ended up trimming out the entire meniscus. I did go back to running afterwards for a while in the army, but after a few years my knee would get sore.

WCR: *How did medical school at Cornell in Manhattan strike you?*

JDM: If I felt like I wasn't the smartest person in the world at Cornell University, I felt like I was close to being the dumbest person in the world at Cornell Medical School. That was a tremendous amount of work, and all my time was devoted to clinical or laboratory work. The research I did was at the Hospital for Special Surgery. The very first day of medical school I decided to go into orthopaedic surgery. We were on a tour of the Hospital for Special Surgery (one of the top four orthopaedic training programs in the world) and visited the cast

room, which was huge. Working there was Dr. Alan Inglis, a well-known orthopaedic surgeon, who was putting a long leg cast on a woman. (This was before the widespread use of intramedullary nails.) I watched him mold the cast and saw how smooth he made the plaster. I thought, "This is orthopaedics? This is cool! This is something that I want to do." In another portion of the room was a spine surgeon who was putting a Risser cast on a patient with scoliosis. I thought, "The leg cast was cool, but this is even better! This is a body cast." I was immediately attracted to orthopaedics because it allowed me to work with my hands.

WCR: *That was the first day of medical school?*

JDM: Yes. I hadn't seen an operation yet, I wasn't sure what else they did, but I liked the casts. I thought that if you got paid for doing that, it had to be cool. I wanted to do something in orthopaedics and was directed to the laboratory of Al Burstein, a PhD in biomechanics and one of the most famous orthopaedic researchers. He had pretty much invented orthopaedic biomechanics. He directed me to Jim Otis, PhD, who was also involved in biomechanics but in gait analysis and kinesiology. I worked on a study measuring torque around the shoulder. No one had ever really done that before, and my job was to design a special harness to hold the shoulder down. I also worked on some of the programming because they also had a PDP computer. I did a lot of data entry and coauthored an article, my first. (The article didn't actually get published until a few years later.) I also was involved in some gait analysis studies, not as fancy as the ones we do now, but walking studies and carbon dioxide analyses.

WCR: *How much time a week were you spending in these laboratories?*

JDM: I worked there mainly in the summer and then full-time, when I wasn't doing army duty.

WCR: *Did you do science projects in high school?*

JDM: Yes. In eighth grade I did a report on DNA. I had read *The Double Helix* and books by Isaac Asimov, who in addition to being a great science fiction writer was a great scientist.

WCR: *Did you read a lot growing up?*

JDM: I read a lot of science fiction—Bradbury, Asimov, and Clarke.

WCR: *Did your mother and father read much?*

JDM: Yes. My mother used to read to me a lot.

WCR: *Were there a lot of books around the house?*

JDM: Yes, all over the place. Sometimes we would pick up some of my father's graduate texts and study the anatomy drawings and dissections.

After working with Jim Otis for 4 years during medical school and summers, I went off to do my residency. After that, the army allowed me to do a fellowship in biomechanics. The army paid for me to go back to New York City with family in tow. I lived on Staten Island and drove in each day through the Brooklyn Battery tunnel, which came out under the Twin Towers. I went back to work full-time in Jim Otis' new gait analysis lab. It had motion capture and a lot of fancy features. I would do that for about 5 or 6 hours in the mornings, and in the afternoons I would scrub in with the total joint surgeons in

the hospital. I was at the hospital at least 10 to 12 hours a day. I couldn't have done it without the army, and, frankly, without the US Army I couldn't have done all that I wanted to do. I give the army full credit.

The year after I had finished my fellowship in biomechanics, Fabian Pollo, another PhD, came to work in Otis' lab. He went to Houston and then came to BUMC 7 or 8 years ago. With funds from the Priddy Foundation and under the guidance of Bob Jackson, they set up a gait lab at BUMC. When I was interviewing for this position, one thing that attracted me to BUMC, in addition to all of the other great things, was Fabian's lab and the promise that I could do gait analysis again. I always wanted to get back into it but never had the resources. On my second day at BUMC, Fabian and I went through the research funds available to the Department of Orthopaedics. We found enough money in the Ruth Jackson Fund. I looked at Fabian when I saw those figures and said, "How much would it take to upgrade the gait lab?" He said, "About that much." We immediately went out looking for another gait system, and through Dr. Pollo's astute bargaining powers we acquired a system that's worth well over \$300,000 for something slightly less than \$200,000. That gave us the 12 MX 40 cameras along with the hardware and software to run them.

