

Postoperative outcomes in Unilateral versus Bilateral DIEP Flap Reconstructions: A Systematic Review and Meta-Analysis

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Introduction:

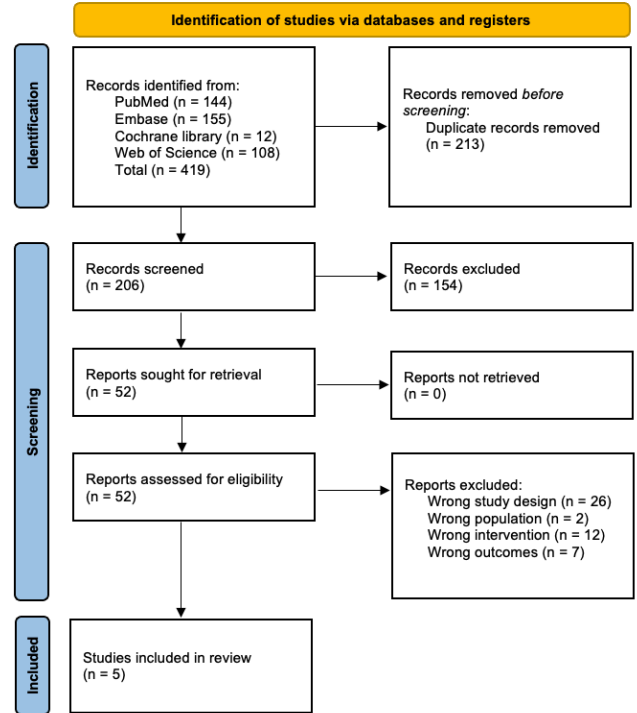
- Increase in the number of bilateral mastectomies and bilateral DIEP flap
- **Contradictions in studies** regarding the complication rates of bilateral versus unilateral DIEP flaps.

Methods:

- Systematic review with PRISMA guidelines.
- Databases: Pubmed, Cochrane Library, Web of Science.
- Criteria: Comparative studies between 2014 and 2024
- Data were collected independently by two authors and cross-checked

Results:

- 419 studies identified initially, 52 full-text articles reviewed
- 5 studies included, representing 5120 patients; 4,173 unilateral, 947 bilateral
- **Higher risk of total flap loss in bilateral reconstructions** OR: 1.48 [95% CI: 1.02; 2.14], $p = 0.04$
- No Significant Differences for Partial Flap Loss, Venous Congestion, Recipient Site Infection, Recipient Site Hematoma Donor Site Herniation and Donor Site Infection



Discussion:

- The increased risk in bilateral DIEP explained by Longer Operative Time, Surgeon Fatigue Less Optimal Tissue Selection

Conclusion:

- Bilateral DIEP breast reconstruction carries a moderately higher risk of complete flap loss but remains a viable option

Study or Subgroup	Bilateral DIEP		Unilateral DIEP		Weight	Odds Ratio M-H, Random, 95% CI
	Events	Total	Events	Total		
Beugels J et al.	7	208	9	322	13.6%	1.21 [0.44, 3.30]
Bodin F et al.	0	22	5	110	1.6%	0.43 [0.02, 7.99]
Laurent R et al.	1	42	4	157	2.8%	0.93 [0.10, 8.57]
Moellhoff N et al.	35	1341	57	3236	75.5%	1.49 [0.98, 2.29]
Wade RG et al.	5	194	3	371	6.6%	3.25 [0.77, 13.73]
Total (95% CI)		1807		4196	100.0%	1.48 [1.02, 2.14]
Total events	48		78			
Heterogeneity: Tau ² = 0.00; Chi ² = 2.16, df = 4 (P = 0.71); I ² = 0%						
Test for overall effect: Z = 2.07 (P = 0.04)						

