

Going big on small

By simply reducing three weeks recovery time to just three days, the keyhole technique of surgery has revolutionised joint replacement and several sports-related injuries, such as strained and cramped muscle, sprained ankles, tennis elbow, lower back pain, painful heels and knees, among others.

Better implants and less invasive surgical techniques now make it possible for people, including active sportspersons, to get completely back on track.

“Better implants, surgical instruments and techniques available now significantly improve the overall quality of treatment,” said Dr Deepak Chaudhary, director, Safdarjung Hospital’s Sports Injury Centre (SIC), where nearly 150 keyhole surgeries are done each month; 90% of which are knee and shoulder surgeries. Surgery to repair the knee ligament tear, for instance, has evolved to a stage where the patient starts walking three days after the surgery. In just about three months, sportspeople can go back to active sports.

“Earlier, it took six weeks for a person to start walking after surgery, mainly because the ligament taken from inside the knee was fixed on titanium-based implant that couldn’t be integrated with the joint,” said **Dr Pushpinder Bajaj**, specialist in the field of Arthroscopic (keyhole) surgery. “The new implant is a bone-based, bio-absorbable, grows on the joint and allows the ligament to be a part of the joint much faster.”

The surgical method has also seen a change. “Instead of the trans-tibial technique used earlier, surgeons use the anatomical technique using navigation-based methods to place the implant closer to its original position,” added **Dr Bajaj**.

While knee and hip replacement surgeries are done at most orthopaedic centres, shoulder replacement surgery is still uncommon. An unhealed shoulder fracture, a shattered shoulder, and ligament injury where the support to the socket is missing, are some of the reasons for shoulder joint replacement.

MUSCLE CRAMPS	LIGAMENT TEAR	RUNNER'S KNEE	TENNIS ELBOW
Painful involuntary muscle spasm, usually in the legs. Dehydration and excessive sweating after sudden exertion are usually the cause as these deplete essential minerals such as sodium, potassium, calcium, magnesium etc. from body. Other risk factors are poor nutrition, inadequate sleep, smoking and wearing high-heeled or ill-fitting shoes.	A sudden and severe jerk may stretch the muscle beyond its capacity, causing a pull or a tear in muscle fibre. Anyone can have a ligament pull or ligament tear, owing to extra strain, overuse, fatigue or even a bad fall.	A common cause of knee pain, it occurs due to misalignment of the knee-cap within its socket. Constant rubbing of the knee-cap against the wall of the socket wear out the cartilage on the sides and on the back. In some cases, fluid may build up and cause swelling and pain.	A sporty name for pain and tenderness in the outer part of the elbow as a result of muscle and tendon inflammation. though, it's common in people who play racquet sport, it may also occur due to driving for long hours or using a computer at a stretch.

Hip-joint replacement surgery is also being attempted these days arthroscopically, using the image guidance technique. “Till a couple of years ago, surgeons didn’t do keyhole hip replacement because it’s a difficult surgery. Since the joint lies much deeper and many vital structures such as arteries and veins surround it, surgeons preferred cutting open the hip to do the surgery,” said **Dr Bajaj**. The surgery is computer-assisted now and a standard x-ray machine provides a real-time images to the surgeon. The procedure provides tremendous post-operative benefits to patients, with shorter scar, less blood loss, shorter recovery period and going back to normal life in a relatively shorter period of time.

Vishwas Rajput, 27, a Varanasi-based wrestler, who underwent a shoulder repair surgery at SIC last month, could lift his arm marginally on the fourth day post-surgery. “There are many senior wrestlers back home who had to quit the sport due to shoulder injury that didn’t heal even years after surgery. Thankfully, I already feel better,” he said.

Pain-management has also improved, with each patient being offered a customised pain management technique called Pain Controlled Analgesic (PCA), where the patient is given a button to press for a higher dose of pain reliever, in case the pain is high.

“These new techniques makes the initial few months of recovery comfortable and faster for patients. It makes a lot of difference, if the surgeon is well trained,” said Dr Chaudhary.

Apart from sports, joint injury can occur while exercising, playing, using electronic gadgets for long hours and even while driving. In fact, many sports-related injuries are seen not in sports persons but common people who are not into sports. More than half of the injured treated at SIC in a week are those who got injured without playing any sports. About 10% are road traffic accident cases.

Over this weekend, 500 doctors were exposed to 30 live surgeries showcasing developments in keyhole and minimally-invasive joint surgeries at the International Society for Knowledge for Surgeons on Arthroscopy and Arthroplasty’s annual conference in New Delhi. “The focus was sports-related injuries, like cartilage transplant, custom-specific implant and navigation-based joint replacement surgeries. We need more skilled surgeons to meet the domestic need because very few can afford to travel abroad for treatment,” said **Dr Bajaj, who organised the conference**.

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