WCR: *How many students were in your medical school class?*

JDM: About 100.

WCR: *Where did you live in New York during medical school?*

JDM: The first year I lived in Olin Hall across the street from Cornell. That was a true dormitory. The next 3 years I lived in Lasdon House. It was also across the street.

WCR: *How did the basic science classes in medical school strike you?*

JDM: They required a lot of memorization. It seemed that medicine was essentially learning the language of describing things. I could figure out how things worked, but I had to learn the names of them, and that was the key. I spent hours making study notes and reviewing.

WCR: *Did you have to study hard?*

JDM: Yes. In college, I felt comfortable taking the weekends off, but in medical school I don't think anyone took the weekends off. In college, you could finish studying at 7:00, 8:00, or 9:00 p.m. In medical school, I studied until my eyes could not stay open, then went to sleep, and the next day started again.

WCR: *During your clinical years when you were rotating through pediatrics, obstetrics, gynecology, medicine, general surgery, and so on, did any of these specialties come close to prying you away from orthopaedics?*

JDM: I always focused on orthopaedics and got a lot of my elective rotations scheduled at the Hospital for Special Surgery. When I finished medical school I received the Thompson Award for outstanding achievement in orthopaedic surgery.

WCR: *Did you enjoy the other services?*

JDM: I received honors in medicine, which I really enjoyed. When doing my medicine rotation at the North Shore Hospital, I had a Latino patient who had episodic fevers, and no one could figure out what was going on. I asked him about

his travels, and he had flown through and landed in Honduras, and I happened to know that the area that he had landed in was endemic for malaria. I ordered smears on his blood and made the diagnosis. I think I got honors in medicine because of that diagnosis, one of the few cases of malaria in New York City. I really enjoyed cardiology, especially electrocardiography. Most of all, I enjoyed surgery. I got the chance to work on the New York Hospital Burn Unit, which was headed by Dr. G. Tom Shires, who earlier had been chief of surgery at Parkland Hospital. Dr. Shires had brought his entire contingent from Parkland to New York City. His rotation was an intense experience.

Every medical school class at Cornell puts on an annual Christmas show, and our class worked particularly hard on our production. One of my classmates, Sam Spiegelman, a urologist now in Beverly Hills, had had a lot of experience in putting on college musicals. In the middle of neurology, our hardest course, we put together a medical school production of *A Funny Thing Happened on the Way to the Forum* with our class as cast, crew, and orchestra. It got to be such a big project that at one point the dean almost threatened to expel us if we didn't focus on our studies. He was worried that we wouldn't pass. It turned out that we did better in those classes than anyone had ever done before because everyone was just psyched. I played a variety of roles. I didn't get the lead because I'm not a good singer. We played it straight. There was no parody or anything—just straight comedy.

We were a bit worried on opening night as to how it would be received. The performance was done in a gymnasium at Olin Hall, a basketball court that served as the stage. The place was packed—the dean, the president of the university, and every faculty member was there either to see us fail or to fail us. I think they all wanted to see just how we were wasting our time. By the time we finished, all of that was distant. It was an excellent production. Our class became known for that production, and that reputation followed us through the rest of medical school.

WCR: *Were there any teachers in medical school who had a particular impact on you?*

JDM: Adele Boskey, my biochemistry professor. She had a very good attitude towards learning. She was friendly and encouraging. Everyone I worked with in orthopaedics was fantastic. Cornell is one of those places where everybody is at the top of their form. I felt lucky to be there, and I tried to soak up as much as I could from them.

WCR: *You enjoyed medical school?*

JDM: Yes. After that first musical production, I was the master of ceremonies for the next three and introduced the entire show. That comes from all of the public speaking and debate training I had much earlier on.

WCR: *You did this every year for 4 years?*

JDM: Yes. Every medical school class did a Christmas show. Our musical was after the Christmas show, later on in the year.

WCR: *Did you have officers in your medical school class?*

JDM: Yes. I was the social chairman. We should probably leave it at that!



