

Why Neurosurgery?

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Neurosurgeons Offer Reasons Why They Chose the Specialty

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“I’ve always been interested in neurological disorders, and was attracted to neurology and psychiatry at an early age. However, two incidents in tenth grade sparked an interest in neurosurgery, which lasted all throughout medical school. First, I read a TIME article on Dr. Keith Black and his experience with complex brain tumors. Then in a psychology class, we learned about a patient with intractable seizures and different forms of memory. We watched a video about a patient with a movement disorder and how the neurosurgeon performed a craniotomy while the patient was awake. All this fascinated me, opened up a whole new world of reading, and convinced me that I wanted to become a neurological surgeon.”¹

Dr. Zachariah George

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“I discovered neurosurgery as a senior in high school during an internship and observership at St. John’s Queens Hospital neurosurgery service for three months. My fascination for neuroanatomy only grew with the neurosurgery rotation as a third year medical student at NYU. Neurosurgery combined my love for neuroanatomy and tactile skills required in surgery.”²

Dr. Kenneth De Los Reyes

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“As part of a routine surgical rotation, one particular neurosurgeon invited me into his operating room and introduced me to the field. I watched a pineal tumor resection in a child for the first time. I remember being mesmerized by the experience and deciding that I could not see myself doing anything else.”³

Dr. Ronit Gilad

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“My final decision to go into neurosurgery came during my third year after doing a four week rotation on the service. Although I had rotated through other services, many of which I found to be extremely interesting, there was none that I felt was as intellectually and physically challenging as neurosurgery. It embodied both my fascination with the central nervous system and my desire to intervene, if appropriate.”⁴

Dr. Arien Smith

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“The summer after my freshman year of medical school, I volunteered at the largest public hospital in Honduras where I saw a particularly memorable patient who sustained a depressed skull fracture from a machete blow. He underwent emergent craniotomy and survived. I was hooked on neurosurgery from the first time I saw an open craniotomy. I realized then and there that neurological surgery required strict attention to detail and technical excellence. It is the combination of the technical challenges with the reward in a successful operation that has drawn and maintained my love for the specialty.”⁵

Dr. Harshpal Singh

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“From a technical vantage, I find that the inherent demands of precision and caution required in the practice of neurosurgery make the practice of this delicate field of medicine utterly appealing. From the classic perspective of the physician as ‘trusted healer,’ and because a patient must make such a leap of faith, must repose so much trust in his or her neurosurgeon, I aspire to become worthy of such trust. In a romantic sense, the recognition of the brain as an organ, the curiosity that stems from its complexity, and the mystique of identifying pathologies and correcting them within this remarkably complex organ, is enthralling.”

Dr. Yakov Gologorsky

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“As I rotated through the different specialties, neurosurgery presented itself as the most intellectually stimulating and interesting field. Also, the advanced equipment employed during operations I observed appealed to my engineering background and love for technology.”⁷

Dr. Madhu Jannapureddy

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“Number one I liked the fact that you can actually cure patients directly, using your hands and using technology. I didn't like the medicine aspect as much, to prescribe drugs and medications or merely make diagnoses. I liked it, but not as much. So the ability to go and intervene acutely. Number two, the toys. Of all the new technology and all the important technological advancement in medicine, much of it has been made in Neurosurgery. I have been an Electrical Engineer and am interested in new technologies, new toys, new ways of doing things. The third thing was that I found a lot more common ground with the Neurosurgeons. I just fit with them. We all shared common things.”⁸

Dr. Farhad Limonadi

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“The brain is the most fascinating organ in the human body. I thought becoming a neurosurgeon was a great way to help others in need, while also learning neuroscience. It was a really easy decision for me.”⁹

Dr. Edward Chang

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“For as long as I can remember, I have been fascinated with the brain. My mother was a scientist and my father is a physician, so I grew up surrounded by science and medicine.”¹⁰

Dr. Zachary Levine

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“My father was a medical school professor. I always thought I would become a physician, too, but I wasn't sure what my specialty would be. During my studies as an undergraduate at MIT, I became fascinated by how the human brain works. Later, when I trained as a physician, I found myself drawn to neurosurgery.”¹¹

Dr. Charles Park

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“When I arrived at medical school I was not certain how I wanted to specialize. First, I made the choice to go into surgery, rather than medicine, and then I picked my surgical specialty. My first year neuro-anatomy course influenced my choice dramatically. We were required to develop a 3 dimensional model of the brain and to identify each of the different tracks. I used different colored strings to trace the tracks that control pain, motor function, and the senses of touch, of heat, and of position, etc. It was astounding to see in detail how complicated the structure of the brain is and to think about the delicacy of surgical touch needed to work within this complex organ and yet preserve the tracks which enable such a diversity of functions. It is amazing what the brain, along with the spinal cord which is barely the width of a No. 2 pencil, can control; from gross physical movement to the most refined thought process. I never lost this fascination with the central nervous system that this model-building exercise instilled in me.”¹²

