A man with dark, wavy hair, wearing light blue scrubs, is sitting down. He has a white surgical mask hanging from his neck. He is looking directly at the camera with a slight smile. The background is a plain, light-colored wall.

"Gray Matter is a riveting page turner rife with pathos, compassion, and real-life medical drama."

C. EVERETT KOOP, MD, ScD

GRAY MATTER

a neurosurgeon
discovers the
power of prayer . . .
one patient at a time

DAVID LEVY, MD
WITH JOEL KILPATRICK

As a practicing neurointerventional surgeon in San Diego and colleague of Dr. Levy, I was utterly captivated by the compelling and personal nature of these clinical vignettes. It takes both courage and personal fortitude to openly discuss one's spiritual beliefs in this high-stakes and often cynical field. I can personally attest to the compassion, humility, and prowess I have witnessed in David's practice. While he and I come from different religious backgrounds, I found the humanistic qualities of his work to be broadly applicable and inspirational to caregivers from all walks of life.

JORDAN ZIEGLER, MD

San Diego

Dr. Levy is a well-trained, experienced, and professionally superb brain surgeon. In bringing God into the equation, he has broken through a near-taboo, and he has done so for the good of patient and family. To do such good is the essence of our calling; for another physician, an agnostic, to recognize his accomplishment must be the highest compliment. You will enjoy this book and the gift of insight it gives you.

CHARLES KERBER, MD

Professor of Radiology and Neurosurgery

UCSD Medical Center

San Diego

Neurosurgery can be extraordinarily stressful, both for patients and physicians, but in the book *Gray Matter* neurosurgeon David Levy shows us how spirituality can help defuse some of the tension, while providing readers with a very interesting educational perspective on the brain and its potential. I am delighted to have one of my colleagues stand up boldly for faith and intellect.

