

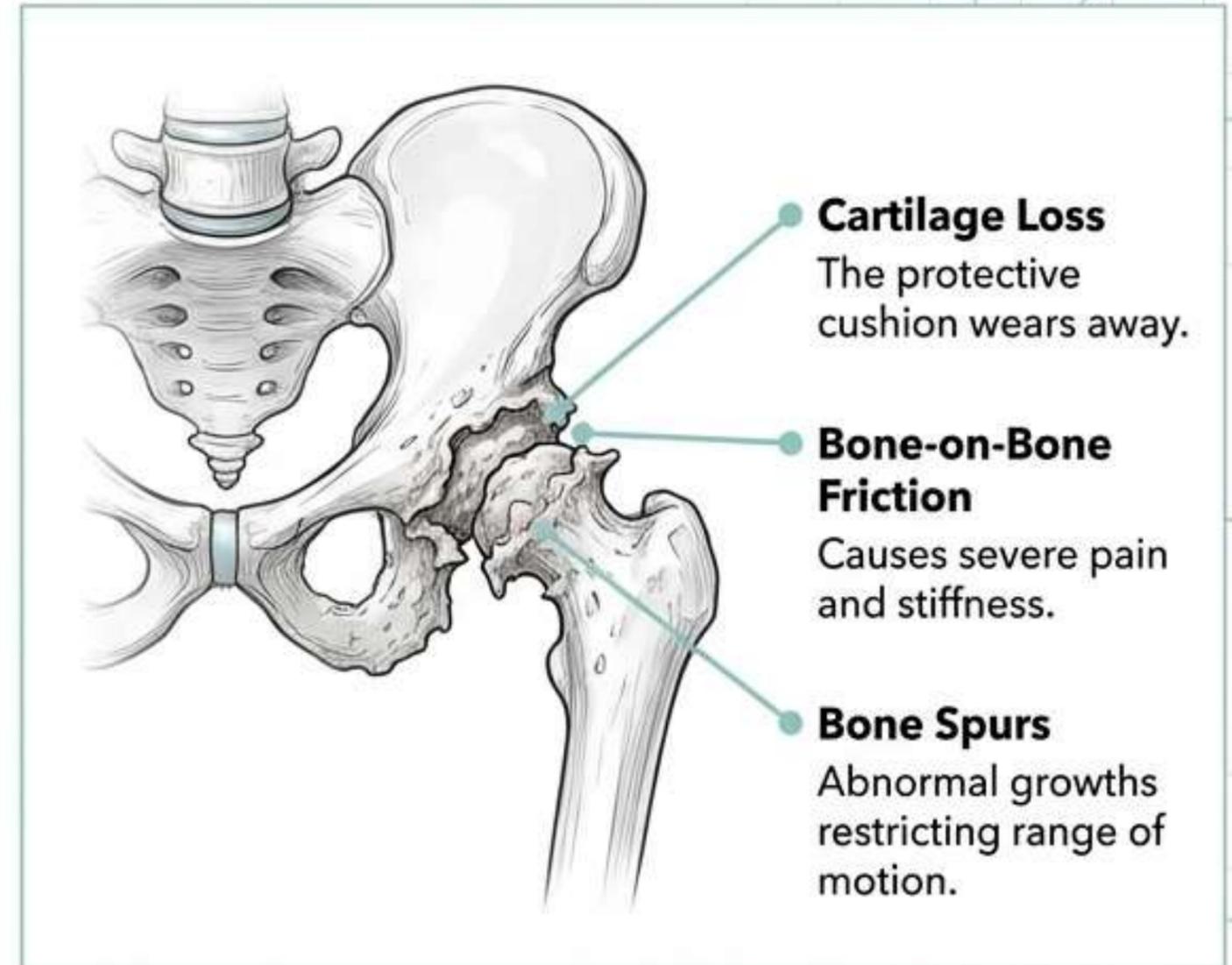
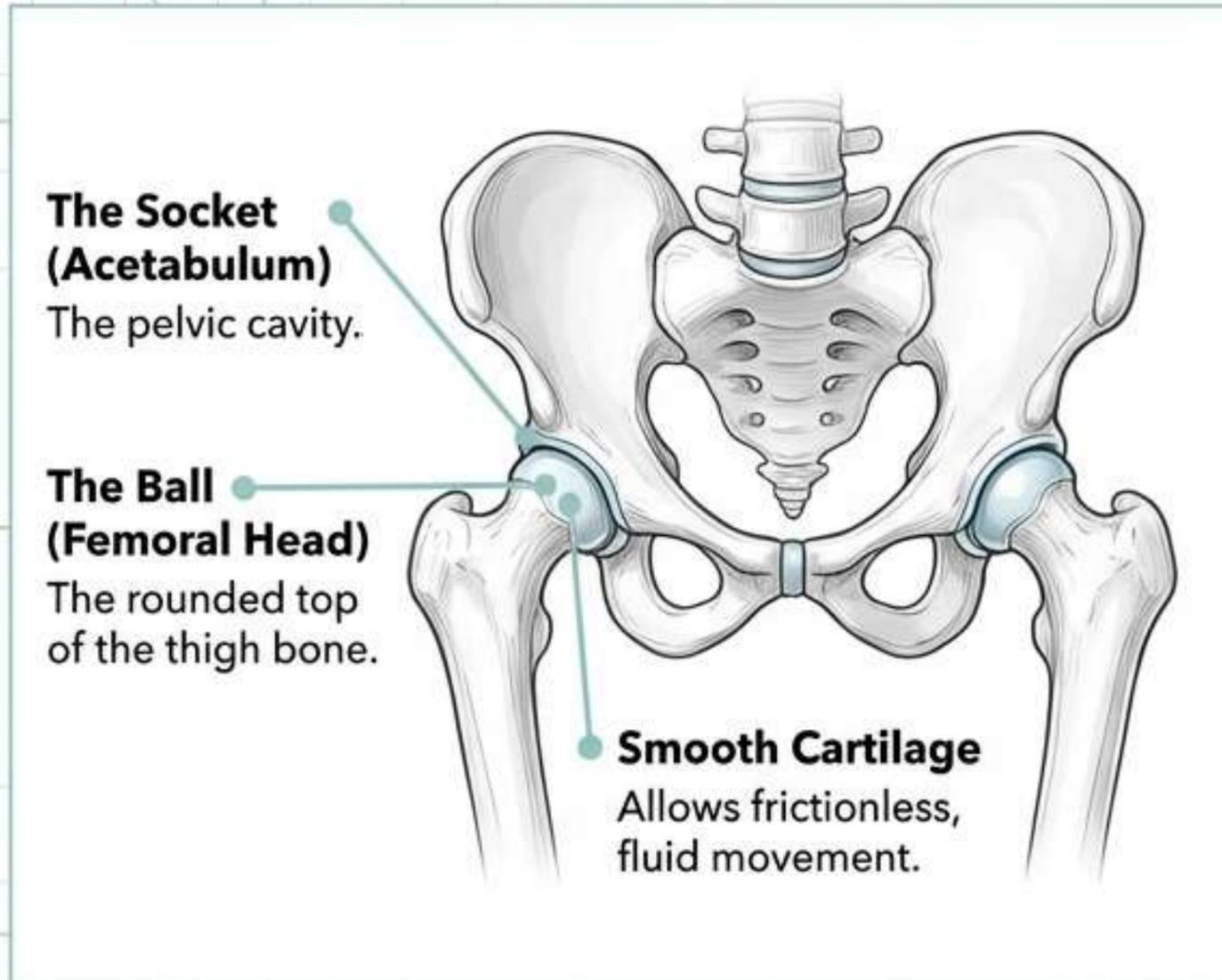
Total Hip Replacement: The Blueprint to Restored Mobility

A comprehensive patient journey from preparation to a pain-free life.



