

William & Mary Environmental Law and Policy Review

Volume 18 (1993-1994)
Issue 2 *William and Mary Journal of
Environmental Law*

Article 3

April 1994

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Bill Charles Wells, *The Grin Without the Cat: Claims for Damages from Toxic Exposure Without Present Injury*, 18 Wm. & Mary Envtl. L. & Pol'y Rev. 285 (1994), <https://scholarship.law.wm.edu/wmelpr/vol18/iss2/3>

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THE GRIN WITHOUT THE CAT: CLAIMS FOR DAMAGES FROM TOXIC EXPOSURE WITHOUT PRESENT INJURY

BILL CHARLES WELLS*

In the past several years, toxic tort litigation has involved plaintiffs attempting to gain damages in cases where neither impact nor present injury can be shown.¹ Non-injury damage claims may be for medical monitoring,² increased or enhanced risk of disease, or emotional distress.³ Claims for emotional distress include claims for psychological injury from the awareness of exposure and the alleged increased risk of the disease.

These damage theories are tied together by the plaintiff's failure to show a current physical injury caused by exposure to the chemical or chemicals in question.⁴ Proving that a particular injury is caused by exposure to a small dose of any particular chemical is difficult; proving that a specific level of exposure will cause future injury is even more

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1. D. Alan Rudlin & Linsey W. Stravitz, *Novel Toxic Tort and Superfund Claims*, in ENVIRONMENTAL AND TOXIC TORT CLAIMS: INSURANCE COVERAGE IN 1991 AND BEYOND 163, 175 (Prac. L. Inst. 1991).

2. The terms "medical surveillance," "diagnostic testing," "preventive monitoring" and "medical monitoring" are used interchangeably by the courts and commentators. All of these terms represent the general process through which medical testing protocols are funded for the alleged or potential victims of exposure to toxic substances. See Allan T. Slagel, *Medical Surveillance Damages: A Solution to the Inadequate Compensation of Toxic Tort Victims*, 63 IND. L.J. 849, 850 n.8 (1988). This Article will utilize the term medical monitoring.

3. This Article will consider emotional distress as an element of damages in negligence or strict liability, or as in some jurisdictions, the independent tort of negligent infliction of emotional distress. The intentional infliction of emotional distress raises different issues (mostly related to fraud) that are beyond the scope of this Article.

Some courts draw a distinction between claims based solely on a simple fear of developing a disease, which do not require expert testimony to support the claim, and claims in which the plaintiff's distress amounts to a phobia, which do require that the claim be supported by expert testimony. See, e.g., *Eagle-Picher Indus., Inc. v. Cox*, 481 So. 2d 517, 526 (Fla. Dist. Ct. App. 1985); *Devlin v. Johns-Manville Corp.*, 495 A.2d 495, 499 (N.J. Super. 1985).

4. Rudlin & Stravitz, *supra* note 1.

difficult.⁵ These claims for "non impact damages" attempt to avoid the necessity of proving causation by doing away with the need to prove injury.⁶ With apologies to Lewis Carroll, this approach presents the question of whether there can be the grin, without the bother and inconvenience of the cat.⁷ This Article will survey the general area of claims for common law tort damages without present injury due to toxic exposure as developed in the various states.⁸ The Article will then discuss the ability to claim medical monitoring under the Resource Conservation and Recovery Act ("RCRA")⁹ and the Comprehensive Environmental Response Compensation and Liability Act ("CERCLA").¹⁰ The Article will also consider the effect of the Federal Tort Claims Act and its limited

5. See David Rosenberg, *The Causal Connection in Mass Exposure Cases: A "Public Law" Vision of the Tort System*, 97 HARV. L. REV. 851, 851 n.2 (1984); *Cottle v. Superior Court*, 5 Cal. Rptr. 2d 882, 895 (Cal. Ct. App. 1992) (Johnson, J., dissenting); see also 1 AMERICAN LAW INST., ENTERPRISE RESPONSIBILITY FOR PERSONAL INJURY 321 (1991), in which the authors question the comparatively small number of toxic tort actions and conclude that the fact that "environmental tort cases are difficult to win" results in fewer cases being brought.

6. See Rudlin & Stravitz, *supra* note 1, at 186; see also Jay Zinns, Comment, *Close Encounters of the Toxic Kind--Toward an Amelioration of Substantive and Procedural Barriers for Latent Toxic Injury Plaintiffs*, 54 TEMP. L.Q. 822, 853 (1981) (concluding that only governmental entities can afford to prove proximate cause in toxic tort cases because of the expense of such proof).

7. See LEWIS CARROLL, ALICE'S ADVENTURES IN WONDERLAND AND THROUGH THE LOOKING-GLASS 56 (E.P. Dutton & Co. 1970) (1865) ("Well! I've often seen a cat without a grin," thought Alice, 'but a grin without a cat! It's the most curious thing I ever saw in all my life!").

8. See *infra* parts II. through IV.

9. Pub. L. No. 94-580, 90 Stat. 2796 (1976) (codified as amended at 42 U.S.C. §§ 6901-6992K (1988 & Supp. IV 1992)).

10. Pub. L. No. 96-510, 94 Stat. 2767 (1980) (codified as amended at 42 U.S.C. §§ 9601-9675 (1988 & Supp. IV 1992)). See *infra* part V. This Article will not discuss in detail the option of claiming medical monitoring under the various state law analogues to CERCLA or pursuing medical monitoring in the occupational setting (independent of tort liability). For an example of such a state statute, see Hazardous Sites Cleanup Act ("HCSA"), 35 PA. CONS. STAT. ANN. §§ 6020.101-6020.1305 (1993). In representing either a plaintiff or defendant in a medical monitoring action, however, the state "Superfund" law must be considered. For example, in Pennsylvania, a court has held that the HSCA does provide for recovery of both medical and legal costs. *Manella v. Sequa Corp.*, Pa. Ct. C.P., Bucks County, No. 89-1069-21-2, Oct. 20, 1992, 7 Toxics L. Rep. (BNA) No. 24, at 715 (Nov. 11, 1992).

waiver of sovereign immunity¹¹ on the viability of these claims when asserted in a suit against the United States.¹²

I. BACKGROUND ON TOXIC TORTS AND ALTERNATIVE DAMAGE THEORIES

A. *Toxic Torts in General*

Before addressing the area of damages in toxic tort litigation, one must first address the threshold issue of what a "toxic tort" is. A toxic tort is a tort claim that results from the exposure of the plaintiff to toxic (chemical or radioactive) substances because of the defendant's actions.¹³ The claim is usually based on a negligence theory, but on occasion plaintiffs have asserted claims under a strict liability theory or under a specific state statute.¹⁴ Negligence as a cause of action traditionally has four parts: duty, breach of duty, proximate cause, and injury.¹⁵ To the extent that claims for damages without proof of present injury are recognized, the elements of the cause of action are reduced to two. Without a requirement to prove injury, no requirement exists to show that toxic exposure is the proximate cause of the injury. The duty element is easily satisfied if one assumes that people have a duty not to expose others to hazardous chemicals. Thus, the plaintiff only needs to show a breach of that duty through proof of exposure to toxic substances and proof of damages. Damages may include the amount of money needed to compensate the plaintiff for future medical expenses, increased risk of future health problems, and fear of developing disease in the future.¹⁶

11. 28 U.S.C. § 1346(b) (1988).

12. *See infra* part VI.

13. *See* Steve Gold, *Causation in Toxic Torts: Burdens of Proof, Standards of Persuasion, and Statistical Evidence*, 96 YALE L.J. 376, 376 n.1 (1986). For information on torts in general, *see* W. PAGE KEETON ET AL., PROSSER & KEETON ON THE LAW OF TORTS (5th ed. 1984).

14. Claims other than negligence are beyond the Federal Tort Claims Act's limited waiver of sovereign immunity. 28 U.S.C. § 1346(b). *See infra* part VI; *see generally* LESTER JAYSON, HANDLING FEDERAL TORT CLAIMS §§ 211.01, 225 (1977).

15. *See* WILLIAM L. PROSSER, THE LAW OF TORTS 143 (4th ed. 1971); RESTATEMENT (SECOND) OF TORTS § 281 (1991).

16. *See* Ayers v. Township of Jackson, 525 A.2d 287 (N.J. 1987); Albert H. Parnell et al., *Medical Monitoring: A Dangerous Trend*, FOR THE DEFENSE, April 1992, at 6.

The plaintiff must also show that the chemical in question has the potential to cause future injury, which is much easier than showing that it has caused or will cause an injury.

B. *Special Characteristics of Toxic Torts*

Toxic tort claims arise from a wide variety of factual situations and under differing legal theories,¹⁷ but these claims have several distinguishing characteristics that set them apart from other tort litigation.¹⁸ These characteristics are important not only to academics but also to practitioners because they suggest and support additional theories of liability and defense. These characteristics also affect the way litigation is managed by both court and counsel.¹⁹

The first characteristic of a toxic tort is that it involves injuries that allegedly stem from exposure to harmful substances.²⁰ In acute exposure cases, for example, the catastrophe that occurred at the Union Carbide plant in Bhopal, India,²¹ the factual issues presented are not greatly different from those of a bus or airplane accident. Acute exposure cases usually involve questions about who was at fault for the accident, and are less concerned with establishing that harmful effects resulted from the incident. In the case of chronic exposure to a toxic substance that results in latent injury,²² however, two questions are important: Who was

17. For example, toxic torts may involve exposure through air, water or soil contamination. These torts may involve chemicals or radioactive substances, and may be founded in either negligence or strict liability, or some combination of both. See generally Allan Kanner, *Emerging Conceptions of Latent Personal Injuries in Toxic Tort Litigation*, 18 RUTGERS L.J. 343 (1987).

18. MICHAEL DORE, *THE LAW OF TOXIC TORTS* § 2.02 (1992).

19. *Id.*

20. Wendell B. Alcorn, Jr., *Liability Theories for Toxic Torts*, 3 NAT. RESOURCES & ENV'T 3, 3 (1988).

21. See *In re Union Carbide*, 809 F.2d 195 (2d Cir. 1986).

22. The latency period is the interval of time between a person's exposure to the toxic substance responsible for the manifestation of a disease, and the appearance of the first signs of the disease by definitive symptoms or actual detection. See F. HOMBURGER ET AL., *A GUIDE TO GENERAL TOXICOLOGY* 203 (1983).

responsible for the exposure? And, could the toxic substance involved in a particular incident have caused the injuries claimed?²³

The second characteristic of toxic torts is that most cases involve the exposure of large numbers of people to similar amounts of a chemical.²⁴ This characteristic is important in an administrative and practical sense because it affects the way lawsuits are litigated. Practitioners may decide to pursue a class action suit²⁵ or a consolidated action²⁶ based upon the perceived benefits of either form of action in particular factual circumstances.²⁷ The huge amounts of money at stake may encourage the parties to settle when multiple plaintiffs are involved.²⁸ In such cases, adverse rulings can bankrupt companies, drive products from the market,²⁹ and destroy entire industries;³⁰ defendants become eager to settle. In addition, defendants are more inclined to settle because of their fear that litigation will keep new products from the market, discourage research and development, and damage the competitive position of American companies.³¹

A third characteristic of toxic tort litigation is that the full consequences of the exposure may not be immediately apparent. Many of the diseases in question have long latency periods, creating problems in determining causation.³² Another complication associated with long latency periods is that the connection between exposure and illness in any given individual may not be linear. For example, a direct dose/response

23. See, e.g., *Renaud v. Martin Marietta Corp.*, 749 F. Supp. 1545 (D. Colo. 1990), *aff'd*, 972 F.2d 304 (10th Cir. 1992).

24. Exceptions exist. See, e.g., *Hagerty v. L & L Marine Servs.*, 788 F.2d 315 (5th Cir. 1986) (involving both a single individual and a single large scale exposure). In *Hagerty*, a tankerman was "drenched" in a hazardous substance when a valve on his employer's barge malfunctioned. *Id.* at 317.

25. FED. R. CIV. P. 23.

26. FED. R. CIV. P. 42(a).

27. See *Allen v. United States*, 588 F. Supp. 247 (D. Utah 1984); 1 AMERICAN LAW INST., *supra* note 5, at 324.

28. *In re Fernald Litig.*, No. C-1-85-149, 1989 WL 267039 (S.D. Ohio June 30, 1989).

29. PETER W. HUBER, *GALILEO'S REVENGE: JUNK SCIENCE IN THE COURTROOM* 128 (1991).

30. See generally PAUL BRODEUR, *OUTRAGEOUS MISCONDUCT: THE ASBESTOS INDUSTRY ON TRIAL* (1985).

31. See Arnold W. Reitze, Jr., *A Century of Air Pollution Control Law: What's Worked; What's Failed; What Might Work*, 21 ENVTL. L. 1549, n.104 (1991).

32. Kanner, *supra* note 17, at 347.

relationship may not be determinable, and there may be a threshold level of exposure below which no harm can be shown. In addition, the passage of time allows both for loss of evidence and intervening causes.³³ The passage of time between the exposure and the onset of symptoms may also lead to problems in identifying the source of the substance, even though its nature may be known. For example, a plaintiff may know that her mother took DES, but may not be able to determine who made the DES or who sold it.³⁴

A fourth characteristic of the average toxic tort suit is that the evidence used to support claims of harm, and to show causation when required, may not be generally accepted by the mainstream scientific community. This evidentiary difficulty is driven by a combination of the amount of money involved and the difficulty in determining the mechanism of injury or the source of the substances.³⁵

The fifth characteristic relates to the unpredictability of the outcome and the amount of money involved in toxic tort litigation.³⁶ Often the plaintiff's injuries are so serious or the plaintiff is so sympathetic (or conversely, the defendant is so unsympathetic) that traditional tort defenses such as contributory negligence, statute of limitations, and requirement of actual injury, are evaluated critically by the court. For example, in

33. See Troyen A. Brennan, *Causal Chains and Statistical Links: The Role of Scientific Uncertainty in Hazardous Substance Litigation*, 73 CORNELL L. REV. 469 (1988).

34. ROBERT MEYERS, D.E.S. THE BITTER PILL 217 (1983). DES is short for Diethylstilbestrol, or diethyl stilbestrol, a synthetic estrogen which duplicates the actions of natural estrogens. DES is used for estrogen replacement therapy, but was formerly used to prevent miscarriage in pregnancy. DES is no longer used for the prevention of miscarriages due to the possibility that its use caused cancer in the reproductive organs of children whose mothers took DES. NEW AMERICAN POCKET MEDICAL DICTIONARY (1978).

35. HUBER, *supra* note 29, at 192; see Clifford J. Zatz, *Defenses on the Frontiers of Science*, 19 LITIG. 1, 13 (Fall 1992); see also *Daubert v. Merrell Dow Pharmaceuticals Inc.*, 951 F.2d 1128 (9th Cir. 1991), *vacated*, 113 S. Ct. 2786 (1993) (holding that general acceptance is not a necessary precondition to admissibility of scientific evidence and that the trial judge must insure that the expert's testimony rests on a reliable foundation).

36. HUBER, *supra* note 29, at 118 ("Smarter plaintiff's lawyers don't want a trial; a trial, after all, carries with it the risk of losing everything if the theories of a William McBride or an Alan Done [plaintiff's experts of whom Huber was very critical in his book] don't quite persuade. But defendants don't want any part of a huge trial either, partly because legal fees in this kind of litigation are astronomical, partly because there's always some risk, no matter how solid your scientific case may be, that you will still lose.").

Anderson v. W.R. Grace & Co.,³⁷ the court broadly interpreted the wrongful death statute to avoid the statute of limitations.³⁸ Similarly, in *Brafford v. Susquehanna Corp.*,³⁹ the court held that "subcellular injury"⁴⁰ met the physical injury requirement for the increased risk of future disease.⁴¹

The sixth characteristic is that all toxic torts are administrative in nature. The size, nature, and complexity of toxic tort actions can cause administrative and procedural problems for the court system dealing with the litigation.

Finally, toxic torts often lead to insurance coverage disputes. These disputes arise because of the difficulty in determining when or by what mechanism the injury occurred. These disputes are also fueled by arguments about which insurance carrier should defend and pay the claim, issues that surface because of the practice of large industrial concerns of purchasing their insurance coverage on a competitive bid basis and frequently changing insurers.⁴²

The possibility of disputes about insurance coverage is particularly troublesome because of the danger of defendants filing bankruptcy or otherwise becoming judgment-proof.⁴³ For example, a plaintiff seeking punitive damages may need to show that certain acts were intentional. Damages resulting from intentional acts are excluded from coverage under nearly all insurance policies.⁴⁴ Many insurance policies also exclude

37. 628 F. Supp. 1219 (D. Mass. 1986).

38. *Id.* at 1223-24. The court did not allow the plaintiffs to recover for the mental distress they suffered in watching their children's illness, nor for their own minimally enhanced future risk of disease. The court did allow recovery for the possibility that existing diseases would increase in severity. *Id.* at 1228-32.

39. 586 F. Supp. 14 (D. Colo. 1984).

40. "Subcellular injury" resulted when exposure to radiation from mine waste used as fill caused injury at the level of internal cell structure, without any other indicia that injury had occurred. *Id.* at 17.

41. *Id.*

42. Eugene R. Anderson et al., *Procedural, Practical and Strategic Issues in Insurance Coverage Disputes Stemming From Mass Tort Actions*, in *INSURANCE, EXCESS AND REINSURANCE COVERAGE DISPUTES 1992*, at 17-26 (PLI Litig. & Admin. Practice Course Handbook Series No. 427, 1992).

43. See generally RICHARD B. SOBOL, *BENDING THE LAW: THE STORY OF THE DALKON SHIELD BANKRUPTCY* (1991).

44. Scot C. Stirling, *Reasonable Expectations of Insurance Coverage and the Problem of Environmental Liabilities*, 22 ARIZ. ST. L.J. 395, 459-62 (1990); see also *Transamerica Inc. Group v. Meere*, 694 P.2d 181, 186 (Ariz. 1984).

punitive damages from their coverage.⁴⁵ In proving whether the actions involved were intentional or merely negligent, the plaintiff and the defendant may be bound by a court's finding that the acts occurred.⁴⁶ If the defendant's financial strength is questionable, however, the plaintiff will need to stress negligent acts to avoid the hollow victory of a judgment for which no source of payment exists.⁴⁷ In some states the law forbids insurance coverage of punitive damages on grounds of public policy.⁴⁸

A finding that the acts occurred may result in additional exposure to liability, such as corporate or individual exposure to civil fines or criminal liability.⁴⁹ The same showing of willful and intentional action that avoids the insurance coverage may also support personal civil or criminal liability for a corporate officer under the environmental laws.⁵⁰

C. *Toxic Tort Damages and Alternative Damage Theories*

Toxic tort damages include traditional tort damages, such as lost wages, past and future medical expenses, and emotional distress, including pain and suffering.⁵¹ Other elements of damages are also available in

45. Grace M. Giesel, *The Knowledge of Insurers and the Posture of the Parties in the Determination of the Insurability of Punitive Damages*, 39 KAN. L. REV. 355, 388 (1991).

46. See CHARLES ALAN WRIGHT, *THE LAW OF FEDERAL COURTS* 688 (4th ed. 1983); RESTATEMENT (SECOND) OF JUDGMENTS § 28 (1982).