BENJAMIN S. CARSON SR., MD

The Benjamin S. Carson Sr., MD, and Dr. Evelyn Spiro, RN,

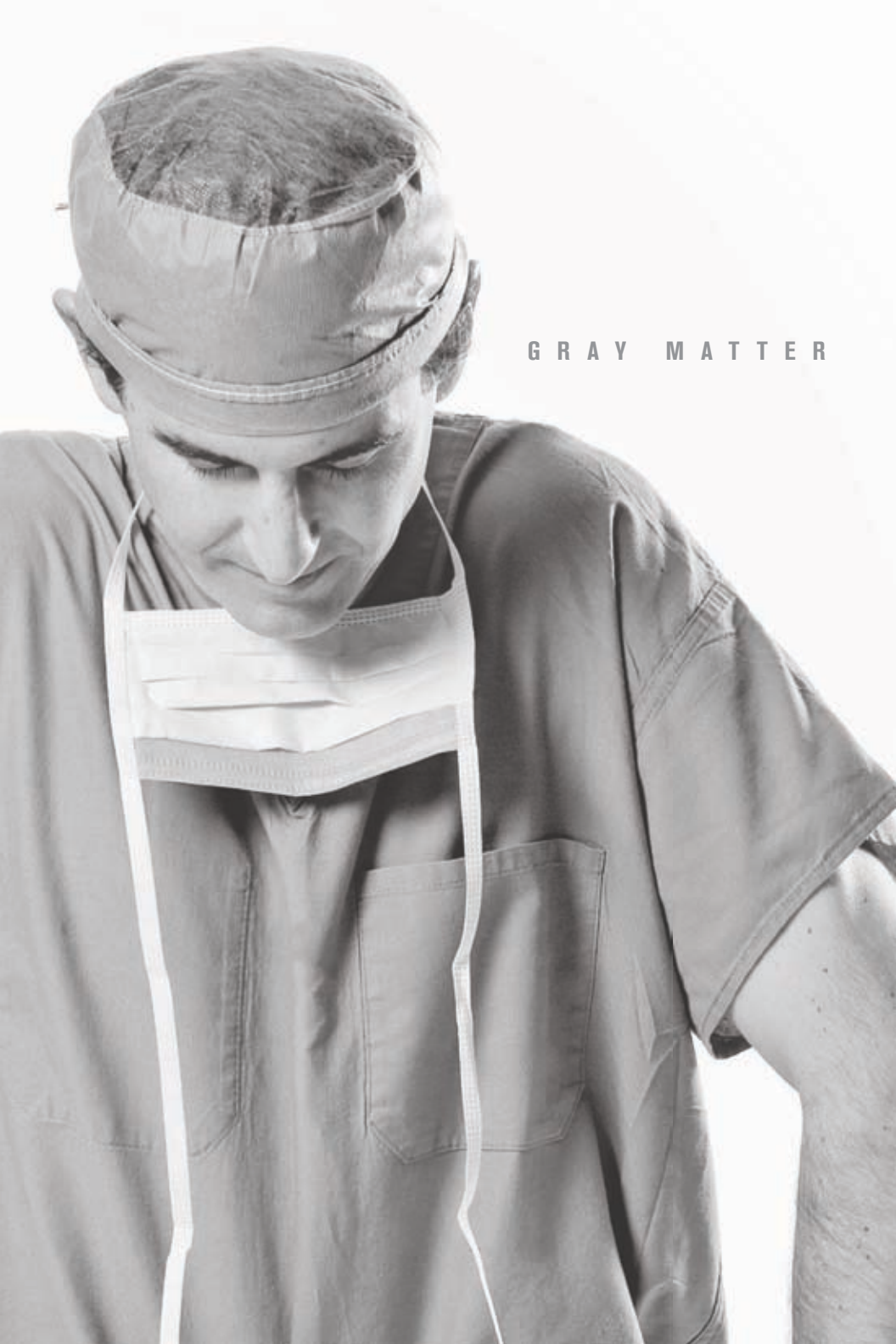
Professor of Pediatric Neurosurgery

Director of Pediatric Neurosurgery

Professor of Neurological Surgery, Oncology, Plastic Surgery, and Pediatrics

Johns Hopkins Medical Institutions

Author of Gifted Hands



GRAY MATTER

GRAY MATTER

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This book is dedicated to my father, Isaac Levy, who passed away in 2001. Dad, you were a man of integrity and hard work, on whose shoulders I now stand. You demonstrated courage in the face of adversity, and only now do I realize all that you gave me. After we reconciled in 1997, I asked you to give me a father's blessing. You wrote, "That you may be happy in your work and in your endeavors . . . and that you continue growing." This book is the fulfillment of that blessing. I know that we will meet again, and when we do, we will have much to celebrate.

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The stories in this book happened to real patients. To protect patient confidentiality, names and some identifying details of every person have been changed. Events are represented as closely as possible to actual occurrence.

CHAPTER I

RISK
FACTORS

MARIA, THE WELL-DRESSED BUSINESSWOMAN sitting in my office, had a brain aneurysm. One of the blood vessels in her brain had weakened, causing the vessel wall to balloon out in one place like a snake that has swallowed an egg. From the size and irregular shape of the aneurysm I had concluded that if not dealt with relatively quickly it might burst and kill her.

She was employed in high-level management and looked the part: she wore a black suit and heels, and an attaché case that appeared to be full of paperwork, presentations, and binders rested on the chair next to her. It looked as if she might be here on a lunch break between important meetings. I half expected her to say something like, “I’ve got ten

minutes until my face-to-face with clients, Doc. Make it snappy.” But I could see that this sudden and unexpected diagnosis was causing her concern—a brain aneurysm isn’t exactly one of those things you put on your calendar and schedule into your life.

It was our first meeting. She had been referred to me a week earlier by the neurologist who had picked up on the aneurysm, an unexpected “catch” that might very well save Maria’s life. Many brain problems don’t announce themselves. Aneurysms, notoriously, give no warning; they hide in the brain until one day, when the blood pressure proves too great for the strength of the artery wall, they rupture and bleed, causing a tremendous headache, loss of consciousness—and eventual death. Sometimes, in the fortunate cases, the aneurysm will push against a nerve or brain structure and prompt some odd symptoms that might alert someone before a catastrophic rupture. In Maria’s case, there hadn’t even been a suspicion of an aneurysm. The MRI scan had been ordered for a completely different, minor concern. But like a video security system that happens to catch images of a wanted killer lurking in the background, the scan had detected this menace inside her skull.

My job was to fix it before it could do any real damage.