Dr. Vinay Joshi, Senior Orthopaedic Surgeon

The Anatomy of Hip Osteoarthritis



The Tipping Point: When conservative treatments fail and pain interrupts sleep or daily walking, surgical intervention becomes the definitive solution to restore mechanics.

Engineering Fluidity: The Architecture of a New Hip

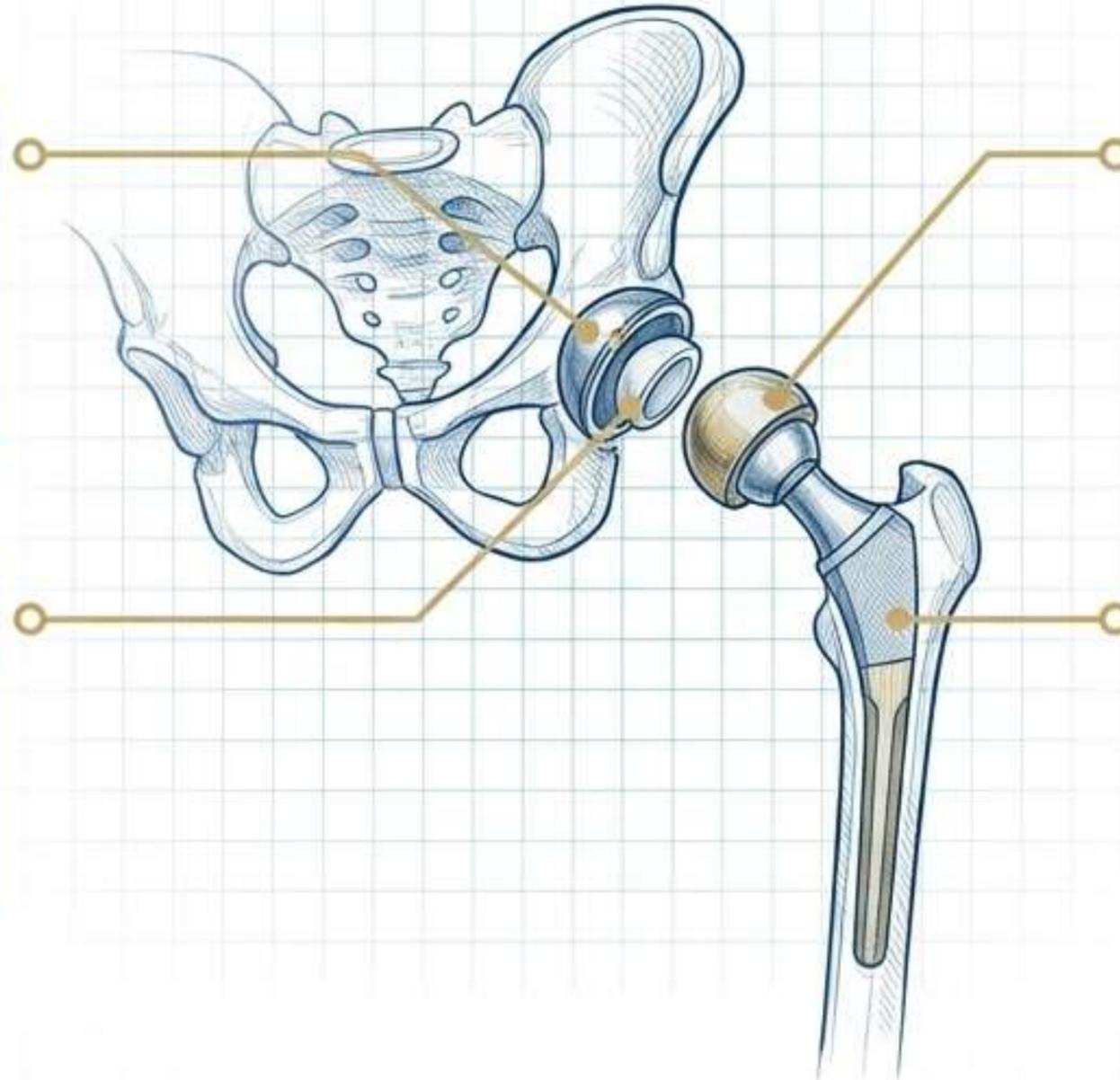
The damaged joint is removed and replaced with a frictionless, high-performance mechanical system designed to integrate naturally with your body.

