

Nipple-Areolar Complex Reconstruction: A Compilation of Techniques to Achieve a Natural Result

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BACKGROUND: The nipple-areolar complex (NAC) is a defining feature of a woman's breast anatomy that is often lost following mastectomy and breast reconstruction. Numerous methods of nipple-areolar reconstruction have been described, yet 1 in 3 patients report dissatisfaction with the final results¹. This may be due to the unnatural appearance of the reconstructed NAC. We present a series of techniques utilized to achieve optimal nipple-areolar reconstruction aesthetics.

METHODS: A retrospective review of a single surgeon's practice was performed from January 2008 until December 2014. Patient follow-up ranged from 1 to 8 years. Pre-mastectomy color evaluations of the native nipple-areolar complex were performed. All patients that underwent reconstruction had simultaneous nipple-areolar tattooing utilizing a blending method. The specific NAC local flap was determined based on the patient's individual scar pattern.

RESULTS: There were a total of 342 patients included; 140 reconstructions were unilateral (41%) and 202 reconstructions were bilateral (59%). Sixty-eight patients (20%) had fading of their tattoo, of which 34 patients (10%) underwent nipple color retouching. The most common area that required additional tattooing was the mastectomy scar. Thirty patients (9%) underwent secondary nipple reconstruction due to loss of nipple projection. One hundred and two patients (30%) developed superficial epidermolysis of the reconstructed NAC which was managed with local wound care alone. There were no cases of full thickness necrosis of the NAC that required debridement. Overall, 290 patients (85%) were satisfied with their nipple-areolar reconstruction.

CONCLUSION: This is the largest series of patients undergoing NAC reconstruction in the current literature that we are aware of. We use a variety of techniques that may lead to a natural outcome and a greater satisfaction rate following NAC reconstruction. Our approach includes performing NAC reconstruction with local anesthetic in an office-based setting with immediate post-flap tattooing. A pre-mastectomy color evaluation of the NAC for all mastectomy patients has proven to be highly beneficial for those undergoing bilateral mastectomies. Encouraging patient participation in pre-operative NAC site markings may make patients feel more involved in their care and further enhance satisfaction rate. Selecting the type of local flap performed based on the patient's individual scar pattern may lead to better aesthetic outcomes. These are practical modifications that can be easily implemented to augment nipple-areolar reconstructions.

REFERENCES:

1. Goh, S. C., Martin, N. A., Pandya, A. N., Cutress, R. I. Patient satisfaction following nipple-areolar complex reconstruction and tattooing. *J Plast Reconstr Aesthet Surg* 2011;64:360-363.