

CONSIDERATIONS:

1. The purpose of compression therapy is to decrease blood stasis by promoting venous return. Example: compression stockings are frequently ordered for post-surgical patients.
2. Two types of compression stockings:
 - a. Elastic compression stockings: provide equal pressure over the patient's leg
 - b. Elastic graduated compression stockings: provide graded pressure that is greatest at the ankle and decreases over the length of the leg
3. Contraindications for compression stockings include:
 - a. Lesions on legs, e.g. dermatitis, surgical incision
 - b. Compromised arterial circulation
 - c. Severe edema of legs or pulmonary edema
4. Guidelines for compression stockings include:
 - a. Physician's order required
 - b. Size determined by leg length from heel to back of knee and calf circumference
 - c. Knee high stockings should extend to 1 inch below back of knee. (Some patients will have thigh-high stockings)
 - d. Nurse should remove stockings to check:
 - i. Skin integrity under stockings
 - ii. Level of edema (See *Circulatory System – Edema*)
5. Teaching points for patients/caregivers:
 - a. Apply small amount of bath powder or cornstarch to legs (if not prohibited by manufacturer) to ease application
 - b. Apply stocking in morning, before edema develops. It must be put on after being "up," lie down, elevating legs above heart for 30 minutes, before applying stockings
 - c. DO NOT turn down top of stockings
 - d. Do not bunch up stockings at top of legs so they constrict the leg
 - e. Monitor stockings/legs after application:
 - i. No constrictions
 - ii. No wrinkles
 - iii. Good circulation to foot/toes
 - f. Remove stockings once a day to:
 - i. Bathe legs and to apply lotion to promote healthy skin (Allow lotion to dry completely or dry with towel before applying stockings)
 - ii. Observe color, temperature, sensation, and ability to move legs
 - iii. Look for reddened areas. If redness is present, leave stockings off for 1 to 2 hours until redness disappears. If redness does not resolve, contact nurse

- g. Launder stockings:
 - i. Per manufacturer's instructions
 - ii. At least every 3 days
 - iii. Get two sets to accommodate laundering
- h. Avoid rubbing and massaging legs. Only perform light skin massage necessary to apply lotion
- i. If stockings lose elasticity, they need to be replaced

EQUIPMENT:

Elastic compression stockings
Bath powder or cornstarch, optional
Manufacturer's instructions

PROCEDURE:

1. Read manufacturer's directions for use.
2. Adhere to Standard Precautions and explain procedure to patient.
3. Apply small amount of powder to legs, if permitted by manufacturer.
4. Put one arm inside the stocking and grab the toe of stocking in hand.
5. Use your other hand to invert the upper part of stocking back over its lower part.
6. Loosely gather the doubled stocking in your hand and position stocking over toes and onto foot.
7. Center patient's heel in heel pocket.
8. Pull stockings up, fitting around ankle and calf, smoothing out all wrinkles while working up.
9. Place skid-resistant socks or slippers on before patient attempts to ambulate.

AFTER CARE:

1. Document in patient's record:
 - a. Type of stocking
 - b. Condition of skin
 - c. Degree of edema
 - d. Circulation check to toes
 - e. Compliance with stocking use
 - f. Any teaching performed
 - g. Any communication with physician
2. Instruct patient/caregivers in "Teaching Points."
3. Alert physician to any problems with adhering to stocking order.

COMPLICATIONS:

1. Arterial blood flow obstruction, which is characterized by cold and bluish toes, dusky toenail beds, decreased or absent pedal pulses and leg pain or cramps.
2. Allergic reaction and skin irritation.
3. Rolled stocking edges can cause excessive pressure and interfere with circulation.

REFERENCE:

- Amaragiri, S.V., Lees, T. (2009). Elastic Compression Stockings for Prevention of Deep Vein Thrombosis (review) *Cochrane Database of Systematic Reviews 2000, Issue 1. Art. No: CD001484. DOI:10.1002/14651858.CD001484.*
- Winslow, E.H., Brosz, D.L. (2008). Graduated Compression Stockings in Hospitalized Postoperative Patients: Correctness of Usage and Size. *American Journal of Nursing* 108(9), 40-50.

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