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**fatemeh emdad\*** (faemdad@utmb.edu), 1042 Gladstone dr, League City, TX 77573, **clarisse djukom**, TX, and **david n herndon** and **marc g jeschke**. *Influence of inhalation injury on mortality of burn patients.*

Despite recent advances in burn care, advances in the management of inhalation injury have faltered. The objective of this study was to examine and compare the outcomes of patients with inhalation injury versus patients without inhalation injury in a large prospective multi-center trial.

Patients with an inhalation injury had a greater overall rate of mortality (20% vs. 9%;  $p < 0.001$ ). Patients with the probability of having inhalation injury have the highest risk of dying. Death among patients with inhalation injury and patients without inhalation injury was attributed to multiple organ failure (26% and 14%) or sepsis (24% and 33%). Patients with inhalation injury had a respiratory rate higher than patients without inhalation injury. The average (SD) highest respiratory rate for patients with inhalation injury was 29(12) vs. 26(7) for patient without inhalation injury, also the average lowest respiratory rate for patients with inhalation injury was 18(10) vs. 16(7). Compared to patients with like size burns, patients with inhalation injury are at greater risk of mortality, require longer periods in the intensive care unit as well as in the hospital prior to discharge. Surprisingly, patients with inhalation injury do not require more days spend on ventilation. (Received August 11, 2009)