Figure 12. As a second lieutenant at Fort Bragg, North Carolina, in 1979.

WCR: *Where did you apply for your general surgery internship?*

JDM: I was under obligation to the US Army. My first rotation in Fort Bragg, North Carolina, was after my sophomore year in medical school (*Figure 12*). When I was there, I ran into three orthopaedic surgeons, and they helped fuel my interest in orthopaedics. Allan Bucknell, Carl Savory, and Mike Romash introduced me to J. Leonard Goldner, the chief of orthopaedics at Duke. Fort Bragg was 60 miles away from Durham, NC, and Dr. Goldner came there once a month to give rounds and to do consultations. I knew that I was going into orthopaedics and I knew I had to find a residency, but I didn't know how the residency selection worked. No one had explained that to me. At Duke they had a civilized way of selecting residents, and that was with a handshake. Dr. Goldner, on the recommendations of the three orthopedists, asked me if I wanted to be a resident at Duke, and I said, "Yes, sir." I shook his hand and thought that was all there was to it. I flew down to Durham for one interview and figured that was it. I was also accepted into the Hospital for Special Surgery, however, in New York City, but that hospital did not have an internship. They accepted you into their program, but you had to apply for your surgical internship at Roosevelt Hospital on the other side of Manhattan. The army did not understand that. The army said, "If you are going to do a civilian residency, you have to have a contract for all of the years of your training." The Hospital for Special Surgery couldn't do that. I really would have preferred to go to the Hospital for Special Surgery, but the army wouldn't let me do it, so I ended up at Duke on a handshake.

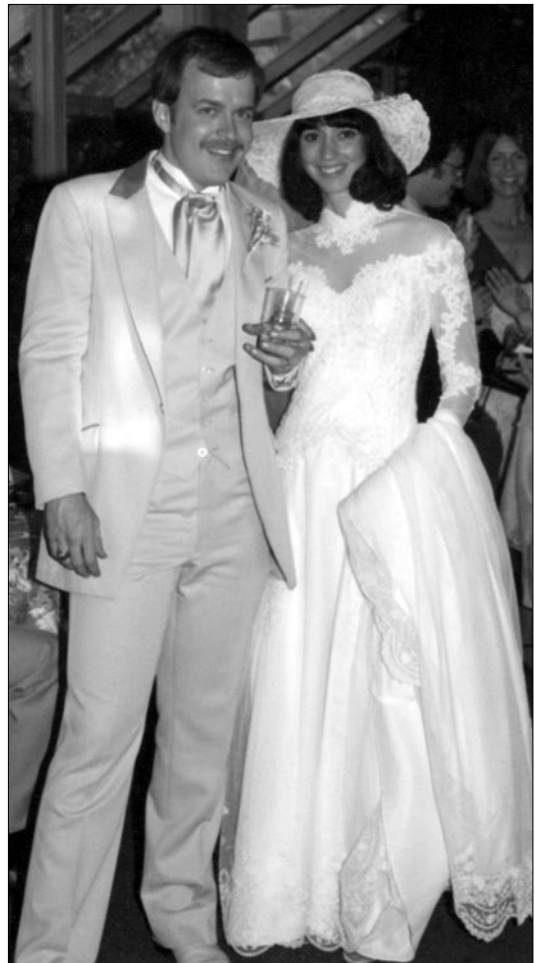


Figure 13. Wedding day, May 31, 1981.

When it came time to apply for orthopaedic residencies, I applied to several hospitals just in case. One residency I applied to and got an interview at was Parkland Hospital. I vividly remember coming to Dallas and interviewing with Dickie Jones. Even back then, Dickie Jones was renowned in Dallas. When I went into his office, he tossed me a femur. I caught it and he said, "Take a look at it." I looked at it and he said, "Give it back." I gave it back and he looked at me and said, "Now, draw it." I thought, this can't be this easy because the day before I had been working on some anatomy drawings of the pelvis and the hip, and I had already done several different drawings of the hip and femur. I didn't even have to look at it. I already had the image in my head. I sketched out this nice, shaded drawing and was quite pleased with the result. Dickie Jones looked at it and was amazed.

