Gender Parity in Orthopedic Residency: A Review of Recent Match Data

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Introduction: Despite near parity among male and female U.S. medical students, orthopedic surgery remains the least gender-diverse specialty in medicine. To evaluate where the field currently stands and where improvement may be achieved, we analyzed NRMP Match data from 2022 to 2025 to characterize trends in gender representation among applicants and matched residents.

Methods: Publicly available NRMP Match data was analyzed for the years 2022 to 2025. For both males and females, we tabulated the number of applicants into orthopedic residency, the number of successful matches, the percent share of the total applicant and match pool, the match rate, and the internal parity index. Finally, we calculated the relative risk of matching into orthopedic residency as a woman, using men as the reference group, along with the 95% CI and p values. All calculations, including 95% confidence intervals and *p* values, were performed using Microsoft Excel.

Results: From 2022–2025, female applicants to orthopedic surgery increased from 276 to 352, representing a 22.8%–27.5% share of the applicant pool, while male applicants remained stable (900–938; 73.8%–77.2%) with a year-over-year decline in proportional share. Female matches rose from 252 to 297, comprising 23.8%–28.1% of the matched pool, with match rates between 84.4%–91.3%, compared with 80.1%–86.1% for males. Across all four years, women matched at equal or higher rates than men, reflected by parity indices of 1.02–1.07 for females versus 0.98–0.99 for males. The relative risk of matching as a woman ranged from 1.03–1.10 and was statistically significant in 2022 (p=0.004), 2024 (p=0.045), and cumulatively (p=0.001) across all four years.

Discussion: Female applicants match into orthopedics at equal or greater rates than their male counterparts. This supports that persistent gender discrepancies among residents are not due to a problem of selection, but due to differences in the rate at which men and women apply into the field. Future efforts should be directed at increasing interest in orthopedics among female premed and medical students through workshops, clinical exposure, and mentorship opportunities in the field.

Significanc/Clinical Relevance: This study quantifies trends in female representation and matching outcomes within orthopedic surgery, providing data driven insight into whether gender disparities persist at the point of residency selection. This helps to inform ongoind efforts to promote equity and diversity within the orthopedic workforce.

References:

1. National Resident Matching Program. (2025) *Charting Outcomes: Demographic Characteristics of Applicants in the Main Residency Match and Soap.* https://www.nrmp.org/match-data/2025/05/charting-outcomes-demographic-characteristics-of-applicants-in-the-main-residency-match-and-soap/

Images and Tables:

Year	Gender	Applicants (% Share)	Matched (% Share)	Parity Index	Match Rate	RR (95% CI)	p value
2022	Female	301 (24.30%)	265 (26.10%)	1.07	88.00%	1.1 (1.03–1.17)	**0.004**
	Male	938 (75.70)	751 (76.20%)	0.98	80.10%	Ref	
2023	Female	276 (22.80%)	252 (23.80%)	1.04	91.30%	1.06 (1.00–1.12)	0.047
	Male	936 (77.20%)	806 (76.2 %)	0.99	86.10%	Ref	
2024	Female	319 (26.20%)	290 (27.30%)	1.04	90.90%	1.06 (1.00–1.12)	**0.045**
	Male	900 (73.80%)	771 (72.70%)	0.99	85.70%	Ref	
2025	Female	352 (26.20%)	297 (27.30%)	1.02	84.40%	1.03 (0.97–1.10)	0.36
	Male	929 (74.79 %)	759 (71.90%)	0.99	81.70%	Ref	
2022-2025	Female	1248 (25.21%)	1104 (26.34%)	1.04	88.46%	1.06 (1.03–1.09)	**0.001**
	Male	3703 (74.79%)	3087 (73.66%)	0.98	83.36%	Ref	

Table 1: NRMP Match data for male and female applicants (2022-2025).