

# Evaluation of Ergonomics Education during Dermatologic Training

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## Introduction

Workplace injuries are becoming more frequent in public health and medical industries. Physicians are often performing repetitive maneuvers or spend long periods of time in awkward positions, which can negatively impact their long-term mobility and ability to practice. Given that dermatologists perform repetitive movements and complex procedures, ergonomics education can play a key role in preventing musculoskeletal (MSK) injuries.

## Objective

- To describe the type of ergonomics training available during dermatology training.
- Highlight the prevalence, types, and severity of workplace injuries that can manifest early in training.

## Methods

- The members of the Association of Professors of Dermatology (APD) were invited to distribute this survey to dermatology residents via email. Dermatologists in residency or fellowship programs were eligible to complete the survey.
- Emails to APD members were sent 3 times between the periods between November 2020 and January 2021.
- Dermatology program directors were sent an email in December 2020 with an email describing the details of the study.

Table 1

|                       | (n, %)   |
|-----------------------|--|
| <b>Age</b>            | 26-30: 42<br>31-35: 20<br>36-40: 6<br>41-45: 1<br>46-50: 1 |
| <b>Sex (male)</b>     | 29(41.4%)  |
| <b>Sex (female)</b>   | 41(58.6%)  |
| <b>Training level</b> |  |
| Resident              | 58(82.9%)  |
| Fellow                | 12(17.1%)  |
| <b>Training year</b>  |  |
| PGY-2                 | 20(28.5%)  |
| PGY-3                 | 18(25.7%)  |
| PGY-4                 | 20(28.5%)  |
| PGY-5                 | 12(17.1%)  |

Table 1: Demographic characteristics

## Results

- Fifty-eight residents and 12 fellows participated in the study, ranging between 26-50 years of age.
- Most common anatomical sites of strain were the lower back (40, 56%), shoulders (34, 48.5%), and eyes (31, 44.2%).
- 30 (43%) reported that their musculoskeletal pain began during residency training.
- Ergonomic equipment included adjustable patient chairs (47.1%), compression stockings (34.2%), and chairs with arm rests (34.2%).
- Only 7 (10%) individuals reported receiving ergonomics training.

Figure 1

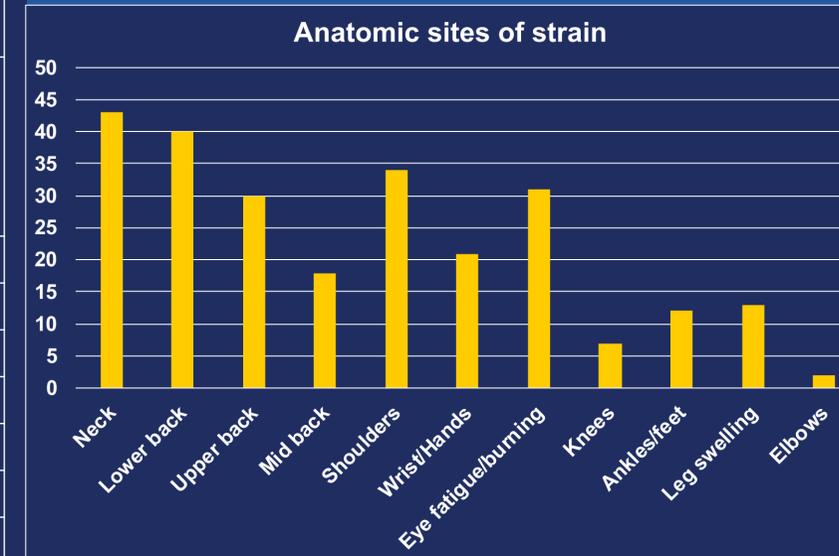


Figure 1. Reported areas of strain.

Figure 2

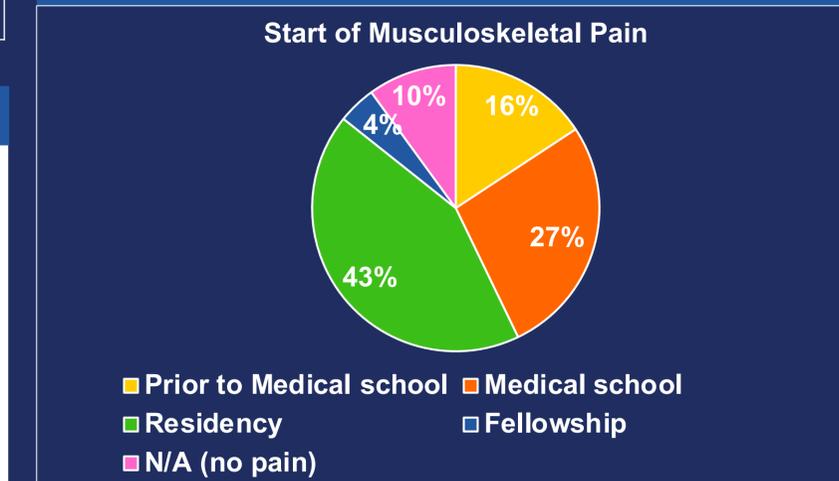


Figure 2. Time that MSK strain developed.

## Discussion

- The survey data showed that many fellowship and residency training programs do not have a formal ergonomics training program.
- Use of ergonomics equipment is common practice within the field of dermatology. In many cases, use of ergonomics equipment can prevent awkward straining or promote proper posturing.
- However, use of ergonomics equipment may not be enough for an effective intervention, as training is necessary for workers to know how to adjust tools and correct awkward maneuvers.
- A well-designed ergonomics training program can prevent complex or even irreversible injuries from developing down the line.

## Conclusion

If trainees are provided with the right tools paired with ergonomics education, early manifestations of musculoskeletal disorders can be prevented, or at least minimized.

## References

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