47. See SOBOL, *supra* note 43, at 67.

48. This prohibition may be by statute as in North Dakota, N.D. CENT. CODE § 32-03-07 (1989), or Ohio, OHIO REV. CODE ANN. § 3937.182 (Baldwin 1982). Case law may also establish such a prohibition as in Florida and many other states. See *Nicholson v. American Fire and Casualty Ins. Co.*, 177 So. 2d 52 (Fla. Dist. Ct. App. 1965). For a complete listing of the various state rules on the insurability of punitive damages, see chapter 5 of RICHARD L. BLATT ET AL., *PUNITIVE DAMAGES, A STATE BY STATE GUIDE TO LAW AND PRACTICE* (1991).

The rationale for such prohibitions is that allowing insurance against punitive damages may lessen the deterrent effect of such awards. See *Northwestern Nat'l Casualty Co. v. McNulty*, 307 F.2d 432, 436 (5th Cir. 1962).

49. DORE, *supra* note 18, at § 2.02; see also Arnold W. Reitze, *supra* note 31, at 1569 (in the area of "buying off" claimants for equitable relief, this exposure was referred to as "the extortion value of equitable relief," and that value is even greater when the facts which might be revealed carry with them the possibility of senior executives facing criminal sanctions and jail).

50. See *Federal Indictment Hits Company Officials with Criminal Charges, \$15.2 Million in Fines*, 23 Env't Rep. (BNA) 1373 (Sept. 11, 1992) (discussing a case in which toxic tort defendants also faced a criminal indictment).

51. DORE, *supra* note 18, at § 2.02.

toxic tort cases.⁵² These various alternative measures of damages--medical monitoring, enhanced risk of future disease, and emotional distress--have developed in response to the difficulty of showing injury and causation in the case of exposure to chemicals in less than acutely toxic amounts. Although the theories differ in how they attempt to quantify and compensate for these alleged injuries, these measures also have many characteristics in common.

An action for medical monitoring seeks to recover only the cost of periodic medical examinations needed to detect the onset of physical injury from chemical exposure. The aim of medical monitoring is to compensate the plaintiff for the cost of any special medical procedures that may lead to early detection of the diseases in question.⁵³ The cause of action for medical monitoring assumes that earlier detection will lead to earlier diagnosis and an improved chance of successful treatment.⁵⁴

By comparison, a claim for enhanced risk of disease seeks payment for the anticipated harm itself, perhaps discounted by the possibility that the injury may never occur. For example, a \$10,000 injury with a ten percent possibility of occurring would be "worth" \$1,000.⁵⁵ With medical monitoring, the question is whether the plaintiff needs medical tests to protect his health due to exposure to the defendant's toxic substance. In a claim for enhanced risk, the question becomes whether the plaintiff has an increased chance of developing disease because of his exposure to the defendant's toxic substance.⁵⁶ Damages for emotional distress, in cases in which no symptoms of the toxin-related disease presently exist, are based on the assumption that once the plaintiff knows he has been exposed or may have been exposed to a toxic substance, he will worry about future health effects that may result from the exposure.

52. These damage theories are rare in traditional tort litigation. Some commentators have suggested that this rarity is undesirable, and that if one can recover for the fear of a cancer one may never get, one should be able to recover for the fear of having to share the highway with a driver that you believe to be reckless. See, e.g., William H. Armstrong, *Tort Damages for Injuries Not Yet Suffered*, 3 NAT. RESOURCES & ENV'T 26, 53 (1988).

53. See *In re Paoli R.R. Yard PCB Litig.*, 916 F.2d 829, 852 (3d Cir. 1990) *cert. denied sub nom.* General Elec. Co. v. Knight, 499 U.S. 961 (1991); Slagel, *supra* note 2.

54. See *In re Paoli R.R. Yard*, 916 F.2d at 849-52; Slagel, *supra* note 2, at 867.

55. *In re Paoli R.R. Yard*, 916 F.2d at 850.

56. *Id.*

II. ALTERNATIVE THEORY ONE: MEDICAL MONITORING DAMAGES

Medical monitoring is the process of conducting a test or series of tests to follow changes in a patient's condition.⁵⁷ In tort law, medical monitoring damages include payment for the testing required to detect latent diseases and protect the plaintiff from additional harm.⁵⁸ The theory of medical monitoring developed in response to the perceived inability of traditional tort law to address the problem of potential injury due to exposure to hazardous substances. In normal tort litigation, one must show injury before claiming to have suffered a legal harm. In some cases such as DES or genetic injury cases, however, generations may pass between exposure to a hazardous substance and eventual injury.⁵⁹

Medical monitoring claims may be either an element of legal damages, an independent tort, or equitable relief. These differing forms of the claim exist because medical monitoring developed from several different theoretical roots. Although the states have differing requirements for the award of medical monitoring damages, one fact sets medical monitoring apart from any other claim in toxic substances personal injury litigation: No requirement exists to show present injury. This lack of a present injury requirement settles the causation issue and makes the plaintiff's burden of proof easier to meet.

In essence, the cause of action for medical monitoring requires a showing that (1) the plaintiff was exposed to hazardous substances; (2) the defendant was more likely than not the source of the hazardous substances; and (3) some form of expanded medical testing and follow-up is needed.⁶⁰ The trade-off for the reduced evidentiary burden is that recovery under a medical monitoring theory is limited to the expected cost of this testing.⁶¹

In jurisdictions that have rejected medical monitoring as both an independent tort and a separate remedy, the courts have viewed medical

57. Myrton F. Beeller & Robert Sappenfield, *Medical Monitoring, What it is, How Can it Be Improved?*, 87 AM. J. OF CLINICAL PATHOLOGY 285 (1987).

58. *Id.*

59. *See, e.g.*, *Richardson v. Richardson-Merrell, Inc.*, 857 F.2d 823 (D.C. Cir. 1988), *cert. denied*, 493 U.S. 882 (1989) (plaintiff's birth defects caused by ingestion of Benedectin by mother); *Mink v. University of Chicago*, 460 F. Supp. 713 (N.D. Ill. 1978) (plaintiff's increased risk of cancer caused by ingestion of DES by mother).

60. *See Askey v. Occidental Chem. Corp.*, 477 N.Y.S.2d 242, 247 (N.Y. App. Div. 1984).

61. DORE, *supra* note 18, at § 7.05[1].

monitoring as a form of future medical expenses.⁶² In these jurisdictions the plaintiff must meet all the traditional requirements for recovery in tort, including causation. The plaintiff must also prove that the monitoring requested is medically necessary and required due to his exposure to the hazardous substances released by the defendant.⁶³

A. *Early Development of the Medical Monitoring Concept*

The modern development of medical monitoring is an example of the law of unintended consequences. Academics and practitioners agree that the origins of modern medical monitoring theory and litigation are traceable to *Friends for All Children, Inc. v. Lockheed Aircraft Corp.*⁶⁴ and *Ayers v. Township of Jackson*.⁶⁵

Friends for All Children was not a toxic tort case. Instead, the case involved the crash of a Lockheed C5A military transport aircraft.⁶⁶ The plaintiffs alleged that the children who survived the crash were at risk for a neurological disorder generically known as Minimal Brain Dysfunction ("MBD"). This risk was a result of the explosive decompression and

62. *Ball v. Joy Technologies, Inc.*, 958 F.2d 36, 39 (4th Cir. 1991), *cert. denied*, 112 S. Ct. 876 (1991) (stating that a "claim for medical surveillance costs is simply a claim for future damages. Plaintiff correctly points out that the law of West Virginia allows the recovery of the reasonable value of future medical expenses necessitated by the defendant's wrong."); *see also* *Potter v. Firestone Tire & Rubber Co.*, 863 P.2d 795 (Cal. 1993) (allowing medical monitoring claim when the need for monitoring is a reasonably certain result of exposure and the monitoring itself is reasonable); *Morrissy v. Eli Lilly & Co.*, 394 N.E.2d 1369, 1376 (Ill. App. Ct. 1979) (denying class certification because necessity for medical monitoring for one exposed individual did not imply necessity for medical monitoring of similarly, but not identically exposed individuals).

63. *Ball*, 958 F.2d at 39.

64. 746 F.2d 816 (D.C. Cir. 1984).

65. 525 A.2d 287 (N.J. 1987). *Ayers* was the first case to apply medical monitoring in a toxic tort case.

66. *Friends for All Children*, 746 F.2d at 819. The C5A was being used to evacuate Vietnamese orphans from Saigon during "Operation Babylift" in the closing days of the Vietnam war. The airplane crashed due to the failure of the locking mechanism that kept the doors and cargo ramp closed. Most of the passengers were killed, but at least 149 survived and were brought to the United States by a second airplane. *Id.*

hypoxia the children suffered during the air crash.⁶⁷ After several years of litigation involving numerous appeals and remands, the plaintiffs moved for partial summary judgment on Lockheed's liability for diagnostic examinations and medical treatment⁶⁸ and asked for "preliminary relief ordering Lockheed to pay for such examinations and treatment *pendente lite*."⁶⁹

The district court granted the plaintiffs' motion for summary judgment on the issue of diagnostic testing, but not on the issue of medical treatment.⁷⁰ The court did not enter judgment as to the exact amount of Lockheed's liability to the individual plaintiffs,⁷¹ but did order Lockheed to create a fund to cover the costs of the diagnostic examinations.⁷² The court refused to grant summary judgment on the issue of medical treatment because Lockheed continued to dispute the fact that the plaintiffs were suffering from MBD and that the crash had caused the MBD.⁷³

The appellate court affirmed on narrow grounds. In upholding the order for the injunction, the court emphasized that this remedy was extraordinary, and that the inherent equitable powers of the court gave the district court the authority to order this interim relief.⁷⁴ The court justified the remedy by the fact that Lockheed had stipulated to liability.⁷⁵ The panel stressed the narrowness of its holding:

We hold only that a preliminary injunction requiring the defendant to create a fund to pay for diagnostic exams is proper when the defendant has been held liable for the costs

67. Explosive decompression occurs when the structure of an airplane is punctured or otherwise fails, and pressure is suddenly released. The higher pressure in the aircraft is released and rushes out. The effect is similar to popping the top on a can of soda that has been shaken, except that the substance under pressure is air and not soda. Hypoxia is a diminished amount of oxygen in the blood. NEW AMERICAN POCKET MEDICAL DICTIONARY (1978).

68. *Friends for All Children*, 746 F.2d at 820.

69. *Id.* As grounds for the *pendente lite* relief, the plaintiffs alleged and offered evidence that the children would not benefit from any therapy that might be suggested after testing unless the testing was accomplished before the children reached adolescence. *Id.* at 825.

70. *Id.* at 822.

71. *Id.*

72. *Id.*

73. *Id.*

74. *Id.* at 822-23.

75. *Id.* at 822.

of such examinations and when the delay inherent in trying the case to compute the amount of the defendant's liability will result in irreparable injury. Moreover, under our holding, plaintiffs must show that they meet traditional standards governing the award of equitable relief, and the District Court must seek to minimize the prospect that a plaintiff will receive any funds that a trier of fact will subsequently fail to award.⁷⁶

*Ayers v. Township of Jackson*⁷⁷ was the first case in which a court awarded medical monitoring damages in the toxic tort context. Factually, *Ayers* was a toxic tort action in which the township, through its improper operation of a landfill, contaminated the groundwater consumed by the plaintiffs.⁷⁸ When the township discovered the contamination, it informed the plaintiffs and provided an alternative water source.⁷⁹ The plaintiffs sued seeking damages for their increased risk of disease due to the contaminants in the water and for medical monitoring expenses.⁸⁰ The trial court found that New Jersey law did not allow the action for increased risk of disease and granted summary judgment for the township on that issue.⁸¹ The jury returned a verdict in favor of the plaintiffs on the issue of medical monitoring damages, and the court awarded a lump sum payment.⁸² The appellate division reversed on the grounds that damages for medical monitoring were too speculative.⁸³

The New Jersey Supreme Court reinstated the award for medical monitoring expenses.⁸⁴ Relying on *Friends for All Children*⁸⁵ and

76. *Id.* at 831.

77. 525 A.2d 287 (N.J. 1987).

78. *Id.* at 293.

79. *Id.* For over two years the plaintiffs were forced to make do with a primitive temporary water system that involved having 40 gallon barrels of water dropped off at the road side, which the residents then carried into their homes. Although not relevant to the issue of medical monitoring, this fact did support an award for their inconvenience, notwithstanding a statutory bar of "pain and suffering" damages against municipalities under the New Jersey Tort Claims Act. *Id.* at 294.

80. *Id.* at 291.

81. *Id.* The enhanced risk claims will be discussed *infra* part IV.

82. *Ayers*, 525 A.2d at 297.

83. *Id.*

84. *Id.* at 312, 315.

85. See *supra* notes 66-76 and accompanying text.

Reserve Mining Co. v. EPA,⁸⁶ the court awarded medical monitoring expenses for the increased risk alone, but did not award substantive damages for that same increased risk.⁸⁷ The court set forth factors to consider in determining the reasonableness of medical expense: "[t]he likelihood of disease ..., the significance and extent of the exposure to chemicals, the toxicity of the chemicals, the seriousness of the diseases for which individuals are at risk and the value of early diagnosis."⁸⁸ The court specified that the plaintiffs must show these factors with "reliable expert testimony."⁸⁹ The court added:

Even if the likelihood that these plaintiffs would contract cancer were only slightly higher than the national average, medical intervention may be completely appropriate in view of the attendant circumstances. A physician treating a Legler-area child who drank contaminated well water for several years could hardly be faulted for concluding that child should be examined annually to assure early detection of symptoms of disease.⁹⁰

The New Jersey Supreme Court also addressed the issue of the form of payment of the medical monitoring expenses.⁹¹ Even though the court affirmed the trial court's award of a lump sum payment, the court emphasized that in future cases it would prefer the use of a court-supervised fund mechanism as the remedy.⁹² Administrative convenience

86. 514 F.2d 492 (8th Cir. 1975). *Reserve Mining* was a regulatory case in which the court upheld an injunction despite the fact that "[i]n assessing probabilities in this case, it cannot be said that the probability of harm is more likely than not." *Ayers*, 525 A.2d at 312 (quoting *Reserve Mining*, 514 F.2d at 520).

87. *Ayers*, 525 A.2d at 312.

88. *Id.*

89. *Id.* What constitutes "reliable expert testimony" is the subject of its own massive debate. See generally HUBER, *supra* note 29 (discussing the use of fringe science and pseudoscience by lawyers).

90. *Ayers*, 525 A.2d at 312.

91. *Id.*

92. *Id.* at 314-15. *Ayers* was concerned with a claim against a municipality under the New Jersey Tort Claims Act. Although the court said that the use of the fund mechanism to pay medical monitoring claims was particularly well-suited to claims under the New Jersey Tort Claims Act, the court did not say "only under the [New Jersey] Tort Claims Act." *Id.*

and judicial economy influenced the court's decision to uphold the lump sum payment in this particular case.⁹³ In stating its preference for a court-supervised fund, the court concluded that a trial court's authority to order such a fund derived from the court's equitable powers.⁹⁴ The court quoted with approval Judge Weinstien's opinion from *In re Agent Orange Prod. Liab. Litig.*:⁹⁵

[S]ince "implementation of any distribution plan based on traditional tort principles is impossible because of a virtual absence of proof on causation," it was appropriate to consider "alternate methods of distributing [the] settlement fund [that] may be premised on a rationale similar to the *cy pres* doctrine of testamentary interpretation."⁹⁶

The apparent inconsistency in the court's decision was created by the court leaving the lump sum award intact while emphasizing the equitable nature of the award. This inconsistency is justified by the court's concern that disturbing the award would only cause administrative inconvenience and would not result in any appreciable benefit in this particular case.⁹⁷ Thus, the court announced that the rule requiring a court-supervised fund would apply prospectively.⁹⁸ The *Ayers* decision and its remedy suggest that either medical monitoring costs were once legal damages but are now available only as equitable remedies, or that these costs may be legal or equitable remedies depending on the circumstances.⁹⁹

93. *Id.* at 315. Because the parties first addressed the issue of creating a fund to pay these expenses was raised for the first time on appeal, the court would have had to reopen the entire question of damages for each plaintiff in order to separate out the portion to be allocated to medical monitoring. *Id.* at 313, 315.

94. *Id.* at 314.

95. 611 F. Supp. 1396 (E.D.N.Y. 1985), *aff'd in part, rev'd in part*, 818 F.2d 194 (2d Cir. 1987).

96. *Ayers*, 525 A.2d at 314 (quoting *In re Agent Orange*, 611 F. Supp. at 1402-03) (alteration in original).

97. *Id.* at 315.

98. *Id.*

99. The latter conclusion is contrary to the general rule that equitable remedies are only available when legal remedies are inadequate.

The key assumption that underlies the New Jersey Supreme Court's opinion in *Ayers* is that the increased risk of harm is in fact an injury.¹⁰⁰ Because of the difficulty in proving the extent of such an injury, however, the plaintiff has only a limited right to recover damages for that harm.¹⁰¹ Courts are unable to accurately measure and evaluate such injuries, and thus are reluctant to award compensation.¹⁰²

In contrast, courts can ascertain the approximate costs of medical screening, monitoring, and surveillance necessary to detect symptoms or signs of disease.¹⁰³ Though not without its uncertainties, such as changing medical technology and discounting to present value, medical monitoring is a more certain remedy than a remedy which tries to determine if the exposed individual will actually develop the disease, or what a given individual's probability of developing the disease is.

The Supreme Court of New Jersey revisited the issue of medical monitoring in *Mauro v. Raymark Indus., Inc.*¹⁰⁴ In *Mauro* the court affirmed an award of a lump sum payment of medical monitoring costs to a single plaintiff.¹⁰⁵ When taken in conjunction with *Ayers*, this award indicates that the court viewed medical monitoring as a legal remedy that may possess equitable features in a mass tort situation. The court relied on *Ayers*, and its decision clarified that the analysis of the court in *Ayers* was not limited to cases under the New Jersey Tort Claims Act.¹⁰⁶

100. See *Potter v. Firestone Tire & Rubber Co.*, 863 P.2d 795, 822-23 (Cal. 1993); see also *Mauro v. Raymark Indus. Inc.*, 561 A.2d 257 (N.J. 1989) (clarifying that *Ayers* held that enhanced risk itself is not compensable but medical monitoring based on enhanced risk is).

101. See *Ayers*, 525 A.2d at 305-07 (citing conflicting court opinions).

102. See *id.* at 307; *Mauro*, 561 A.2d at 262-63.

103. The reason for the use of a court-supervised fund is the fact that cost can only be determined in rough terms. If cost could be determined with certainty, no reason would exist not to award a lump sum, a more simple remedy for all concerned.

104. 561 A.2d 257 (N.J. 1989).

105. *Id.* at 260-67.

106. *Id.*; see also *Herber v. Johns-Manville Corp.*, 785 F.2d 79 (3d Cir. 1986) (federal circuit court interpreting New Jersey law and treating medical monitoring as a compensable element of tort damages rather than as equitable relief).