If you have a brain aneurysm less than seven millimeters in size, a quarter inch in diameter, the chance of it bleeding is relatively low, less than 2 percent per year. That means the chance of it not bleeding is greater than 98 percent every year, which is not a large risk. However, if it does bleed, the

risk of death is high—30 percent of those whose aneurysms burst don't even reach the hospital alive. They die from the trauma of blood flooding the skull and having nowhere to exit. Of those who make it to the hospital, 30 percent end up with a major cognitive deficit of some sort, losing their ability to talk or walk or recall information or even recognize loved ones. They are not able to resume their previous lifestyles. These are the kinds of facts I have to lay out for patients when discussing whether or not to treat them. I have to tell them whether I think that aneurysm or other malformation we see on the scan has a good chance of bursting or harming them and, if so, how to fix it before it does.

As for Maria, I felt she had no choice. The nine-millimeter aneurysm had multiple weak spots, or “daughter sacks,” and was large, unstable, and unpredictable. It had to be treated.

We sat across from each other in my exam room at the San Diego hospital where I practice. The room is nothing special, your typical ten-by-ten medical box with a sink, cabinet, and window looking out on the trees in the parking lot. Nothing about it bespeaks comfort. Only my own nature photography hanging on the walls sets it apart from any other room in any other medical facility in America. Lining one wall are seats for the patient and family, though there was nobody here today but Maria and me. Just off to one side is a rolling computer stand into which I enter data and can review a patient's scans. Now I turned the computer screen around and showed Maria a 3-D rotational picture of the aneurysm from the CT angiogram. The multilobed,

balloon-shaped aneurysm arose from her smooth brain artery like a phantom from a drainpipe.

“Let me lay out how I would approach this technically,” I said. On the wall behind me was a whiteboard on which I drew a picture of her aneurysm and then detailed the treatment plan, to help her understand what would be taking place inside her skull while she was asleep. After a moment, I swiveled gently away from the board to face her. This was an important moment for both of us. In spite of her professional demeanor, Maria was now giving all the visible signals of agitation: arms and legs held uncomfortably tight against her body, eyes and facial muscles tense and alert. She kept making quick motions with her head and unconscious repetitive movements with her fingers. If she was trying to hold the anxiety in, it wasn’t working; the tension was spilling out. Maria seemed to be wondering if her life, so full of the things she had hoped and planned for, was coming to an end. It was as if someone had slammed on the brakes and turned sharply into a blind alley called brain surgery.

As the neurosurgeon walking her through this difficult news, I had a complex set of tasks to perform. I had to ease her mind about the upcoming procedure, giving her the confidence that it could be successful and that she could come out of it without any loss of function. I also had to be honest with her about the level of risk it involved—of blindness, coma, paralysis, or death—so that she could properly set her own expectations and those of her family. We could not avoid the possibility that, as with any surgery in so delicate

an area, things could go terribly wrong. I had to convey all this in a calm, honest, and straightforward way—to someone who really didn't want to hear it.

So much of a doctor's job is in not just diagnosis but in demeanor and presentation as well—the way you come across as you speak, the way you comport yourself, the way you relate to patients. Are your eyes steady, or are they shifty? Do you look into their eyes or over their shoulders or around the room? What does this subtly tell them about their prognosis? What can they read into your body language, your hand motions, your almost imperceptible movements of facial muscles, your ease or lack of ease, and your willingness to engage with them as persons, not just medical problems? Pre-surgical consultation is a dance. You have to practice it, becoming light on your feet and making the right moves in sequence, for it to seem graceful to you and to your patients. Fortunately, I have a calm manner that seems to set people at ease. Still, it takes a great deal of experience to make bedside manner seem effortless, and ultimately that is what you want to achieve: a sense of peace and confidence in spite of a bad diagnosis.

I explained the risks and benefits of intervention, and the risks and benefits of doing nothing. She nodded and followed along, taking it all in. As she looked at me, her eyes pleading for good news, I knew she was waiting for me to tell her that there was a pill or an easy treatment—something quick and painless that would solve her problem. Most patients believe, or at least hope, that a doctor can do anything. We are the modern medical high priests, called upon in almost

spiritual fashion to rid people of the inconveniences of illness and to heal on demand. At least, that's how people treat us and how, especially in my field of neurosurgery, we often want to be treated. But I had made a decision to give up the role of high priest, even if I still looked like one in my white coat and light blue scrubs—the standard, intimidating outfit that helps to signal the surgeon's separation from and, technically speaking, superiority to the people around us. Yes, I am a highly trained medical professional, but I am not my patients' ultimate healer, and I certainly am not their god. I believe that position is already taken.