I put in my request for the match. I asked my classmates where they were going and they said, "We don't know. We have to wait for the match." I learned to just keep my mouth shut because the first few times I'd say, "Didn't you meet with the chairman? Didn't you shake his hand?" They would look at me like: "No. Did you? Where are you going?" I said, "I did. I'm going to Duke." That's when I figured out that my first 2 years at Duke would be in general surgery with David Sabiston. The surgical residency at Duke at the time was known as "the decade with Dave" because the general surgery and thoracic residents



Figure 14. As an orthopaedic resident at Duke, 1982.

could spend up to 10 years in residency. I was somewhat naive and didn't know of the Duke reputation in surgery. I didn't realize that the only people who applied to Duke were those who were true masochists and really didn't plan on having a life. Nonetheless, I made a commitment, and I got married the day after I graduated from medical school (Figure 13). It's a good thing we took a nice honeymoon because I really didn't see my wife much for the next 2 years since I was on call every other night. (That was before restrictions on resident work hours.) Some of the services were nicer; they had call every third night. Dave Sabiston was a great teacher and administrator. He truly ruled the department with a velvet glove. He was very much in control. It was nice actually to move out from under that and get into orthopaedics.

WCR: *How was Sabiston able to keep all the subdivisions of surgery under his domain?*

JDM: That was the Duke way. That was the way it had always been done there. He kept all of the subdivisions literally as divisions, not departments. I was in the division of orthopaedics, and he controlled the funding. He also controlled the salaries of all the division chiefs. He would look at the balance sheet at the end of the year and do some figuring in his head and then decide how much money was going to go to each one. Obviously, that method was very profitable for the hospital and the university. He ran an extremely successful program, and he engendered extreme loyalty from all of his residents. Those were intense years (Figure 14).

WCR: *How big was the faculty in the division of orthopaedics at Duke?*

JDM: There were at least a dozen faculty members, including Jim Nunley, Richard Goldner (Leonard Goldner's son), Jim Urbaniak, Donald McCollum, Frank Clippinger, Bill Garrett, and Robert Fitch. Jim Urbaniak became the chief of orthopaedics halfway through my residency.

WCR: *How long was the orthopaedics training at Duke?*

JDM: I had 4 years of orthopaedics and 2 years of general surgery.

WCR: *Then you had the additional fellowship in New York City.*

JDM: Yes.



Figure 15. Sons Travis and Hunter during time at Fort Stewart, Georgia, 1988.

WCR: *Did you get to do as many procedures as you wanted to do at Duke?*

JDM: Yes. By the time I was the chief resident, I could handle just about any case.

WCR: *Did you do joint replacements while you were in training there?*

JDM: I didn't do many there. The focus at Duke at the time was more on hand and spinal surgery. We did some joint replacements. I really didn't get involved with total joint replacement until I got back to the Hospital for Special Surgery.

WCR: *Did you know joint replacement was what you wanted to focus on eventually?*

JDM: By the time I was in the army at Fort Stewart, Georgia (Figure 15), I had decided that I wanted to focus on joint replacement, and that's when I started applying for my fellowship. At that time, I had a 4-year active duty commitment to the army, and I was already nearing the end of my third year with only 1 more year to go when the army finally granted my request for fellowship, which would also incur an additional year of service. Instead of finishing my army obligation in 4 years, I finished it in 6.

WCR: *You had to pay them back for the fellowship?*

JDM: Yes.

WCR: *When did you retire from the army?*

JDM: After I finished my fellowship in 1991, I was assigned to Brooke Army Medical Center in San Antonio, and I spent my last 2 years in the army there. At that time, I began doing some research at the Health Science Center in San Antonio. I contacted Adele Boskey, my former biochemistry professor, and asked her if she knew anyone at the university. She informed me that her very good friend, Barbara Boyan, was there. I ended up doing some basic research on osteoblasts in her laboratory while I was still in the army. It was during that time that I got to know Jim Heckman, who was then the chief of orthopaedics at the University of Texas Health Science Center at San Antonio. It turned out that they were looking for someone about the same time I was finishing my obligation to the army. I applied and was accepted to the faculty in 1993.

WCR: *In addition to working there you also worked at the VA Hospital.*

JDM: I had a co-appointment there, and my office was in the VA Hospital.

