

Evolution of a new league in
Joint Reconstruction Surgery...

Asian Joint Reconstruction Institutez



The first dedicated Joint Reconstruction Unit in the region

Joint reconstruction surgery has evolved exponentially in recent years requiring a team effort and sub specialization to render a full service to the patient and optimise outcomes.

This has led us to set up the first dedicated joint reconstruction institute in this part of the world.

This unique coming together of expertise, talent, experience and equipment will take joint reconstructive surgery to the next level.

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AJRI 360° Joint Care

Complex revision joint replacement surgery

Specialised Musculoskeletal Radiologist / Pathologist / Infectious diseases consultants

Arthroscopy (Key hole surgery)

Advanced bracing & taping techniques

Dedicated orthopaedic anaesthesia team and pain management

Specialised Non-operative management

Osteotomy (Realignment of bone)

Rheumatology service

High performance primary joint replacement surgery



Dr. P. Suryanarayan M.S (Ortho)
Joint Director & Consultant Orthopaedic Surgeon



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Team AJRI



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Associate Consultant



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Dr. VSV Kumar DNB (Ortho)
Associate Consultant



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Dr. Velmurugan DNB (Ortho)
Associate Consultant



Revision joint replacement surgery

Revision or redo hip and knee reconstruction is becoming common in India. Revision is required for patients whose primary replacement implants have failed due to varied reasons (wear and tear, infection, primary failure). Surgical experience is a critical ingredient while addressing to a variety of issues encountered during revision surgeries.

Complex revision joint replacement surgery is one of the most technically challenging interventions in orthopaedics.

Team **AJRI** has vast experience in complex revisions and reconstructions of the hip and knee involving the use of allografts, porous tantalum material, non cemented metaphyseal sleeves and custom revision components.

It also has the highest experience of revision for infected joint replacements.



Largest (>20 years) experience in revision hip and knee replacement surgery in India

Partial / Unicondylar knee replacement

TKR is not the only solution for all types and stages of painful arthritis.

In some patients only one compartment is predominantly affected. These situations are best suited for joint conserving procedures like corrective osteotomies / unicondylar replacement. Since all the ligaments are preserved and as the procedure is minimally invasive, the recovery is rapid and function near normal.

Preservation of the natural joint to the maximum extent possible is the core philosophy of **AJRI**.



Maximam experience of partial / uni knee replacement in this region



Computer aided hip & knee navigation surgery and custom instrumentation for TKR

Accuracy of component placement is the most important variable that influences the outcome of joint replacement surgery especially the function and the longevity of prosthesis.

AJRI surgeons have been the key designers for computer navigation systems for both hip and knee replacement surgeries. Navigation is a way of life at AJRI and is used constantly to fine tune the accuracy of component placement to optimise outcomes.



AJRI surgeons were also involved in the development of "PrePlan* - 2 pin Concept", a patient specific custom instrumentation based on CT scan that enables precision in key surgical steps.



Principal design surgeon team for international hip & knee navigation systems

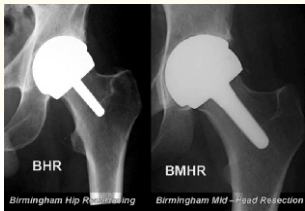
* PrePlan - © Stryker

Bone conservative surgery (Birmingham Hip Resurfacing)

Unlike the western population hip arthritis occurs in young patient in India/Asia. Hence conserving bone becomes crucial. The BHR (Birmingham Hip Resurfacing) and BMHR (Birmingham Mid Head Resection) prosthesis is specifically developed for younger and more active patients.



AJRI has experience of over 2000 BHR/BMHR procedures which makes it the largest volume centre in Asia. In addition, the centre has the largest experience of this procedure for avascular necrosis of hip in the world.



Largest experience of bone conservation surgery in the hip in Asia (BHR) / (BMHR)

Deltamotion hip

Traditional THR is characterised by 3 important disadvantages: 1 .The relatively small sized head makes it prone for dislocation. 2. The polyethylene articulation wears out rapidly in younger active patients necessitating revision surgery. 3. Conventional stem design makes revision surgery very difficult.



The Deltamotion eliminates these 3 weak links by providing, 1. Incrementally large head proportioned to the native size allowing near normal activity postoperatively. This is made technically possible by a factory fitted component. 2. Deltaceramic on deltaceramic articulation which shows unrivalled longevity amongst bearings. 3. Bone friendly stems which makes revision surgery (if required) very easy to do.

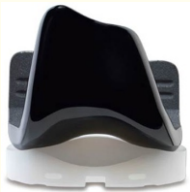
AJRI surgeons have developed the surgical technique for ideal implantation of Deltamotion.



Asia's largest experience of the revolutionary Deltamotion hip

Oxinium (Ceramic) knees

Conventional knee replacement is not suitable for relatively younger and active patient due to the potential of rapid wear and early failure.



Oxinium knee reduces the wear by 50%. It is popularly known as the "30 year knee" in North America. This innovation was brought to this region by **AJRI** surgeons in early 2010, enabling the employment of the knee replacement procedure for relatively younger patients.



Maximum experience Oxinium (Ceramic) knees in this region