Postoperative Early Ambulation Guideline Post Skin Graft to Lower Extremities

Site Applicability

VCH Vancouver Acute Care

Practice Level

Profession	Advanced Skill (requiring additional education)
RN, LPN & PT	Must have completed Plastics Education Day (at unit orientation) or equivalent experience.

Need to Know

The consistent finding in the literature is that early ambulation can be safely initiated after lower extremity skin grafting without compromising graft take if external compression is applied. Although this may not improve wound healing it does not seem to jeopardize graft take significantly. Patients who remain mobile throughout their hospital stay have less risk of acquiring the sequelae that is associated with even short periods of immobilization.

The most common cause of autologous skin graft failure is hematoma. The second most common cause of graft loss is infection. Excessive pressure on a fresh graft may also cause it to die. The applied pressure should never exceed 30mmHg (usually a. tensor bandage only has 10mmHg and double tubigrip approximately 16mmhg).

In addition to common contraindications for mobilization, patients with lower limb fractures, plantar surface of the foot graft and/or a medical status prohibiting mobilization should be excluded from this protocol.

Equipment and Supplies

Prior to mobilizing a patient, make sure to clarify what kind of dressing and/or compression is needed by following the table below:

Dressing Type	Compression Required	Mobility Criteria
NPWT (VAC)	No extra compression needed	Clear to mobilize if the patient meets criteria to safely ambulate.
Occlusive dressing (from OR)	External compression needed with figure 8 tensoring at 50% stretch	Clear to mobilize if the patient meets criteria to safely ambulate.
Grafts crossing a lower extremity joint (ankle/Knee)	External compression needed with figure 8 tensoring at 50% stretch. May also require a thermoplastic splint or plaster orthosis to immobilize the joint.	**Clarify weight bearing restrictions before mobilizing this patient.**
Graft open to air (OTA) once occlusive dressing removed	Requires protective dressing and external compression with figure 8 tensoring at 50% stretch	Clear to mobilize if the patient meets criteria to safely ambulate.

For wounds without VAC or occlusive dressing a protective dressing must be applied as follow:

- Adaptic or Jelonet, with gauze and kling
- Figure 8 tensoring

Guideline

- **A physician order is required prior to early mobilization of a patient with lower extremity graft. Check chart for orders prior to mobilization.**
- With physician order, begin ambulation on **post-operative day 2.** Progress in the following order, and advance to next step as patient is deemed to be safe:
    1) **Dangle** - at the edge of bed
    2) **Stand** - if allowed to fully weight bear (assess balance and need of walking aid)
    3) **Ambulate** - start with short distances and progress as able

- Patients should always have the limb elevated when not mobilizing.
- Once occlusive dressings are removed on post-operative day 4 by Plastics Team, protective dressings (Adaptic or Jelonet, with Gauze and Kling) should be applied prior to tensoring for mobilization.

Expected Outcomes

Patients can be discharged from hospital once they are independent with ambulation and they can safely perform required protective dressing and tensoring at home. Patient should be able to mobilize safely and return to prior functional mobility, if no restrictions with weight bearing, prior to discharge from hospital.

Patient Education

- Education on how to apply protective dressings (Adpatic or Jelonet, with gauze and kling) and tensoring should be taught to the patient and/or family member that will be helping with patient's care at home. Start teaching tensoring early so patients and family are able to tensor independently upon discharge.
- Care of your Skin Graft after Surgery (FO.935.H69)
- Figure 8 tensoring

Evaluation

If occlusive dressing (eg. negative pressure wound therapy, occlusive dressing applied in the operating room) is on, **do not** remove it. The Plastics Team is responsible to remove occlusive dressings on post-operative day 4. In this case evaluate mobility tolerance based on patient feedback and not on how the graft looks.

Once occlusive dressings are removed and only protective dressings are being used, remove dressings post mobilization and check the following:

- Graft colour:
  - If the grafted area changes color and gets dark, dusky or blue post mobilization, elevate limb and wait approximately 20 minutes, then re-assess.
  - If still dark, dusky or blue, page plastics team to assess.
- Presence or worsening of open areas
- Amount of drainage

Documentation

Document the following on physiotherapist / nurses notes:

- Graft assessment before and after mobilization
- Dressings used to protect graft for ambulation
- Mobility assessment and discharge goals.

Related Documents

VCH:

- Allograft Tissue Request (D-00-11-30068)

PHC-VCH:

- Burn Wound Bed Preparation and Blister Management in the Acute Adult Burn (BD-00-07-40008)
-

Related Videos

- Tensor Bandage Figure 8 Wrapping

References

A. Nedelec B, Serghiou M, Niszczak J. Practice Guidelines for Early Ambulation of Burn Survivors after Lower Extremity Grafts. School of physical and Occupational Therapy, McGuill University, American Burn Association 2012

B. Tallon B, Lamb S, Patel D. Randomized nonblinded comparison of convalescence for 2 and 7 days after split thickness grafting to lower leg. Dermatol Surg 2009; 35:634-7

C. Smith T. Whn should patient begin ambulation following lower limb split skin graft surgery? A systematic review. Physiotherapy 92 (2006) 135-145

D. Luczak B, Ha J, Gurfinkel R. Effect of early and late mobilization on split skin graft outcome. Australian Journal of Dermatology (2012) 53, 19-27

E. Lorello et al. Result of a prospective Randomized Controlled Trial of Early Ambulation for patients with lower extremity Autografts. Journal of Burn Care & Research (2014) 431-436

Effective Date:	12-JUN-2020
Posted Date:	12-JUN-2020
Last Revised:	12-JUN-2020
Last Reviewed:	12-JUN-2020
Approved By: *(committee or position)*	VCH
	Endorsed By: (Regional SharePoint 2nd Reading) Health Authority Profession Specific Advisory Council Chairs (HAPSAC) Health Authority & Area Specific Interprofessional Advisory Council Chairs (HAIAC) Operations Directors Professional Practice Directors **Final Sign Off:** Vice President, Professional Practice & Chief Clinical Information Officer, VCH
Owners: *(optional)*	VCH
	DST Developer Lead(s): ● Physiotherapy, Plastic surgery, Vancouver General **Other members:** ● Director Postgraduate Education, UBC Plastic Surgery, Dept Surgery - Plastic Surgery, Vancouver acute, VCH ● Regional Clinical Resource Therapist - Physiotherapy - Med/Surg Professional Practice, VCH ● Regional Practice Coordinator – Physiotherapy, Professional Practice - Allied Health, VCH ● Wound care and ostomy nurse, VCH