

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA**

JAMIE NELSON, individually and as) Administratrix of the Estate of) DYLAN FEHLMAN,) Plaintiff,)	Civil Action No. 1:18-cv-210
v.)	Re: Daubert hearing
AMERICAN HONDA MOTOR CO., INC.) Defendant.)	ECF No. 113

MEMORANDUM OPINION and ORDER

Introduction

This products liability action arises out of an accident in which 17-year-old Dylan Fehlman died. Plaintiff Mrs. Jamie Nelson is the mother of the deceased and is the administratrix of Fehlman’s estate. Dylan was driving a three-wheel All Terrain Cycle (“ATC”) manufactured and originally sold by Defendant American Honda Motor Company (“Honda”) around 1984. At this advanced stage in the litigation, the only claims remaining for trial are strict liability claims¹ based on the failure to warn (based on a post-sale duty) and defective design. ECF No. 1 (Counts I, II, and X).

Presently pending before this Court is Plaintiff’s motion to preclude the testimony of David Thom, an expert witness who would testify as to the impact a helmet would have had in Dylan’s accident. ECF No. 113. This Court held a *Daubert*² hearing on this motion. The hearing

¹ Pennsylvania law recognizes three different types of defects that give rise to a strict liability claim: (1) design defect; (2) manufacturing defect; and (3) warning defect (i.e., failure to warn or inadequate warnings). *Lopez v. Ethicon Inc.*, 2020 WL 5569770, at *3 (E.D. Pa. Sept. 17, 2020) citing *Phillips v. A-Best Prods. Co.*, 665 A.2d 1167, 1170 (Pa. 1995). This case presents two distinct theories of liability: design defect and warning defect.

² *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993).

was conducted in a hybrid manner with the Court and attorneys appearing in person and the witness appearing via video conferencing. *See* ECF No. 228.

Federal Rules of Evidence

Relevant evidence is admissible at trial. Fed.R.Evid. 402. Evidence is relevant if: “(a) if has any tendency to make a fact more or less probable than it would be without the evidence; and (b) the fact is of consequence in determining the action.” Fed.R.Evid. 401. Generally, the Federal Rules of Evidence “embody a strong and undeniable preference for admitting any evidence having some potential for assisting the trier of fact.” *Amidon v. Goodyear Tire & Rubber Co.*, 2021 WL 7907073, at *1-2 (M.D. Pa. Sept. 3, 2021) quoting *Holbrook v. Lykes Bros. Steamship Co., Inc.*, 80 F.3d 777, 780 (3d Cir. 1996) (cleaned up). However, the Rules provide additional considerations for expert testimony. Fed.R.Evid. 702; Fed.R.Evid. 703. A district court “exercises more control over experts than over lay witnesses,” since “expert evidence can be both powerful and quite misleading because of the difficulty in evaluating it.” *Daubert*, 590 U.S. at 595.

Rule 702 provides that a witness may testify as an expert if:

- (a) The expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
- (b) The testimony is based on sufficient facts or data;
- (c) The testimony is the product of reliable principles and methods; and
- (d) The expert has reliably applied the principles and methods to the facts of the case.

Fed.R.Evid. 702. And, Rule 703 provides the bases of an expert’s opinion testimony:

“an expert may base an opinion on facts or data in the case that the expert has been made aware of or personally observed. If experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the subject, they need not be admissible for the opinion to be admitted. But if the facts or data would otherwise be inadmissible, the proponent of the opinion may disclose them to the jury only if their probative value in helping the jury evaluate the opinion substantially outweighs their prejudicial effect.”

Fed.R.Evid. 703.

Expanding on these Rules of Evidence, the Supreme Court set out the standard for admissibility of expert testimony in *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993). There, the Supreme Court delegated to district courts a “gatekeeping responsibility” under Rule 702. This responsibility requires that courts determine at the outset whether an expert witness may “testify to (1) scientific knowledge that (2) will assist the trier of fact.” *Id.* at 592.

The threshold inquiry, and Plaintiff’s initial challenge here, revolves around whether expert testimony is necessary or will be helpful to the factfinder. “The purpose of expert testimony is to assist the trier of facts to understand, evaluate, and decide complex evidential material.” *U.S. v. Perez*, 280 F.3d 318, 341 (3d Cir. 2002) (“It is true that the average juror probably is not familiar with the biochemical mechanisms and physiology of cocaine use; it is just as true, however, that the average juror knows that cocaine affects a person’s ability to perceive and reason.”).

Here, Plaintiff argues that scientific evidence that a helmet lessens head injuries is not needed at trial because lay people already know this to be true. At the evidentiary hearing, Plaintiff honed her argument in this regard. She is challenging the majority of Mr. Thom’s conclusions as lay opinions not needing scientific explanation.