B. *The Debate Over the Present Injury Requirement*

While the New Jersey courts were wrestling with medical monitoring costs in *Ayers*,¹⁰⁷ a Pennsylvania trial court addressed the same issue in *Habitants Against Landfill Toxicants (HALT) v. City of York*.¹⁰⁸ The plaintiffs in *HALT* were property owners whose wells were contaminated with toxic substances from a landfill operated by the city of York and other defendants. In addition to separate actions at law for damages, the plaintiffs filed an equity action seeking a million-dollar medical monitoring fund, an alternative water supply, and other relief.¹⁰⁹ The defendants filed for summary judgment, alleging that the plaintiffs had an adequate remedy at law and arguing that Pennsylvania did not recognize an equitable action for medical monitoring.¹¹⁰ The court denied the defendants' motion. Citing the trial court's ruling in *Ayers*, the court found that Pennsylvania recognized an action seeking a constructive trust to pay medical monitoring expenses.¹¹¹

In *Merry v. Westinghouse Elec. Corp.*¹¹² the United States District Court for the Middle District of Pennsylvania relied on *HALT* in denying the defendant's motion for summary judgment.¹¹³ Property owners whose wells were contaminated by toxic substances, including toluene and xylene,¹¹⁴ claimed that exposure to these substances had resulted in emotional distress, fear of future injury and disease, and increased risk of

107. See *supra* notes 77-102 and accompanying text.

108. 15 Env'tl. L. Rep. (Env'tl. L. Inst.) 20,937 (Pa. Ct. C.P. May 20, 1985). *HALT* was decided before the New Jersey Court of Appeals reversed the trial court's decision in *Ayers*.

109. *Id.* at 20,937.

110. *Id.* at 20,938.

111. *Id.* at 20,938-39 (citing *Ayers v. Township of Jackson*, 461 A.2d 184 (N.J. Super. 1983), *aff'd in part, rev'd in part*, 525 A.2d 287 (N.J. 1987)).

112. 684 F. Supp. 847 (M.D. Pa. 1988).

113. *Id.* at 849.

114. *Id.* at 851. Toluene is a volatile hydrocarbon (C₆H₅CH₃) that smells like benzene. Many chemical and industrial processes use toluene as a solvent feedstock, and it is also used as an additive. Xylene is also a volatile hydrocarbon (C₆H₄(CH₃)₂) that is a commercial mixture of three isomers (ortho-, meta-, and para-xylene). Companies use xylene as an additive in gasoline, as a solvent in protective coatings and resins, and as a part of the production process for organic chemicals. GESSNER G. HAWLEY, *THE CONDENSED CHEMICAL DICTIONARY* 1031, 1100 (10th ed. 1981).

cancer and other diseases.¹¹⁵ The plaintiffs also requested future medical monitoring expenses and other damages.¹¹⁶

The court held that in order to recover medical monitoring damages, the plaintiffs needed to prove (1) exposure to a hazardous substance because of the defendant's actions, (2) potential for injury, and (3) the need for early detection and treatment.¹¹⁷

Applying a slightly different standard, the federal district court for eastern Pennsylvania in *Villari v. Terminix Int'l Inc.*¹¹⁸ had held one year earlier that Pennsylvania law required a plaintiff seeking medical monitoring costs to show some present injury, although not necessarily the symptoms of the disease to be monitored.¹¹⁹ In *Merry* the court specifically rejected this standard.¹²⁰

In 1990 the third circuit court of appeals resolved the conflict as to which standard was appropriate under Pennsylvania law for determining whether to award medical monitoring expenses. In *In re Paoli R.R. Yard PCB Litig.*,¹²¹ the third circuit found that the Pennsylvania Supreme Court would probably recognize a claim for medical monitoring.¹²² The court set forth the following standard:

1. Plaintiff was significantly exposed to a proven hazardous substance through the negligent actions of the defendant.
2. As a proximate result of exposure, plaintiff suffers a significantly increased risk of contacting a serious latent disease.
3. That increased risk makes periodic diagnostic examinations reasonably necessary.

115. *Merry*, 648 F. Supp. at 848.

116. *Id.*

117. *Id.* at 850.

118. 663 F. Supp. 727, *amended*, 677 F. Supp. 330 (E.D. Pa. 1987).

119. *Id.* at 735.

120. *Merry*, 684 F. Supp. at 848-49.

121. 916 F.2d 829 (3d Cir. 1990), *cert. denied sub nom. General Elec. Co. v. Knight*, 499 U.S. 961 (1991).

122. *Id.* at 852.

4. Monitoring and testing procedures exist which make early detection and treatment of the disease possible and beneficial.¹²³

The present injury requirement adopted by the district court in *Villari* was specifically rejected.¹²⁴ The third circuit cited the *Ayers* decision with approval, including the requirement that "competent expert testimony" must support the plaintiff's claim for medical monitoring.¹²⁵ The court did caution plaintiffs, stating that

[i]n light of the statute of limitations problems caused by Pennsylvania law against splitting causes of action, we intimate no view as to whether a plaintiff who sues for medical monitoring must forego his or her claim for damages if and when the disease ultimately manifests itself.¹²⁶

Courts in other states have followed the medical monitoring decisions of the New Jersey and Pennsylvania courts. For example, state courts in New York,¹²⁷ Arizona,¹²⁸ and Indiana¹²⁹ have recognized the right to recover medical monitoring expenses without showing present

123. *Id.*

124. *Id.*

125. *Id.* at 852 (citing *Ayers v. Township of Jackson*, 525 A.2d 287, 312 (N.J. 1987)).

126. *Id.* at 852 n.25a.

127. *See, e.g., Askey v. Occidental Chem. Corp.*, 477 N.Y.S.2d 242 (N.Y. App. Div. 1984) (holding that medical monitoring damages may be recovered on an individual basis); *Geradi v. Nuclear Util. Servs.*, 566 N.Y.S.2d 1002, 1004 (N.Y. Sup. Ct. 1991) (allowing medical monitoring damages "which may flow from the invasion of the body by toxic substances through negligent exposure").

128. *See, e.g., Burns v. Jaquays Mining Corp.*, 752 P.2d 28 (Ariz. Ct. App. 1987), *petition for review dismissed*, 781 P.2d 1373 (1987). Citing *Ayers*, the court held that despite the lack of evidence of any present physical harm, the plaintiffs were entitled to regular medical testing "as [was] reasonably necessary and consistent with contemporary scientific principles applies by physicians experienced in the diagnosis and treatment of these types of injuries." *Id.* at 33. *But see Destories v. City of Phoenix*, 744 P.2d 705, 711 (Ariz. Ct. App. 1987) (rejecting the plaintiffs' medical monitoring claim as factually insufficient due to the failure of the plaintiffs to prove that the proposed expenses were "reasonably necessary").

129. *See, e.g., Adams v. Clean Air Sys.*, 586 N.E.2d 940 (Ind. Ct. App. 1992).

injury. Federal district courts in Minnesota¹³⁰ and Hawaii¹³¹ have recognized a similar cause of action.

In *Barth v. Firestone Tire and Rubber Co.*,¹³² the district court expanded the remedies allowed in the New Jersey and Pennsylvania cases. A worker at a Firestone plant, one of the plaintiffs in *Barth*, filed a suit seeking class certification on behalf of himself and other employees allegedly exposed to benzene, heavy metals, and other industrial toxins used or produced in the tire-making process.¹³³ The plaintiffs contended that their class was entitled to equitable relief in the form of a fund designed to locate exposed employees and former employees, and then to pool and share the knowledge about the results of the alleged exposures.¹³⁴ This fund would also provide diagnosis and preventative medical care to minimize the extent of any future harms.¹³⁵ The plaintiffs alleged that as class members, they would suffer irreparable harm such as misdiagnosis, mistreatment, and loss of legal rights stemming from the failure to recognize symptoms if the fund was not established.¹³⁶ The court denied the defendant's motion to dismiss this claim.¹³⁷ It held that the plaintiffs need not prove any present physical injury or impairment to claim this remedy.¹³⁸

The *Barth* case also illuminates the interplay between the present injury requirement and worker's compensation laws. For the plaintiffs in

130. See, e.g., *Werlein v. United States*, 746 F. Supp. 887 (D. Minn. 1990), *vacated on other grounds*, 793 F. Supp. 898 (D. Minn. 1992) (denying medical monitoring under CERCLA and RCRA, but allowing it as a common law tort remedy).

131. See, e.g., *In re Hawaii Fed. Asbestos Cases*, 734 F. Supp. 1563 (D. Haw. 1990). For other federal cases discussing the medical monitoring cause of action, see *Hagerty v. L & L Marine Servs.*, 788 F.2d 315 (5th Cir. 1986); *Johnson v. Armstrong Cork Co.*, 645 F. Supp. 764 (W.D. La. 1986).

132. 661 F. Supp. 193, *revised*, 673 F. Supp. 1466 (N.D. Cal. 1987).

133. *Id.* at 195, 203-05.

134. *Id.* at 194-96.

135. *Id.*

136. *Id.* at 203.

137. *Id.* at 205.

138. *Cf. id.* at 196. Although the court did not require the plaintiff to allege a current manifestation of cancer to defeat defendant's summary judgment motion, the court found that the plaintiff "suffered a direct injury to his immune system and a further injury through the presence of diseases in their latency period." *Id.*

The Supreme Court of California has approved the lack of a requirement of a present injury, even in an action at law. See *Potter v. Firestone Tire & Rubber Co.*, 863 P.2d 795 (Cal. 1993).

Barth, their only hope of recovery was to show no present injury or impairment. If the plaintiffs had alleged that they suffered present harm or injury, the action would be barred by the exclusivity provision of California's workers' compensation law.¹³⁹

Although many courts have allowed claims for medical monitoring expenses, others have denied these claims or allowed them only with proof of present injury.¹⁴⁰ Requiring proof of present injury is the functional equivalent of denying the claim for medical monitoring expenses for toxic torts because the plaintiff is forced to prove the existence of the injury and the cause of the injury before the injury even exists.

C. *The Desirability of Medical Monitoring Damages*

The idea that a person who has exposed another person to a hazardous substance, which increases the risk that the exposed person may contract a serious disease, should be required to pay for medical testing to protect the victim's health is an extremely appealing idea in an emotional sense.¹⁴¹ Medical monitoring seems to present all benefit and no detriment, except the detriment suffered by a company accused of creating the danger. Medical monitoring is not entirely benign in effect, however, and both courts and commentators have placed limits on the doctrine.

The American Law Institute's project ("ALI Study" or "Study") examining responsibility for personal injuries¹⁴² endorses limited medical monitoring.¹⁴³ Initially, the ALI Study would require that the need for monitoring be established by "reliable expert testimony" provided by "court appointed experts or science panels."¹⁴⁴ As a further limitation,

139. See *Barth*, 661 F. Supp. at 198-200.

140. See, e.g., *Ball v. Joy Technologies, Inc.*, 958 F.2d 36 (4th Cir. 1991), cert. denied, 112 S. Ct. 876 (1992) (denying claim under West Virginia and Virginia law without proof of present physical injury).

141. See Leslie S. Gara, Note, *Medical Surveillance Damages: Using Common Sense and the Common Law to Mitigate the Dangers Posed by Environmental Hazards*, 12 HARV. ENVTL. L. REV. 265, 269-70 (1988); Parnell et al., *supra* note 16, at 6.

142. 2 AMERICAN LAW INST., ENTERPRISE RESPONSIBILITY FOR PERSONAL INJURY 378-79 (1991).

143. *Id.* at i.

144. *Id.* at 379-80. The ALI Study is favorably inclined towards both court-appointed experts and the use of special panels of scientific and technical experts to deal with the problem of "hired gun" experts and the perceived difficulty that courts have in dealing

the ALI Study recommends an offset for items already covered by a collateral source such as insurance.¹⁴⁵

The Study does not advocate damages for medical monitoring that fall within the scope of normal periodic medical examinations or that are recommended by fringe "clinical ecologists."¹⁴⁶ Instead, the ALI Study recommends

some sort of epidemiological investigation of where and when the disease actually manifests itself among the exposed groups. This work would serve both to inform the medical profession about which people are in real need of early treatment and to provide reassurance to people who turn out not to be at risk.¹⁴⁷

The Study adds, "We do not favor awarding damages under the label of 'medical monitoring' and having the money paid directly to the plaintiffs to be spent on additional medical attention only if they are so inclined."¹⁴⁸

Medical monitoring as proposed by the ALI Study is appealing if courts impose the remedy based on a modified negligence theory with the requirements of injury and causation deleted. The requirements of duty and breach would continue to provide some degree of protection to a defendant who acted as reasonably as possible at the time of his actions, but who now finds his past decisions being criticized from the perspective of current knowledge.¹⁴⁹

with scientific and technical questions. This view is shared by many other critics of the current liability system. See, e.g., HUBER, *supra* note 29; Troyen A. Brennan, *Helping Courts with Toxic Torts*, 51 U. PITT. L. REV. 1 (1989); Jack B. Weinstien, *Improving Expert Testimony*, 20 U. RICH. L. REV. 473 (1986).

145. 2 AMERICAN LAW INST., *supra* note 142, at i.

146. See, e.g., American Academy of Allergy & Immunology, *Position Statement: Clinical Ecology*, 78 J. OF ALLERGY & CLINICAL IMMUNOLOGY 269 (1986); Abba I. Terr, *Environmental Illness: A Clinical Review of Fifty Cases*, 146 ARCH. OF INTERN. MED. 145 (Jan. 1986).

147. 2 AMERICAN LAW INST., *supra* note 142.

148. *Id.* at 379.

149. See John E. Munter & Scott P. DeVries, *Higgins v. Aerojet Corporation: Successfully Defending A Toxic Tort Case*, 1 Toxics L. Rep. (BNA) No. 10, at 874 (1987). In *Higgins* a jury accepted the argument that the defendant Aerojet should not have their conduct in the mid 1950's judged by the standards of the mid 1970's. *Id.*

Medical monitoring, despite its benign image, presents problems in application, even in situations in which a court imposes a trust to insure that the money intended for medical monitoring is indeed spent for that purpose as opposed to funding additional litigation¹⁵⁰ or a trip to Las Vegas.¹⁵¹ For example, medical monitoring without the requirement of present injury forces courts to make decisions based on limited scientific knowledge. The requirement of actual physical injury acts as a floor for imposing liability and provides at least one clear reference point that does not require a Ph.D. in biostatistics to understand.

The further the rules of liability move from their common law roots, the more each side is forced to rely upon experts. As this movement occurs, the process is reduced to a battle of experts. Yet, the judicial system relies on a panel of non-experts in a jury trial or a single non-expert in a judge trial to determine the outcome.¹⁵² This problem is partially relieved by the use of court-appointed experts and/or science panels as recommended by the ALI Study.¹⁵³ These devices, however, will increase the cost and complexity of the already costly and complex process of toxic tort litigation.

Another problem with medical monitoring is that courts cannot always easily determine the specifics of the medical monitoring remedy. The testing protocol should not be a replacement for regular health care.¹⁵⁴ Additionally, testing should be geared both to the chemicals involved and to their amounts. For example, a protocol designed for an occupational setting, in which the levels of exposure are much higher than in the typical toxic tort case, would not necessarily be appropriate in screening the plaintiffs in a typical groundwater contamination case. The

150. See *Friends for All Children, Inc. v. Lockheed Aircraft Corp.*, 746 F.2d 816, 820 (D.C. Cir. 1984). Early in this long and convoluted case, a partial settlement occurred in which Lockheed paid \$5000 per plaintiff for the infant plaintiffs' "medical treatment" and "therapy," or for their litigation expenses. *Id.* All of the money was used for litigation expenses, on the assumption that the cases would settle after the bellwether trials. When this settlement did not occur, the issue of funding for medical monitoring had to be revisited. *Id.*

151. 2 AMERICAN LAW INST., *supra* note 142, at 379.

152. See David Bernstein, Note, *Out of the Fryeing Pan and into the Fire: The Expert Witness Problem in Toxic Tort Litigation*, 10 REV. LITIG. 117, 123-24 (1990) (discussing jury incompetence in toxic tort cases).

153. 2 AMERICAN LAW INST., *supra* note 142.

154. Ronald E. Gots, *Medical Monitoring Following Chemical Exposures*, FOR THE DEFENSE, Nov. 1992, at 22, 24.

protocol would be inadequate because the levels of exposure are normally much lower when the route of exposure is groundwater.¹⁵⁵

If sufficient money and time are expended on testing, a physician can almost always find something abnormal; often what he finds will only prove that the test result is indeed outside the normal range.¹⁵⁶ Before medical monitoring can be a practical benefit to the plaintiff,¹⁵⁷ proof must exist that the condition for which he is being monitored is one whose treatment or cure depends upon early detection.¹⁵⁸ A test that provides reliable early detection must also exist.¹⁵⁹

In addition, the adverse effects of screening need to be considered. These effects include both the risk of false positives¹⁶⁰ and labeling.¹⁶¹ False negative tests, which will give an unwarranted sense of security, are also possible. To the extent that a testing protocol is not well-designed and scientifically valid, these risks increase.¹⁶²

Another problem with medical monitoring claims is that their prosecution and defense are extremely fact-specific. Even in those jurisdictions that recognize medical monitoring as a valid cause of action, the plaintiff's attorney must lay all of the necessary foundations to avoid a defense verdict.¹⁶³ Similarly, even in jurisdictions such as Virginia or

155. See generally CASSARETT & DOULL, TOXICOLOGY: THE BASIC SCIENCE OF POISONS.

156. Steven H. Woolf & Douglas B. Kamerow, *Testing for Uncommon Conditions: The Heroic Search for Positive Test Results*, 150 ARCH. INTERN. MED. 150 (1990).

157. For example, a practical benefit would be a health benefit to the exposed plaintiff, as opposed to a general gain in society's scope of knowledge about the effects of substance X.

158. Gots, *supra* note 154, at 25.

159. *Id.*

160. False positives are results that suggest an abnormality when in fact nothing is wrong.

161. Labeling occurs when an individual is perceived by himself and others as "damaged goods."

162. See William Feldman, *How Serious are the Adverse Effects of Screening?*, 5 J. OF GEN. INTERN. MED. S50 (Oct. 1990 Supp.); Terr, *supra* note 146.

163. See, e.g., *Destories v. City of Phoenix*, 744 P.2d 705 (Ariz. Ct. App. 1987). In *Destories* the court rejected the plaintiff's medical monitoring claim as factually insufficient due to the plaintiff's failure to prove the proposed expenses were "reasonably necessary." *Id.* at 711; see also *Herber v. Johns-Manville Corp.*, 785 F.2d 79 (3d Cir. 1986).

West Virginia¹⁶⁴ that have refused to recognize medical monitoring as distinct from future medical expenses, the defendant's counsel will have to argue against a broad definition of injury that includes "subcellular" or "subclinical" injury.¹⁶⁵ Medical monitoring claims reward the attorney who is well-prepared on both the law and the science, regardless of whether he represents the plaintiff¹⁶⁶ or defendant.¹⁶⁷ A poorly prepared case claiming toxic injury and medical monitoring is unlikely to survive a motion for dismissal or summary judgment.¹⁶⁸

III. ALTERNATIVE THEORY TWO: EMOTIONAL DISTRESS DAMAGES

Emotional distress as an alternative damage theory allows recovery for injuries other than physical ones. Emotional distress damage claims may also include the traditional claim for pain and suffering, as these are injuries in the intangible and emotional sense.¹⁶⁹ Most lawyers, commentators, and judges generally view emotional distress as the distress that is fundamentally separate and distinct from a physical injury.

164. See, e.g., *Ball v. Joy Technologies, Inc.* 958 F.2d 36 (4th Cir. 1991), *cert. denied*, 112 S. Ct. 876 (1992). In *Ball* the court held that a "claim for medical surveillance costs is simply a claim for future damages." *Id.* at 39.

165. See, e.g., *Anderson v. W.R. Grace & Co.*, 628 F. Supp. 1219 (D. Mass. 1986); *Brafford v. Susquehanna Corp.*, 586 F. Supp. 14 (D. Colo. 1984).

