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One-Stop Motion Preserving Minimally Invasive Spine Unit (MMSU)



Alexandra Hospital (AH) MMSU is the first comprehensive and dedicated spine unit focused on motion preserving and minimally invasive spine surgeries.



An Increasing Problem

Degenerative disc disease in the cervical and lumbar spine is an increasing problem in our ageing population with prevalence up to 50% of the population. The local prevalence for degenerative spine conditions is 23% across all ages, with those afflicted having about 4 episodes of pain a year, lasting up to two weeks each time.

The presentation of such spine conditions will continue to increase, related to Singapore's ageing population and general lifestyle habits. Degeneration is accelerated by obesity, poor lifestyle habits such as lack of exercise, poor posture, and occupational hazards.

What is Motion Preservation Surgery

It is a technique that hinges on a meticulous combination of spinal decompression and tissue releases and balancing to 'de-stress' stiff spines, restoring mobility at the affected vertebral segments. This restores physiological range of motion, restores disc height and keeps the cord and nerves decompressed.

Conventional spine surgeries favor spinal fusion and big incisions. NUHS hospitals have developed an enhanced motion-preserving disc replacement surgical technique to benefit up to approximately 80% of patients who require anterior cervical spine surgery. In addition, patients can have their spinal disease treated while preserving their spinal motion.



Dr Dennis Hey (right), Founding Director at AH's new dedicated motion-preserving and minimally invasive spine unit and Senior Consultant Spine Surgeon at NUH, together with Dr Lin Shuxun (left), Consultant Spine Surgeon at AH and NTFGH, have operated on more than 100 spine levels in the past 15 months alone. This surgery can also be performed by these doctors at NUH and Ng Teng Fong General Hospital.

AH MMSU multidisciplinary team led by Founding Director, Dr Dennis Hey comprises of spine surgeons, pain and rehabilitation specialists.



We Provide

- One stop end-to-end tailored care plan

We Seek

- To reduce the need for unnecessary fusion surgeries
- Improve surgical outcome
- Promote functional ageing

What our doctors say:

"This new technique loosens the joints of the spine safely and effectively to allow implantation of artificial discs without imposing stress on spinal tissues. As a result, spinal mobility is maintained or enhanced. For an ageing society where we are living longer and aspire to have a better quality of life, this technique presents an option for better outcomes."

- Dr Dennis Hey, Founding Director, AH's MMSU and Senior Consultant Spine Surgeon, NUH

"We shift the paradigm of spine surgery from 'fusion' to 'function', to enable preservation of a flexible and naturally mobile spine, to benefit more patients."

- Dr Lin Shuxun, Co-founding Director, Consultant Spine Surgeon, AH and NTFGH