

# Toxic Tort Takedown: Court Demands Biologically Plausible Causation in Uniform Chemical Case

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## SUMMARY

The District Court for the Northern District of Illinois recently excluded plaintiffs' experts who failed to *specifically* identify the allegedly harmful chemical or allegedly harmful dose of that chemical. As a result, the court granted summary judgment for the defendants, Twin Hill Acquisition et. al., and dismissed class action claims brought on behalf of current and former American Airlines (AA) employees. *Zurbriggen v. Twin Hill Acquisition Co., Inc.*, No. 1:17-CV-5648, 2025 WL 1092973 (N.D. Ill. Apr. 11, 2025). The plaintiffs alleged that their AA uniforms—which were made by Twin Hill—contained harmful chemicals that caused a range of adverse health reactions such as rashes, hives, headaches, and throat swelling.

## THE RULING

The court's analysis focused on the need for reliable expert testimony.

### (1) The Necessity of Expert Testimony

Expert testimony is required to support claims based on exposure to harmful chemicals.<sup>[1]</sup> Cases that involve toxic substances often have a "special problem" of "proving the connection between a substance and development of a specific disease."<sup>[2]</sup> Notably, the mere existence of a temporal relationship between the exposure of a substance and the onset of symptoms is insufficient to establish a causal relationship.<sup>[3]</sup>

### (2) The Reliability of the Plaintiffs' Expert's Testimony

In toxic tort cases, expert testimony must pass a "step zero," which is to put forth a "biologically plausible theory" for how a plaintiff's negative reactions can be related to chemical exposure.<sup>[4]</sup>

Here, both of the plaintiffs' experts—a toxicologist and a textile chemistry expert—failed to identify the specific chemical that purportedly caused the plaintiffs' adverse reactions. Both experts included a general explanation for how *similar* substances *might* trigger symptoms. Both experts also failed to opine on the minimum harmful dosage of the chemicals. Instead, the plaintiffs' experts relied on an argument that "any exposure" to the chemicals was sufficient.

The court found their testimony insufficient for several reasons.

First, the experts did not identify a specific chemical that caused the plaintiffs' reactions, only that some of the chemicals present on some of their uniforms *could* cause potential reactions. Many of these chemicals are common in household products that could have been introduced to the uniforms after production, not during manufacturing or the result of defendant's actions. Plaintiffs' experts, therefore, failed to show the potentially irritant chemicals plaintiffs were exposed to were the result of any defect in Twin Hill's production process.

Second, the experts failed to opine on the type, duration, and intensity of exposure necessary to cause any harm, leaving a jury with no meaningful way to determine whether the plaintiffs' specific exposure could have actually triggered a harmful response.

Third, the argument that "any exposure" is sufficient to cause adverse reactions is only acceptable in the Seventh Circuit if an expert first proves that a chemical has "no safe level of exposure to known sensitive populations," which the experts also failed to do here.<sup>[5]</sup>

Like many other toxic tort plaintiff experts, the experts here attempted to use the Bradford Hill criteria to establish causation. The court rejected their application of the criteria due to multiple methodological flaws.

The Bradford Hill criteria is a well-established methodology for showing that correlation between two variables is representative of a causal relationship. To apply this methodology, an expert must show a statistically significant association between two variables, then analyze that association based on nine criteria such as strength of association, consistency, and temporality.

Here, the plaintiffs' experts failed to even show a statistical association between exposure to the defendant's uniforms and the plaintiffs' adverse reactions. The experts relied on reports of complaints from AA employees to show the rate of symptoms, but this was insufficient. Reports of complaints, the court explained, are not a reliable indicator of the rate of symptoms as the rate of complaints could increase due to independent factors, such as union messaging to employees, while the rate of symptoms remains the same. The experts also declined to specify the weight assigned to each of the Bradford Hill factors in their analysis or sufficiently show that each had been met, both of which are requirements of using the methodology.

Finally, the experts also failed to address plausible alternative explanations for the plaintiffs' symptoms—alternative explanations, the court emphasized, that had a substantial basis in the evidentiary record. This, the court noted, is another independent reason the plaintiffs' experts' testimony was unreliable and inadmissible.

Without expert testimony, the plaintiffs' claims failed. For instance, the evidence showed that there were differences in the composition of the defendant's uniforms, and no single set of chemicals classified as sensitizers or irritants were present in a majority of the uniforms plaintiffs were exposed to. The plaintiffs' experts not only conceded that point but also agreed that the variability made it "impossible to trace" the chemical composition of a single uniform. For these reasons, the court held that no reasonable jury could conclude the plaintiffs were harmed by defects in the defendant's uniforms even if the plaintiffs' experts' testimony were admitted and accepted on its face.

## KEY TAKEAWAYS

- In the Seventh Circuit, toxic tort experts must identify a plausible biological theory of causation, identify a toxic dose, and address plausible alternative explanations.
- Relying on temporality is insufficient to establish causation without additional scientific support.
- The volume of consumer complaints is an insufficient basis to show a statistically significant association in the application of the Bradford Hill criteria.

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[1] *Crawford v. Davis*, 597 F. Supp. 3d 1243, 1245 (S.D. Ill. 2022).

[2] Restatement (Third) of Torts: Phys. & Emot. Harm § 28, cmt. c(1) (2010).

[3] *Ervin v. Johnson & Johnson, Inc.*, 492 F.3d 901, 904–05 (7th Cir. 2007); see also *Shafer v. Kal Kan Foods, Inc.*, 417 F.3d 663, 664 (7th Cir. 2005) (“Post hoc ergo propter hoc is not a good way to establish causation.”).

[4] *Wintz by & Through Wintz v. Northrop Corp.*, 110 F.3d 508, 513 (7th Cir. 1997).

[5] See *Donaldson v. Cent. Ill. Pub. Serv. Co.*, 767 N.E.2d 314, 334 (Ill. 2002).

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