

Live tissue vs synthetic tissue training for critical procedures: No difference in performance

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Training on the synthetic training model (STM) or live tissue (LT) model does not result in a difference in subsequent performance for five of the seven critical procedures examined: junctional hemorrhage wound packing, tourniquet, chest seal, nasopharyngeal airway, and needle thoracostomy. That is the primary finding of a study reported in the Proceedings of the 2017 AEM Consensus Conference, to be published in the February 2018 issue of *Academic Emergency Medicine* (AEM), a journal of the Society for Academic Emergency Medicine (SAEM).

The lead author of the study is Danielle Hart, MD, MACM, program director for [emergency medicine](#) at Hennepin County Medical Center (HCMC), Minneapolis, Minnesota, and the director of simulation for HCMC's Interdisciplinary Simulation and Education Center (ISEC).

The study, by Hart, et al, indicates that until synthetic training models are developed with improved anthropomorphic and tissue fidelity, there may still be a role for live tissue for training tube thoracostomy and potentially cricothyrotomy.

While these results begin to uncover the effects of training and assessing these procedures on various models, these findings indicate that further study is needed to ascertain how well performance on an STM or LT model translates to the human model.

William Bond, MD, co-chair of the 2017 AEM Consensus Conference and director of simulation research at the Jump Trading Simulation and Education Center, University of Illinois College of Medicine at Peoria commented:

"Hart, et al. shows the many challenges involved in simulation research. In particular, their group should be commended for their attempt to control for the test on training model effect, and training order effect. The article shares the simulation [training](#) experience for a number of procedures relevant to emergency medicine, trauma teams, and military [medicine](#)."

More information: Danielle Hart et al. Training and Assessing Critical Airway, Breathing, and Hemorrhage Control Procedures for Trauma Care: Live Tissue Versus Synthetic Models, *Academic Emergency Medicine* (2017). [DOI: 10.1111/acem.13340](https://doi.org/10.1111/acem.13340)

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