

# Additional Information on Taser Safety

Bozeman, WP. Additional information on Taser safety. *Ann Emerg Med*, November, 2009; 54(5): pgs 758-759..

Volume 54, Issue 5, Pages 758-759 (November 2009)

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To the Editor:

Controversy continues regarding the safety of conducted electrical weapons, commonly known by the brand name Taser. This important discussion often pivots on the question of cardiac safety: whether, and if so how often, conducted electrical weapons might produce a fatal cardiac dysrhythmia.

Recently released figures will be of particular note and interest to the broad audience that is following this discussion. In May 2009 the British Home Office Scientific Development Branch presented a paper on conducted electrical weapon uses in England and Wales to the European Symposium on Non-Lethal Weapons.<sup>1</sup> The UK has recorded 4,046 consecutive Taser uses overall and 1330 cases in which conducted electrical weapons were discharged and an electrical shock was delivered. Clinical outcomes were assessed; in none of the cases was there a death attributed to the conducted electrical weapon use and in particular there were no sudden fatal collapses suggestive of a cardiac dysrhythmia (personal communication, Graham Smith, Home Office Scientific Development Branch, May 20, 2009).

These data are important because they provide a carefully monitored denominator of consecutive conducted electrical weapon uses, against which a numerator of adverse events can be compared. When this experience is combined with previous reports of medical outcomes after consecutive field use of conducted electrical weapons, including Eastman et al (n=426), Bozeman et al (n=1201), and a recent abstract by Angelidis et al (n=1101), there is a combined experience of 4,058 consecutively monitored conducted electrical weapon uses with an electrical shock delivered.<sup>2, 3, 4</sup> Serious injuries are clearly rare, and there are no cases in any of the reports suggesting sudden cardiac death related to the Taser. While these findings of zero observed fatalities neither fully exclude the possibility of conducted electrical weapons having cardiac effects nor diminish the importance of that possibility, they do allow calculation of a 97.5% confidence interval that the risk of an immediate fatal event due to conducted electrical weapon use is not greater than 0.09%.

The accumulating safety evidence from carefully monitored field experience clarifies the potential risks of conducted electrical weapons and continues to support their overall safety. This is particularly evident when safety information is considered in the context of the known benefits of conducted electrical weapons including their effectiveness as a police tool, reductions in injuries among both officers and suspects, and reductions in the use of lethal force.

From a public health/epidemiologic perspective the use of conducted electrical weapons is similar to that of automobile air bags, which are also known to pose a small risk of serious injury and even death in rare cases, but are clearly responsible for marked overall reductions in injuries and fatalities. While investigations to clarify the risks and optimize the safety of these devices must continue, the overall balance of risks versus benefits in terms of injuries prevented and lives saved weighs heavily in favor of the use of both.

## References

1. Home Office Scientific Development Branch Figures on the reported and recorded uses of Taser by police forces in England and Wales. [http://scienceandresearch.homeoffice.gov.uk/images/106966/Taserfigs\\_Sep-Dec\\_08\\_.pdf](http://scienceandresearch.homeoffice.gov.uk/images/106966/Taserfigs_Sep-Dec_08_.pdf) 05 May 2009; Accessed May 16, 2009.
2. Eastman AL, Metzger JC, Pepe PE, et al. Conductive electrical devices: a prospective, population-based study of the medical safety of law enforcement use. *J Trauma*. 2008;64:1567-172.
3. Bozeman WP, Hauda WE, Heck JJ, et al. Safety and injury profile of conducted electrical weapons used by law enforcement officers against criminal suspects. *Ann Emerg Med*. 2009;53:480–489.
4. Angelidis M, Basta A, Walsh M, et al. injuries associated with law enforcement use of conducted electrical weapons. *Acad Emerg Med*. 2009;16(suppl. 1):S229.

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*Funding and support:* By *Annals* policy, all authors are required to disclose any and all commercial, financial, and other relationships in any way related to the subject of this article that might create any potential conflict of interest. The author has stated that no such relationships exist. See the Manuscript Submission Agreement in this issue for examples of specific conflicts covered by this statement.

PII: S0196-0644(09)00646-5

doi:10.1016/j.annemergmed.2009.06.015

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