WCR: *After a while, you switched entirely to the university?*

JDM: Yes. After about 6 years of being chief of orthopaedics at the VA Hospital, I felt that I had done my duty and wanted to concentrate more on the university practice. Most new faculty were initially placed at the VA Hospital and later at the University Medical Center.

WCR: *When did your clinical practice switch mainly to hip and knee replacement?*

JDM: When I was at Brooke Army Medical Center, I was co-director of the total joint service there with Allan Bucknell, who was the orthopaedic surgeon at Fort Bragg who had introduced me to J. Leonard Goldner. Allan was now the chief of orthopaedics at Brooke Army Medical Center, and he was the one who had requested that I come to San Antonio after my fellowship. I joined the university under the assumption that I was going to focus on hip and knee replacement. Little did I know that the plan was for me to handle a lot of trauma and other operations at the VA Hospital, and the rest of the faculty members were to take care of the total joints. Nevertheless, I just kept focusing on hip and knee replacement. We were one of the first departments to come up with care pathways for hip and knee replacements. We published them in 1996. By 2003 in San Antonio, half my practice was hip and knee replacement and the other half was trauma because I also took level 1 trauma call. Several residents worked under me, so that made things a lot easier.

WCR: *When did you come to BUMC?*

JDM: On July 1, 2004.

WCR: *How was BUMC able to attract you from San Antonio?*

JDM: The trauma aspect in San Antonio was becoming somewhat burdensome, and it didn't look like it was going to be solved anytime soon. Also, it was difficult for me to expand the total joint practice because of the trauma cases and also because we were a county hospital and faced competition from the private sector for joint-replacement cases. Most of my patients were on Medicaid or were uninsured. It was still very satisfying to treat them, but the hospital was not doing as well as it could have because of all the unfunded patients. I was looking for another position for a change of pace and direction. I had interviewed for a position at the University of North Carolina to work with Bill Garrett, the chief. While I was there, I found out that he was leaving to go back to Duke, so a chair at the University of North Carolina was open. I threw my hat in the ring. My curriculum vitae got into the hands of the same headhunter that BUMC had hired for its search, and about 6 months later I got a call from the search firm: "We have a position for chief of service at BUMC in Dallas. Would you be interested?" That's when I started interviewing at BUMC, and here I am.

WCR: *How did the interview process work?*

JDM: I came out for a general interview with Luci Neumann and several members of the orthopaedics staff as well as several members of the administration: Joel Allison, Tim Parris, and John McWhorter. I went through the first interview, and eventu-

ally the number of applicants dropped to two: an orthopaedic surgeon from Florida and me. My interest in the gait analysis lab may have been a factor in my hiring because I had proposed some studies and suggested that that would be a priority for me.

WCR: *Did you know much about BUMC before?*

JDM: I knew a lot more about Baylor College of Medicine in Houston. I had several friends there.

WCR: *Did the Tom Landry Center impress you?*

JDM: Incredibly. When I came on board I got my ID badge for the Landry Center before I got my BUMC badge. I latched onto the Landry Center right away. About that time, the gait lab was moved from the sixth floor of Hoblitzelle to the second floor of Landry. That move stimulated me to upgrade the lab. The system that they had before was about 8 or 9 years old and used old technology. It was taking hours to analyze just one motion-capture file. The new system that we purchased from Vicon could do the same analysis in greater detail and with better accuracy, and it could do it in seconds. Now, instead of spending all day analyzing data, we can test a patient in 30 minutes and quickly have the data collected and analyzed. That allows us to do a lot more studies.

Our lab has caught the attention of US Track and Field, the official organization that oversees the training and qualification of the Olympic athletes. In October 2005, several representatives from US Track and Field were at the Landry Center for a conference to look at our gait analysis system with the idea of testing their middle- and long-distance runners. Although US athletes dominate the sprinting events, they don't dominate the long running events. The trainers calculated that if they could eliminate 1/100th of a second from each stride of one of their runners, that could take 2 minutes off the clock, the difference between a gold medal and no medal.