1. The Cup (Acetabular Shell)

A durable titanium/metal shell secured into the prepared pelvic bone.

2. The Liner

A smooth, highly cross-linked polyethylene or ceramic insert that acts as the new cartilage.



3. The Ball (Femoral Head)

A perfectly round ceramic or metal sphere replacing the damaged natural bone.

4. The Stem

A high-strength metal anchor precisely fitted into the hollow center of the thigh bone (femur).

Built to Last: Advanced Implant Materials

Modern implants are designed to provide up to 30 years of pain-free mobility. Dr. Joshi selects the exact material profile based on your anatomy, age, and activity level.

Ceramic-on-Ceramic (CoC)

- ✓ **Composition:**
 - ✓ Both the ball and socket liner are high-grade ceramic.
- ✓ **Clinical Advantage:**
 - ✓ Exceptional wear resistance and lower rates of osteolysis (bone loss).
- ✓ **Outcomes:**
 - ✓ Associated with higher long-term functional scores (Harris Hip Score).

Ceramic-on-Polyethylene (CoP)

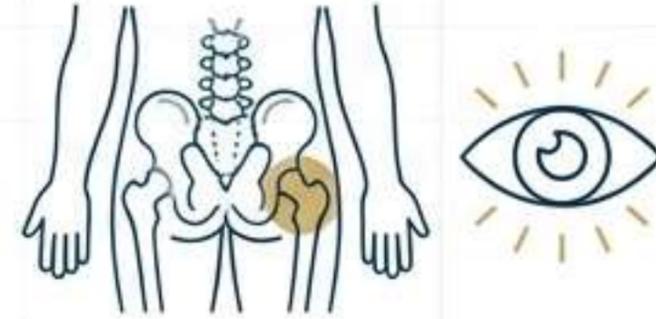
- ✓ **Composition:**
 - ✓ Ceramic ball paired with a Highly Cross-Linked Polyethylene (HXLPE) plastic liner.
- ✓ **Clinical Advantage:**
 - ✓ Incredible impact durability and reduced risk of postoperative joint infection.
- ✓ **Outcomes:**
 - ✓ The most widely used combination for highly reliable, long-term stability.

Tailoring the Surgical Approach to Your Anatomy



The Anterior Approach (Muscle-Sparing)

- **The Technique:**
 - Accesses the joint from the front, working between muscle fibers rather than cutting them.
- **The Benefit:**
 - Faster early mobility, less early postoperative pain, and no strict bending precautions.
- **The Consideration:**
 - Technically demanding; not ideal for very muscular or highly obese body types.



The Posterior Approach (Maximal Visibility)

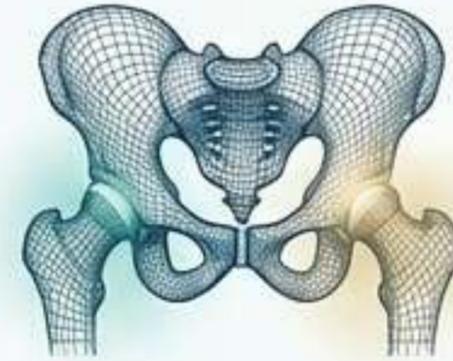
- **The Technique:**
 - The traditional, highly proven method accessing the joint from the back.
- **The Benefit:**
 - Provides the surgeon with a superior, unobstructed view of the joint. Suitable for all patients regardless of body type.
- **The Consideration:**
 - Requires cutting and repairing muscle tissue; necessitates strict bending precautions during the first 6 weeks.

