



E15 Meeting the *Daubert* Challenge: A Proposed Model to Test the Relevance and Reliability of Expert Testimony

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The purpose of this paper is to present a model to assist the court in assessing the admissibility of testimony from expert forensic biomechanists. The model proposes a system for answering the questions presented in *Daubert v. Merrell Dow Pharmaceuticals, Inc.* (509 U.S. 579, 1993): is the testimony “relevant to the task at hand” and does it rest on “reliable foundation.”

This presentation will impact the forensic community and/or humanity by providing a method for addressing the “gatekeeper” function of the court by displaying the relevance and reliability of expert opinion. Ultimately society will benefit from courts that find truth through a more complete understanding of the relationships discoverable from the evidence.

When the relationship between human tissue damage and an external event is unclear, the forensic biomechanist can offer a qualified opinion as to the forces involved and the potential causes of injury. Currently, however, there are no standard procedures to help the court determine the usefulness of such an opinion. The proposed model provides a method for the biomechanist to summarize his/her opinion, and thereby aid the court in evaluating the usefulness and admissibility of the testimony.

If a judge determines that testimony is relevant and reliable, an expert witness can provide “scientific, technical, or other specialized knowledge [that] will assist the trier of fact to understand the evidence or to determine a fact in issue” (Federal Rules of Evidence, Article VII, Rule 702, p. 13). How can a judge decide, however, whether an opinion from a forensic biomechanist is based on sufficient data, relies on sound principles and methods, and aids the court in understanding the facts of the case? *Daubert v. Merrell Dow Pharmaceuticals, Inc.* (1993) provides a basic checklist for judges reviewing expert testimony but offers little help in determining whether an expert’s opinion actually answers the question in the case.

Rather than relying solely on the expert’s qualifications, the proposed model offers a systematic approach to the questions of relevance and reliability by providing a visual summary of the expert’s opinion. The model provides a visual tree or diagram with three main branches: medical documentation, event history, and physical evidence. Evidence from these three branches, along with supporting literature, is summarized in the trunk of the model. The expert’s opinions and conclusions are prepared in a summary document and presented along with the tree as an integrated final report. Using this model for organizing, documenting, and displaying evidence can help the expert illustrate for the court the usefulness of an opinion, and aid a judge in determining the relevance and reliability, that is the admissibility, of expert testimony.

Forensic Biomechanics, *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, Relevance and Reliability