

# ADVANCES IN REHABILITATION MEDICINE



## Joel Stein, MD

Physiatrist-in-Chief  
NewYork-Presbyterian

Simon Baruch Professor and Chairman  
Department of Rehabilitation  
and Regenerative Medicine  
Columbia University Medical Center  
js1165@cumc.columbia.edu

Professor and Chairman  
Department of  
Rehabilitation Medicine  
Weill Cornell Medicine  
jos7021@med.cornell.edu

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## LATEST NEWS

NewYork-Presbyterian's  
Physical Medicine &  
Rehabilitation Residency  
Program has been **ranked #6**  
**in the country** by reputation  
in the 2017-2018 Doximity  
residency rankings. These  
rankings are based on survey  
responses from physicians in  
the field, both alumni and non-  
alumni of various programs.



## Rehabilitation Medicine: At the Front Line of Spine Care

In 2016, Weill Cornell Medicine launched the Center for Comprehensive Spine Care, enabling patients to receive highly skilled, interdisciplinary treatment for spinal conditions in one dedicated location. Emphasizing the importance of providing patients with access to both nonoperative and surgical expertise, the Center is co-directed by **Jaspal Ricky Singh, MD**, who is triple-boarded in Physical Medicine and Rehabilitation, Sports Medicine, and Pain Medicine and also serves as Director of Interventional Spine in the Department of Rehabilitation Medicine at NewYork-Presbyterian/Weill Cornell Medical Center, and **Roger Härtl, MD**, Director of Spinal Surgery and Neurotrauma in Weill Cornell's Department of Neurological Surgery. They lead a team of spine specialists from rehabilitation medicine, physical therapy, neurology, neurosurgery, and anesthesiology.

**"In our dedicated spine center, physiatrists can serve as the front line for evaluating patients' spine disorders, referring them to surgeons and other specialists, if needed, for consultation on the same day."**

— Dr. Jaspal R. Singh

### Importance of Interdisciplinary Perspectives

The heterogeneous nature of spine disorders necessitates an interdisciplinary perspective and treatment strategy that includes conservative management alone or in concert with surgical approaches. "The majority of spine patients have conditions that are benign and self-limited. These patients will likely not become surgical candidates, but they do require treatment," says Dr. Singh.

"The most successful outcomes for spine patients are derived from the insights, experience, and expertise of a team of practitioners who consult with each other to address all aspects of the patient's spinal disease and pathology. These include pain, disability, and overall quality of life."

Traditionally, spine care is driven by which specialist – neurologist, surgeon, physiatrist, pain medicine physician – sees the patient first. By reviewing cases together, team members in the Center for Comprehensive Spine Care examine spine issues from an integrative approach, identifying the specific causes of a patient's condition and developing targeted therapies together that will best serve

the patient's individual circumstances.

"For example, not all spinal stenosis is the same," says Dr. Singh. "Is it a soft disc herniation, which can sometimes reabsorb? Is it a bone segment that's not going to reabsorb? Is that person's neck stable? All these factors are taken into consideration to prognosticate how a person is expected to do and when, if ever,

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Dr. Jaspal Ricky Singh

Rehabilitation medicine specialists are at the front line of treatment in the Center for Comprehensive Spine Care, performing comprehensive physical examinations to develop a differential diagnosis and to determine if conservative methods are appropriate or if the patient requires a surgical consult. Only about 10 percent of spine patients will go on to surgery.

## Rehabilitation Medicine: At the Front Line of Spine Care *(continued from page 1)*

it is necessary to intervene aggressively to prevent neurological injury. The result of this interdisciplinary approach is a coordination of services that optimizes the experience of our patients and the outcomes of their care.

“A great advantage of our center is that now we are all co-located in one center,” continues Dr. Singh. “If I have tried some conservative measures for a patient’s spine issue – medication, physical therapy, an interventional procedure – and they are still not progressing, I can schedule a surgical consultation quickly. In fact, there have been patients who’ve gone from seeing me to coordinating and planning a surgery in the same day.”

