ORTHOPAEDIC ONCOLOGY · PATIENT GUIDE

Megaprosthesis After Bone Tumour Surgery: How Is It Different from a Joint Replacement?

A guide to the proposed reconstruction, the recovery plan and the questions to take to your surgeon.

Dr. Vishnu Baburaj

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A **megaprosthesis** is a specialised implant that replaces a joint together with a large segment of bone. It may be used after removal of a bone tumour. The same term also covers implants used for major bone loss from other causes, so the name alone does not describe your operation.[1]

If you are picturing a routine hip or knee replacement, the name can be misleading. A useful starting point is a drawing of the bone to be removed, the implant that will replace it and the surrounding tissues involved.

How does it differ from an ordinary knee replacement?

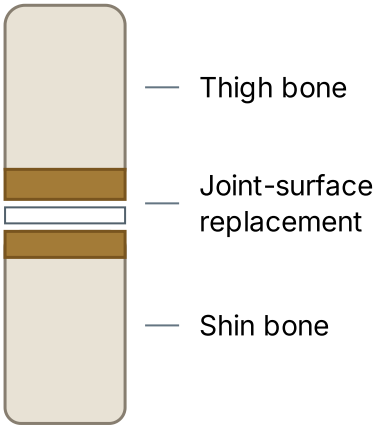
In a conventional total knee replacement, the surgeon removes damaged cartilage and a small amount of underlying bone. Metal components cover the prepared bone surfaces, with a plastic spacer between them. The operation is often described as resurfacing the joint.[2]

After tumour removal, the gap may extend well beyond the joint surface. A modular tumour prosthesis can replace the missing bone segment as well as the adjacent joint. Different components are assembled to fit the defect and connect the reconstruction to the remaining bone.[3]

Joint surfaces, or a bone segment and joint

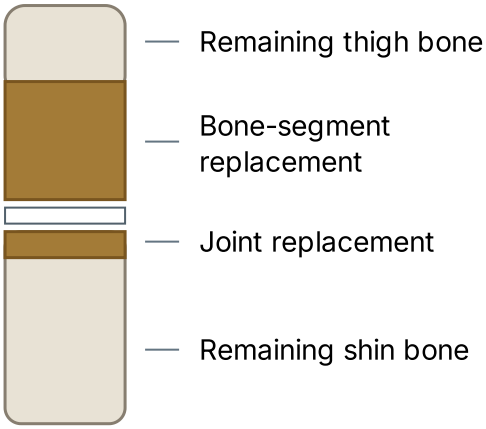
The tumour example replaces the lower end of the thigh bone and the adjoining knee joint.[6]

Conventional knee replacement



Damaged cartilage and a small amount of underlying bone are removed. Components cover the prepared surfaces, with a plastic spacer between them.[2]

Segment-replacing reconstruction



The implant replaces a missing bone segment as well as the adjoining joint. The tissues removed and repaired also form part of the reconstruction discussion.[1][3][6]

Bone retainedReplacement region

Simplified comparison using a distal-femur replacement. The lengths are illustrative; the drawing does not show a particular implant or compare recovery speed or implant lifespan.[1][2][6]

Why do muscles and tendons matter?

The implant is only part of the reconstruction. After removal of the upper shin bone, for example, the mechanism that straightens the knee needs reattachment. Adequate tissue coverage is also important. This helps explain why two operations described as a “knee megaprosthesis” may have different functional concerns.[3]

The practical discussion is about what movement the remaining muscles and repaired tissues can provide, as well as what the implant replaces.[3] Describe what your work involves: a desk, hours on your feet, repeated stairs or heavy lifting. “Back to work” can mean quite different things.

> **Dr. Vishnu's perspective**
>
> I want us to discuss what this reconstruction may achieve now and what dealing with a problem later could involve. What would useful movement mean for you: getting out of a chair, managing stairs or returning to work? Those details belong beside the discussion of the implant. We should also talk honestly about the help and recovery you may need.

When will I be able to walk?

Rehabilitation depends on the site of reconstruction, how the implant is fixed and the tissues removed or repaired. Published programmes differ in weight-bearing, movement restrictions and use of braces. An exercise sheet intended for a routine joint replacement may therefore be unsuitable for your operation.[4]

Being allowed to put weight through the leg and walking independently are separate questions. The plan needs to specify the support and restrictions for your reconstruction; there is no reliable week-by-week promise that applies to everyone.[4]

More about the evidence

A 2025 systematic review found only case series, mostly retrospective, with differing operations and rehabilitation programmes. It did not establish one programme or an independent-walking milestone for every megaprosthesis.[4]

Your written rehabilitation plan. The team should specify how much weight you may put through the leg, which movements are permitted, whether you need a brace and who will review these instructions. Stairs, bathroom access and help at home belong in discharge planning.

How long does a megaprosthesis last?

There is no single reliable lifespan. Mechanical problems include loosening, wear or breakage; soft-tissue failure and infection can also require further surgery. Studies involve different implants, anatomical sites and lengths of follow-up, so a published implant-survival figure should not be treated as a personal guarantee.[3]

The long-term plan should explain which changes need an earlier appointment. If care transfers to another hospital, the teams should arrange access to the implant details and operation record; you can keep copies too.

Why is infection discussed separately?

Infection around a megaprosthesis can be difficult to treat. The extent of surgery, tissue coverage and other cancer treatments can affect the risk.[5]

Treatment may involve antibiotics and surgical cleaning, exchange of removable components, or a more extensive implant replacement. Decisions depend on factors including the organism, the duration of infection, the condition of the surrounding tissues and whether the implant is securely fixed. A staged reconstruction is one option, not an automatic plan for every infection.[5]

The possibility of another operation deserves a practical discussion before the first one: what might it involve, and how would it fit with the rest of your cancer care? Discharge instructions should include a contact route for wound concerns.

Questions to take to your appointment

- What is the exact name and location of my proposed reconstruction?
- Which everyday activities should we discuss before deciding on it?
- Who will supervise rehabilitation near my home?
- What information should I keep about the implant and future follow-up?

Frequently Asked Questions

Is a megaprosthesis the same as a routine knee replacement?

It replaces a joint and a substantial segment of bone. A routine knee replacement resurfaces the joint after removing damaged cartilage and a smaller amount of underlying bone. [1] [2]

Will a megaprosthesis last for the rest of my life?

That cannot be guaranteed. Wear, loosening, breakage and other complications can lead to further surgery. Published results vary by reconstruction and follow-up, so they cannot give one lifespan for every implant. [3]

When can I put my full weight on the leg?

Your surgical and physiotherapy teams need to specify this for your reconstruction. Published protocols differ, and the remaining bone, fixation and soft-tissue repairs affect the plan. [4]

Does infection always mean the whole implant must be removed?

No single operation suits every infection. Selected cases may be treated with cleaning and retention of parts of the implant; others require replacement in one or more stages. The organism, tissues and implant stability matter. [5]

Your consultation

Discuss a proposed megaprosthesis in Kannur

To discuss a proposed megaprosthesis and questions about recovery, you can book a consultation with Dr. Vishnu Baburaj at Aster MIMS Kannur.

Book a consultation Plan your visit

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Medically reviewed by Dr. Vishnu Baburaj, MS Ortho (PGI Chandigarh), MRCS (UK) · Last reviewed Oct 31, 2026

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