According to Plaintiff, Mr. Thom’s testimony as to these points is not necessary and will not be helpful because lay people already know that wearing a helmet, like wearing a seatbelt, is

safer than not wearing one. Defendant answers that Plaintiff's position is an oversimplification and this Court agrees. While the average juror knows that helmets prevent or lessen head injuries generally, expert testimony will be helpful to the jury *in this case* to evaluate the effects of *the available helmet on Dylan's head injury*.

The *Daubert/Paoli* Tripartite Standard for Admissibility

Following the Supreme Court's decision in *Daubert*, the Third Circuit established three basic requirements for the admissibility of expert testimony. The party seeking to introduce the expert testimony must demonstrate:

- (1) the expert's qualifications;
- (2) the reliability of the proffered testimony; and
- (3) the fitness of the testimony (or, in other words, the connection between the opinion and the issues in the case).

Santiago v. Walmart, 2019 WL 5103106, at *2 (W.D. Pa. 2019) *citing In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 741-43 (3d Cir. 1994) ("*Paoli II*"). *See also Three Rivers Hydroponics, LLC v. Florists' Mutual Ins. Co.*, 2020 WL 419946, at *1 (W.D. Pa. 2020) *quoting Schneider v. Fried*, 320 F.3d 396, 404 (3d Cir. 2003) (the admissibility of expert testimony "hinges on a 'trilogy of restrictions: qualification, reliability, and fit.'").

The qualification prong demands that the proffered expert possess sufficient "specialized knowledge" to testify as an expert. *Paoli II*, 35 F.3d at 741. Qualification "refers to the requirement that the witness possess 'specialized expertise' which requirement the Third Circuit has interpreted liberally, holding that 'a broad range of knowledge, skills, and training qualify an expert.'" *Ellison v. United States*, 753 F.Supp.2d 468, 475 (E.D. Pa. Nov. 10, 2010) *quoting Schneider*, 320 F.3d at 404 (cleaned up).

To satisfy the reliability prong, an expert’s opinion “must be based on the ‘methods and procedures of science’ rather than on ‘subjective belief or unsupported speculation.’” *Paoli II*, 35 F.3d at 742, *quoting Daubert*, 509 U.S. at 589. “An expert’s testimony is admissible so long as the process or technique the expert used in formulating the opinion is reliable.” *Id.*

As to the fit prong, admissibility “depends ... on the proffered connection between the scientific research or test result ... and [the] particular disputed factual issues.” *Id.* at 743. This third element “goes primarily to relevance.” *Daubert*, 509 U.S. at 591. The expert’s testimony “must fit under the facts of the case so that ‘it will aid the jury in resolving a factual dispute.’” *Meadows v. Anchor Longwall & Rebuild, Inc.*, 306 Fed. App’x 781, 790 (3d Cir. 2009) *quoting Lauria v. National Railroad Passenger Corp.*, 145 F.3d 593, 600 (3d Cir. 1998). “The standard for [this] factor is not high; it is met when there is a clear ‘fit’ connecting the issue in the case with the expert’s opinion that will aid the jury in determining an issue in the case.” *Id.*

The burden of proof for the admissibility of expert testimony falls upon the party who seeks to introduce the evidence. *Oddi v. Ford Motor Co.*, 234 F.3d 136, 145 (3d Cir. 2000). *See also Three Rivers Hydroponics*, 2020 WL 419946, at *1, *quoting In re TMI Litig.*, 193 F.3d 613, 705 (3d Cir. 1999) (“The party offering the expert testimony has the burden of establishing **each** of these requirements by a preponderance of the evidence.”) (emphasis added). However, the Third Circuit has emphasized that “the test of admissibility is not whether a particular scientific opinion has the best foundation or whether it is demonstrably correct. Rather, the test is whether the particular opinion is based on valid reasoning and reliable methodology.” *Id.* Moreover,

“[t]he standard is not intended to be a high one, nor is it to be applied in a manner that requires the plaintiffs to prove their case twice—they do not have to demonstrate to the judge by a preponderance of the evidence that the assessments of their experts are correct, they only have to demonstrate by a preponderance of evidence that their opinions are reliable.”

Id. citing Paoli II, 35 F.3d at 743. District courts must always be cognizant of the fact that “the analysis of the conclusions themselves is for the trier of fact when the expert is subjected to cross-examination.” *Id.* Importantly, credibility is not part of the *Daubert* analysis. Instead, the credibility of a witness and the weight of the evidence are for a jury to decide. *Babcock & Wilcox Ebensberg, Power, Inc. v. Zurich American Ins. Co.*, 2005 WL 6068838, at *9 (W.D. Pa. 2005).