I glanced over her scans one more time, knowing full well that, with her, there was only one way to go.

“Maria, I recommend we take care of that aneurysm,” I said. “It is the type we call a berry aneurysm because it has a small ‘neck’ holding it to the parent vessel. The aneurysm itself is round like a berry. Unfortunately, this kind has thin walls, and your thin walls have thinner walls called ‘daughter sacks,’ which I believe make it more likely to burst.”

She didn't even exhale when I said this. It was as though she were holding her breath, waiting for the good part. She wanted me to tell her that she would be fine, but I could not promise that. Looking at this woman in the prime of her life and career, I was struck yet again by the fact that people with nothing outwardly wrong can have a ticking time bomb inside their heads.

I felt compassion and a familiar sense of peace. It would be tricky, but I had the skills to help her, and I loved using

those skills; we were going to mend this thing so she could get on with the rest of her life. I wanted nothing more than to help put this incident firmly in her past. Ideally, she wouldn't see the inside of a hospital again until we did follow-up scans several months later to monitor her progress. Unlike other relationships, most surgeon-patient relationships should be temporary. We come together, solve the problem, and then go our separate ways.

"Can it wait?" she finally asked.

Statistically, it could; an aneurysm of that size had been there a long time. But those who have been in the business long enough have seen people bleed before they can get into surgery.

"If your aneurysm were perfectly round or smaller, I would have no problem waiting," I said. "We could wait a month—but I don't feel good about the size and shape."

She nodded slightly. "Then I guess that's what I have to do," she said. "I'm sure I'll have more questions when I've had a chance to digest this and research it a little more, and after I tell my family."

We both sat quietly as she considered again what I had said. After a moment, I leaned forward slightly and did what had become customary for me, something that I had never seen another doctor do, something that in a single moment stripped me of any semblance of godlike status.

"I know that I have given you a lot to think about. Would it be okay if I said a prayer with you?" I asked in a tone that made it safe for her to say no if she wished. I had asked earlier

about her spiritual history and learned that her parents were Catholic but that she did not attend services.

She tilted her head to one side and looked at me curiously, as if reading a financial report she didn't understand. She relaxed slightly and nodded.

"Uh, okay," she said, a little confused. "Fine."

I slid my rolling chair over to her and slowly reached out my hand. As surprised as she was, she instinctively reached out with both of her hands and grabbed it as if grabbing a lifeline. I bowed my head to give her privacy. Then I began to pray.

"God, thank you for Maria and for allowing us to find this problem," I said. "This is a surprise to us but no surprise to you. I am asking that this aneurysm not cause her any problems until we can fix it. Please give her peace and good sleep leading up to this surgery. God, we are asking you for success for this surgery. Give her the sense that you are with her. In Jesus' name, Amen."

I opened my eyes after the short prayer. Maria's chin was on her chest and she was crying softly. Tears had made water marks on her skirt. Peace seemed to blanket her, and she was tranquil and centered, like a visitor in a church or other sacred place. Gone were the extraneous movements born of high stress. She breathed deeply and seemed to exhale the concerns that had nearly overtaken her. This sudden change might have surprised me if I hadn't seen it happen so many times with so many other people.

After a few moments she looked up at me. Tears were

blending with her mascara and running down her cheeks in gray streaks. She nodded her affirmation of the prayer and dabbed her nose with a tissue that I handed her from the box I keep on my computer stand.

“Thank you, Dr. Levy,” she said with a sparkle in her eyes that spoke of calm and hope. “I’ve never prayed with a doctor before.”

I smiled. I’d heard that many times. This simple act had done what no conversation, no psychological analysis, no recitation of the medical facts had ever done, in my experience. She had received something no insurance company, medical provider, surgeon, or drug could offer: confidence and peace from a simple prayer. And even, I believe, a welcome touch from God.

Maria’s surgery went flawlessly—until the very end. Then a tear in the aneurysm caused blood to flow into the spaces of her brain with every heartbeat. I feared the worst; we might not be able to save her.

With my crew waiting for instructions, I called for the specific tools I would need to repair the breach. Everything seemed to happen in slow motion, and I felt my frustration rise. There is nothing surgeons hate more than surprises, especially the kind that could rob this family of a wife and mother.

