



## Procedure Information Sheet

### Introduction

Amputation is the surgical removal of all or part of a limb. Below- or above-knee amputations are some of the most commonly practiced major amputations in orthopaedic surgery. To patient, amputation represents a permanently loss of a major body part. The objectives is for life saving and control the spread of infection.

### Indication

- Dead limb: usually results from peripheral vascular disease, but sometimes due to severe trauma or burns.
- Dangerous limb: with a malignant tumour or potentially lethal infection or because of a crush injury.
- Nuisance limb: because of rest pain, recurrent infection, gross deformity beyond reconstruction (either congenital or acquired) or severe loss of function.

In Hong Kong, the most common causes for lower limb amputation are peripheral vascular disease and complications of diabetes mellitus, such as infection or intractable ulcerations. The level of amputation i.e. below or above the knee joint depends on the viability of the soft tissue, the level of infection and the knee joint deformity.

### The Operation / Procedure

1. The procedure will be performed under either general or spinal anesthesia.
2. The skin, muscles, nerves and blood vessels are divided around the selected level of amputation, the bone(s) is then sawed.
3. Stop the bleeding, the soft tissue is closed around the bone end to create a stump.
4. A plastic drain is inserted into the stump to drain haematoma or secretion. The drain is usually removed few days after the operation.
5. The skin is closed with stitches or staples and they are usually removed 2 weeks after the operation if the wound heals uneventfully.

### Before the Operation / Procedure

1. Doctor will explain to patient about operation procedure, risks and complications, patient has to sign a consent form.
2. Optimization of the underlying disease: better control of the blood sugar level, improve the circulation by vascular surgery if possible, improve the nutritional status etc.
3. Pre-operative assessment by anaesthetist if necessary.
4. Antibiotics to control infection if necessary
5. Counseling for rehabilitation plan.
6. Fasting according to doctor's advice.

### After the Operation / Procedure

1. Post-operative Management
  - 1.1. Close observation of vital signs, wound and drainage at initial phase.
  - 1.2. Resume diet according to doctor's order.
  - 1.3. Provide intravenous therapy, analgesics and antibiotics according to doctor's prescription.
  - 1.4. Compressive wound dressing is commonly used for controlling and minimizing swelling:
    - 1.4.1. Patient with above-knee amputation is usually given a soft dressing which is sterile, compressive stump bandage.
    - 1.4.2. Patient with below-knee amputation is usually given a rigid dressing, such as a Plaster-of-Paris cast to protect the stump immediately after the operation. This "constant volume" dressing offers some advantages in minimizing the stump pain and controlling edema and knee joint contracture.
  - 1.5. Keep wound dry. Drain to be removed according to doctor's order.
  - 1.6. Bed rest and keep stump straight. Perform deep breath to avoid pneumonia.
  - 1.7. Removal of stitches according to doctor's order.
  - 1.8. Depends on the patient's training potential, condition before and after the operation:
    - Prosthetic and orthotic staff will make the prosthesis
    - Physiotherapist and occupational therapist will help in mobility training and daily activity training.

#### Patient's Label

Patient Name: \_\_\_\_\_  
Hospital No: \_\_\_\_\_  
Episode No: \_\_\_\_\_



2. Discharge Management
  - 2.1. Daily cleaning of prosthesis, checking of skin condition, call doctor if abnormalities noted.
  - 2.2. Continue rehabilitation exercise.
  - 2.3. Proper positioning of affected limb.
  - 2.4. Take medicine and follow-up as advices.
  - 2.5. If massive bleeding, severe pain, fever, wound redness and swelling or with smell and discharge, consult doctor immediately.

### Risk and Complication

1. Complications related to anaesthesia is rare (<0.01%). But may lead to permanent harm or death.
2. Slow or non-healing of stump wound from bleeding haematoma, infection or wound dehiscence, requiring revision or further amputation.
3. Wound repeated breakdown, hypersensitivity or contracture.
4. Stump pain and numbness, phantom limb pain.
5. Prosthesis related complications: skin ulceration, impingement by bony prominence, contracture etc.
6. Repeated surgery may be necessary to rectify the complications.

### Disclaimer

This leaflet only provides general information pertaining to this operation / procedure. While common risks and complications are described, the list is not exhaustive, and the degree of risk could also vary between patients. Please contact your doctor for detailed information and specific enquiry.

### Reference

Smart Patient Website of Hospital Authority, Procedure Information Sheet: Below or Above-Knee Amputation (04/2021)

Patient's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### Patient's Label

Patient Name: \_\_\_\_\_

Hospital No: \_\_\_\_\_

Episode No: \_\_\_\_\_