David Thom’s Report and Testimony

At the hearing, Mr. Thom explained that counsel requested that he look at the factual circumstances surrounding the accident and evaluate the effects of a helmet. Mr. Thom described the first steps of his process:

The first thing to do is understand as much about the crash as is available and necessary in order to get a – have an understanding of what the head injury was and the circumstances that caused that head injury, and then the second phase would be then to determine if there was a helmet available, which there was, he wasn’t wearing it, but there was one available, and then I found an exemplar helmet, the same helmet, the same model and did some testing to determine how the helmet would do under those particular circumstances ...

Transcript, page 25.

Mr. Thom performed numerous tests on an exemplar helmet. *Id.* at page 30. Mr. Thom measured acceleration forces (both linear and rotational) on humanoid head forms. He then compared and evaluated the measurements for helmeted head forms and unprotected head forms.

Id. at pages 25-26. In his written report, Mr. Thom offered the following opinions:

1. Dylan Fehlman was riding an ATV without a helmet when he fell, struck his head, and succumbed to a lethal head injury.
2. The description of Mr. Fehlman’s injury as a depressed skull fracture shows a high level of concentrated impact to his unprotected head. This is precisely the sort of injury for which helmets have proven to be extremely effective.

3. The EVS Vortek helmet not worn by Mr. Fehlman is a full-facial off-road design that provides a high level of protection to the entire head, including the face and jaw.
4. The EVS Vortek helmet available to Mr. Fehlman would have reduced all measures of head injury threat dramatically.
5. The linear acceleration would have been halved or better.
6. The contact forces that caused the depressed skull fracture would be dramatically reduced.
7. The rotational acceleration that causes shearing injury would have been reduced to less than one-third by wearing the helmet he had available.
8. Dylan Fehlman died from a depressed skull fracture which would have been prevented had he worn the EVS helmet available to him.
9. While it is certainly possible that Mr. Fehlman would have had a mild rotational injury such as a concussion, testing shows that use of a helmet would provide a major reduction in any rotationally induced injury.

ECF No. 114-1, page 10.

Plaintiff's Challenge to Mr. Thom

In her short written brief, Plaintiff contends that Mr. Thom should be precluded from testifying because he is not a medical doctor qualified to render an opinion on decedent's cause of death. Plaintiff maintains that "Mr. Thom has no medical basis for his opinion. Instead, Mr. Thom's opinion amounts to medical speculation" and he must be excluded. ECF No. 114, page 3. At the *Daubert* hearing, Honda agreed that Mr. Thom will not offer opinion as to cause of death. Transcript, page 60.³ Having dispatched this threshold issue, we proceed to the three-prong test for admissibility.

³ There is a coroner's report as to cause of death and this Court has previously ruled that Dr. Talbott will be permitted to testify about cause of death. *See* ECF No. 221.

Qualifications

Courts must interpret the qualification requirement “liberally,” considering that “a broad range of knowledge, skills, and training qualify an expert as such.” *Paoli II*, 35 F.3d at 741. The basis of an expert’s “specialized knowledge” can include “practical experience as well as academic training and credentials.” *Waldorf v. Shuta*, 142 F.3d 601, 625 (3d Cir. 1998).

Mr. Thom’s educational background, as noted in his Curriculum Vitae, is uncontested. Mr. Thom holds both a bachelor’s and a master’s degree in Safety Science from the University of Southern California. Mr. Thom has authored and co-authored numerous scientific papers related to the design and testing of helmets. ECF No. 114-1, pages 16-18; Transcript, page 22. Besides his educational background, Mr. Thom has extensive experience in testing thousands of helmets over forty years. Transcript, page 19. Moreover, Mr. Thom was retained as a research scientist by the Department of Transportation to analyze helmet performance in vehicular accidents (*id.* at page 23); consulted on a DOT committee that authored the Federal Motor Vehicle Safety Standard No. 218 (the federal standard applicable to vehicular helmets) (*id.* at page 20); and contributed to the DOT-sponsored “Hurt Report” analyzing hundreds of motorcycle accidents (ECF No. 113-1, page 15).

Mr. Thom meets the qualifications requirement for designation as an expert for purposes of this case.⁴

⁴ Plaintiff’s motion to exclude is limited to the qualification prong of the *Daubert/Paoli* test. However, counsel’s arguments at the *Daubert* hearing touched on methodology (and, to a lesser extent, relevance). This Court will examine all three prongs.

Reliability

“An inquiry into the reliability of scientific evidence under Rule 702 requires a determination as to its scientific validity.” *Paoli II*, 35 F.3d at 742, quoting *Daubert*, 509 U.S. at 589. When faced with a challenge to reliability based on methodology, a district court may consider eight non-exclusive factors:

- whether a method consists of a testable hypothesis;
- whether the methodology has been subject to peer review;
- the known or potential rate of error;
- the existence and maintenance of standards controlling the technique’s operation;
- whether the methodology is generally accepted;
- the relationship of the technique to methods which have been established to be reliable;
- the qualifications of the expert witness to testify based on the methodology; and
- the non-judicial uses to which the method has been put.