166. See, e.g., *Elam v. Alcolac Inc.*, 765 S.W.2d 42 (Mo. 1988), *cert. denied*, 493 U.S. 817 (1989). In *Elam* the court awarded a \$49 million verdict, including \$43 million in punitive damages on numerous grounds, one of which was medical monitoring. *Id.* at 49. The parties settled for \$6 million.

167. See, e.g., *Munter & DeVries*, *supra* note 149; Clifford J. Zatz & Jeffery K. Sherwood, *Defending Speculative Injury Claims*, 2 *Toxics L. Rep. (BNA)* No. 10, at 76 (1987); see also *Stites v. Sundstrand Heat Transfer, Inc.*, 660 F. Supp. 1516 (W.D. Mich. 1987).

168. See, e.g., *Carroll v. Litton Systems Inc.*, No. B-C-88-253, 1990 WL 312969 (W.D.N.C. Oct 29, 1990); see also *Stites*, 660 F. Supp. 1516.

169. See *Indianapolis & St. Louis R.R. Co. v. Stables*, 62 Ill. 313, 320-21 (1872).

Infliction of emotional distress has two principal forms, negligent and intentional.¹⁷⁰ Negligent infliction of emotional distress can be either an independent tort¹⁷¹ or an element of damages in negligence cases.¹⁷²

A. *Background on Emotional Distress Damages*

Courts have traditionally recognized that a person injured because of the negligent or wrongful actions of another can recover not only for his financial losses, but also for the pain, suffering, and inconvenience caused by the defendant's actions.¹⁷³ The development of an action or element of damages to compensate the plaintiff for fear of injuries that he has not yet suffered, however, is a more recent development.¹⁷⁴

In toxic tort cases, the specific question is whether the plaintiff can recover for the fear or apprehension caused by his awareness of his exposure to a hazardous substance.¹⁷⁵ This question assumes that the particular substance has the capability of causing harm to the plaintiff. Though many of the cases have dealt with fear of cancer, the question extends to any future harm, such as immune system dysfunctions or other diseases, that results from exposure to hazardous substances and has a long latency period.¹⁷⁶

170. See *Charlton v. Day Island Marina, Inc.*, 732 P.2d 1008, 1013 (Wash. Ct. App. 1987). This Article is primarily concerned with the negligent infliction of emotional distress. The action for intentional infliction of emotional distress is far more dependent on individual state law determinations and raises issues of both fraud and punitive damages that are beyond the scope of this Article.

171. See *George v. Jordan Marsh Co.*, 268 N.E.2d 915, 921 (1971); RESTATEMENT (SECOND) OF TORTS § 46(1) (1991).

172. See *Potter v. Firestone Tire & Rubber Co.*, 863 P.2d 795, 805 (Cal. 1993); *Marlene F. v. Affiliated Psychiatric Med. Clinic, Inc.*, 770 P.2d 278, 281 (Cal. 1989).

173. See D. DOBBS, HANDBOOK ON THE LAW OF REMEDIES 545 (1973).

174. Terry Morehead Dworkin, *Fear of Disease and Delayed Manifestation Injuries: A Solution or a Pandora's Box*, 53 FORDHAM L. REV. 527, 527 (1984).

175. See generally PAUL R. LEES-HALEY, DEFENSE OF DAMAGES IN MASS INJURY CLAIMS (1992) (commercial monograph, on file with Paul R. Lees-Haley, Ph.D., A Psychological Corporation, Encino, Cal.).

176. See, e.g., *Johnson v. West Virginia Univ. Hosp.*, 413 S.E.2d 889 (W. Va. 1991) (suing for fear of AIDS from being bitten by hospital patient suffering from AIDS); Stephanie B. Goldberg, *Aids Phobia: Reasonable Fears or Unreasonable Lawsuits?*, ABA JOURNAL, June 1992, at 88.

B. *The Requirement of Reasonable Fear*

Almost everyone is concerned about the risk of cancer.¹⁷⁷ The average person is aware of the risk of cancer, but tends not to brood about it too much. When an average person is told he has been exposed to a hazardous substance which may increase his risk of cancer, however, the amount of worry and concern he experiences may increase dramatically.¹⁷⁸ This concern is reasonable and perhaps even beneficial because it may lead him to seek information about his condition and reduce other risk factors.¹⁷⁹ In comparison, other individuals may have a nervous disposition or may, at the mention of "the dread specter of cancer,"¹⁸⁰ become completely disabled solely because of emotional reasons.

The states are divided as to whether the traditional "eggshell-thin skull"¹⁸¹ rule applies in emotional distress cases. This problem of whether to apply the rule arises in cases in which some basis for the fear exists, but that basis lasts only a short time.¹⁸² The general rule is that the plaintiff is entitled to recover only for the distress that occurs while a

177. See *Color Additives: Hearings Before the House Comm. on Interstate and Foreign Commerce*, 86th Cong., 2d Sess. 115-18 (1960) (statement of Rep. Harris) (noting that "almost everyone ... is so conscious of cancer as a dread disease" and hypothesizing that throwing out the Delaney Clause "would create so much fear in the mind of the American people" that they might react against industry); see also DORE, *supra* note 18, at § 7.02[3]; Paul Slovic, *Perception of Risk*, SCIENCE, April 1987, at 280.

178. See Paul Slovic et al., *Preference for Insuring Against Probable Small Loses: Insurance Implications*, 44 J. RISK & INS. 237, 253 (1977); Paul Slovic, *Judgement, Choice and Societal Risk Taking*, in JUDGEMENT AND DECISION IN PUBLIC POLICY FORMATION 98, 99 (Kenneth Hammond ed., 1980).

179. For example, both smoking and exposure to asbestos increase the chance of lung cancer occurring in a given individual. The increase from a combination of asbestos exposure and smoking, however, is dramatically more than that from either alone. HUBER, *supra* note 29, at 154.

180. See *Lohrmann v. Pittsburgh Corning Corp.*, 782 F.2d 1156, 1160 (4th Cir. 1986).

181. The term "eggshell skull" comes from illustrations appearing in English cases in which a plaintiff with an "eggshell skull" suffers death as a result of a defendant's negligence when a normal person would only suffer a bump on the head. See *Dulieu v. White & Sons*, 2 K.B. 669, 679 (1901); *W. PAGE KEETON ET AL.*, *supra* note 13, § 43, at 292.

182. See RESTATEMENT (SECOND) OF TORTS §§ 312, 313 (1991). The answer is different for intentional infliction of emotional distress than for negligent infliction. If one intends their actions to cause emotional distress to another, and the target is injured by those actions, the actor is liable even if the harm is far more severe than desired or intended.

reasonable basis for his fear continues.¹⁸³ This line of reasoning developed out of dog bite cases in which the operative fear was the fear of rabies.¹⁸⁴ One bitten by an unknown dog is reasonable in fearing rabies; one bitten by an apparently mad dog is even more reasonable in suffering from the fear of rabies. This fear is reasonable, however, only for the time that rabies has the potential to appear after a bite.¹⁸⁵ Beyond that period, the general rule is that claims for damages from fear and emotional distress are unreasonable and noncompensable.¹⁸⁶

Two recent cases have addressed the issue of placing a time limitation on the reasonableness of the fear of disease. In a traditional toxic tort case, *Laxton v. Orkin Exterminating Co., Inc.*,¹⁸⁷ the plaintiffs alleged that Orkin had contaminated their water supply with a hazardous chemical while treating their home for termites.¹⁸⁸ Upon discovering the contamination, the plaintiffs installed a new water system and sought medical care.¹⁸⁹ After the installation of the new water system, the plaintiffs' doctor told them that they needed no further tests.¹⁹⁰

The plaintiffs sued and asked for damages for emotional distress based on the fear of future disease.¹⁹¹ The court found that the plaintiffs were reasonable in being concerned and fearful about the future effects of the contamination.¹⁹² The court determined, however, that the reasonableness of the plaintiffs' fear ended when their physician told them that their blood test levels were normal, and that they would experience no further effects from the exposure.¹⁹³

183. For cases applying the general rule, *see, e.g.*, *Clark v. United States*, 660 F. Supp. 1164 (W.D. Wash. 1987), *aff'd*, 856 F.2d 1433 (9th Cir. 1988); *Laxton v. Orkin Exterminating Co.*, 639 S.W.2d 431 (Tenn. 1982).

184. *See Dworkin, supra* note 174, at 542.

185. This time period is approximately one year for rabies. *See* MERCK MANUAL OF DIAGNOSIS AND THERAPY 183 (Robert Berkow ed., 15th ed. 1991).

186. *See, e.g.*, *Buck v. Brady*, 73 A. 277 (Md. 1909); *Friedman v. McGowan*, 42 A. 723 (Del. 1898); *Serio v. American Brewing Co.*, 74 So. 290 (La. 1917).

187. 639 S.W.2d 431 (Tenn. 1982).

188. *Id.* at 432.

189. *Id.* at 432-33.

190. *Id.* at 433.

191. *Id.* at 431.

192. *Id.* at 434.

193. *Id.*

In the second case, *Johnson v. West Virginia University Hospitals*,¹⁹⁴ a patient infected with the AIDS virus bit a security officer.¹⁹⁵ The court awarded the plaintiff \$1.9 million in emotional distress damages because of his "reasonable fear of contacting AIDS."¹⁹⁶ The jury and the appellate court ignored facts in the record that cast great doubt on the reasonableness of both the fear and the verdict.¹⁹⁷ First, according to the Centers for Disease Control ("CDC"), no documented cases existed in which AIDS was transmitted through biting or saliva. Additionally, according to a CDC report, ninety-five percent of those people exposed to HIV will seroconvert¹⁹⁸ within six months of exposure, and rarely does anyone seroconvert after a year.¹⁹⁹

The apparent inconsistency between the results in *Laxton* and *Johnson* can be explained by the fact that society's knowledge of AIDS and HIV transmission is still developing and is less complete than the knowledge of more conventional diseases.²⁰⁰ This explanation indicates courts' willingness to allow the fears and fads of the general populace to create liability without regard for any basis in science.²⁰¹

The different results in *Laxton* and *Johnson* emphasize the key weakness of the limitation of recovery for emotional distress due to fear of disease to those fears that are "reasonable." The weakness is that what is "reasonable" is not defined, and may not even be subject to precise definition. Is a fear based on a widely-held, but patently untrue assumption, reasonable? Does the fear cease to be reasonable when the plaintiff is informed of the true facts, or would a reasonable man still follow superstition and folk wisdom and disregard scientific knowledge? Some courts have allowed recovery for fears that were irrational but widely-held.²⁰² Other courts have refused to allow recovery on similar

194. 413 S.E.2d 889 (W. Va. 1991).

195. *Id.* at 891.

196. Goldberg, *supra* note 176, at 88.

197. *Id.*

198. One seroconverts when one develops antibodies to a virus. The standard tests for the AIDS virus do not test for the virus itself, but instead test for the antibodies the body makes in response to the presence of the virus. See Goldberg, *supra* note 176, at 88. See also Martha F. Rogers et al., *Lack of Transmission of Human Immunodeficiency Virus From Infected Children to Their Household Contacts*, 85 PEDIATRICS 210 (1990).

199. Goldberg, *supra* note 176, at 88.

200. *Id.*

201. See HUBER, *supra* note 29, at 130-47.

202. See, e.g., *Marchica v. Long Island R.R.*, 810 F. Supp. 445 (E.D.N.Y. 1993).

facts.²⁰³ The general rule is that a plaintiff can recover for fear of future disease only if that fear is "reasonable."²⁰⁴ The reality, however, is that reasonableness is a question of fact. In most cases a jury can disregard science in deciding if a fear is reasonable, and the appellate courts are bound to uphold the verdict.²⁰⁵

C. *Floors and Hurdles in Emotional Distress Litigation*

Claims for emotional distress are inherently subjective because the injury cannot be seen. This invisibility causes two interrelated concerns for courts. The first concern is that a flood of new claims will occur,²⁰⁶ and the second concern is that many of these claims will be false.²⁰⁷ Courts have utilized various approaches in addressing these concerns. These approaches can be divided into two categories, "floors" and "hurdles."

The floors category incorporates the idea that certain things are too inconsequential to be compensable. "[S]ome level of harm [exists] which one should absorb without recompense as the price he pays for living in an organized society."²⁰⁸ The most common floor used by courts is a requirement that the emotional distress be "serious." This requirement insures that the harm is important enough to make it worthwhile to invest the court's time in determining if an injury exists and the amount of compensation required.²⁰⁹

Hurdles are particular requirements of proof a plaintiff must meet before the finder of fact can consider the claim.²¹⁰ Judges are generally

203. See, e.g., *Watson v. Augusta Brewing Co.*, 52 S.E. 152 (Ga. 1905); *Burk v. Sage Prods. Inc.*, 747 F. Supp. 285 (1990).

204. See *In re Moorenovich*, 634 F. Supp. 634, 637 (D. Me. 1986).

205. See, e.g., *Johnson*, 413 S.E.2d 889; see also Richard S. Brown & Paul R. Lees-Haley, *Fear of Future Illness, Chemical AIDS and Cancerphobia: A Review*, 71 PSYCHOL. REP. 187, 197 (1992).

206. See *Mitchell v. Rochester Ry. Co.*, 45 N.E. 354 (N.Y. 1896).

207. See *Payton v. Abott Labs*, 437 N.E.2d 171 (Mass. 1982).

208. *Gilliam v. Stewart*, 291 So. 2d 593 (Fla. 1974).

209. See *Dworkin*, *supra* note 174, at 530; *Deleski v. Raymark Indus. Inc.*, 819 F.2d 377, 380 (3d Cir. 1987); see also William H. Armstrong, *Tort Damages for Personal Injuries Not Yet Suffered*, 3 NAT. RESOURCES & ENV'T 26, 54 (1988).

210. Some floors, such as a requirement of physical injury before emotional distress can be awarded, are also hurdles.

suspicious of claims for emotional distress, particularly in toxic tort cases. Thus, courts have traditionally denied recovery in cases in which no direct physical impact or injury has occurred.²¹¹ For example, courts often require that the plaintiff have a physical injury before it will entertain a claim for emotional distress, including the fear of future diseases.²¹² The intentional infliction of emotional distress cause of action has its own built-in hurdles because the plaintiff must prove that the defendant acted with the intention of causing the plaintiff emotional distress. Because of this inherent hurdle, the physical injury requirement does not usually apply to claims for the intentional infliction of emotional distress.²¹³

The requirement that the plaintiff show present physical harm is a real and fairly serious hurdle.²¹⁴ Many courts have denied recovery to plaintiffs who could not show sufficient physical harm.²¹⁵ Assuming that the plaintiff must establish present "physical harm" as a threshold for being able to recover damages for the fear of future disease, how severe must that harm be?²¹⁶ Some courts require only "impact,"²¹⁷ and other courts require "injury."²¹⁸

In most jurisdictions that follow the impact rule, merely ingesting a hazardous substance will not be enough to support a claim for emotional

211. See generally ARVIN MASKIN, OVERVIEW AND UPDATE OF EMERGING DAMAGE THEORIES IN TOXIC TORT LITIGATION (ALI-ABA, 1991); Fournier J. Gale & James L. Goyer, III, *Recovery for Cancerphobia and Increased Risk of Cancer*, 15 CUMB. L. REV. 723 (1985).

212. See, e.g., *Ruth v. Fletcher*, 377 S.E.2d 412 (Va. 1989).

213. See, e.g., *Moore v. Allied Chem. Corp.*, 480 F. Supp. 364 (E.D. Va. 1979); *Sypert v. United States*, 559 F. Supp. 546 (D.D.C. 1983) (applying Virginia law and holding that physical injury is not a requirement if the defendant's actions were willful, wanton and vindictive); *Linker v. Custom-Bilt Machinery, Inc.*, 594 F. Supp. 894 (E.D. Pa. 1984); see also RESTATEMENT (SECOND) OF TORTS § 436A (1991).

214. See, e.g., *Amendola v. Kansas City S. Ry. Co.*, 699 F. Supp. 1401 (W.D. Mo. 1988); *Atchison, Topeka & Santa Fe Ry. Co. v. Buell*, 480 U.S. 557 (1987); *Woyke v. Tonka Corp.*, 420 N.W.2d 624 (Minn. Ct. App. 1988).

215. See, e.g., *Nesom v. Tri Hawk Int'l*, 985 F.2d 208 (5th Cir. 1993).

216. See, e.g., *Stites v. Sundstrand Heat Transfer, Inc.*, 660 F. Supp. 1516, 1526 (W.D. Mich. 1987) (requiring that the plaintiffs show that their alleged ingestion of contaminated water had caused "definite and objective physical injury"). The court in *Stites* noted that Michigan courts have been "very lenient in finding allegations [of physical] harm sufficient." *Id.* at 1527 (quoting *Parnell v. Booth Newspapers, Inc.*, 572 F. Supp. 909, 917 (W.D. Mich. 1983)).

217. See *infra* notes 219-24 and accompanying text.

218. See *infra* notes 225-34 and accompanying text.

distress from fear of future harm without evidence that some change to the body resulted from contact with the hazardous substance.²¹⁹ However, the plaintiff must prove only that the change occurred, and not that the change was harmful.²²⁰ A minority of courts will not even demand a showing of physical change. In *Wetherill v. University of Chicago*,²²¹ mere prenatal exposure to DES satisfied the impact requirement.²²²

Some courts have developed variations on this analysis. For example, in *Bennett v. Mallinckrodt*²²³ the court required that the plaintiffs show emotional "distress [that] is medically diagnosable and medically significant." The court did not require the plaintiffs to show "contemporaneous physical injury."²²⁴

The injury test has many different manifestations. In its most lenient form, courts have purported to require physical injury, but have then accepted proof of such slight injuries that they have in fact adopted an "impact" test. For example, in *Brafford v. Susquehanna Corp.*²²⁵ the court allowed an emotional distress claim to go to the jury based on evidence of subcellular harm alone.²²⁶ In *Herber v. Johns-Manville*

219. See, e.g., *McAdams v. Eli Lilly & Co.*, 638 F. Supp. 1173 (N.D. Ill. 1986) (requiring present bodily injury for recovery of fear of future cancer in a DES case); *Anderson v. W.R. Grace & Co.*, 638 F. Supp. 1219 (D. Mass. 1986) (requiring physical harm and requiring that although it need not be immediately apparent, its existence must be evidenced by expert medical testimony).

220. See *Plummer v. Unites States*, 580 F.2d 72 (3d Cir. 1978) (finding that exposure to the tubercle bacteria, as shown by a change from a negative to a positive skin test, was sufficient to support a claim for emotional distress).

221. 565 F. Supp. 1553 (N.D. Ill. 1983).

222. *Id.* at 1562. DES is an abbreviation for Diethylstilbestrol, or diethyl stilbestrol, a synthetic estrogen that duplicates the actions of natural estrogens. DES is used for estrogen replacement therapy, but was formerly used to prevent miscarriage in pregnancy. DES is no longer used for the latter purpose due to the possibility that its use caused cancer in the reproductive organs of the children born of these pregnancies. NEW AMERICAN POCKET MEDICAL DICTIONARY (1978). But see *McAdams v. Eli Lilly & Co.*, 638 F. Supp. 1173 (N.D. Ill. 1986).

223. 698 S.W.2d 854 (Mo. Ct. App. 1985), cert. denied, 476 U.S. 1176 (1986).

224. *Id.* at 866-67.

225. 586 F. Supp. 14 (C.D. Colo. 1984) (alleging the defendants had contaminated the plaintiff's home with radioactive residue); see also *Anderson v. W.R. Grace & Co.*, 638 F. Supp. 1219 (D. Mass. 1986) (requiring that the alleged subcellular harm be proven by expert medical testimony based on objective evidence).

