

# Quick Review of Model System Research

### Contractures in Adults with Burn Injury: A Burn Model System National Database Study

### What is the study about?

### Joint [contractures](https://www.merriam-webster.com/dictionary/contractures) are a major cause of morbitiy and functional limitations for individuals with burn injury. This study examines the frequency and severity of joint contractures in a large population of individuals with burn injury.

### What did the study find?

Nearly one third of the study’s participants had a contracture at discharge despite splinting and positioning, vigorous physical and occupational therapeutic interventions. The most frequently contracted areas are shoulder, elbow and wrist, in that order. Risk factors for the development of postburn contractures include male sex, African-American or Hispanic ethnicity, the presence of medical problems, neuropathy, total body surface area (TBSA) grafted, and TBSA burned.

### Who participated in the study?

Data were collected from the National Institute on Disability and Rehabilitation Research Burn Model System database on adult burn survivors from 1994 to 2003.

### How was the study conducted?

Demographic and medical data were collected on each participant. Outcome measures included incidence of contractures, number of contractures per patient, and severity of contractures at time of hospital discharge. Data were analyzed to learn if there are predictors regarding the presence, severity, and number of contractures.

### [How can people use the results?](file:///C%3A%5CUsers%5Cccai%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.Outlook%5C4WHR71C4%5CBogner_CER-1403-13476_DFRR_Professional%20and%20Public%20Abstract_SME%20Review_102918%20ccai.docx#Note)

Clinicians, individuals with burn injuries, and their family members can use the results of this study to become more informed on the frequency and risk factors regarding joint contractures.

### [Reference](file:///C%3A%5C%5CUsers%5C%5Cccai%5C%5CAppData%5C%5CLocal%5C%5CMicrosoft%5C%5CWindows%5C%5CTemporary%20Internet%20Files%5C%5CContent.Outlook%5C%5C4WHR71C4%5C%5CBogner_CER-1403-13476_DFRR_Professional%20and%20Public%20Abstract_SME%20Review_102918%20ccai.docx%22%20%5Cl%20%22Note%22%20%5Co%20%22Describe%20who%20could%20use%20the%20results%20and%20how.%20Could%20be%20patient%2C%20doctor%2C%20administration%2C%20centers.%20Should%20make%20sense%20given%20findings%20and%20study%20design.%20Do%20not%20overreach.)

Goverman, J., Mathews, K., Goldstein, R., Holavanahalli, R., Kowalske, K., Esselman, P., . . . Schneider, J. C. (2017). Adult Contractures in Burn Injury. Journal of Burn Care & Research, 38(1). doi:10.1097/bcr.0000000000000380

### Disclaimer

The contents of this quick review were developed under a grant from the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR grant number 90DP0082). NIDILRR is a Center within the Administration for Community Living (ACL), Department of Health and Human Services (HHS). The contents of this quick review do not necessarily represent the policy of NIDILRR, ACL, HHS, and you should not assume endorsement by the Federal Government.