Paoli II, 35 F.3d at 742 n.8. These factors “are neither exhaustive nor applicable in every case ... and the inquiry envisioned by Rule 702 is a flexible one.” *Strictly F/X L.L.C. v. Pyrotecnico F/X, L.L.C.*, 2022 WL 2343309, at *4 (W.D. Pa. June 29, 2022) quoting *Pineda v. Ford Motor Co.*, 520 F.3d 237, 248 (3d Cir. 2008). Because “the evidentiary requirement of reliability is lower than the merits standard of correctness,” the standard for determining scientific reliability “is not that high.” *Oddi*, 234 F.3d at 155-56, quoting *Paoli II*, 35 F.3d at 744-45.

Mr. Thom's methodology easily satisfies these benchmarks. Thom conducted multiple tests with a humanoid head form measuring linear acceleration⁵ and rotational acceleration. He explained:

“[W]hat we measure are the peak g or the peak linear acceleration of the head, the head form as influenced by either being bare and striking those surfaces with no helmet or being protected by the helmet, and that shows up in two different columns because there's two different ways we measure that.”

Transcript, at page 32.

The tests were done “with a direct, perpendicular impact” of the head form “into a section of railroad tie and a container of railroad bed ballast with and without the helmet on the head form.” ECF No. 114-1, page 4. The linear acceleration tests focused on the temple region of the helmet in order to evaluate the level of protection at the site of the impact (as described in the investigating officer's and the coroner's reports). *Id.* Thom conducted similar testing to measure the rotational acceleration.

Mr. Thom found that all the Injury Assessment Reference Values (IARVs) were dramatically lower in the tests with the helmet than those without the helmet. *Id.* Thom compared these values against the Head Injury Criterion (HIC), a measure of the likelihood of head injury arising from an impact. The results of the helmet impacts were substantially lower than the HIC value of 700 which is used as the pass/fail value in federal crash test standards. *Id.* And, conversely, the results of the non-helmeted impacts had values higher than 700. *Id.* Mr. Thom's testing used established methods to evaluate performance of the exemplar helmet and compared that to recognized national and international safety standards.

⁵ Mr. Thom described linear acceleration as meaning “how hard does the head form stop. How abruptly, how violently it is brought to a halt.”). Transcript, page 29.

Plaintiff attacks the reliability of Mr. Thom’s testing because it did not precisely replicate Dylan’s accident. Counsel argued that there were differences in the angle at which Dylan’s head struck the ground and at which Mr. Thom conducted his testing. Further, Plaintiff takes issue with Mr. Thom’s failure to visit the site of the accident and to articulate the specifics of the railroad ties or the ballast. But Plaintiff’s arguments are inapposite. An expert witness need not replicate the precise accident for his or her methods to be reliable. *See Lackey v. Robert Bosch Tool Corp.*, 2017 WL 129891, at *8 (E.D. Ky. Jan. 12, 2017) (permitting expert testimony even though expert did not recreate the exact accident). Mr. Thom conducted tests to demonstrate the injury-reducing or injury-preventing capability of a helmet in a worst-case accident scenario. Plaintiff’s counsel will have every opportunity to challenge Thom’s testing at trial.

Relevance/Fit

Finally, Mr. Thom’s testimony must be relevant and must “fit” the case. *Daubert*, 509 U.S. at 597. Relevant evidence is that which has “any tendency to make the existence of any fact that is of consequent to the determination of the action more probable or less probable that it would be without the evidence.” *Id.* citing F.R.E. 401. Put another way, Mr. Thom’s testimony must be “sufficiently tied to the facts of the case that it will aid the jury in resolving a factual dispute.” *Repa v. Napierkowski*, 2022 WL 1522360, at *3 (W.D. Pa. May 13, 2022) quoting *United States v. Downing*, 753 F.2d 1224, 1242 (3d Cir. 1985). The standard for determining relevance is a liberal one. *Hausknecht v. John Hancock Life Ins. Co. of New York*, 2022 WL 1664362, at *4 (E.D. Pa. May 25, 2022) citing *Daubert*, 509 U.S. at 587.

The parties have only slightly touched on this part of the *Paoli* test. Honda argues that the helmet testimony is at least relevant to the post-sale duty to warn claim in that Dylan did not

heed an existing warning. At this stage and because the standard for determining relevance is a liberal one, this Court agrees. However, relevance may be revisited throughout the trial.

ORDER

AND NOW, this 23rd day of August 2022;

IT IS HEREBY ORDERED that Plaintiff's motion to exclude testimony of David Thom [ECF No. 113] is denied.

/s/ Susan Paradise Baxter
SUSAN PARADISE BAXTER
United States District Judge