Surgical Precision: Robotic-Assisted vs. Manual Expertise



Manual Arthroplasty

- **Process:** Relies on the surgeon's tactile feedback, real-time clinical judgment, and deep anatomical mastery.
- **Track Record:** The gold standard with decades of proven, highly successful long-term outcomes.



Robotic-Assisted (e.g., Mako)

- **Process:** Uses CT-based 3D modeling and computer-guided haptic arms to optimize component alignment.
- **Advantage:** Minimizes alignment variability and achieves slightly faster early recovery milestones (MCID).

The Bottom Line: Precision technology enhances reproducibility, but long-term success relies entirely on expert soft-tissue management and the clinical judgment of the surgeon. Technology assists; expertise delivers.

Laying the Foundation: Your Pre-Op Checklist



Step 1: Medical Clearance

Complete blood tests, ECG, and X-rays.

Pause blood-thinners or arthritis medications as directed.

Crucial: No dental work (even cleanings) within 2 weeks prior to surgery to prevent infection. No steroid injections within 3 months.



Step 2: Home Preparation

Clear all trip hazards (loose rugs, power cords).

Prepare a ground-floor recovery space.

Install a raised toilet seat and grab bars in the shower.

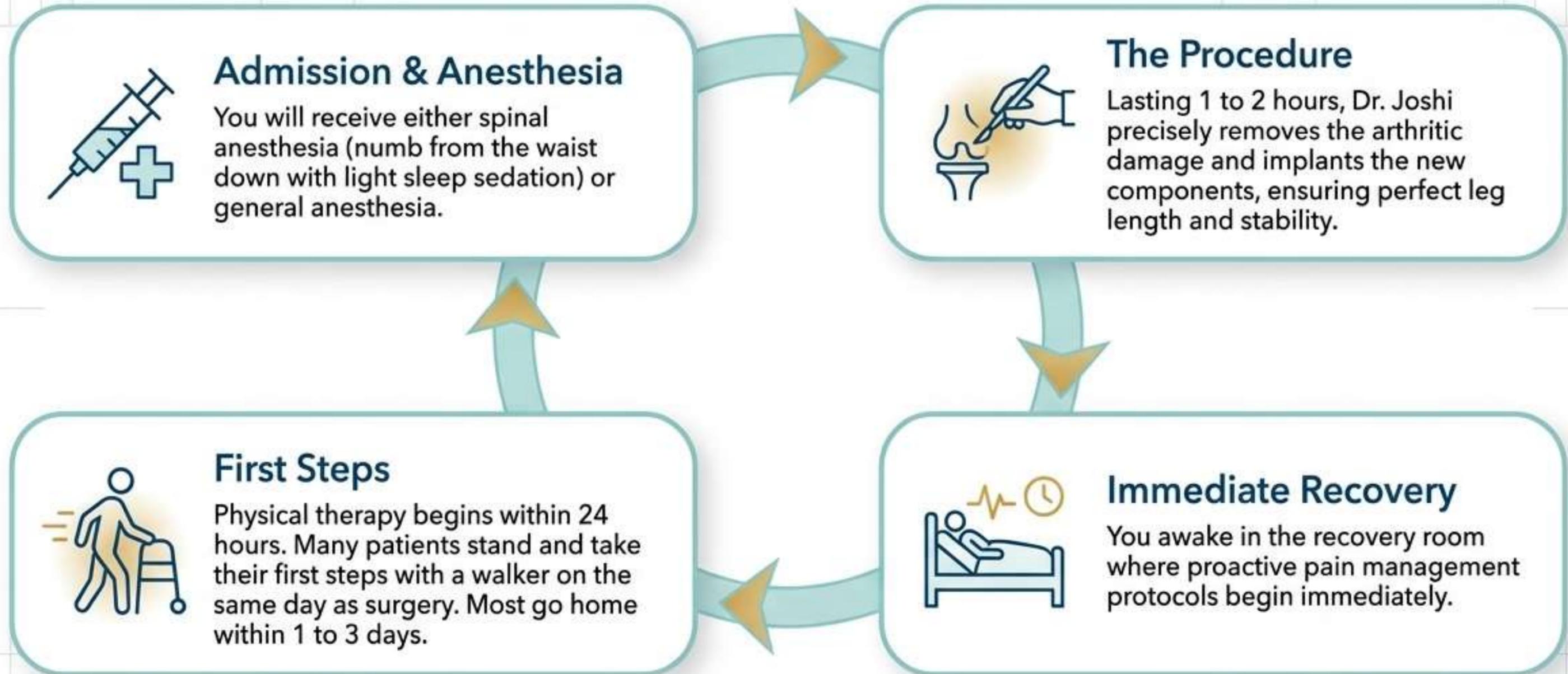


Step 3: Physical Preparation

Perform recommended upper body and non-operative leg exercises to build strength for walker use.