WCR: *From your curriculum vitae, I was impressed at your teaching dedication and your computer skills, which you have brought into the operating arena. I'd like also to talk about your family, your kids, and your wife. What is your home like? What are your hobbies? What do you do when you're off?*

JDM: As far as teaching goes, that probably comes from my father. I like explaining things, and I like the look on people's faces when they understand something. I also enjoy entertaining people. All of my presentations are on PowerPoint. I like to make sure that they are visually entertaining to keep people's interest. I have brought up my computer skills in high-end 3-D graphics programs. The one I use is 3DS Max. It's one of the programs that they used for the movies *Lord of the Rings*, *The Last Samurai*, *Fantastic Four*, and just about every other special-effects movie. It is a very powerful program. I got the educational discount on it, and I've spent the last 2 years learning how to use it because it is not simple. I've started using it for anatomic illustrations. I find that the 3-D computer illustrations enhance my teaching abilities. Now that I'm not teaching medical students here at BUMC, I give seminars on total joint replacements to physicians, nurses, and patients. I also often speak on care pathways. I am involved with the Food and Drug Administration panel that selects the joint replacement devices used in the USA. It's probably the neatest thing I've done so far.

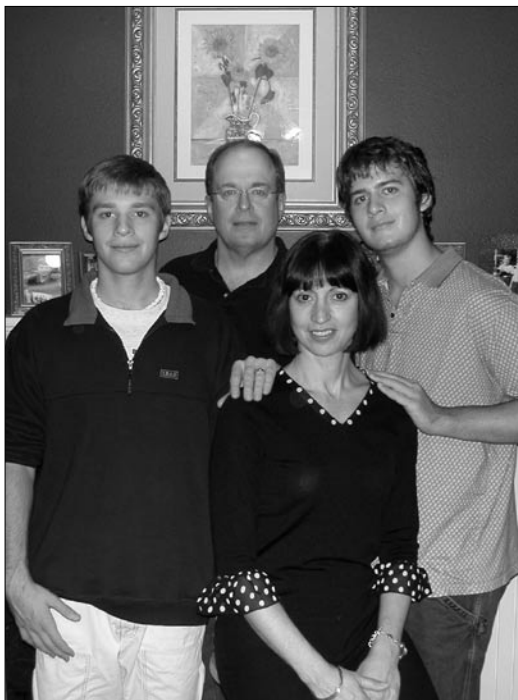


Figure 16. Family photo in 2003: Jay, Deborah, Travis, and Hunter.

I have a lovely wife, Deborah. We have been married for 24 years and have two sons, Hunter, who just turned 20, and Travis, 18, who is a freshman at Southern Methodist University (*Figure 16*). He is studying cinema and directing. His classes will include film aesthetics, the history of film, screenwriting, and, later on, classes in directing the screen actor. He has always been interested in producing his own movies. My older son, Hunter, who initially went to Trinity University in computer science, learned last year that the University of Texas at Dallas had one of the best computer graphics programs in the country, so he applied and was accepted into that program this summer. Because of his skills in programming, he worked in the gait lab helping us redesign the models that we use to attach to these motion files. Hunter helped us develop our own custom BUMC models. Later, we will license these models as the BUMC gait model.

My wife is a nurse. While we were at Duke she was the assistant head of nursing for the recovery room until she decided to go full-time as mother to our two sons (*Figure 17*). She has gone back and received her master's degree in nursing at the Health Science Center in San Antonio and finished that program with honors. This summer she has been busy helping put the final touches on the house that we have been building all year. We will move into it in August 2005.

WCR: *What attracted you to Deborah?*

JDM: I met her when I was a medical student and she was the head nurse on one of the surgery wards. She was somewhat tolerant of my inexperience in medicine. When she met me I was a goofy medical student with no clue as to what I was doing. She is the rock on which everything else is based. Right now, she is training for her first marathon in December 2005.

WCR: *You don't run anymore?*



Figure 17. With wife Deborah during the time at Duke, 1984.

JDM: I bike. I have a mountain bike that I use a lot.

WCR: *Do you bike together?*

JDM: Yes. We haven't had much of an opportunity over the last year because she was in San Antonio most of the time.

WCR: *What time do you wake up in the morning?*

JDM: I wake up at 4:20 AM so I can get to my personal trainer by 5:00 AM at the Landry Center. I grab my suit and take it with me and work out for 1 hour. I finish at 6:00 AM so that I can get to any meeting at BUMC.