226. *Brafford*, 586 F. Supp. at 18.

Corp.,²²⁷ the plaintiff feared contracting asbestosis and presented evidence of "pleural thickening."²²⁸ Although asbestos exposure is only one possible cause of pleural thickening, the court permitted the plaintiff to recover without evidence of asbestosis²²⁹ or other impairment.²³⁰

On the other hand, some courts have developed variations of the injury test that greatly increase the hurdle. In *Rabb v. Orkin Exterminating Co., Inc.*,²³¹ the court required the plaintiffs to prove with reasonable certainty that the feared future condition would occur, in addition to showing a present bodily injury.²³² Because the plaintiffs did not offer any proof of the specific disease that they feared, the court found that the plaintiffs had not laid an adequate foundation for the recovery of emotional distress for the threat of future harm.²³³

Other courts have distinguished between "ordinary fear," which can be shown by lay witnesses, and "cancerphobia," which requires expert testimony.²³⁴ Some courts have even allowed recovery without proof of present physical injury or impact. These courts have allowed recovery with proof of exposure without any significant physical changes as

227. 785 F.2d 79 (3d Cir. 1986).

228. Pleural thickening involves a scarring of the pleura or lining of the lung. Pleural thickening "is highly suggestive of asbestos exposure when other possible causes, such as trauma, surgery, and infection, are excluded." See AMA Council on Scientific Affairs, *A Physician's Guide to Asbestos-Related Diseases*, 252 JAMA 2593, 2593 (1984). "Patients with only pleural involvement are usually asymptomatic and have normal pulmonary function," although patients with extensive pleural thickening may have difficulty breathing. CECIL TEXTBOOK OF MEDICINE 2363 (1988).

229. Asbestosis is fibrosis of the lungs resulting from the inhalation of fine asbestos dust and fibers. NEW AMERICAN POCKET MEDICAL DICTIONARY (1978).

230. *Herber*, 785 F.2d at 82-83.

231. 677 F. Supp. 424 (D.S.C. 1987). But see *Stites v. Sundstrand Heat Transfer, Inc.*, 660 F. Supp. 1516 (W.D. Mich. 1987) (denying summary judgment for the defendant despite the fact that the plaintiffs did not state their fears in definite and concrete terms).

232. *Rabb*, 677 F. Supp. at 428.

233. *Id.*

234. See, e.g., *Devlin v. Johns-Manville Corp.*, 495 A.2d 495 (N.J. Super. 1985); *Eagle-Picher Indus., Inc. v. Cox*, 481 So. 2d 517 (Fla. Ct. App. 1985), review denied, 492 So. 2d 517 (Fla. 1986). Plaintiffs can also recover damages for present psychiatric injuries independently from damages for the emotional distress from the fear of future disease or injury. See *Potter v. Firestone Tire & Rubber Co.*, 863 P.2d 795, 804 (Cal. 1993).

evidence.²³⁵ These courts draw the line, however, at the point of definite exposure. Courts have rejected all cases that have sought recovery for the fear of future disease based solely upon possible exposure.²³⁶

Another approach to limiting the plaintiff's right to recover for allegations of fear of future harm requires the plaintiff to show he is more likely than not to contract the disease.²³⁷ Courts use this particular hurdle more in the litigation of enhanced risk claims,²³⁸ but occasionally utilize it in claims for fear of disease.²³⁹

D. *Recovery of Emotional Distress Damages by Bystanders*

Recovery by a bystander for emotional distress is a claim that courts in tort cases have traditionally treated with disfavor.²⁴⁰ Most courts that have considered the issue have rejected claims for bystander recovery of emotional distress in toxic tort cases. For example, in *Wisniewski v. Johns-Manville Corp.*,²⁴¹ the court denied recovery to the survivors of asbestos workers for the emotional distress caused by the "observation of gradual, nontraumatic injury to family members."²⁴² The

235. See *In re Moorenovich*, 634 F. Supp. 634 (D. Me. 1986); *Hagerty v. L & L Marine Servs., Inc.*, 788 F.2d 315, *reconsideration denied*, 797 F.2d 256 (5th Cir. 1986).

236. See, e.g., *Mergenthaler v. Asbestos Corp. of Am.*, 480 A.2d 647 (Del. 1984) (rejecting the claim of an asbestos worker's wife who was exposed to asbestos from washing her husband's clothes); *Rittenhouse v. St. Regis Hotel Joint Venture*, 579 N.Y.S.2d 100 (N.Y. App. Div. 1992) (dismissing the claim of an interior decorator who attempted to claim for the fear of future disease based on a possible exposure); *Cathcart v. Keene Indus. Insulation*, 471 A.2d 493 (Pa. Super. Ct. 1984) (rejecting the claim of a wife who ingested asbestos fibers while washing her husband's clothes because she had no physical manifestations of disease and finding that Pennsylvania law requires some physical injury for recovery).

237. See, e.g., *Watson v. Norfolk & Western Ry. Co.*, 507 N.E.2d 468 (Ohio Ct. App. 1987); *Daniels v. Combustion Eng'g Inc.*, 583 S.W.2d 768 (Tenn. Ct. App. 1978); *Elam v. Alcolac Inc.*, 765 S.W.2d 42 (Mo. App. 1988), *cert. denied*, 493 U.S. 817 (1989).

238. See *infra* part IV.

239. See, e.g., *Sorenson v. Raymark Indus. Inc.*, 756 P.2d 740 (Wash. Ct. App. 1988); *Clark v. United States*, 660 F. Supp. 1164 (W.D. Wash. 1987), *aff'd*, 856 F.2d 1433 (9th Cir. 1988); *Dartez v. Fibreboard Corp.*, 765 F.2d 456 (5th Cir. 1985).

240. W. PAGE KEETON ET AL., *supra* note 13, § 54, at 366.

241. 812 F.2d 81 (3d Cir. 1987).

242. *Id.* at 90.

court in *Anderson v. W.R. Grace and Co.*²⁴³ also denied recovery to the plaintiffs who witnessed the negligently-induced illness of family members.²⁴⁴

E. *Emotional Distress Damages in Perspective*

Damages for emotional distress from the fear of future disease contrast in important ways from medical monitoring and recovery purely for increased risk. Emotional distress claims offer the possibility of substantial damages,²⁴⁵ because unlike medical monitoring they are not limited to the amount of expected future medical testing costs. Furthermore, these damages are not subject to defense motions requesting the court to use its equitable powers to establish a trust fund instead paying the plaintiff in a lump sum.²⁴⁶ Unlike claims for compensation for enhanced risk of future disease, emotional distress actions usually lack a causation hurdle.²⁴⁷

IV. ALTERNATIVE THEORY THREE: DAMAGES FOR ENHANCED RISK OF FUTURE DISEASE

The concept of a claim for increased or enhanced risk of disease, though mostly disfavored by the courts,²⁴⁸ dates to 1930.²⁴⁹ The

243. 628 F. Supp. 1219 (D. Mass. 1986).

244. *Id.* at 1230. *But see* Laxton v. Orkin Exterminating Co., Inc., 639 S.W.2d 431 (Tenn. 1982) (finding sufficient injury to the plaintiffs to allow recovery of damages for their concern about themselves and their infant children).

245. Robert L. Willmore, *In Fear of Cancerphobia*, 3 Toxics L. Rep. (BNA) No. 18, at 559, 561 (Sept. 28, 1988).

246. Tort reform statutes of general application in some states will limit the plaintiff's recovery for non-economic damages and may in some cases require periodic payment of damages. *See generally* 2 DAVID LOUISELL & HENRY WILLIAMS, *MEDICAL MALPRACTICE* ch. 18 (1993).

247. *See* Willmore, *supra* note 245, at 562.

248. *See, e.g.,* Schweitzer v. Consol. Rail Corp. (Conrail), 758 F.2d 936, 943 (3d Cir. 1985), *cert. denied sub nom.* Reading Co. v. Schweitzer, 474 U.S. 864 (1985) (holding that "until injury manifests itself, it follows that there [is] no legal relationship between plaintiffs and defendants relevant to plaintiff's future causes of action in tort from which an 'interest' could flow"); Mink v. University of Chicago, 460 F. Supp. 713, 719 (N.D. Ill. 1978) (holding that risk of cancer alone without manifestation of physical injury is

elements of the cause of action for enhanced risk of disease consist of the traditional tort elements--duty, breach, injury, and causation--with a definition of injury that considers a present risk of future injury as the equivalent of present injury.²⁵⁰

Some courts have allowed an increased risk claim only if present injury exists.²⁵¹ This position is a halfway point between recognizing future consequences of present injuries, a well-recognized, if sometimes factually suspect, form of personal injury damages,²⁵² and allowing recovery for the increased risk of injuries that the plaintiff does not currently have.²⁵³

A. *The Structure of Enhanced Risk Claims*

The term "enhanced risk," which also includes "increased risk," is defined as "the increased risk of developing a disease in the future as a result of the defendant's conduct."²⁵⁴ Damages for enhanced risk of future disease are related to damages for emotional distress based on the fear of future disease, but they are separate and distinct from emotional distress. Emotional distress damages compensate the plaintiff for something that has already happened, that is, exposure that results in fear by the plaintiff.²⁵⁵ When seeking damages for the increased risk of future disease, plaintiffs want compensation for something that has not yet

insufficient to meet requirements of cause of action for products liability).

249. See *Coover v. Painless Parker, Dentist*, 286 P. 1048 (1930) (holding that a patient who had suffered burns to her face because of an overexposure to x-rays could recover for the increased likelihood that she would develop cancer).

250. James D. Pagliaro & Peter J. Lynch, *No Pain, No Gain: Current Trends in Determining Compensable Injury in Toxic Tort Cases*, 4 *Toxics L. Rep.* (BNA) No. 10, at 271, 271 (Aug. 9, 1989).

251. See, e.g., *Amendola v. Kansas S. Ry. Co.*, 699 F. Supp. 1401 (W.D. Mo. 1988); Donald F. Pierce, *Recovery for Increased Risk of Developing a Future Injury From Exposure to a Toxic Substance*, 19 *Envtl. L. Rep.* (Envtl. L. Inst.) 10,256, 10,257 (1989). According to Pierce, the weakness of this line of reasoning is that a direct connection between the present injury that qualifies the plaintiff for damages and the threatened, more serious disease may not exist. *Id.*

252. See *Anderson v. W.R. Grace & Co.*, 628 F. Supp. 1219, 1231 (D. Mass. 1986).

253. See, e.g., *Jackson v. Johns-Manville Sales Corp.*, 781 F.2d 394 (5th Cir. 1986), *cert. denied*, 478 U.S. 1022 (1986).

254. Pierce, *supra* note 251, at 10,256.

255. See *supra* part III.

and may never happen, i.e. actually contracting the disease.²⁵⁶ For a tort system in which injury is the starting point²⁵⁷ and the anchor around which all else revolves, this nebulous concept of injury is a major disruption to the intellectual framework.²⁵⁸

As enhanced risk is a cause of action sounding in negligence, the plaintiff must prove duty, breach, injury, and causation.²⁵⁹ Assuming that a duty not to unknowingly expose unwilling individuals to hazardous substances exists, the plaintiff can easily establish this duty. If these chemicals escape into the environment and members of the public are thereby exposed to them, the defendant has breached this duty. The questions of injury and causation are more difficult to answer. The uniqueness of the enhanced risk cause of action is a result of the different way of showing that the plaintiff indeed has an injury, and that the defendant caused this injury by his negligent use or release of hazardous substances.

The first major element of an enhanced risk claim is proving exposure to an allegedly toxic substance for which the defendant is responsible.²⁶⁰ Proving exposure is particularly difficult when the plaintiff alleges that the exposure occurred at low levels over a long period of time, and that the substance was not one that leaves a permanent marker of its presence.²⁶¹ An additional complicating factor is demonstrating that the plaintiff has not been exposed to other unrelated hazardous substances. If other exposure has occurred, the defendant can claim that those unrelated substances caused the plaintiff's condition rather than the substances allegedly released by the defendant.²⁶²

256. See MARGIE TYLER SEARCY, A GUIDE TO TOXIC TORTS § 3.12[2] (1992).

257. W. PAGE KEETON ET AL., *supra* note 13, § 30 at 165; see also *Hagerty v. L & L Marine Servs., Inc.*, 788 F.2d 315, *reh'g denied*, 797 F.2d 256 (5th Cir. 1986) (denying recovery for enhanced risk in the absence of present injury but allowing the plaintiff compensation for future medical monitoring expenses and fear of future disease); *Martin v. Johns-Manville Corp.*, 494 A.2d 1088 (Pa. 1985) (denying recovery for the cause of future cancer in the absence of present injury).

258. Kanner, *supra* note 17, at 343, 346-48, 351-56.

259. RESTATEMENT (SECOND) OF TORTS § 281 (1991).

260. See *Adams v. Clean Air Sys.*, 586 N.E.2d 940 (Ind. Ct. App. 1992) (denying recovery because plaintiff only showed possible, but not proven, exposure).

261. See, e.g., *Ayers v. Township of Jackson*, 525 A.2d 287 (N.J. 1987).

262. See *In re Agent Orange Prod. Liab. Litig.*, 611 F. Supp. 1223, 1261 (E.D.N.Y. 1985), *aff'd in part, rev'd in part*, 818 F.2d 145 (2d Cir. 1987).

The plaintiff must next prove that the substance or substances to which he was exposed are toxic.²⁶³ Proving a substance's toxicity to humans, particularly at low levels of exposure over extended periods of time, is not easy. Major cases have failed because the plaintiffs have not been able to overcome this hurdle.²⁶⁴

The plaintiff must also establish that the condition from which he suffers is one that would not occur but for the presence of the hazardous substance.²⁶⁵ A court may find a showing that the condition would not occur in the manner and frequency in which it is now appearing but for the exposure to a hazardous substance sufficient to establish enhanced risk. The problem, however, is that this showing does not prove that the plaintiff's condition occurred because of the presence of the defendant's hazardous substance. The plaintiff must eliminate all other potential sources to convince the court of the defendant's responsibility.²⁶⁶

The final element that the plaintiff must show in order to establish the action for enhanced risk is that the toxic substance to which he has been exposed will more likely than not cause him to develop the harm for which he claims to be at risk.²⁶⁷ This issue of causation is the toughest hurdle for the plaintiff to clear, and the one upon which the outcome of most cases eventually turns.

Commentators have divided the results of courts' causation determinations into two categories: "strong" and "weak."²⁶⁸ The weak cases allow a plaintiff to survive summary judgment or directed verdict if he has presented statistical evidence that the probability of harm to any

263. *See id.*

264. *See id.* at 1261.

265. *Id.*

266. *See* Harvard Law Review Association, *Developments in the Law, Toxic Waste Litigation*, 99 HARV. L. REV. 1458, 1617 (1986).

267. *See id.*; *see also* Hagerty v. L & L Marine Servs., Inc., 788 F.2d 315, 319, *reh'g denied*, 797 F.2d 256 (5th Cir. 1986). The standard for determining if the plaintiff has shown the disease was more likely than not the result of the hazardous substance exposure is usually "reasonable medical certainty." This phrase is most often interpreted as requiring a greater than 50% chance of the plaintiff actually getting the disease for which he claims to be at risk. *See* Gideon v. Johns-Manville Corp., 761 F.2d 1129, 1138 (5th Cir. 1985).

268. Pierce, *supra* note 252; Harvard Law Review Association, *supra* note 267, at 1619.

person exposed to substance X is greater than fifty percent.²⁶⁹ The strong cases require both this statistical evidence and some evidence that the plaintiff will be in the group that contracts the disease. If the chances of the plaintiff developing the disease in question are less than fifty percent, he cannot recover under either version of the more likely than not requirement.²⁷⁰

In nearly all cases, providing evidence of the plaintiff's chances of actually contracting the disease and of the toxicity of the substance will require expert testimony.²⁷¹ Courts will therefore face questions about the qualifications of experts and the admissibility of novel scientific theories.²⁷²

B. *The Single Action Rule in Enhanced Risk Cases*

The necessity for the development of the doctrine of enhanced risk derives from the single action rule.²⁷³ The traditional rule requires the plaintiff to bring all of his complaints against the defendant regarding a

269. See *Dartez v. Fibreboard Corp.*, 765 F.2d 456, 466 (5th Cir. 1985). A few courts have departed from the majority rule and have allowed recovery for the enhanced risk of future disease when the odds of the claimant getting the disease are less than probable, i.e., less than 50%. See, e.g., *Valori v. Johns-Manville Sales Corp.*, Civ. A. No. 82-2686, 1985 WL 6074 (D.N.J. Dec. 11, 1985); *Brafford v. Susquehanna Corp.*, 586 F. Supp. 14 (D. Colo. 1984) (allowing recovery for future risk of cancer after finding that the plaintiffs had "suffered a definite, present physical injury" in the form of subcellular damage to chromosomes); *Depass v. United States*, 721 F.2d 203 (7th Cir. 1983) (allowing recovery for unrelated possible future harm after finding present physical injury).

270. See *Pierce*, *supra* note 252; *Laswell v. Brown*, 683 F.2d 261 (8th Cir. 1982), *cert. denied*, 459 U.S. 1210 (1983); *Larson v. Johns-Manville Sales Corp.*, 399 N.W.2d 1 (1986), *reh'g denied*, (Mich. 1987).

271. See, e.g., *Gideon v. Johns-Manville Sales Corp.*, 761 F.2d 1129, 1137 (5th Cir. 1985).

272. James D. Pagliaro & Amelia C. Benton, *Courtroom Science: Toxic Tort Battleground*, 3 *Toxics L. Rep.* (BNA) No. 42, at 1336 (Mar. 22, 1989).

273. See David P.C. Ashton, Comment, *Decreasing the Risks Inherent in Claims for Increased Risk of Disease*, 43 *U. OF MIAMI L. REV.* 1081, 1090-1102 (1989). Ashton discusses other factors in the development of the enhanced risk cause of action, such as loss of evidence over time and the possibility that the defendant may become insolvent by the time the disease actually occurs. Ashton also argues that delaying the payment of damages until a court is able to determine that a plaintiff will suffer the injury lessens the deterrent effect of liability for such injuries. *Id.*

single incident to the court at one time.²⁷⁴ The natural effect of this rule is that if the plaintiff, for whatever reason, does not recover on all of her claims in the initial suit, then those losses remain forever uncompensated.²⁷⁵

In balancing the interests of finality and judicial economy against the benefits of accurate and full compensation, the courts adopted the single action rule as an acceptable compromise. Over time exceptions to the rule have emerged.²⁷⁶ The exceptions first developed in response to unique situations in which procedural rules or practical realities caused different injuries from the same incident to be handled separately by the courts. Courts allowed plaintiffs to maintain separate actions if it determined that injustice would result through strict application of the single action rule.²⁷⁷

One exception to the single action rule developed in automobile accident cases in which the property and personal injury portions of the claim arose from the same set of facts. Logically, evaluating damage to an automobile is much easier than evaluating injuries to a human. Furthermore, in many cases the true party in interest on the property damage claim was the injured person's insurance company. In these cases the balance of equities shifted and the previously acceptable compromise became unacceptable.²⁷⁸

The weakness of the single action rule becomes apparent when combined with the more likely than not rule for future injury. Unless a court either accepts the proposition that increased risk is itself an injury that can and should be compensated,²⁷⁹ or allows relief from the single

274. RESTATEMENT (SECOND) OF TORTS § 910 (1993).

275. W. PAGE KEETON ET AL., *supra* note 13, § 30, at 165-66.

276. *See* RESTATEMENT (SECOND) OF JUDGMENTS § 26 (1982); *see also* Rosenthal v. Scott, 150 So. 2d 436 (Fla. 1963) (holding that the single action rule did not bar a suit for personal injuries, despite the fact the plaintiff's subrogee had already sued for property damage from the same accident); Eagle-Picher Indus., Inc. v. Cox, 481 So. 2d 517 (Fla. Dist. Ct. App. 1985), *review denied*, 492 So. 2d 1331 (Fla. 1986) (allowing a later action if and when asbestos exposure victim develops cancer).