### Pain Management: A Multimodality Approach

“Rehabilitation medicine doesn’t only determine what is causing spine pain, but equally important, focuses on helping our patients return to the activities they love and the tasks they need to do,” says **Michael T. Sein, MD**, a physiatrist fellowship trained in pain medicine and a member of the Center for Comprehensive Spine Care.



*Dr. Michael T. Sein*

Drs. Singh, Sein, and their colleagues employ a multidisciplinary approach to treating pain by integrating physical therapy and interventional pain management techniques and individualizing treatment plans with a focus on functional restoration. “We provide whatever form of therapy is best for that patient,” says Dr. Sein. “The data has become clear that there are very real risks to chronic opioid use, so we have to figure out what we can offer in their place. This includes multimodal treatments that do not rely on one, single approach. You have to create a multi-tiered plan that may include medication, rehabilitation therapy, or interventional procedures in order to relieve suffering and reestablish quality of life.”

“We provide pain management for patients who find it difficult to complete physical therapy or for those who were not helped by physical therapy, those patients with a history of chronic pain who may need additional pain relief in order to undergo surgery, and for those who have not been helped by surgery,” says Dr. Singh. “In addition to incorporating medications to manage inflammation or neuropathic pain, our pain specialists also work with a number of novel compounds unique to pain management.”



Team members also provide a range of minimally invasive procedures to target and alleviate the causes of chronic pain, especially for patients in whom medications have failed. Their expertise includes nerve blocks, injections, intrathecal pump therapy, and radiofrequency ablation. They are also among the most experienced in spinal cord stimulation and neuromodulation, a technique that uses electrical stimulation or delivers pharmaceutical agents directly to a target area to modify how the nerves conduct pain signals.

“Advances in technology, such as musculoskeletal ultrasound, allow physicians to perform procedures in the office that have been previously limited to the operating room or procedure suite,” adds Dr. Sein. “We are now able to visualize nerves and blood vessels in a way that we couldn’t do purely with fluoroscopy. As ultrasound imaging improves in resolution and portability so does our ability to intervene in a safe and effective manner right at the bedside. The advances in technology that translate to patient care do not occur in a vacuum at a research facility; we’re taking those advances and putting them into action.”

Among their current research initiatives, the Center’s rehabilitation medicine physicians are evaluating the safety and efficacy of growth factors and stem cells in the treatment of facet and sacroiliac joint pain. In addition, they are working with basic scientists to develop a safe epidural injection consisting of these growth factors.

“The Spine Center is all about optimizing the patient experience,” says Dr. Singh. “The speed in which patients can be seen by the appropriate practitioner has been increased dramatically. We have a great group of specialists – and though we all see patients a little differently, each of us brings our expertise to the table to develop the most appropriate treatment plan for each patient.”

### Reference Articles

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### For More Information

Dr. Michael T. Sein • [mis9220@med.cornell.edu](mailto:mis9220@med.cornell.edu)

Dr. Jaspal R. Singh • [jrs9012@med.cornell.edu](mailto:jrs9012@med.cornell.edu)



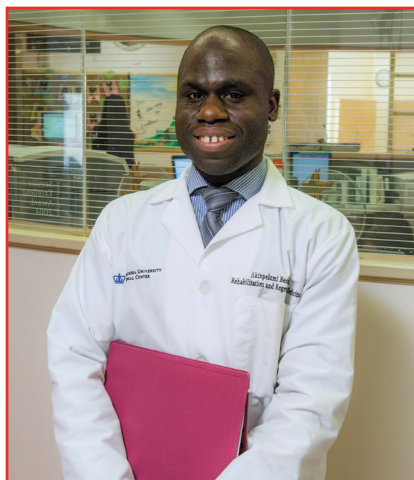
## A Focus on Faculty: Highlighting a Range of Expertise

### Akin A. Beckley, MD

Coming from a family of physicians, it was natural for **Akin A. Beckley, MD, MBA**, to follow in their footsteps. “My father is a urologic oncologist, two of my mother’s brothers are physicians, two of my siblings are physicians, and so are some of my cousins – our family has over a dozen in all,” says Dr. Beckley, a physiatrist in the Department of Rehabilitation and Regenerative Medicine at NewYork-Presbyterian/Columbia University Medical Center.

