

# ` Quick Review of Model System Research

## Long-Term Outcomes in Patients Surviving Large Burns: The Musculoskeletal System

### What is the study about?

[Musculoskeletal](https://www.merriam-webster.com/dictionary/musculoskeletal) complications (i.e., [contractures](https://www.merriam-webster.com/dictionary/contractures), bone loss, [septic arthritis](https://www.mayoclinic.org/diseases-conditions/bone-and-joint-infections/symptoms-causes/syc-20350755)) are common following a burn injury. These complications can occur either as a direct or indirect effect from the burn injury itself or its effect on the bones, joints, and tendons. This study looked at the long-term musculoskeletal complications following a major burn injury.

### What did the study find?

Researchers found that 73% (68 of 93) of the participants had a limitation of motion, with the neck (47%), hands (45%), and [axilla](https://www.merriam-webster.com/dictionary/axilla) (38%) being the most affected areas. Participants with limitation of motion had significant difficulty in areas of mobility, self-care, hand function, and role activities. This study not only shows that survivors of major burn injuries continue to have complications several years after injury, but highlights the importance of long-term follow-up care and therapeutic interventions for survivors.

### Who participated in the study?

Participants (n=98) were 18 years of age or older, had a Total Body Surface Area burn of 30% or greater, and were three years or more from the time of injury.

### How was the study conducted?

Each participant underwent a comprehensive history and physical examination by a senior and experienced Physical Medicine and Rehabilitation physician. Participants were then asked to complete a Medical Problem checklist, the Burn-Specific Health Scale, and a self-report that measures the level of functional adaptation following a burn injury.

### How can people use the results?

Clinicians and survivors of major burn injuries alike can use the results of this study to increase their awareness regarding long-term complications following a major burn injury. The results also highlight the importance of long-term follow-up care and therapeutic interventions for survivors of major burn injuries.

### Reference

Radha K. Holavanahalli, Phala A. Helm, Karen J. Kowalske; Long-Term Outcomes in Patients Surviving Large Burns: The Musculoskeletal System, *Journal of Burn Care & Research*, Volume 37, Issue 4, 1 July 2016, Pages 243–254, <https://doi.org/10.1097/BCR.0000000000000257>

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