277. *See, e.g.,* Rosenthal, 150 So. 2d 436; *see also* Almertoh v. Government Employees Ins. Co., 587 So. 2d 550 (Fla. Dist. Ct. App. 1991).

278. *See* Emmco Ins. Co. v. Bankston, 163 So. 2d 24, 26 (Fla. Dist. Ct. App. 1964). "[It] is not unjust to the wrongdoer, who is thereby required to pay only the full amount for which he is liable because of his wrong or tort." *Id.*

279. Ashton, *supra* note 273, at 1082.

action rule, the plaintiff loses his right to recover for a future injury before he is even aware of its existence.

One example of this lost cause of action is a case based on exposure to airborne asbestos fibers. Over time exposure to a sufficient quantity of asbestos fibers may lead to pleural thickening, a diagnosable but usually benign²⁸⁰ condition involving changes in the lung's lining.²⁸¹ Eventually some people exposed to asbestos will develop the more serious and disabling condition called asbestosis.²⁸² Of those who develop asbestosis many will develop some form of lung cancer. The progression from one condition to the next is neither certain nor predictable. A physician cannot say with certainty that an individual who has pleural thickening will develop asbestosis or that an individual with asbestosis will develop cancer. Yet, courts often allow recovery for the more serious condition if the plaintiff can satisfy the more likely than not standard.²⁸³ The average plaintiff, however, cannot meet the more likely than not burden because either the experts place the odds of injury at less than fifty percent, or because the plaintiff's experts are unwilling to quantify the plaintiff's chance of developing cancer.²⁸⁴

If the plaintiff has pleural thickening or asbestosis but has not yet developed cancer, he cannot recover for cancer unless he can prove it is more likely than not that he will get the cancer.²⁸⁵ Generally, the statute of limitations on the plaintiff's injury runs from the time the plaintiff learned he had asbestosis. This running of the statute of limitations occurs even in jurisdictions with the modern "discovery rule" because the plaintiff will have knowledge of both the injury and its cause.²⁸⁶ If the plaintiff files suit when the asbestosis is diagnosed, he will be unable to obtain compensation for his potential cancer because no certainty exists that he

280. Patients with extensive pleural thickening may have difficulty breathing. CECIL TEXTBOOK OF MEDICINE 2362 (1988).

281. AMA Council on Scientific Affairs, *supra* note 228, at 2593 ("Patients with only pleural involvement are usually asymptomatic and have normal pulmonary function.").

282. *See supra* note 229 (defining asbestosis).

283. *See Jackson v. Johns-Manville Sales Corp.*, 781 F.2d 394 (5th Cir.), *cert. denied*, 478 U.S. 1022 (1986).

284. *See Herber v. Johns-Manville Corp.*, 785 F.2d 79, 82 (3d Cir. 1986); *Pollock v. Johns-Manville Sales Corp.*, 686 F. Supp. 489 (D.N.J. 1988); *Ayers v. Township of Jackson*, 525 A.2d 287 (N.J. 1987).

285. *Dartez v. Fibreboard Corp.*, 765 F.2d 456, 466 (5th Cir. 1985).

286. *Id.*

will ever develop it. If the plaintiff waits to see if the cancer develops, he runs the risk that the statute of limitations will bar the suit.²⁸⁷

Thus, the potential plaintiff is faced with a choice between an inadequate recovery if he sues immediately, and no recovery if he waits.²⁸⁸ This absurd result becomes even more ludicrous in the few states that have not adopted the "discovery rule."²⁸⁹ In those states the statute of limitations for a toxic exposure runs before the potential plaintiff is even aware that an exposure has occurred.²⁹⁰

As Charles Dickens's Mr. Bumble observed, the law may, on occasion, be an ass,²⁹¹ but the judges who make and interpret the law are seldom happy with that state of affairs.²⁹² Some courts have been willing

287. Statutes of limitation for personal injury claims tend to be fairly short. *See, e.g.*, VA. CODE ANN. § 8.01-243 (Michie 1992) (two years); CAL. CIV. PRO. CODE § 340 (Deering 1982) (one year).

288. *See, e.g., Dartez*, 765 F.2d 456; *Devlin v. Johns-Manville Corp.*, 495 A.2d 495, 502 (N.J. Super. 1985).

289. The "discovery rule" means that the statute of limitations runs from the discovery or detection of the condition and not from the exposure to the risk. W. PAGE KEETON ET AL., *supra* note 13, § 30 at 166-67.

290. *See Steinhardt v. Johns-Manville Corp.*, 430 N.E.2d 1297, 1299 (N.Y. 1987), *cert. denied*, 456 U.S. 967 (1982), *overruled by statute*, N.Y. CIV. PRAC. L. & R. § 214-c (Consol. Supp. 1993) (legislatively adopting the discovery rule). This result has been modified in at least some cases by the discovery rule imposed by CERCLA, 42 U.S.C. § 9658 (1988); *see also Schiro v. American Tobacco Co.*, 7 Toxics L. Rep. (BNA) No. 32, at 921 (Miss. Sup. Ct. Dec. 31, 1992) (holding that the statute of limitations began to run only when a diagnosis of cancer was confirmed, and not when the plaintiff became suspicious and fearful that she might have cancer).

291. CHARLES DICKENS, *THE ADVENTURES OF OLIVER TWIST* 399 (New Oxford Illustrated Dickens ed., Oxford University Press 1966) ("If the law supposes that, said Mr. Bumble ... the law is a ass--a idiot.").

292. *See, e.g., Greeley v. Miami Valley Maintenance Contractors, Inc.*, 551 N.E.2d 981, 986-87 (Ohio 1990); *see also Dincher v. Marlin Firearms Co.*, 198 F.2d. 821, 823 (2d Cir. 1952) (Frank, J., dissenting).

Except in topsy-turvy land you can't die before you are conceived, or be divorced before ever you marry, or harvest a crop never planted, or burn down a house never built, or miss a train running on a non-existent railroad. For substantially similar reasons, it has always heretofore been accepted, as a sort of legal "axiom," that a statute of limitations does not begin to run against a cause of action before that cause of action exists, i. e., before a judicial remedy is available to the plaintiff. For a limitations statute, by its inherent nature, bars a cause of action solely because suit was not brought to assert it during a period when the suit,

to live in what Judge Frank called "topsy-turvy land" and thus deny recovery to a plaintiff who brings his action before contracting a disease on ripeness grounds. Yet, these courts also acknowledge that if the plaintiff had waited until he contracted the disease to sue, the statute of limitations would bar his claim.²⁹³

The emerging majority of courts avoid this nonsensical result.²⁹⁴ Some courts accomplish this relief by relaxing the more likely than not requirement for future injury,²⁹⁵ but more courts have opted to modify, weaken, or create an exception to the single action rule.²⁹⁶ Some of these courts find that asbestosis and asbestos-related cancer are separate and distinct disease processes.²⁹⁷ Accordingly, a plaintiff would be unreasonable in bringing an action for damages that he has not yet

if begun in that period, could have been successfully maintained; the plaintiff, in such a case, loses for the sole reason that he delayed--beyond the time fixed by the statute--commencing his suit which, but for the delay, he would have won. As the Connecticut Supreme Court has said, the policy behind a limitations statute is that of penalizing one who "sleep[s] upon his rights". But no student of such legal somnolence has ever explained how a man can sleep on a right he does not have.

Id. (citations omitted).

293. See, e.g., *Gideon v. Johns-Manville Sales Corp.*, 761 F.2d 1129, 1137 (5th Cir. 1985).

294. Pierce, *supra* note 251, at 10,262; see also David G. Poston, Comment, *Gone Today and Here Tomorrow: Damage Recovery for Subsequent Developing Latent Diseases in Toxic Tort Exposure Actions*, 14 AM. J. TRIAL ADVOC. 159, 167 (1990).

295. See, e.g., *Valori v. Johns-Manville Sales Corp.*, Civ. A. No. 82-2686, 1985 WL 6074, at *3 (D.N.J. Dec. 11, 1985); *Brafford v. Susquehanna Corp.*, 586 F. Supp. 14, 16 (D. Colo. 1984) (allowing recovery for future risk of cancer after finding that the plaintiffs had "suffered a definite, present physical injury" in the form of subcellular damage to chromosomes).

296. See, e.g., *Adams v. Johns-Manville Sales Corp.*, 727 F.2d 533, 537 (5th Cir.), *certification denied*, 467 So. 2d 529 (La. 1985), *reh'g denied*, 783 F.2d 589 (5th Cir. 1986); *Wilson v. Johns-Manville Sales Corp.*, 684 F.2d 111, 120-21 (D.C. Cir. 1982); *Eagle-Picher Indus., Inc. v. Cox*, 481 So.2d 517, 521-23 (Fla. Dist. Ct. App. 1985), *review denied*, 492 So. 2d 1331 (Fla. 1986).

297. See, e.g., *Devlin v. Johns-Manville Sales Corp.*, 495 A.2d 495, 502 (N.J. Super. Ct. 1985); see also *Goodman v. Mead Johnson & Co.*, 534 F.2d 566, 577-78 (3d Cir. 1976), *cert. denied*, 429 U.S. 1038 (1977) (holding that thrombophlebitis of the leg and cancer of the breast were not products of the same chain of causality even if both were related to the plaintiff's use of the defendant's oral contraceptives).

suffered. Some courts have also noted that requiring a plaintiff to bring all possible claims in a single action runs contrary to notions of judicial economy.²⁹⁸

The reasoning of the asbestos cases is applicable in any case involving similar injuries. The medical and legal communities better understand the effects of asbestos on humans because of the large number asbestos victims.²⁹⁹ The reasoning process in cases involving other hazardous substances would be the same, although the analysis may be less accurate due to the lack of complete information.

Allowing a modification of the single action rule makes intellectual and logical sense for the area of latent injuries from hazardous substances. Modification avoids ridiculous, absurd, and unjust results,³⁰⁰ and fosters wise use of limited judicial resources.³⁰¹ Despite these arguments in favor of allowing relief from the single action rule, states have not universally adopted modifications. Several states have specifically rejected allowing relief from the rule, including Texas³⁰² and Pennsylvania.³⁰³ In the alternative, plaintiffs should be compensated for the enhanced risk of a future disease as a remedy in the single action.

C. *Enhanced Risk Damages in Perspective*

Enhanced risk claims remain controversial, and the enhanced risk cause of action in toxic tort law is still developing. This controversy and development are the result of the current system in which tort law is a

298. This effect occurs because a plaintiff in a "single action" state is faced with the certain loss of his rights to recover if he does not file suit. The plaintiff is forced to litigate the issue of future cancer at the early signs of injury, instead of waiting to see if the cancer actually develops as feared. Plaintiffs may lose most of the claims but would probably win enough of them to cause the actions to continue. *See, e.g., Eagle-Picher*, 481 So. 2d at 521-23.

299. Numerous books and journal articles have been published on the medical and legal aspects of asbestos. *See, e.g.,* B. CASTLEMAN, *ASBESTOS: MEDICAL AND LEGAL ASPECTS* (2d ed. 1986); AMA Council on Scientific Affairs, *supra* note 228, at 2593.

300. *See Dincher v. Marlin Firearms Co.*, 198 F.2d 821, 823 (2d Cir. 1952) (Frank, J., dissenting).

301. *See Gideon v. Johns-Manville Corp.*, 761 F.2d 1129, 1146 (5th Cir. 1985).

302. *See id.* at 1138.

303. *See Ross v. Johns-Manville Corp.*, 766 F.2d 823, 828 (3d Cir. 1985); *Cathcart v. Keene Indus. Insulation*, 471 A.2d 493, 500 (Pa. Super. Ct. 1984).

business,³⁰⁴ and a business requires money to operate. Damages for enhanced risk are potentially substantial, and one-third of a large award is more pleasing to an attorney working on a contingent fee than is one-third of a small award. Furthermore, unlike medical monitoring damages, these damages will be paid in a lump sum. This potentially great reward must be contrasted with the problem that toxic tort cases are hard to prove in most circumstances,³⁰⁵ and claims for enhanced risk are even tougher.³⁰⁶ Although commentators are intrigued with the enhanced risk cause of action, judges and legislators are not.³⁰⁷ Unless the plaintiff can prove that he is more likely than not to contract the threatened disease, he is unlikely to recover for the enhanced risk. In contrast, substantial risks that are less than probable will provide excellent support for an emotional distress cause of action. Furthermore, if the plaintiff's condition merits special monitoring, the plaintiff may seek relief under the cause of action for presymptom medical monitoring.³⁰⁸

V. ENVIRONMENTAL STATUTES AS A POSSIBLE BASIS OF RECOVERY

In addition to the various common law theories of recovery used to gain compensation for individuals exposed to toxic or hazardous substances, many environmental statutes that have been passed in the last twenty years provide a variety of possible remedies.³⁰⁹ With one possible exception, however, the remedies available do not include a cause of action for personal injury damages.³¹⁰ The exception is that in certain

304. Reitze, *supra* note 31, at 1568.

305. 2 AMERICAN LAW INST., *supra* note 142.

306. DORE, *supra* note 18, at § 7.07.

307. *Id.* at § 7-16.2 n.24; see also David S. Pegno, *An Analysis of the Enhanced Risk of Action (Or How I Learned to Stop Worrying and Love Toxic Waste)*, 33 VILL. L. REV. 437, 460 (1988).

308. See, e.g., *Hagerty v. L & L Marine Servs., Inc.*, 788 F.2d 315, *reh'g denied*, 797 F.2d 256 (5th Cir. 1986).

309. Jeffery Trauberman, *Compensating Victims of Toxic Substances: An Analysis of Existing Federal Statutes*, 5 HARV. ENVTL. L. REV. 1, 18-21, 26-27 (1981) (addressing claims under the Federal Water Pollution Control Act and various oil pollution compensation statutes); Alcorn, *supra* note 20, at 3.

310. See, e.g., *Adams v. Republic Steel Corp.*, 621 F. Supp. 370, 376 (W.D. Tenn. 1985) (holding that no private right of action for damages exists under the Clean Air Act or the Toxic Substances Control Act); *Sanford Street Local Dev. Corp. v. Textron, Inc.*, 768 F.

narrowly defined circumstances, a plaintiff may be able to seek medical monitoring costs under the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA")³¹¹ or the Resource Conservation and Recovery Act ("RCRA").³¹²

As a general rule, the possible remedies available for private causes of action under the environmental statutes, also known as "citizen suits," are limited to injunctive relief and fines and penalties paid to the government. Furthermore, courts have interpreted most citizen suit provisions so that the grant of the explicit private cause of action for injunctive relief bars any implied cause of action for any other purposes.³¹³ Additionally, the United States Supreme Court has held that citizen suits under the Federal Water Pollution Control Act³¹⁴ cannot be used to redress violations that occurred entirely in the past.³¹⁵ RCRA contains similar language, and courts have interpreted the citizen suit provisions of RCRA to bar actions for violations that occurred entirely in the past as well.³¹⁶

A. *Medical Monitoring Under RCRA*

Congress designed RCRA to deal with the production and disposal of hazardous materials in ongoing facilities.³¹⁷ RCRA is commonly described as a "cradle to grave" regulatory system for hazardous

Supp. 1218, 1224 (W.D. Mich. 1991), *vacated*, 805 F. Supp. 29 (W.D. Mich. 1991) (holding that not only does no private right of action exist under TSCA, but that a violation of TSCA cannot even be used to establish negligence per se under state tort law, as this would indirectly allow what Congress had chosen to deny by direct federal action).

311. 42 U.S.C. §§ 9601-9675 (1988 & Supp. IV 1992).

312. 42 U.S.C. §§ 6901-6992K (1988 & Supp. IV 1992) (part of the Solid Waste Disposal Act Amendments).

313. *See, e.g.*, *Middlesex Cty. Sewerage Auth. v. National Sea Clammers Ass'n*, 453 U.S. 1, 11 (1981). The citizen suit provisions are very similar. *Compare* RCRA § 7002, 42 U.S.C. § 6972 *with* CERCLA § 301, 42 U.S.C. § 9659.

314. 33 U.S.C. §§ 1251-1387 (1988 & Supp. IV 1992).

315. *Gwaltney of Smithfield v. Chesapeake Bay Found., Inc.*, 484 U.S. 49, 63 (1987).

316. *See Coburn v. Sun Chem. Corp.*, 28 Env't Rep. Cas. (BNA) 1665, 1672 (E.D. Pa. Nov. 9, 1988).

317. H.R. REP. NO. 1016, 96th Cong., 2d Sess. pt. 1, at 17 (1980), *reprinted in* 1980 U.S.C.C.A.N. 6119, 6119; *United States v. Kayser-Roth Corp., Inc.*, 910 F.2d 24 (1st Cir. 1990), *cert. denied*, 498 U.S. 1084 (1991).

substances.³¹⁸ Whereas CERCLA deals primarily with past contamination, RCRA is concerned mostly with current operations. Thus, RCRA's regulatory outlook is proactive rather than reactive.³¹⁹ RCRA also contains "corrective action" provisions intended to deal with past contamination of sites that continue to operate under its regulation. RCRA's corrective action provisions are narrower in reach and application, however, than are the similar provisions of CERCLA.³²⁰

No doubt exists that the Administrator of the Environmental Protection Agency ("EPA") or the appropriate state body in a state with an authorized RCRA program could order medical monitoring of an exposed population.³²¹ The citizen suit provisions of RCRA³²² do not appear broad enough, however, to give private litigants the right to demand medical monitoring except in the most limited of circumstances.³²³

318. Roberta G. Gordon, *Legal Incentives for Reduction, Reuse, and Recycling: A New Approach to Hazardous Waste Management*, 95 YALE L.J. 810, 811 & n.9, 812 (1986).

319. *Id.*

320. *See, e.g.*, RCRA § 3019, 42 U.S.C. § 6939a (providing for health assessments at landfills and surface impoundments); *id.* § 3004, 42 U.S.C. § 6924 (dealing with the general power of the EPA Administrator to require corrective action by permitted facilities, including the authority to require that corrective action extend beyond the premises of that facility unless the adjoining landowner refuses to permit it).

321. *Id.* § 3013(a), 42 U.S.C. § 6934(a). The monitoring would be accomplished by the Administrator of EPA requesting that the Agency for Toxic Substances and Disease Registry ("ATSDR") conduct a preliminary health assessment, to be followed by "full scale health and epidemiological studies and medical evaluations" if indicated. *Id.* § 3019(f), 42 U.S.C. § 6939a(f). This monitoring pattern is the same monitoring scheme required for a CERCLA site; the scheme is implemented through RCRA and the corrective action rules.

322. *Id.* § 7002, 42 U.S.C. § 6972.

323. *Cf. McGregor v. Industrial Excess Landfill, Inc.*, 709 F. Supp. 1401 (N.D. Ohio 1987), *aff'd*, 856 F.2d 39 (6th Cir. 1988) (holding that under RCRA § 7002, 42 U.S.C. § 6972, a citizen suit is possible only when the state and federal authorities have not acted and notice has been given to the Administrator of EPA 60 days before filing suit). Members of the public "may submit evidence of releases of or exposure to hazardous constituents" to the Administrator of ATSDR, the Administrator of EPA, or to a state with an authorized RCRA program, but they can not demand that the government actor take any particular action based on that information. RCRA § 3019, 42 U.S.C. § 6939a(c).