Becoming a physiatrist was also prompted by a very personal experience. “After completing my medical degree at the University of Connecticut, my sister became ill with a brain tumor that affected the use of one of her arms, as well as her ambulation,” says Dr. Beckley. “I took time off from my residency to care for her and realized that this was the area of medicine I wanted to specialize in.”

Dr. Beckley seeks to help patients return to their level of function after an illness or injury using an interdisciplinary and collaborative approach. “My particular interests are in oncology, amputee care, and cardiopulmonary rehabilitation,” says Dr. Beckley. “I work with patients in conjunction with physical, occupational, and speech therapists to address functional impairments they may have before starting either surgical or nonsurgical treatments. After treatment I stay actively



involved in their care to help them return as close to normal as possible.”

Dr. Beckley believes it is important for rehabilitation medicine to integrate more with other specialties and to promote awareness about physiatry and its role in ensuring comprehensive patient care.

“This may involve physiatrists meeting with patients prior to surgery or undergoing chemotherapy and radiation,” he says. “We might be initially consulted when primary care physicians are looking at both surgical and nonsurgical options for their patients with musculoskeletal issues.”

Educating residents about physiatry is another component of Dr. Beckley’s role at Columbia, and one that he enjoys. “When I instruct the residents and medical students, I advise them to look at the patient as a whole, listening and ensuring a complete neuromuscular physical examination is performed. For example, shoulder pain may actually originate from the spine. The physiatrist can be instrumental in collaboration with therapists in the diagnosis and treatment of functional impairments.”

#### For More Information

Dr. Akin A. Beckley • aab2236@cumc.columbia.edu

### Leroy R. Lindsay, MD

“I have always been interested in the musculoskeletal and neurologic systems and in function and quality of life,” says **Leroy R. Lindsay, MD**, a physiatrist in the Department of Rehabilitation Medicine at NewYork-Presbyterian/Weill Cornell Medical Center. “I found that physiatry offered me the perfect blend of those interests and would allow me to help patients achieve as much function and independence as possible regardless of their diagnosis. That really appealed to me.”

Dr. Lindsay received his medical degree from the University of Rochester School of Medicine and Dentistry, followed by residency training in physical medicine and rehabilitation at Rutgers-NJMS/Kessler Institute for Rehabilitation. He then completed a fellowship in brain injury medicine and neurological rehabilitation at Georgetown University/MedStar National Rehabilitation Hospital.

Dr. Lindsay notes that patients with brain injuries or who have been treated for cancer often seek further care with physiatrists. “For example, we are seeing more patients who have had glioblastoma resections,” he says. “They may have seizures from the surgery or from medications that cause weakness and changes in function. Teaching patients, as well as their caregivers, how to ambulate safely once they return home is very important.”

Dr. Lindsay is also collaborating with pediatric neurologists in



the area of concussion. “We’re examining high school players and weekend warriors to determine the effect of exercise on recovery after concussion,” he says. “We’re also seeing patients that have confounding factors, such as cervicogenic or vestibular issues, migraines, anxiety, depression, or ADHD, that contribute to a lack of recovery or slow recovery. Is there a standardized course that we could offer these patients? We’re looking into that now.”

“At the point of injury, most physicians enacting treatment are concerned with repair, stability, and safety. And that is perfect,” Dr. Lindsay explains. “It’s helpful for me to be integrated into this acute side of care.”

Because I see patients a month, two months, a year down the road, I know what they look like at the end of their recovery. I have the benefit of knowing complications they might face and anticipating obstacles. I’m looking to prevent any of these secondary complications. My focus is on minimizing the impact of neurologic and musculoskeletal injury and maximizing function through nonoperative treatments. I think about what the patient wants and needs and the challenges they will need to overcome.”

#### For More Information

Dr. Leroy R. Lindsay • lel9053@med.cornell.edu

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NewYork-Presbyterian Hospital  
525 East 68th Street  
New York, NY 10065  
[www.nyp.org](http://www.nyp.org)

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