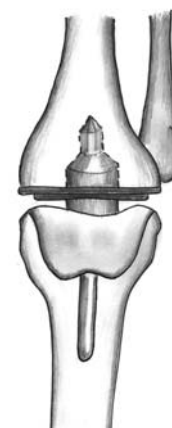


Limb Salvage After Bone Cancer

What is “limb salvage”?

Limb salvage is a surgical procedure that replaces a diseased bone and reconstructs a functional limb by using a metal implant, a bone graft from another person (allograft), or a combination bone graft and metal implant (allo-prosthetic composite).



What are the goals of this procedure?

The goals are the complete resection of the tumor with minimal complications while maintaining acceptable function, durability, and appearance of the limb.

What are the potential late effects after a limb salvage procedure?

- **Nonunion** - For people who had reconstruction with a bone graft, nonunion (non-healing) of the bones is a possible late complication. In the allograft procedure, the portion of bone removed due to tumor is replaced with donated bone. Nonunion occurs when one or both ends of the replaced bone do not heal, making fracture more likely, especially if the area is stressed. Surgery for additional bone grafting may be necessary.
- **Limb-length discrepancy** - Bones are constantly growing throughout childhood and adolescence until adult height is reached. Each bone has a growth plate (area where growth activity occurs). Often, bone cancers are located near the growth plate, requiring removal of this area during the limb salvage procedure. Since the reconstructed section of bone cannot grow, a limb-length discrepancy may occur. Surgeries or other procedures may be necessary to accommodate growth.
- **Prosthetic loosening** - Sometimes the implanted joint can loosen or wear out, especially in people who are active. These complications may require further surgery to tighten or replace part or all of the implant. **If you notice any loosening of the implant notify your healthcare provider.**
- **Contractures** - After a limb salvage procedure, muscles, tendons and ligaments sometimes stiffen or shrink, forming contractures (permanent tightening of the joint). This is more likely to occur in people who are not physically active. Periodic follow-up with a physical and/or occupational therapist is helpful in order to prevent the formation of contractures.

What is the recommended follow-up care after a limb salvage procedure?

- **Follow-up visits** are usually done by the **orthopedic surgeon** (bone specialist) **every 6 months until the person is full-grown, then every year.** The follow-up intervals may lengthen as time progresses.
- **X-rays** are usually done at least **yearly.**
- **Life-long follow-up** by an orthopedic surgeon is **recommended.**

What can you do to promote health after limb salvage surgery?

- **Physical and occupational therapy** play an important role in successful rehabilitation after limb salvage surgery. Both **passive and active range-of-motion exercises** are important in maintaining optimal limb function.
- If there is **pain, swelling, redness** or any **other signs of infection** at the surgical site, or if you develop **fever, contact your healthcare provider promptly.**
- Due to a **life-long risk of infection, antibiotics** should be taken **prior to all dental procedures (including teeth cleaning),** and for **other invasive medical procedures** such as those involving the respiratory, gastrointestinal, or urinary tracts. Infection can result if bacteria enter the blood stream during these procedures and become attached to the internal metal components (screws, plates, rods, joints).
- Some metal implants may pose a **problem when going through security screening,** such as at the airport. It is good idea to **carry a medical letter** indicating that you have had bone cancer and a metal implant.

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