I guided my instruments up the carotid artery just below the bleeding aneurysm and tried another method to stop the bleeding from the potentially fatal tear in the vessel wall. After five minutes of intensely focused work, I injected dye to

see if I had succeeded. My heart sank as I watched the screen and saw the dye leak from the top of the aneurysm as she continued to bleed. She had been bleeding into the brain for more than five minutes. Would she survive? And if she did, what would she be like?

It took several more minutes of delicate, painstaking work and periods of agonizing waiting, but finally the bleeding stopped. It took another hour to determine that Maria would survive the bleed and had not suffered a major stroke; she was moving her arms and legs and was talking. As she went into the intensive care unit and continued to improve over the next few days, I thanked God for answering the prayer that Maria and I had prayed together in my exam room. I believe it made the difference for Maria—and for me.

Because in neurosurgery, you never know what might happen.



I have no way of knowing exactly how many nurses, doctors, surgeons, or even other neurosurgeons take the spiritual lives of their patients seriously or pray with their patients as I do. It's certainly not a subject that comes up at medical conferences or with coworkers in the elevator or hospital cafeteria. In fact, if spirituality is not introduced in a way that honors the patient and his or her faith, it can lead to ostracism by the medical community or worse—discipline of some kind. The role of prayer in health care is itself a gray matter.

Yet both doctors and patients seem to recognize that some crucial component of patient care is often missing. Though spirituality is almost completely absent from medical interactions, a large majority (75 percent) of more than a thousand physicians surveyed agree that religion and spirituality are important in helping patients cope and in giving them a positive state of mind.¹

Patients, too, place a high value on religion and spirituality, particularly in the midst of an illness. In one study, 82 percent of 124 consecutive ophthalmology patients at Johns Hopkins University said prayer was important to their sense of well-being.²

As I have addressed patients' spirituality and made prayer a regular part of my patient interactions, the response has been impressive. I have seen lives brought to a level of spiritual, emotional, and physical health that my patients had never enjoyed before. In the process, I have learned two important things: that there is a limit to what I can do as a highly trained and experienced surgeon and that there is no limit to what God can do to touch a person emotionally and spiritually, not just physically.

My goal as a professional is to use my skills and knowledge to help people have the best lives possible, for as long as possible. This includes emotional as well as physical health, because the two are interrelated. Emotions can create health or cause disease, and spiritual health affects emotional health. Laughter and joy are known to restore and encourage health, while bitterness and resentment promote disease.

Forgiveness has well-documented health benefits. One's concept of God can cause ongoing joy or ongoing anxiety. These issues are not incidental but are central to health.³

The responsible thing for a doctor to do is to give patients the opportunity to make healthy choices in all areas of life.



As a neurosurgeon, I see a lot of tough cases. I am at the end of a chain of doctors that begins, usually, with primary care or emergency room physicians. Patients may start the journey toward neurosurgery because of minor problems such as headaches, dizziness, or tingling sensations that prompt them to go to the emergency room or see their primary care physicians. Some are sent to a neurologist, who orders an MRI scan.

Just to be clear, neurologists do not operate on the body; neurosurgeons do. Neurologists are the Ansel Adamases of the brain world, taking pictures of the brain and nervous system with various types of equipment—EEGs, EMGs, MRIs, and so on—to try to pinpoint a problem. Their challenge is to diagnose and treat symptoms nobody else can figure out. They gather a myriad of symptoms, bundle them together, and label them with a diagnosis. Maybe those symptoms point to Parkinson's disease, multiple sclerosis, or one of the other neurological diseases that have a specific set of symptoms. Or maybe the symptoms form a random collection that doesn't tell you much of anything. In many cases the

symptoms are caused by stress and anxiety. Much of the time nobody really knows why someone has a tingling arm, persistent headaches, or a “weird feeling” in some part of his or her body. Neurologists often have to tell patients, “I can’t find anything to explain your symptoms.” After all, most people with symptoms such as headaches, dizziness, or tingling do not have a brain aneurysm. Neurologists try to figure out who actually has disease. They have a difficult job.

The MRI scans neurologists order often prove invaluable because they can reveal an aneurysm or other malformation in the brain that nobody knew was there and that usually has nothing to do with the symptoms. We call this an incidental finding, and it is one of the reasons patients are redirected to me. They usually have small bumps on the vessels that are of no consequence. Occasionally—as in Maria’s case—they are life-threatening problems.