In *Werlein v. United States*,³²⁴ the only reported case in which medical monitoring was sought under RCRA, the court denied medical monitoring on summary judgment. The court may have rejected medical monitoring, however, because the proposed relief was structured as a lump sum payment to the plaintiffs to be used for their future medical monitoring.³²⁵ The court stated that it objected to the award of medical monitoring expenses in these circumstances, but that it might consider a medical monitoring remedy under RCRA in the future.³²⁶ In particular, the court objected to awarding a large lump sum payment to the plaintiffs under its power to award "injunctive relief."³²⁷

The court in *Werlein* relied on *Barth v. Firestone Tire & Rubber Co.*³²⁸ to reject medical monitoring as a remedy.³²⁹ In *Barth*, the plaintiffs requested medical monitoring in order to gather and share information regarding exposure.³³⁰ The court in *Werlein* found this type of relief to be a proper form of injunctive relief.³³¹ Thus, medical monitoring under RCRA would likely be limited to situations such as the one in *Barth*, in which information must be gathered to assess the effects on the public health. If medical monitoring is awarded, the form of the remedy will be a court-supervised fund controlled by a public agency.³³²

324. 746 F. Supp. 887 (D. Minn. 1990), *vacated in part*, 793 F. Supp. 898 (D. Minn. 1992). *Werlein* was filed under the RCRA citizen suit provision, RCRA § 7002, 42 U.S.C. § 6972, which allows "any person" to file a suit against a defendant who is "alleged to be in violation of any permit, standard, regulation, condition, requirement, prohibition, or order which has become effective pursuant to this chapter." If the plaintiff alleges that the permit applicant did not comply with the monitoring provisions of RCRA § 3019, 42 U.S.C. 6939a, the plaintiff may have a cause of action against both the applicant and the Administrator. Similarly, if the monitoring provisions were included in the permit but were not being enforced, the plaintiff may have a viable cause of action under RCRA. The existence of a RCRA cause of action is also dependent on compliance with the other procedural hurdles, i.e., no state or federal enforcement actions and 60-days notice. *See id.* § 7002(b), (c), 42 U.S.C. § 6972(b), (c); *see also McGregor*, 709 F. Supp. 1401.

325. *Werlein*, 746 F. Supp. at 895.

326. *Id.*

327. *Id.*

328. 661 F. Supp. 193 (N.D. Cal.), *revised*, 673 F. Supp. 1466 (N.D. Cal. 1987).

329. *Werlein*, 746 F. Supp. at 895.

330. *Barth*, 661 F. Supp. at 203-04.

331. *Werlein*, 746 F. Supp. at 895.

332. *See, e.g., Ayers v. Township of Jackson*, 525 A.2d 287 (N.J. 1987) (holding that a court-supervised fund is the preferred method of handling medical monitoring awards).

B. *Medical Monitoring Under CERCLA*

1. *Agency for Toxic Substances and Disease Registry*

Private actions are not the only option for providing services traditionally considered to be medical monitoring. Section 104(i) of CERCLA³³³ establishes the Agency for Toxic Substances and Disease Registry ("ATSDR"). The 1986 amendments to CERCLA³³⁴ granted ATSDR a complicated scheme of functions relating to the assessment of health effects of actual and threatened hazardous substance releases.³³⁵ For example, ATSDR is required to conduct formal health assessments for every National Priorities List ("NPL") facility.³³⁶ Additionally, ATSDR is authorized to conduct formal health assessments on other sites if provided with information from individuals or physicians regarding human contact with released hazardous materials.³³⁷ These physicians and individuals may then petition the ATSDR to perform a health assessment. If ATSDR denies the request, they must provide a written explanation of why an assessment is not appropriate.³³⁸ In performing health assessments, ATSDR considers a variety of factors that indicate the degree of risk to human health.³³⁹ Depending on the results of the health assessment, ATSDR may conduct pilot epidemiologic studies³⁴⁰ and

333. CERCLA § 104(i), 42 U.S.C. § 9604(i).

334. Superfund Amendments and Reauthorization Act of 1986 ("SARA"), Pub. L. No. 99-499, 100 Stat. 1613 (1986) (codified as amended at 42 U.S.C. §§ 9601-9675 and scattered sections elsewhere).

335. *See, e.g., id.* § 110, 100 Stat. 1636-42; *see generally* *Ambrogi v. Gould Inc.*, 750 F. Supp. 1233, 1249 (M.D. Pa. 1990) ("To remedy the perceived inadequacies of the 1980 enactment, Congress created an expanded role for the Agency for Toxic Substances and Disease Registry ("ATSDR") to provide medical examinations and testing of exposed individuals including 'tissue sampling, chromosomal testing, epidemiological studies, or any other assistance appropriate under the circumstances.'"); SUSAN M. COOKE, *THE LAW OF HAZARDOUS WASTE, MANAGEMENT, CLEANUP, LIABILITY AND LITIGATION* § 13.01[4][d][vii] (1992) (overview of ATSDR health assessment functions under section 104(i) as amended by SARA).

336. CERCLA § 104(i)(6)(A), 42 U.S.C. § 9604(i)(6)(A). The NPL is a list of all "known releases or threatened releases throughout the United States" which is used for assigning the priority for remedial actions. *Id.* § 105(a)(8)(B), 42 U.S.C. § 9605(a)(8)(B).

337. *Id.* § 104(i)(6)(B), 42 U.S.C. § 9604(i)(6)(B).

338. *Id.*

339. *Id.* § 104(i)(6)(F), 42 U.S.C. § 9604(i)(6)(F).

340. *Id.* § 104(i)(7), 42 U.S.C. § 9604(i)(7).

establish a registry of exposed persons.³⁴¹ In the case of a serious health risk ATSDR may establish a long-term health surveillance program. This program may include periodic medical testing and a treatment referral mechanism for persons who are screened positive.³⁴²

This scheme appears to be an excellent solution from a medical and scientific standpoint, but it suffers from at least two practical defects. The first is that the ATSDR is still getting "geared up" for the massive task of surveying all NPL sites; it has more work to do than it has resources with which to do it.³⁴³ The second is that exposed persons cannot gain direct access to any of the money from ATSDR, nor can they direct ATSDR in their actions.³⁴⁴ ATSDR's findings and reports are available to plaintiffs and their lawyers, however, in any tort suits filed regarding injuries from the contamination.³⁴⁵

2. *Private Actions Under CERCLA*

Plaintiffs may also seek medical monitoring costs under CERCLA in private actions. The analysis under CERCLA varies somewhat from that under RCRA as a consequence of the nature of the two programs. Congress had a different set of goals and objectives in passing CERCLA as compared to RCRA.³⁴⁶ Whereas RCRA was designed to prevent disasters before they happen by regulating ongoing operations, CERCLA deals with closed or abandoned sites of hazardous chemical releases. The

341. *Id.* § 104(i)(8), 42 U.S.C. § 9604(i)(8).

342. *Id.* § 104(i)(9), 42 U.S.C. § 9604(i)(9).

343. *Hazardous Substances, Statutory Deadline Blamed for Inadequacy of Superfund Health Assessments by ATSDR*, DAILY REPORT FOR EXECUTIVES (BNA), Sept. 5, 1991, at A-7.

344. To the extent that attorneys of exposed individuals played a role in the decision to grant the monitoring by ATSDR, they might be able to make a claim for fees as a response cost. An article of faith among toxic tort defense lawyers, although seldom mentioned in the literature, is that the real reason plaintiffs want medical monitoring as interim relief is to provide money to pay the experts in the companion toxic tort suits.

345. For a general discussion of ATSDR, see James A. Rogers, *The Potential Role of Superfund in Toxic Tort Litigation*, 3 NAT. RESOURCES & ENV'T 13 (1988).

346. CERCLA's primary purpose is "to facilitate the prompt cleanup of hazardous waste sites by placing the ultimate financial responsibility for cleanup on those responsible for the hazardous wastes." *Walls v. Waste Resource Corp.*, 761 F.2d 311, 318 (6th Cir. 1985).

text of both statutes is less than a model of legislative clarity,³⁴⁷ however, and the legislative history is uncertain at best.³⁴⁸

As proposed, CERCLA was to create a comprehensive response to the leakage of hazardous substances into the environment, but most of the provisions related to leakage were cut as the various interests fought over the contents and fate of the bills. When first introduced, the bills that later became CERCLA provided for a distinct and independent federal cause of action for personal injuries caused by exposure to hazardous chemicals.³⁴⁹ During the legislative process, however, those provisions were abandoned.³⁵⁰ Although this compromise removed the cause of action for general personal injury damages, it did not completely settle the question of whether a court could award medical monitoring in a CERCLA action. This ambiguity remains because CERCLA authorizes private litigants to recover "response costs" from the party or parties who caused the release of the hazardous substance into the environment. Thus, by characterizing medical monitoring as a response cost, it is, theoretically at least, possible to recover medical monitoring costs under CERCLA. In cleanups directed by a governmental agency, the government need prove only that the costs incurred were "not inconsistent with the National

347. For example, the tenth circuit has referenced CERCLA's "notorious lack of clarity." *Daigle v. Shell Oil Co.*, 972 F.2d 1527, 1533 (10th Cir. 1992).

348. *Id.*; see *Ambrogi v. Gould*, 750 F. Supp. 1233, 1244 (M.D. Pa. 1990) ("Because of its varied and extensive record of passage, the use of CERCLA's legislative history has its limits."); see also 126 CONG. REC. 31,969 (1980) (statement of Rep. Broyhill).

349. The 96th Congress fully considered three major hazardous substance response bills, in addition to a Carter administration bill which died in committee. See 1 ENVTL L. INST., SUPERFUND: A LEGISLATIVE HISTORY xiii (1983).

350. Senator Jennings Randolph of West Virginia was cosponsor of one of the bills that became CERCLA. He expressly acknowledged the intentional deletion of any private cause of action for personal injury. The Senator stated that "[w]e have deleted the Federal cause of action for medical expenses or income loss." 126 CONG. REC. 14,964 (daily ed. Nov. 24, 1980), reprinted in 2 ENVTL. L. INST., SUPERFUND: A LEGISLATIVE HISTORY 260 (1993). Given Senator Randolph's status as a cosponsor of the compromise bill, courts have found his statements a reliable indicator of congressional intent to exclude "medical expenses" from recovery. This reliability is reasonable especially because the Senate passed the bill the same day the remarks were made, and the full Congress approved it two weeks later. Patricia A. Shackelford, Comment, *Easing the Credit Crunch: A "Functional" Approach To Lender Control Liability Under CERCLA*, 19 B.C. ENVTL. AFF. L. REV. 805 (1992); see also *North Haven Bd. of Educ. v. Bell*, 456 U.S. 512, 526-27 (1982) (noting "authoritative" status of the remarks of the sponsor of a bill).

Contingency Plan."³⁵¹ A private party claiming response costs, however, has the burden of proving the expenses were "consistent" with the NCP.³⁵²

To recover medical monitoring costs, a plaintiff must first show that medical monitoring is a response cost. "Response cost" is not defined in CERCLA's definition section.³⁵³ A definition of "response" exists and provides that "[t]he terms 'respond' or 'response' mean remove, removal, remedy and remedial action; [sic] all such terms (including the terms 'removal' and 'remedial action') include enforcement activities related thereto."³⁵⁴ The terms "remove," "removal," "remedy," and "remedial action" all have their specified CERCLA meanings:

(23) The terms "remove" or "removal" means the cleanup or removal of released hazardous substances from the environment ... such actions as may be necessary to monitor, assess, and evaluate the release or threat of release of hazardous substances, the disposal of removed material, or the taking of such other actions as may be necessary to prevent, minimize, or mitigate damage to the public health or welfare or to the environment, which may otherwise result from a release or threat of release.

(24) The terms "remedy" or "remedial action" means those actions consistent with permanent remedy taken instead of or in addition to removal actions in the event of a release or threatened release of a hazardous substance into the environment, to prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health or welfare or the environment. The term includes, but is not limited to, such actions at the location of the release ... any monitoring reasonably required to assure that such actions

351. The National Contingency Plan ("NCP") is an overall blueprint for how cleanups should be conducted. *See* CERCLA § 105, 42 U.S.C. § 9605; 40 CFR § 300.1-.920.

352. The question of consistency under the NCP is a factual determination that "cannot be made on the basis of the pleadings but must await development of a factual record." *Pinole Point Properties, Inc. v. Bethlehem Steel Corp.*, 596 F. Supp. 283, 290 (N.D. Cal. 1984).

353. CERCLA § 101, 42 U.S.C. § 9601.

354. *Id.* § 101(25), 42 U.S.C. § 9601(25).

protect the public health and welfare and the environment.³⁵⁵

The total impact of the above definitions is that a "response cost" is a cost incurred in responding to a release or threatened release of toxic or hazardous substances. These costs may be in the nature of an immediate reaction, which is called a removal action, or a long-term cleanup, which is called a remedial action. Because a removal action includes actions that "may be necessary to monitor, assess, and evaluate the release or threat of release of hazardous substances,"³⁵⁶ the definition of response costs might include medical monitoring for exposed individuals if the purpose of the monitoring was to "monitor, assess, and evaluate the release or threat of release of hazardous substances."³⁵⁷ If the purpose of the monitoring is to protect the health of an individual, rather than the public at large, the monitoring will not likely be a covered response cost.

The courts are split on whether medical monitoring costs are properly an element of private response costs under CERCLA. Some courts find decisively that they are not. Others hold that perhaps, in the right circumstances, they might be. Complicating the issue is the problem that all the leading cases in which the courts find medical monitoring costs possible under CERCLA are federal district court cases. The only circuit court of appeals decision on the question held that medical monitoring expenses were not a proper response cost when claimed by a private party.³⁵⁸

Additionally, no recorded case exists in which a court has actually awarded medical monitoring expenses as an element of response costs under CERCLA. The issue has always arisen when the court is confronted by a motion to dismiss or for summary judgment. Therefore, the court has only had to decide whether any possible construction of facts pleaded might allow the award, and not whether the plaintiff is actually entitled such an award.³⁵⁹ The fact that courts have denied defendants' motions

355. *Id.* § 101(23), (24), 42 U.S.C. § 9601(23), (24).

356. *Id.* § 101 (23), 42 U.S.C. § 9601(23).

357. *Id.*

358. *Daigle v. Shell Oil Co.*, 972 F.2d 1527 (10th Cir. 1992).

359. *Conley v. Gibson*, 355 U.S. 41, 45-46 (1957). For example, the court in *Brewer v. Ravan*, 680 F. Supp. 1176 (M.D. Tenn. 1988), ruled that "the Court cannot say that it appears beyond doubt that plaintiffs can prove no set of facts in support of their CERCLA

for summary judgment on the question is far from a ringing endorsement for the plaintiffs' claims.³⁶⁰

Medical monitoring expenses are possible because of the extremely broad definition of "response costs" under CERCLA. Though no reported decision has awarded medical monitoring expenses as a response cost under CERCLA, several decisions have left the door open to do so.³⁶¹ In these decisions, the courts have consistently held that the claimant must establish that the monitoring is needed to assess the extent of the contamination or for another valid public health purpose³⁶² and that the testing is "consistent with the national contingency plan."³⁶³ Because the purpose of the NCP is to ensure that cleanups are conducted in an efficient and cost effective manner,³⁶⁴ it is unlikely that a court would ever approve a claim for medical monitoring expenses that duplicated services already provided by the ATSDR.

Medical monitoring is undoubtedly of a very private nature and therefore recovery under CERCLA is extremely unlikely to occur.³⁶⁵ Additionally, no doubt exists that the ATSDR has broad power and discretion to conduct monitoring of the communities affected by the release of hazardous substances,³⁶⁶ even though some commentators question whether the ATSDR has the resources or will to conduct the

claim." *Id.* at 1180. Similarly, in *Jones v. Inmont Corp.*, 584 F. Supp. 1425 (S.D. Ohio 1984), the court said "[i]n light of the present procedural posture of the case, we cannot say as a matter of law that the plaintiffs are not so entitled." *Id.* at 1430.

360. *Williams v. Allied Automotive, Autolite Div.*, 704 F. Supp. 782, 784 (N.D. Ohio 1988) ("costs of future medical monitoring are not categorically unrecoverable as response costs under CERCLA").

361. *See, e.g., id.*

362. For example, the court in *Brewer* held, "To the extent that plaintiffs seek to recover the cost of medical testing and screening conducted to assess the effect of the release or discharge on public health or to identify potential public health problems presented by the release, however, they present a cognizable claim under section 9607(a)." *Brewer*, 680 F. Supp. at 1179 (emphasis in original).

363. *Williams*, 704 F. Supp. at 784.

364. *Jones*, 584 F. Supp. at 1430 (citing *City of Philadelphia v. Stepan Chem. Co.*, 544 F. Supp. 1135, 1144 n.16 (E.D. Pa. 1982)). *But see Stepan Chem.*, 544 F. Supp. at 1141 (denying defendant's argument even though doing so would create a "merry go round of litigation").

365. *Brewer*, 680 F. Supp. at 1179.

366. COOKE, *supra* note 335, at § 13.01[4][d][vi].

task.³⁶⁷ The sole remaining question, therefore, is whether medical monitoring expenses incurred by a private party may ever be deemed a proper response cost under CERCLA. Several courts have held that they cannot.³⁶⁸ Their reasoning is instructive and persuasive.

The courts considering this issue rely on several key points. First, that "when Congress wanted to provide for medical care and testing, it knew how to do so in explicit language."³⁶⁹ Second, the courts found the legislative history of CERCLA to be instructive.³⁷⁰ Senator Jennings Randolph remarked during debate that "we have deleted the federal cause of action for medical expenses or income loss."³⁷¹ Third, the courts noted that the provisions regarding "monitoring" in section 104 of CERCLA relate only to "removal" actions under section 107³⁷² and are limited by the language in the provision.

The tenth circuit, in *Daigle v. United States*,³⁷³ ruled that "the 'monitor[ing]' allowed for under the 'removal action' definition relates under the plain statutory language only to an evaluation of the extent of a 'release or threat of release of hazardous substances.'"³⁷⁴ The court then decided that the "remedial action" definition focused expressly on actions necessary to "prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health or welfare or the environment"³⁷⁵ and that remedial actions did not include long term-medical monitoring.³⁷⁶

367. *Federal Public Health Studies Misleading, Citizens Endangered By Toxic Waste, Group Says*, 23 Env't Rep. (BNA), July 3, 1992, at 721.

368. See *Daigle v. Shell Oil Co.*, 972 F.2d 1527 (10th Cir. 1992); *Ambrogi v. Gould*, 750 F. Supp. 1233 (M.D. Pa. 1990); *Coburn v. Sun Chem.*, 28 Env't Rep. Cas. (BNA) 1665 (E.D. Pa. Nov. 9, 1988).

369. *Coburn*, 28 Env't Rep. Cas., at 1670.

370. See *Daigle*, 972 F.2d at 1536; *Cook v. Rockwell Int'l*, 755 F. Supp. 1468, 1474 (D. Colo. 1991); *Coburn*, 28 Env't Rep. Cas. (BNA) 1665; *Werlein v. United States*, 746 F. Supp. 887, 903 (D. Minn. 1990). Both *Werlein* and *Cook* cited *Coburn* and quoted Senator Randolph. *Werlein*, 746 F. Supp. at 902; *Cook*, 755 F. Supp. at 1473.

