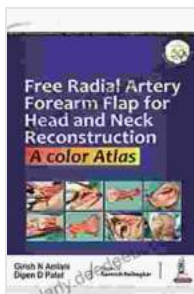


# Free Radial Artery Forearm Flap for Head and Neck Reconstruction: A Comprehensive Guide

The free radial artery forearm flap (FRFAF) is a versatile and reliable flap for head and neck reconstruction. It is based on the radial artery and its concomitant veins, which are located in the forearm. The flap is harvested as a fasciocutaneous flap, which includes skin, fascia, and muscle. The FRFAF has a long and successful history in head and neck reconstruction, and it remains one of the most commonly used flaps for this purpose.



## Free Radial Artery Forearm Flap For Head And Neck Reconstruction: A Color Atlas by Pei-Show Juo

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## Advantages of the FRFAF

The FRFAF has several advantages over other flaps for head and neck reconstruction, including:

- **Reliability:** The FRFAF has a high success rate, with reported flap survival rates of over 95%. This is due to the fact that the radial artery is a relatively large and consistent artery, and the flap is harvested in a well-defined anatomical plane.

- **Versatility:** The FRFAF can be used to reconstruct a wide variety of defects in the head and neck, including defects of the skin, muscle, bone, and cartilage. The flap is also relatively thin and pliable, which makes it suitable for use in areas where there is limited space.
- **Donor site morbidity:** The donor site morbidity associated with the FRFAF is relatively low. The radial artery is not a major artery, and its sacrifice does not typically cause any significant problems. The donor site scar is also typically well-hidden, as it is located on the inner aspect of the forearm.

### **Indications for the FRFAF**

The FRFAF is indicated for the reconstruction of a wide variety of defects in the head and neck, including:

- **Skin defects:** The FRFAF can be used to reconstruct skin defects of any size or shape. The flap is particularly well-suited for the reconstruction of defects in the face, as it provides a good color and texture match.
- **Muscle defects:** The FRFAF can be used to reconstruct muscle defects in the head and neck. The flap is particularly useful for the reconstruction of the orbicularis oculi muscle, which is responsible for closing the eye.
- **Bone defects:** The FRFAF can be used to reconstruct bone defects in the head and neck. The flap is particularly useful for the reconstruction of the mandible, which is the lower jawbone.
- **Cartilage defects:** The FRFAF can be used to reconstruct cartilage defects in the head and neck. The flap is particularly useful for the

reconstruction of the ear, which is made up of cartilage.

## **Surgical Technique**

The FRFAF is harvested as a fasciocutaneous flap, which includes skin, fascia, and muscle. The flap is typically harvested from the volar aspect of the forearm, between the brachioradialis and flexor carpi radialis muscles. The radial artery and its concomitant veins are located in the center of the flap. The flap is harvested in a retrograde fashion, starting from the distal end of the flap and working proximally. The flap is then transferred to the recipient site and anastomosed to the appropriate vessels.

## **Outcomes**

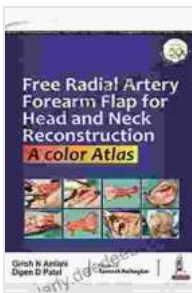
The outcomes of FRFAF for head and neck reconstruction are generally excellent. The flap has a high success rate, with reported flap survival rates of over 95%. The flap also provides good functional and aesthetic results. The donor site morbidity associated with the FRFAF is relatively low, and the scar is typically well-hidden.

The FRFAF is a versatile and reliable flap for head and neck reconstruction. It has a long and successful history in this field, and it remains one of the most commonly used flaps for this purpose. The FRFAF has several advantages over other flaps, including its reliability, versatility, and low donor site morbidity. The flap is also relatively easy to harvest and transfer, and it provides good functional and aesthetic results.

If you are considering head and neck reconstruction, the FRFAF is a good option to discuss with your surgeon.

## **References**

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