

# Workplace stress can take a toll on your brain surgeon, too

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When it comes to workplace stress, even doctors aren't immune to its effects. For doctors training to become neurosurgeons, burnout is common, and certain workplace stressors—like unrewarding mentor relationships, difficult coworkers and not getting enough exposure to the operating room—can lead to it, according to a new study from the Keck School of Medicine of USC.

Building the skills needed to treat complex neurological conditions like stroke, brain tumors or [spinal cord injuries](#) requires a highly demanding, seven-year training program. The pressure of that training can sometimes lead to emotional exhaustion, an inability to connect with others or feeling unaccomplished, which are components of [burnout](#). Understanding what factors influence burnout can be a powerful catalyst for change.

"As a patient, you don't want your doctor to be depressed or demoralized when they're working on you, because they're not their best self," says the study's lead author Frank Attenello, MD, MS, assistant professor of clinical neurological surgery at the Keck School. "And as a society, we don't want to discourage people from becoming neurosurgeons, because we have a rapidly aging population in need of neurosurgeons' skills."

While research on burnout is gaining steam in many fields, not much attention has been paid to it in neurosurgery until now, Attenello explains.

To better understand it, Attenello and his colleagues surveyed 346 neurosurgery residents across the United States. Using an 86-item questionnaire, the team explored everything from whether residents felt satisfied with different aspects of their training to whether they were considering quitting training or leaving medicine entirely. Burnout was assessed using the Maslach Burnout Inventory, a validated tool that has been used to measure burnout both in health care and other professions.

The study, published today in the *Journal of Neurosurgery*, found that 81 percent of residents were satisfied with their career, but 41 percent had given serious thought to quitting neurosurgery at some point. The overall burnout rate was 67 percent—more than double the estimated rate of burnout among American workers overall. Predictors of burnout included inadequate exposure to the operating room, hostile faculty, unsatisfactory relationships with mentors and social stressors outside of work.

"Some of the most impressive and energetic medical students enter neurosurgery," Attenello says. "When they encounter burnout, it limits their considerable potential, both with their patient care and possibly in their academic and research achievements for the field as a whole."

To help reduce the risk of burnout, Attenello and others at the Keck School have already implemented a new model for mentorship. This year, new residents in the Department of Neurological Surgery will choose their mentors, and the school will assign a backup mentor for additional support.

"Our study provided some valuable insights to the prevalence of burnout and some of the pain points in [training](#) neurosurgeons," says study co-author [Steven L. Giannotta, MD](#), chair and professor of [neurological surgery](#) at the Keck School. "Recognizing that burnout exists and finding ways to address it are important steps educational institutions can take to

mitigate it."

**More information:** *Journal of Neurosurgery* (2018). [DOI: 10.3171/2017.9.JNS17996](https://doi.org/10.3171/2017.9.JNS17996) ,  
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