

# An Analysis of Publication Trends in Orthopedic Residents in Relations to Academic Achievement Post-Graduation

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## Background

Continuing Medical Education (CME) is an essential component of physician's careers. For many years the Accreditation Council for Graduate Medical Education (ACGME) has required residency programs to promote scholarly activity to obtain and retain accreditation. Many programs interpret this to mean promoting research amongst their members. Encouraging students to publish during residency is believed to promote research throughout their careers, but little information has been collected and analyzed to verify this assumption. This study was undertaken to determine if publishing in peer reviewed journals during orthopedic residencies was an indicator of continued academic achievement post-graduation.

## Methods

We examined whether research outcomes during orthopedic residencies indicated academic advancement and continual research. We identified 201 orthopedic residency programs and randomly selected 50 credible programs to include. Of the 298 graduates, we recorded the number of peer-review publications, H-index score, fellowship program and if the graduate is currently working in private practice or an academic setting.

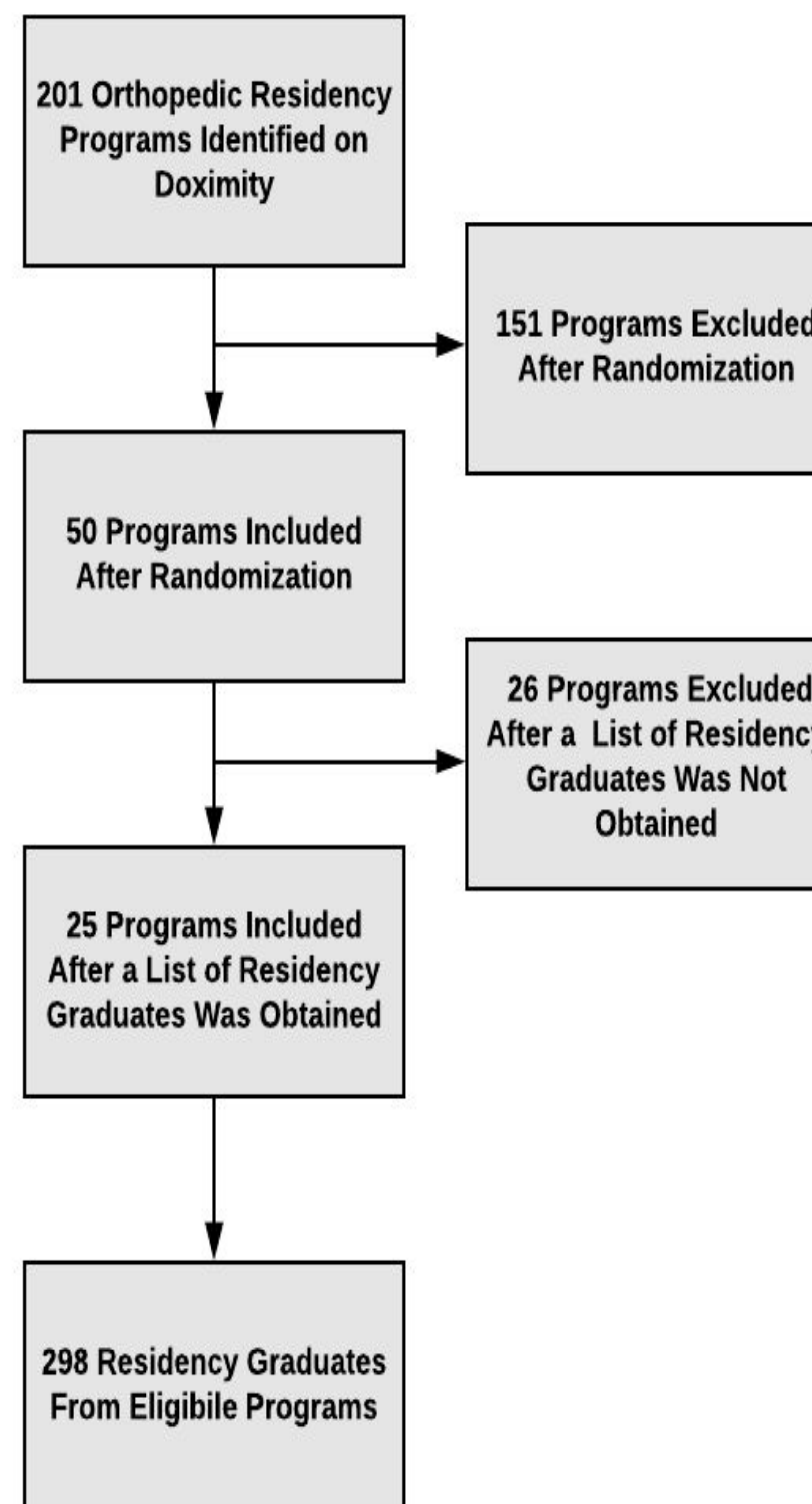
## Results

We included 201 orthopedic residency programs in our sample, of those 50 programs were included. A total of 24 (48%) programs provided graduate rosters for 298 residents. Thirty-seven residents (12.5%) had zero publications, 213 residents (71.5%) had 1-5 publications, 36 residents (12.1%) had 6-10 publications, 5 residents (1.7%) had 11-15 publications, 2 residents (0.67%) had 16-20 publications, 2 residents (0.67%) had 21-25 publications and 3 residents (1.0%) had publications. Sixty-eight graduates (of 298, 22.8%) pursued academia and 276 (of 298, 92.6%) pursued a fellowship.

**Table 1. Resident Graduate Sample Characteristics**

Characteristics	N (%)	[95% CI]
<b>Sex (n= 298)</b>		
Male	257 (86.2)	[82.3-90.1]
Female	41 (13.8)	[9.8-17.8]
<b>Medical Degree Obtained (n= 298)</b>		
M.D.	287 (96.3)	[94.2-98.4]
D.O.	11 (3.7)	[1.6-5.8]
<b>Current Setting of Practice (n= 298)</b>		
Academica	68 (22.8)	[18.1-27.6]
Private	230 (77.2)	[72.4-81.9]
<b>Pursued Fellowship (n= 298)</b>		
Yes	276 (92.6)	[89.7-95.6]
No	22 (10.4)	[4.4-16.4]

**Figure 1: Included Orthopedic Surgery Programs and Residents**



## Summary

The results indicate the vast majority of orthopedic residents published in peer reviewed journals complete fellowships. Though over 90% of residents actively pursued research during their medical instruction, less than a quarter chose to pursue academic medicine after completing their residencies. While not many students continued on to teach, nearly three quarters published after completing their programs. Encouraging publications during medical education does appear to promote further academic achievement after graduation, though more commonly as continued research not necessarily institutional academia.

## References

1. ACGME Home. <https://www.acgme.org/>. Accessed September 24, 2019.
2. Yang G, Zaid UB, Erickson BA, Blaschko SD, Carroll PR, Breyer BN. Urology resident publication output and its relationship to future academic achievement. *J Urol*. 2011;185(2):642-646.