Dr. Martin Camins

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“When I was in medical school, the one subject that intrigued me the most was neuroanatomy. Anatomy of the neurosystem, which is so complex and so compact and yet, if you understand it and know it, you can localize neurological lesion accurately and once you've got a localization of number and types of diseases that involve that area, you can almost sort them out very quickly for diagnosis and come up with an answer. When I was in medical school, practically all of the treatable neurological diseases were surgical...The things that were treatable were aneurysms, brain tumors and trauma. I think it was that that attracted me to be a surgeon.”¹³

Dr. E. Malcolm Field

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“During the first year of medical school in Chicago, I discovered I liked anatomy and the other hands-on classes. I quickly realized that a surgery specialty was something I would be interested in. My neurosurgery service rotation was the first time I saw brain tumors removed and aneurysms clipped. The intricacy of the brain’s anatomy and the intensity of taking care of patients with serious diseases was what attracted me to this field. It became clear that this was the area for me.”¹⁴

Dr. Gregory Zipfel

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“As an engineer, Campbell was intrigued with super computers, which are modeled on the human brain. Reasoning that if he fully understood the brain’s intricacies it might help him stretch the computer’s power, he enrolled in medical school and planned a neurosurgery residency. While computers still fascinate him, they pale in comparison to the nuances of the brain and nervous system. He explores those nuances every day in his work removing brain tumors, performing neurovascular and spine surgeries, and treating brain trauma patients. ‘Every single patient is different,’ he says. ‘Computers are a science, but neurosurgery is an art.’”¹⁵

Dr. Stephen Campbell

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“Neurosurgery is inherently complicated, and the diseases are among the most difficult to treat. The challenge of working on the brain and spinal cord and the limitless potential for recovery that kids demonstrate make neurosurgery so exciting and rewarding.”¹⁶

Dr. Samuel Browd

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“The most satisfying part of my job is having the ability to return critically ill people to a normal life. There’s no better feeling.”¹⁷

Dr. Philip Yazbak

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“In medical school, he saw his first brain tumor surgery and ‘knew that neurosurgery would be a most satisfying career.’ During his second year of residency, he saw his first operation to treat a brain aneurysm. ‘It was like diffusing a time bomb under the microscope – the most elaborate and delicate surgery you can imagine,’ he says. ‘I knew that this is what I wanted to do for the rest of my life.’”¹⁸

Dr. Eric Deshaies

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“It's certainly the youngest field, and so the most changes are occurring in Neurosurgery. A lot of the things that we do now aren't going to be done in a couple of years, and a lot of the things that are done now in Interventional weren't done a couple of years ago. So I like that aspect of it, I like that it's continually evolving. I like that it's probably one of the hardest specialties. I like that there's very little room for error, technically. It's not so much the technical challenge that I like, so much as the trust that people put in you. It's really an enormous leap of faith for people to say yes, go ahead and operate on my brain or operate on my spine. I think some people don't grasp the enormity of it, but I think most people do, and it's a very intimate relationship that you have. Neurosurgery is very satisfying.”¹⁹

Dr. Raymond Tien

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“I've always been interested in neuroscience because the nervous system is truly at the center of how we define ourselves as human beings. Whether it is fond memories, beauty of movement, or even pain and emotional anguish, these phenomena of the nervous system make up the substance of life experience. Disorders of the nervous system, then, are intensely personal and deeply affect both patients and families. The chance to intervene and change the course of neurological disease naturally led me to neurosurgery where the problems can be the most challenging but the rewards can be the most satisfying.”²⁰

Kevin Chen

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“My interest in clinical neuroscience was prompted as a high school student, when my mother, who is an avid reader, would give me books by the neurologist Oliver Sacks. She suspected that I would find them intriguing, and she was right. At Brown I majored in Neuroscience, and once I started spending time with the neurosurgeons at Vanderbilt, I came realize how fulfilling a career in Neurosurgery could be.”²¹

Elyne Kahn

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“Her love affair with neurosurgery came about by accident. During med school rotations at the University of Florida, Einhaus discovered she enjoyed surgery because ‘it was hands-on and gave instant results. I wanted to do plastic surgery because I'd heard students could do a lot and I could show them how good I was,’ she said with a laugh. Instead, she wound up at the VA hospital, where students could scrub in and assist with neurosurgery. She was hooked. ‘I didn't think I was special, but I realized I had a knack for it. It calls for precision, we deal with life and death situations, and I work well under pressure.’”²²

Stephanie Einhaus, MD

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“The neurosurgery work is rewarding to Dr. Bartholomew on multiple levels. ‘Each patient is a different puzzle,’ Dr. Bartholomew said. Each person who steps into his office poses a unique set of challenges and the whole process of putting together the best solution for the patient after sorting through diagnostic tests and the patients’ history is rewarding. And Dr. Bartholomew finds the personal interactions satisfying as well, getting to know each patient as a person before, during, and after the procedures. Seeing the relief on a patient’s face after he/she is finally free from the severe chronic pain that had been tormenting them for so long is a thrill.”²³

Dr. Bradley Bartholomew

“In neurosurgery you really change things,’ she says. ‘I remember as a resident having some students with me and we saw this patient who was literally dying and in a deep coma. But because of our neurosurgical intervention, when the students saw him the next morning, he was nearly back to normal. The students were so amazed. In neurosurgery you can really make a huge difference in patients’ lives. And that’s extremely satisfying.’”²⁴

Dr. Eve Tsai

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