WCR: *What time do you leave the hospital at night?*

JDM: If it's an administrative day I usually leave at 5:00 or 6:00 PM. I left at about 11:00 PM yesterday because there was an emergency case I had to handle. I spend a lot of time working on pathways and clinical transformation and will sometimes be at the hospital until 8:00 PM.

WCR: *What time do you go to sleep?*

JDM: I try to get to bed before 10:00 PM.

WCR: *Do you have hobbies?*

JDM: Mountain biking is one. The modeling and animation is another. I look at my presentations and animations as my job but also my hobby. I make anatomical cartoons with great pleasure.

WCR: *How much time do you take off a year?*

JDM: If you asked my wife, she would say none. We try and get a week twice a year. In 2004, since I hadn't used any vacation time while I was in San Antonio, I had accumulated 45 days of vacation time that they wouldn't give back. I used the 6 weeks for vacation and spent a lot of time doing a special animation project for one of the device companies under contract. They wanted me to illustrate one of their surgical procedures, so I spent several weeks on that.

WCR: *Do you think cemented or noncemented hips are going to prevail?*

JDM: I think the noncemented devices will be the most common. The cemented devices still have a place, but their place now is with much older patients whose anatomy doesn't accommodate the noncemented devices. For older individuals with a very large femur, it's hard to get a good fit with an uncemented

device. Since a lot of the joints now are being done in younger individuals and a lot of older patients have better bones, the uncemented devices are going to be the way to go. I'd say at least 80% of the total hips that we do are uncemented. In contrast, for total knee replacement, the cemented devices are every bit as good as uncemented devices. I think they are even better because you get an immediate fixation. There's never been a problem with cement fixation with total knee replacements.

WCR: *If you had a choice of doing only one of those replacements, which one would you choose—knee or hip?*

JDM: I would go with the hip because the best results are seen much sooner. Once you replace the hip, the pain is gone, the patient can walk, and rehabilitation is usually unnecessary. You basically don't have to see the patient again except to take out the staples and once a year thereafter. Patients with total knee replacements, on the other hand, have to go through some vigorous therapy, and you see them 2 or 3 times after surgery. The patients keep wondering when they are going to be pain free. I also like the idea of a ball-and-socket joint.

WCR: *Is the metal on metal really going to work?*

JDM: Yes. That's what I use most of the time. It's used much more frequently now than it was a couple of years ago. The other

option is ceramic on ceramic, which is what Jack Nicklaus has. You can have metal on cross-linked polyethylene, a specially treated plastic, and those last a long time.

WCR: *Dr. Mabrey, this has been wonderful. On behalf of BUMC Proceedings, I want to thank you for your openness.*

JDM'S BEST PUBLICATIONS AS SELECTED BY HIM

Mabrey JD, Toohey JS, Armstrong DA, Lavery L, Wammack LA. Clinical pathway management of total knee arthroplasty. *Clin Orthop Relat Res* 1997;(345):125–133.

Wirth MA, Agrawal CM, Mabrey JD, Dean DD, Blanchard CR, Miller MA, Rockwood CA Jr. Isolation and characterization of polyethylene wear debris associated with osteolysis following total shoulder arthroplasty. *J Bone Joint Surg Am* 1999;81(1):29–37.

Landry ME, Blanchard CR, Mabrey JD, Wang X, Agrawal CM. Morphology of in vitro generated ultrahigh molecular weight polyethylene wear particles as a function of contact conditions and material parameters. *J Biomed Mater Res* 1999;48(1):61–69.

Poss R, Mabrey JD, Gillogly SD, Kasser JR, Sweeney HJ, Zarins B, Garrett WE Jr, Cannon WD. Development of a virtual reality arthroscopic knee simulator. *J Bone Joint Surg Am* 2000;82-A(10):1495–1499.

Mabrey JD, Afsar-Keshmiri A, Engh GA, Sychterz CJ, Wirth MA, Rockwood CA, Agrawal CM. Standardized analysis of UHMWPE wear particles from failed total joint arthroplasties. *J Biomed Mater Res* 2002;63(5):475–483.