



BRIGHAM AND  
WOMEN'S HOSPITAL

## Comprehensive Spine Care – Surgical and Non-surgical Treatment: A white paper on surgical and non-surgical options

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The reason for forming our comprehensive approach to spine care and our Spine Center is that it affords the opportunity to have multidisciplinary collaboration on a very challenging patient problem – back pain. Our clinicians work collaboratively to achieve the best outcomes for each patient.



Zacharia Isaac, MD  
Medical Director, Spine Center

Research on the treatment of spinal injuries and spinal surgery at Brigham and Women's Hospital is changing the care and treatment of these patients around the world.

"One of the things that is unique at Brigham and Women's is that we really are at the epicenter of generating the evidence that guides spine care not only at our own institution but across the nation," explains neurosurgeon Michael W. Groff, MD, Co-director, Spine Center. "Patients in our hospital and around the country benefit from the work conducted at Brigham and Women's."

Incorporating the newest and most concrete evidence in standards of care is an important process at Brigham and Women's Hospital. At the Spine Center doctors and surgeons work to maintain high levels of care tailored to each patient. While participating in emerging research on spine care, the team is dedicated to multidisciplinary treatment plans including non-surgical and surgical options.

With Medical Director Zacharia Isaac, MD, Dr. Groff and Christopher M. Bono, MD, co-direct the Spine Center bringing a level of expertise recognized by their peers. In 2013 Dr. Groff was named Chair of the American Association of Neurological Surgeons/Congress of Neurological Surgeons (AANS/CNS) Joint Section on Disorders of the Spine and Peripheral Nerves, formed to advance training, research, and patient care for spine disorders. Also in 2013, Dr. Bono was named Second Vice President of the North American Spine Society, a worldwide organization dedicated to fostering the highest quality spine care through education, research, and advocacy. These leadership roles in advancing evidence-based approaches to spine treatment directly benefit our Spine Center patients.

**Life. Giving.  
Breakthroughs.**

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## About the Comprehensive Spine Center

The Spine Center is a multidisciplinary treatment environment for all patients struggling with spinal conditions – back pain, diseases and injuries. The focus of the Center is on providing an initial treatment plan for patients allowing them to easily transition between services as dictated by their diagnosis and particular situation. Each individual who is referred to the Center is treated with state-of-the-art diagnostic procedures and imaging in order to ensure the correct diagnosis and treatment plan.

“Back pain is a very common complaint but a very non-specific complaint. Back pain and leg pain can be caused by many different things including spinal stenosis, disk herniations, and instability. The procedures that we offer are really tailored to the specific patient with a specific disorder based on imaging and exam,” says Dr. Bono, Co-director, Spine Center.

Non-operative and conservative treatment options provided by physiatrists, pain management physicians, and other specialists are often first explored.

Dr. Isaac explains, “Our role as physiatrists is to help with the conservative care and non-surgical management of spine issues. We want to sort out where the pain is coming from and how much of a functional impairment there is. After doing a thorough exam and review of medical history we develop a treatment plan which will often incorporate the use of physical therapy, an exercise regimen, activity modification, careful use of medications, and interventional therapies such as local injections under ultrasound or x-ray guidance.”

For some patients, the most appropriate and effective treatment is surgery.

Spine surgeons at Brigham and Women’s Hospital and Brigham and Women’s Faulkner Hospital treat the entire spectrum of spinal disorders, from common disc herniations to complex spinal tumors. We also treat patients suffering from degenerative disc disease, spondylolisthesis, chiari malformation as well as spinal stenosis, fractures, infections and tumors, among others.

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### Progress and Innovation

Brigham and Women's Hospital is a leader in the field of spine care research and has played an integral role in studies that have improved outcomes and set standards for comprehensive spine care worldwide.

"There are measures we are taking to make sure surgery is more successful, including advancing our techniques to make them less and less invasive" explains Dr. Groff. "Overall, though, the most important advancement has been the collaboration of all of the various care providers in making the outcome for any given patient the best that it possibly can be."

The research also has explored spinal disorders to understand underlying risks, to determine treatment strategies and innovations, and to positively impact patient outcomes.

One Brigham Women's Hospital research project recently published in the journal *Spine* studied the relationship of pain level in a patient and the role that played in the decision to have surgery.

"It sounds very intuitive that pain plays a role in the decision-making but it had never been established in any kind of literature," says Dr. Bono. "We demonstrated a very clear relationship between pain intensity levels at the time that a patient made surgical decisions. Based on the data from the study, we now encourage patients who are having an acute episode of pain to go home and think about it and once the pain has passed they can then make a better decision about whether surgery is the right option for them."

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