Split-Thickness and Full-Thickness Skin Grafts

Sharon Ann Van Wicklin, PhD, RN, CNOR, CRNFA(E), CPSN-R, PLNC, FAAN, ISPAN-F

**Plastic and Aesthetic Nursing (PAN), the official journal of the International Society of Plastic and Aesthetic Nurses (ISPN) publishes this column to provide evidence-based answers to practice questions from plastic and aesthetic nurses.**

**Question:** What is the difference between a split-thickness and a full-thickness skin graft?

**Answer:** A **split-thickness skin graft** includes the epidermis and part of the dermis; however, its thickness varies. A **full-thickness skin graft** includes the epidermis and all of the dermis (Figure 1). A split-thickness graft is rapidly vascularized and its donor site heals more quickly than the donor site of a full-thickness skin graft. Notably, a split-thickness graft may display post-graft contraction and may have a different texture and appearance than normal skin (McEwen, 2019).

A split-thickness skin graft may be meshed. **Meshing** is a process where the surgeon places a donor skin graft in a device that creates numerous small slits in the graft, giving it the appearance of a fishnet stocking. Meshing a graft allows it to expand to many times its original size and to cover an area larger than the size of the original graft. Healing occurs as the spaces between the mesh fill in with new skin growth (McEwen, 2019).

The greater the **meshing ratio** (e.g., 1:1.5, 1:3), the greater a skin graft can expand; however, because the area that must subsequently **epithelialize** (i.e., be repaired as epithelial cells migrate upward) is larger, it will take longer for the skin graft to heal completely. Common meshing ratios include 1:1.5 (meaning the graft will expand to 1.5 times its size) and 1:3 (meaning the graft will expand to 3 times its size). Meshing also allows the graft to be placed on an irregular recipient site. However, the appearance of a meshed graft may not be aesthetically pleasing (McEwen, 2019). When applying a full-thickness skin graft, the surgeon trims excess subcutaneous tissue before suturing the graft to the recipient site.

Full-thickness grafts have minimal contracture, can be used in areas of body flexion, provide tissue where tissue loss has occurred or where additional tissue padding is required, and provide an aesthetically acceptable appearance. The donor site can often be closed by **primary intention** (i.e., when the wound edges are sutured together); however, if the graft does not sufficiently cover the open area, a split-thickness graft may also need to be applied over the remaining uncovered area (McEwen, 2019).

Both split- and full-thickness grafts leave scars at the donor site; therefore, in addition to selecting a donor site that provides an acceptable appearance, surgeons will generally select donor sites that can be covered by clothing. Color match, contour, and durability of the graft are all considerations when selecting an appropriate donor area (McEwen, 2019).

Using a skin graft is an effective way to cover a wound provided that vascularity is adequate, infection is absent, and hemostasis is achieved. Other types of grafts available for surgical reconstruction include bone, cartilage, nerve, tendon, and autologous fat grafts (McEwen, 2019).

Nurses caring for patients who have received skin grafts should monitor the graft for changes in color or temperature, blanching, edema, venous congestion, vasoconstriction, signs of infection, and excessive pain.
I Have a Question!

If you have a question about plastic and aesthetic nursing that you would like to see addressed in the I Have a Question! column of PAN, or if you would like to provide an answer to a particular practice question, please contact Sharon Ann Van Wicklin, Editor-in-Chief, PAN, at sharonvwrn@ispan.org.

REFERENCE

INSTRUCTIONS
I Have a Question! Split-Thickness and Full-Thickness Skin Grafts

TEST INSTRUCTIONS
• Read the article. The test for this nursing continuing professional development (NCPD) activity is to be taken online at www.NursingCenter.com/CE/PSN. Tests can no longer be mailed or faxed.
• You’ll need to create an account (it’s free!) and log in to access My Planner before taking online tests. Your planner will keep track of all your Lippincott Professional Development online NCPD activities for you.
• There’s only one correct answer for each question. A passing score for this test is 7 correct answers. If you pass, you can print your certificate of earned contact hours and access the answer key. If you fail, you have the option of taking the test again at no additional cost.
• For questions, contact Lippincott Professional Development: 1-800-787-8985.
• Registration deadline is June 6, 2025.

PROVIDER ACCREDITATION
Lippincott Professional Development will award 1.0 contact hours for this nursing continuing professional development activity.

Lippincott Professional Development is accredited as a provider of nursing continuing professional development by the American Nurses Credentialing Center’s Commission on Accreditation.

This activity is also provider approved by the California Board of Registered Nursing, Provider Number CEP 11749 for 1.0 contact hours. Lippincott Professional Development is also an approved provider of continuing nursing education by the District of Columbia, Georgia, West Virginia, New Mexico, South Carolina, and Florida, CE Broker #50-1223. Your certificate is valid in all states.

Payment: The registration fee for this test is $12.95

DOI: 10.1097/PSN.0000000000000461