Stop all nicotine/tobacco use immediately to ensure proper wound healing.

The Day of Surgery: A Predictable Process



Protecting the Blueprint: 6-Week Post-Op Precautions

Strict rules apply while your soft tissues heal to prevent dislocation. Follow the specific rules for your surgical approach.

The Don'ts

Posterior Precautions

- Do NOT bend your hip past 90 degrees (no low chairs or bending to touch toes).
- Do NOT cross your legs or ankles.
- Do NOT point your toes inward.

Anterior Precautions

- Do NOT forcefully extend your leg backward.
- Do NOT point your toes outward excessively.
- Do NOT lie flat on your stomach.

The Dos

Universal Golden Rules

- DO take slow, intentional steps using your walker.
- DO pivot your entire body instead of twisting your torso.

The Recovery Roadmap: The First 21 Days

Week 1

Week 2

Week 3

Week 1: The Healing Phase



Milestone: Transition from hospital to home.



Expectation: Swelling and bruising peak around days 3-5. Use cold packs for 30 mins to manage inflammation.



Action: Focus on heel slides, ankle pumps, and short, assisted walks to prevent blood clots.

Week 2: Regaining Control



Milestone: Stitches or staples are removed (around day 10).



Expectation: Pain noticeably shifts from sharp surgical pain to deep muscle soreness.



Action: Continue prescribed physical therapy exercises; walking becomes more fluid and less guarded.