I operate on the brain. If surgery is necessary—on a tumor, an aneurysm, a knot of malformed vessels, or something else—there are a few ways to go into the head to solve the problem. Open surgery enters in the “traditional” way: cutting a hole in the skull to reveal the melon-sized gray matter that functions as the repository of our memories, habits, knowledge, personalities, and everything else that make human life what it is. In the case of aneurysms, most of which are on the base of the brain between the lobes, open surgery involves peeling the lobes apart to work on the vessels. For aneurysm surgery, we must operate while constantly looking through a large, suspended microscope that is wheeled

into position over the patient, a transparent sterile covering allowing it to be close to the open brain. I always enjoy that first look, when the *dura mater*—Latin for “tough mother,” the leathery covering inside the skull—is pulled back and the glistening surface of the brain is exposed. It is like putting on a diving mask and looking beneath the surface of the water at a coral reef: a whole new world opens up, and I become completely absorbed by it. The microscope illuminates and magnifies the brain’s awe-inspiring beauty, and the focus control brings it into sharp detail under powerful light. Against a nearly white background run arteries like red vines, branching into smaller arterioles and coursing through the sulci and gyri—the peaks and valleys of the cortex, the undulating surface of the brain.

People often ask me what it’s like to operate on the brain, to look at it, touch it, and mend it. I tell them that working directly on the brain is simultaneously challenging and invigorating. The vessels—the arteries and veins—glisten and pulsate beautifully. The architecture of the brain itself and the vascular system that supplies it with blood and oxygen are staggeringly complex—far more complex than any spacecraft, supercomputer, or anything else built by human hands. The brain is the command center of the body. Everything we need—from basic body functions to the creation of art and music, speech and complex technology, love and every human endeavor—is contained in this elegant and relatively tiny package. To repair its vessels, to restore blood flow to the command center, is amazing. It is exhilarating to work

around something so vital. This is the human body's most valuable real estate. Working in that neighborhood is one of the highest privileges I have.

I started out, like other neurosurgeons, doing open neurosurgery—drilling off a piece of the skull, putting my hands and instruments inside the brain, repairing the problem, and putting the skull piece back on. Later, I began to specialize in endovascular (“inside the vessels”) work, which I could see was the future of the field. Because many problems in the brain occur in the vessels (the arteries and veins), technology increasingly allows us to treat them without drilling open the skull. We can insert our instruments into the femoral artery (in the leg) and travel three feet “north” into the brain itself. This type of surgery is less invasive. No cutting bone or opening someone's head. Most people like that idea.

There is nothing routine about going inside the brain, though, no matter which direction you're coming from. Endovascular neurosurgery is still difficult and dangerous. In fact, it is one of the most dangerous of all the specialties of neurosurgery, because anytime you're dealing with a damaged vessel, as in the case of an aneurysm, you know that the vessel wall has been injured or compromised. Sometimes any touch, any manipulation, can cause a damaged vessel to rupture and fill the brain with blood.

Every parent knows that head wounds bleed profusely. What turn out to be minor cuts appear at first to be massive gashes that somehow produce copious amounts of blood. That is also true within the head. The brain is a blood hog.

A measure of its importance is that, although the brain represents only 2 percent of total body weight, it receives 15 percent of the body's blood supply.

The brain's high demand for blood and oxygen, along with its lack of appreciable energy reserves, makes it uniquely susceptible to disruptions of the blood supply. When an aneurysm ruptures during open surgery, the blood streams out so freely and quickly that the operating field is flooded, making it difficult to see what you're doing. A straightforward procedure suddenly takes on the character of fixing a leaky pipe under muddy water: stopping the flow is not easy.

When you're operating on other parts of the body, you can clip vessels here and there to stop the blood flow and clear up your field without much consequence. However, in the brain you have to be exponentially more careful. This is a high-rent district, the information headquarters for the patient's entire life. There is no backup system. When the blood flows, you can't start blindly putting clips on whatever is nearby, because you might injure a vessel or nerve that allows the patient to sing, dance, swallow, read, talk, or recognize his or her grandchildren. The brain is a minefield of wonders, and you must move carefully. A sudden hemorrhage might obscure your vision and invite rash movements to stop it, but it is easy to make a bad situation worse. Even small movements of fingers and instruments can have big consequences, so neurosurgeons must develop a finely honed technical ability. They must also know where the bleeding problems are likely to happen and how to stop them.

I was fortunate to train under some of the finest neurosurgeons in the world and have had a successful practice for more than fifteen years, but it is still a challenge to keep calm while adrenaline is pumping into my own bloodstream during a complicated surgery. With stroke or death looming large, controlling my own fear and rising panic becomes a learned skill. When things are going badly in neurosurgery, the potential loss is tremendous. I promise you, the neurosurgeon feels it. Everyone else in the operating room can go home and sleep well after another day of work, but I often lie awake wondering what I should have done differently. In a sense, surgeons work utterly alone.

The complexity and challenge of the brain contribute, at least for me, to the great satisfaction of operating on it, but that comes with great stress and, at times, frustration. Even if you do the procedure technically perfectly, you can still end up with a bad result—a ruined life, a mental deficit, an erased memory. Unexpected things happen. Operating on the brain is a high-wire act that rarely offers you a safety net.

That sense of challenge is also a major reason that I pray—not because I lack confidence but because I am realistic about what I am able to do and confident about what God is able to do. Surgery can treat the immediate problem, but much more is involved in healing than just this physical aspect. Surgery is reactive, not proactive. Surgical outcomes are never completely predictable. Some technically perfect procedures result in stroke or death for patients, while some potentially catastrophic bleeds in the brain result in no loss of function at all.

Most surgeons chalk this up to fate, chance, or luck (“better lucky than good”) because we cannot explain it, but I am convinced that there is much more at work than just “chance.” I believe God wants to be involved—and will be, if we ask him.

This book tells the story of how I, a practicing neurosurgeon, began to address the spiritual and emotional aspects of health and to pray with the people I operate on. My journey to combining medicine and faith did not start easily. At first, I was not graceful or confident about it. I made some people uncomfortable. I’m reminded of the old bit of wisdom that if you want to do something well, you have to be willing to do it poorly at first. I began with no road map for praying with patients. This wasn’t the kind of stuff we were taught in medical school or during residency. Even so, over time prayer worked into my normal routine and became natural. It made things better. I believe it changed outcomes.

Does everyone I pray for get better? No, and that is frustrating. I’m still waiting to receive that magic wand doctors are supposed to receive with their licenses to practice medicine. But I have seen many positive results from prayer, and I’m convinced they go beyond any physical or psychological explanation. Not only have people’s brains been healed, but many people have been released from shackles of bitterness, anger, and resentment, which can be the root cause of serious physical problems. I have discovered that God sees the whole person, not just the particular problem that is flaring up in his or her head. Patients generally appreciate being seen as more than their medical problems.

I have been in this profession for a good number of years and am intimately familiar with most of the new techniques, procedures, medical devices, and drugs hitting the market. Many of them are ingenious, and I use them regularly in my practice. I have consulted for several companies to develop better devices and have traveled the world teaching others to use them. I admire and am grateful for modern medical technology. But though technology can prolong a life or reduce pain, it cannot always make life better.

My experiences have convinced me that spirituality is a crucial element to the well-being of a person as a whole; moreover, if we let him, God can do powerful, supernatural things in our everyday lives. That's why I began inviting God into my consultations, exams, and surgeries. Many would be surprised that a neurosurgeon—a man of science, logic, and human progress—would be such a strong believer in God and divine intervention. Yet the experience has been nothing short of phenomenal.

Notes

CHAPTER 1

1. Curlin FA et al., “Physicians’ Observations and Interpretations of the Influence of Religion and Spirituality on Health,” *Arch Intern Med* (2007) 167:(7)649–54.
2. Magyar-Russell G et al., “Ophthalmology Patients’ Religious and Spiritual Beliefs,” *Arch Ophthalmol* (2008) 126(9):1262–65.
3. Drawn from the following articles:
 - Carson JW et al., “Forgiveness and Chronic Low Back Pain: A Preliminary Study Examining the Relationship of Forgiveness to Pain, Anger, and Psychological Distress,” *J Pain* (2005 Feb) 6(2):84–91.
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Chronic pain patients with positive God images had greater levels of happiness. One’s emotional experience of God has an influence on happiness.

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CHAPTER 3

1. I cannot remember everything I said to Joan after she experienced the “cloudlike” feeling. What I have included here is what I typically would say to someone who wanted to move toward God.