Week 3: Increasing Independence

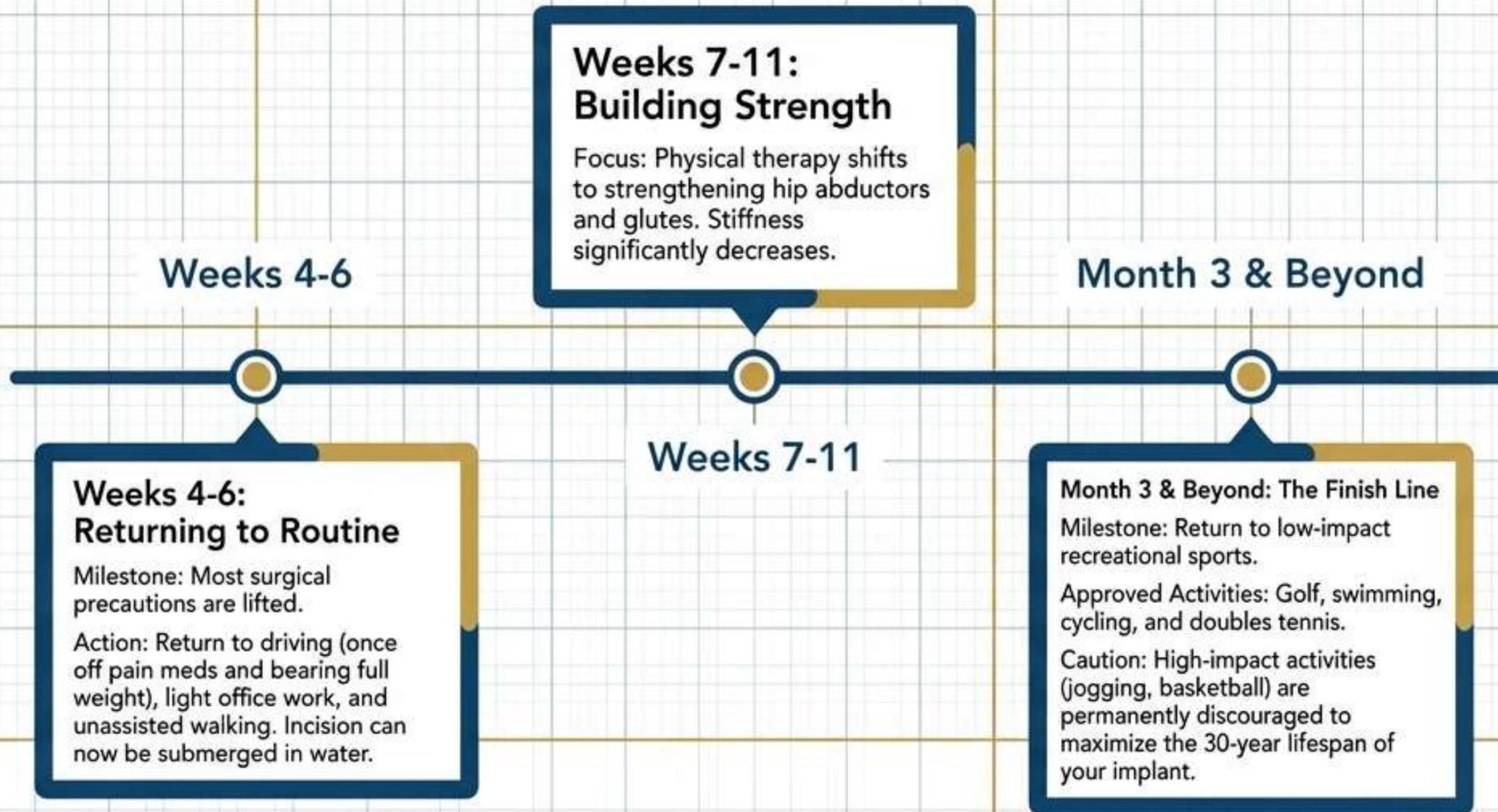


Milestone: Transition from a walker to a cane (based on PT clearance).



Action: Walking distance gradually increases; you may no longer require prescription pain medication.

The Recovery Roadmap: Reclaiming Your Lifestyle



Understanding Risks & Our Prevention Protocols

Complications are rare, but clinical transparency is our priority.

Potential Risk

Blood Clots (DVT/PE)

Risk: Clots forming in the leg veins due to inactivity.



Infection

Risk: Bacteria entering the surgical site.



Dislocation & Loosening

Risk: The new ball slipping out of the socket.



Our Prevention Protocol



Our Prevention Protocol

Protocol: Early mobilization (walking Day 1), prescribed blood thinners, and compression stockings.



Protocol: Strict sterile operating environments, IV antibiotics before and after surgery, and detailed at-home wound care education.



Protocol: Dr. Joshi utilizes the Lewinnek Safe Zone (precise 5-25° anteversion / 30-50° inclination) for perfect cup positioning, combined with your strict adherence to 6-week post-op precautions.

Your Partner in Restored Mobility

The Mobility Equation

**Advanced Materials +
Surgical Precision +
Diligent Patient Rehab
= Lasting Mobility.**

A successful hip replacement is a true partnership. Dr. Joshi provides the architectural foundation and surgical exactness; your commitment to physical therapy builds the house.

Ready to live pain-free?

Schedule your comprehensive hip evaluation today.

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