CHAPTER 4

1. Letter reproduced with the permission of “Dr. Willard,” whose name has been changed.

CHAPTER 5

1. Samuel brought all the tribes of Israel before the LORD, and the tribe of Benjamin was chosen by lot. Then he brought each family of the tribe of Benjamin before the LORD, and the family of the Matrites was chosen. And finally Saul son of Kish was chosen from among them. But when they looked for him, he had disappeared! So they asked the LORD, “Where is he?” And the LORD replied, “He is hiding among the baggage.” So they found him and brought him out, and he stood head and shoulders above anyone else. Then Samuel said to all the people, “This is the man the LORD has chosen as your king. No one in all Israel is like him!” And all the people shouted, “Long live the king!” (1 Samuel 10:20-24).

CHAPTER 7

1. A cheerful heart is good medicine, but a broken spirit saps a person’s strength (Proverbs 17:22).
2. If you forgive those who sin against you, your heavenly Father will forgive you. But if you refuse to forgive others, your Father will not forgive your sins (Matthew 6:14-15).
3. If we confess our sins to him, he is faithful and just to forgive us our sins and to cleanse us from all wickedness (1 John 1:9).
4. Confess your sins to each other and pray for each other so that you may be healed. The earnest prayer of a righteous person has great power and produces wonderful results (James 5:16).

CHAPTER 8

- I. If you forgive those who sin against you, your heavenly Father will forgive you. But if you refuse to forgive others, your Father will not forgive your sins (Matthew 6:14-15).

CHAPTER 10

- I. The details of this story and these remarks were printed with the permission of “Charlotte,” whose name has been changed.

CHAPTER 12

- I. We know that God causes everything to work together for the good of those who love God and are called according to his purpose for them (Romans 8:28).

EPILOGUE

- I. “I know the plans I have for you,” says the LORD. “They are plans for good and not for disaster, to give you a future and a hope. In those days when you pray, I will listen. If you look for me wholeheartedly, you will find me” (Jeremiah 29:11-13).

Those who search will surely find me (Proverbs 8:17).

I tell you, keep on asking, and you will receive what you ask for. Keep on seeking, and you will find. Keep on knocking, and the door will be opened to you. For everyone who asks, receives. Everyone who seeks, finds. And to everyone who knocks, the door will be opened (Luke 11:9-10).

A Final Word

PRAYER IS FOR THE PATIENT, not the physician. Granted, the physician and staff may also be blessed, but prayer is for the patient.

In prayer as in surgery, where there is opportunity to do great good, there is also the potential to do harm. I don't ask to pray with everyone, because prayer with those who don't want it is neither helpful nor kind. There is no one prayer "prescription" that I advocate, except perhaps that of being open to situations in which prayer would be received as a blessing. Pushing one's personal faith on another is not recommended in any setting.

On the other hand, it seems to me that offering medical or spiritual information and considering the patient's response is caring, whereas withholding information that might help

is actually uncaring. Thus I believe that prayer is one of the highest forms of kindness that I can show a person.

Some people feel uncomfortable by the mention of God in their presence. In particular, those who have been hurt by religious institutions are often especially vulnerable if those in positions of authority speak of God. Whenever offense is given, whether in medical practice or elsewhere, humility helps. This is true in all areas of life; when people sense that we genuinely care, they are more open. Let us remember that we are all on a journey, that none of us have arrived.

Whatever our profession or station in life, I believe that we all desire to make a difference in the world. In caring for the whole person in my surgical practice, I have encountered life-changing responses that go far beyond the procedures I perform. As with anything of value, though, there is a cost involved. For example, time is a limited resource; each of us is given the same daily amount. In my practice, my schedule needed to change to allow time for those in need. Through this book I hope to inspire you to approach the relationships in your own spheres of influence, whatever they are, with greater love and authenticity.

David attended medical school at Emory University School of Medicine in Atlanta, Georgia. He completed his residency in neurosurgery at Barrow Neurological Institute in Phoenix, Arizona, and did a fellowship in Endovascular Neurosurgery at the University of Vienna, in Austria. In 2007 he took a year-long sabbatical that took him to prisons and orphanages in Bolivia, Peru, and Ecuador. In recent years, David has reduced his office and operative schedule, using his off-hours to speak with his patients about forgiveness and other aids to healing. He currently practices neurosurgery in San Diego, California.