371. 126 CONG. REC. 14,964 (daily ed. Nov. 24, 1980), reprinted in 2 ENVTL. L. INST., *supra* note 350, at 260.

372. 42 U.S.C. § 9607(a)(4).

373. 972 F.2d 1527 (10th Cir. 1992).

374. *Id.* at 1535 (citing to CERCLA § 101(23), 42 U.S.C. § 9601(23)).

375. *Id.* (citing to CERCLA § 101(24), 42 U.S.C. § 9601(24)).

376. *Id.* at 1537.

The line of cases beginning with a magistrate's decision in *Chaplin v. Exxon*³⁷⁷ and running through the tenth circuit's decision in *Daigle v. United States* all stand for the proposition that the general provision for prevention or mitigation of "damage to public health or welfare" must be narrowly interpreted. This construction is consistent with the specific examples of "removal costs" set forth in the definition.³⁷⁸ In so deciding, these courts relied on the fact that the statutory definitions of each of these words do not contain any references whatsoever to medical expenses of any kind. They also found that these sections do not support any inferences that such expenses are recoverable response costs under CERCLA. Instead, these courts interpreted the definitions as contemplating only the cleanup of toxic substances from the environment.

For example the district court in *Ambrogi v. Gould* said:

Quite simply, we find it difficult to understand how future medical testing and monitoring of persons who were exposed to contaminated well water prior to the remedial measures currently underway will do anything to "monitor, assess, [or] evaluate a release" of contamination from the site" as a partial explanation for its order dismissing the plaintiff's claim for medical monitoring.³⁷⁹

Similarly the tenth circuit in *Daigle* remarked:

Longterm health monitoring of the sort requested by Plaintiffs ... "to assist plaintiffs and class members in the prevention or early detection and treatment of chronic disease," ... clearly has nothing to do with preventing contact between a "release or threatened release" and the public. The release has already occurred.³⁸⁰

377. 25 Env't Rep. Cas. (BNA) 2009 (S.D. Tex. June 10, 1986).

378. See *Daigle*, 972 F.2d at 1535; *Ambrogi v. Gould*, 750 F. Supp. 1223, 1247 (M.D. Pa. 1990). The decision in *Daigle* is beginning to be recognized by district courts in other circuits. See *Price v. United States Navy*, 1992 WL 469880 (S.D. Cal 1992).

379. *Ambrogi*, 750 F. Supp. at 1246 (quoting *Coburn v. Sun Chem. Corp.*, 19 Env't Rep. Cas. (BNA) 1665 (E.D. Pa. Nov. 9, 1988)).

380. *Daigle*, 972 F.2d at 1535.

The key to the courts' negative conclusion concerning the recovery of medical monitoring costs under CERCLA is that the plaintiffs were really requesting future medical expenses. Though perhaps needed to protect the health of an individual, future medical expenses are not monitoring or assessment to determine the health or exposure level of a community. These courts determined that the plaintiffs were using "medical monitoring" in its medical³⁸¹ or tort law³⁸² sense, and not as it was meant by the drafters of CERCLA.³⁸³

Whether medical monitoring will ever be considered a proper response cost is uncertain. This uncertainty arises because the area is very fact-specific. Even when, as in *Daigle* or *Coburn*, judges make broad rulings, the justification for these rulings rests on narrow factual distinctions. The right set of facts to support medical monitoring expenses as a CERCLA response cost may exist, but it would have to involve a substance about which very little is known so that testing would be necessary to determine how much of a risk the substance presents to the population at large. Next, ATSDR would have to decline to study the substance.³⁸⁴ If ATSDR is studying the issue, a competing private study would be unnecessary and wasteful and therefore not "consistent with the NCP."³⁸⁵ Medical monitoring trusts will continue to appear in settlements in which other viable claims are involved in the litigation. These settlements will involve all claims, including CERCLA and common law claims.³⁸⁶

381. Beeller & Sappenfield, *supra* note 58.

382. See *In re Paoli R.R. Yard PCB Litig.*, 916 F.2d 829, 849 (3d Cir. 1990), *cert. denied sub nom.* General Elec. Co. v. Knight, 499 U.S. 961 (1991).

383. *Daigle*, 972 F.2d 1527; cf. Walter Wheeler Cook, *Substance and Procedure in the Conflict of Laws*, 42 YALE L.J. 333, 337 (1933).

384. This refusal might well take the following form: "This is a worthwhile site for a study, but the agency has no funds with which to perform one."

385. CERCLA § 105, 42 U.S.C. § 9605.

386. See *In re Fernald Litig.*, 1989 WL 267038 (S.D. Ohio 1989) (approving \$73 million settlement after summary jury trial indicated problems with the government's case); *In re Agent Orange Prods. Liab. Litig.*, 587 F. Supp. 740 (E.D.N.Y. 1984), *aff'd*, 818 F.2d 145 (2d Cir. 1987), *cert. denied sub nom.* Pinkney v. Dow Chem. Co., 484 U.S. 1004 (1988).

VI. ISSUES UNDER THE FEDERAL TORT CLAIMS ACT

Issues specific to the Federal Tort Claims Act³⁸⁷ ("FTCA") in the area of the government's liability for damages from toxic torts relate to the government's waiver of sovereign immunity. Sovereign immunity in this context means that the sovereign cannot be sued unless it has consented to be sued.³⁸⁸ Prior to the FTCA, an individual injured due to the negligence of the government or a government employee had no remedy in the courts.³⁸⁹ The only possibility of compensation was to request a private relief bill through the Congress.³⁹⁰

The passage of the FTCA did not end the doctrine of sovereign immunity, but only modified and limited it. The FTCA allows suits against the United States only in certain circumstances. Actions not within these confines continue to be barred.³⁹¹ Courts generally construe waivers of sovereign immunity strictly and narrowly.³⁹² Furthermore, federal rather than state law determines whether a cause of action is excluded by the FTCA.³⁹³ The plaintiff's claim must fit within a category for which the FTCA waives immunity as a prerequisite to jurisdiction under the Act.³⁹⁴

The basic concept of the FTCA is that within the scope of the limited waiver of sovereign immunity, state law applies to the United States as if it were a private individual. The Act waives immunity for actions:

for money damages ... for injury or loss of property, or
personal injury or death caused by the negligent or

387. Act of June 25, 1948, Ch. 646, 2 Stat. 933 (codified as amended at 28 U.S.C. § 1346(b)).

388. *See Principe Compania Naviera, S.A. v. Board of Commissioners*, 333 F. Supp. 353 (E.D. La. 1971).

389. The injured party could sue the individual government employee, but that was unlikely to result in more than moral satisfaction, as the average government employee had limited financial resources. *See JAYSON, supra* note 14, at § 51.

390. *See German Bank v. United States*, 148 U.S. 573 (1893).

391. *United States v. Orleans*, 425 U.S. 807, 813 (1976); 28 U.S.C. § 1346(b) (1988 & Supp. IV 1992).

392. *See United States v. Sherwood*, 312 U.S. 584, 590 (1941); *United States v. Testan*, 424 U.S. 392, 399 (1976).

393. *Laird v. Nelms*, 406 U.S. 797 (1972).

394. 28 U.S.C. § 1346(b).

wrongful act or omission of any employee of the Government while acting within the scope of his office or employment, under circumstances where the United States, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred.³⁹⁵

The courts have interpreted the "negligent or wrongful act or omission"³⁹⁶ limitation to bar suits that sound in any other theory of liability except negligence. For example, the FTCA does not include suits based on strict liability³⁹⁷ nor those based on a theory of implied or expressed warranty.³⁹⁸ Similarly, the Act generally prohibits suits seeking damages that are equitable in nature.³⁹⁹

If the cause of action falls outside the scope of the waiver of sovereign immunity, the court is without subject matter jurisdiction to hear the case. In analyzing claims for "non impact damages" against the United States, the court must first question whether the law of the state where the injury allegedly occurred allows claims for these damages.⁴⁰⁰ Because the FTCA applies state law to the United States as if it were a private person, state law is controlling.⁴⁰¹ Once the court determines that the state law allows recovery of these damages, the court must then determine

395. *Id.* Other issues beyond the scope of this Article affect the waiver of sovereign immunity, chief among which is the discretionary function exception.

396. 28 U.S.C. § 1346(b).

397. *Laird*, 406 U.S. 797; *Dalehite v. United States*, 346 U.S. 15 (1952); *Thompson v. United States*, 592 F.2d 1104 (9th Cir. 1979).

398. *See, e.g., Doe v. United States*, 618 F. Supp. 503 (D.S.C. 1984).

399. *See, e.g., Westbay Steel, Inc. v. United States*, 970 F.2d 648, 651 (9th Cir. 1992); *Birnbaum v. United States*, 588 F.2d 319, 335 (2d Cir. 1978); *Moon v. Takisaki*, 501 F.2d 389, 390 (9th Cir. 1974). *But see In re Gabel*, 350 F. Supp. 624, 629 (C.D. Cal. 1972) (allowing some declaratory relief in the course of class action litigation involving an aircraft accident).

400. When determining whether the state allows damages, the court looks to the state's choice of law rules. *See Richards v. United States*, 369 U.S. 1 (1962); *Transco Leasing Corp. v. United States*, 896 F.2d 1435 (5th Cir. 1990).

401. The plaintiff must comply with some uniquely federal procedural requirements. Filing an administrative claim for an amount not exceeding the amount sought in court is a prerequisite to the district court having jurisdiction to hear the suit. 28 U.S.C. § 2675 (1988).

the basis for these awards.⁴⁰² On the other hand, if the state would not allow these damages to be claimed against a private party, then there is no cause of action under the FTCA and the analysis ends.⁴⁰³

If the law of the state allows damages of the sort in question and the theory upon which the damages will be awarded is one that sounds in negligence, the damage claim against the United States can go forward on the merits. However, if the courts of the state base their authority to award the damages on their general equitable powers, the portion of the suit seeking such damages would be beyond the scope of the waiver of sovereign immunity contained in the FTCA.⁴⁰⁴ The court is without jurisdiction to even hear that portion of the claim if there is no waiver of sovereign immunity.⁴⁰⁵ If no controlling state precedent on point is available, the federal court must make its best *Erie*⁴⁰⁶ guess about how the state's courts would decide the issue.⁴⁰⁷

Questions of the scope of the waiver of sovereign immunity under the FTCA have arisen primarily in the area of medical monitoring, as little doubt or controversy exists about the nature of claims for emotional distress or enhanced risk.⁴⁰⁸ Two federal district courts have examined

402. The law the state will apply will usually be its own. As choice of law rules come into play, however, the law of the place of negligence and not the place of injury, if they are different, may apply. For example, this application could occur when an airplane is negligently repaired in state X, which causes it to crash and cause injury in state Y, while the injured persons were citizens of state Z. Venue might lie in either state X, Y, or Z. See 28 U.S.C. § 1402(b) (1988) (choice of law depends on where the court decides the "act or omission" occurred (X or Y)); *Forest v. United States*, 539 F. Supp. 171 (C.D. Mont. 1982) (holding that choice of law for damages might be the place of the act or omission, the place of injury or the place of the plaintiff's residence); *Reich v. Purcell*, 432 P.2d 727 (Cal. 1967); *Olmstead v. Anderson*, 400 N.W.2d 292 (1987).

403. 28 U.S.C. § 1346(b) (1993).

404. *Moon v. Takisaki*, 501 F.2d 389, 390 (9th Cir. 1974).

405. *Id.*

406. See *Erie R.R. Co. v. Tompkins*, 304 U.S. 64 (1938).

407. See *In re Paoli R.R. Yard PCB Litig.*, 916 F.2d 829 (3d Cir. 1990), *cert. denied*, 111 S. Ct. 1584 (1991).

408. But see *Laswell v. Brown*, 524 F. Supp. 847, 850 (W.D. Mo. 1981), *aff'd*, 683 F.2d 261 (8th Cir. 1982), *cert. denied*, 459 U.S. 1210 (1983) (stating that no claim exists for increased risk of future injury without present injury).

claims for medical monitoring under the Federal Tort Claims Act.⁴⁰⁹ Because of variations in state law, the courts' conclusions differed.

In *Burke v. United States*,⁴¹⁰ the magistrate ruled that because California had not recognized either a cause of action for medical monitoring or the right to recover medical monitoring as an element of damages under an existing cause of action, the only way that a court could award such damages was through its general equitable powers. The magistrate further ruled, relying on *Moon v. Takisaki*,⁴¹¹ that because the relief requested was equitable in nature⁴¹² and the United States had not waived its sovereign immunity as to equitable relief, the plaintiff did not have a valid cause of action against the United States. Summary judgment was granted accordingly in favor of the United States.⁴¹³

The opposite result was reached under Pennsylvania law in *Redland Soccer Club, Inc. v. United States*.⁴¹⁴ When ruling on the government's motion for summary judgment, the court stated that because the plaintiff was seeking a specified amount of money, the damages were legal, not equitable, in nature.⁴¹⁵ Relying on *Villari v. Terminix Int'l, Inc.*,⁴¹⁶ the court concluded that the plaintiff's demand was within the scope of the FTCA's waiver of sovereign immunity.⁴¹⁷

409. See *Burke v. United States*, No. CV F-89-455 DLB (E.D. Cal. April 15, 1991); *Redland Soccer Club, Inc. v. United States*, Civ. No. 1:CV-90-1072 (M.D. Pa. Feb. 12, 1992). But see *Werlein v. United States*, 746 F. Supp. 887, 902-04 (D. Minn. 1990). In *Werlein*, the plaintiffs claimed medical monitoring under both CERCLA and Minnesota common law. The court found that the plaintiffs could not recover medical monitoring under CERCLA, but that they could claim medical monitoring as an element of damages under the common law of Minnesota. The court did not address the issue of the recoverability of medical monitoring under the FTCA. *Id.*

410. No. CV F-89-455 DLB (E.D. Cal. April 15, 1991).

411. 501 F.2d 389, 390 (9th Cir. 1974).

412. *Accord* *Barth v. Firestone Tire & Rubber Co.*, 661 F. Supp. 193 (N.D. Cal. 1987) (recognizing medical monitoring in California but only as an equitable remedy).

413. The California Supreme Court has recently approved damages for medical monitoring at law. *Potter v. Firestone Tire & Rubber Co.*, 863 P.2d 795 (Cal. 1993). This holding will presumably open the door for medical monitoring claims under the FTCA.

414. Civ. No. 1:CV-90-1072 (M.D. Pa. Feb. 12, 1992).

415. *Id.*

416. 677 F. Supp. 330 (E.D. Pa. 1987).

417. 663 F. Supp. 727 (E.D. Pa. 1977) (allowing a claim for medical monitoring to go forward, treating the claim as one for legal damages in the nature of future medical expenses); see also *Peterman v. Techalloy Co.*, 29 Pa. D. & C.3d 104 (1982). Some

Accordingly, whether a plaintiff can recover medical monitoring expenses from the United States depends on whether the state allows such damages, as well as the type of authority the state courts use to award those damages.⁴¹⁸ The success of a plaintiff's claim may turn on the manner in which the plaintiff's counsel chooses to plead the claim. In the event the plaintiff's counsel errs, the trial judge may opt to rescue the attorney from his inartful pleading.

For example, in *Villari v. Terminix Int'l Inc.*,⁴¹⁹ the plaintiff requested a "constructive trust sufficient to pay the cost of medical detection and medical monitoring."⁴²⁰ Although constructive trusts are generally considered equitable remedies, the court chose to treat the claim as one for legal damages. In an FTCA action, however, the administrative claim and sum certain requirements may not give a court the same flexibility to rescue a claimant's attorney from her missteps.

Also instructive in this vein is *Molzof v. United States*,⁴²¹ in which the United States Supreme Court interpreted the exclusion of punitive damages from FTCA coverage narrowly.⁴²² *Molzof* involved a veteran who had been left in a comatose state because of medical malpractice. The government claimed that damages for the loss of enjoyment of life by a comatose patient were "punitive in nature."⁴²³ Because the plaintiff was in a coma, the government argued, he did not know that he was not enjoying life. The government reasoned that damages could not "compensate" him for an injury of which he was unaware, and therefore they were "punitive."⁴²⁴ The Court rejected the government's claim and remanded the case to the trial court to determine if the damages in question could be recovered under state law.⁴²⁵ This decision may indicate the Court's hostility to attempts by plaintiffs to use what it considers to be a shield protecting essential governmental functions as a

Pennsylvania trial courts have held medical monitoring costs to be equitable remedies, however. *Habitants Against Landfill Toxicants (HALT) v. City of York*, 15 Env't. L. Rep. (Env't. L. Inst.) 20,937 (Pa. Ct. C.P., May 20, 1985).

418. See *Burke*, No. CV F-89-455 DLB (E.D. Cal. April 15, 1991); *Redland Soccer Club, Inc. v. United States*, Civ. No. 1:CV-90-1-72 (M.D. Pa. Feb. 12, 1992).

419. 677 F. Supp. 330 (E.D. Pa. 1987).

420. *Id.* at 338.

421. 112 S. Ct. 711 (1992).

422. *Id.* at 718.

423. *Id.* at 714.

424. *Id.*

425. *Id.* at 718.

defense to a run of the mill negligence case. The Court may similarly address the government's characterization of medical monitoring damages as an equitable remedy. Conversely, this decision may simply indicate that this case was factually bad for the government.

No uniquely federal aspects exist for claims of emotional distress without present injury or for enhanced risk claims.⁴²⁶ The obstacles to a plaintiff's recovery of these damages are based entirely on state law applied to the United States by operation of the FTCA.

VII. CONCLUSION

A. *A Changing World*

The complexity of toxic tort litigation is a reflection of the increased complexity of modern society and its technology. Not until this century were the first effective antibiotic drugs developed, and only in the second half of the century have they become commonly used.⁴²⁷ Only in the last twenty years have we come to understand the side effects of modern technology. The release of toxic by-products into the environment is the unintended and un contemplated price we pay for technology. These by-products result in injuries to those who have the misfortune to become exposed to them.⁴²⁸

These injuries may take years or generations to appear and have tested the ability of the common law tort system to redress the harm.⁴²⁹ To deal with these injuries some commentators have called for major

426. *Cf. id.* (refusing to determine what damages are punitive as a matter of federal law and remanding for the trial court to determine if the damages in question were allowed as a matter of state law); *see also* *Hurley v. United States*, 923 F.2d 1091, 1096 (4th Cir 1990); *Waffen v. United States*, 799 F.2d 911, 917 (4th Cir 1986).

427. JOHN PARASCONDOLA, ED. *THE HISTORY OF ANTIBIOTICS* 1 (1980).

428. *Alcorn*, *supra* note 20, at 3 ("The term 'toxic tort' is a product - albeit an undesirable one - of modern industrialization. In broad terms, it encompasses any wrongful injury resulting from exposure to one or more hazardous substances"). In *Tiller v. Atlantic Coast Line R.R. Co.*, 318 U.S. 54 (1943), Justice Black described this situation as "the human overhead," which he observed was "an inevitable part of the cost--to someone--of the doing industrialized business." *Id.* at 58.

429. Harvard Law Review Association, *supra* note 267.

changes, wholesale reform or even abandonment of the tort system.⁴³⁰ The system, however, has responded to the challenge in inconsistent ways.

B. *A New Definition of Injury*

A major part of this response has been an expansion in the definition of injury. This has in turn modified the damages a plaintiff can recover. Under traditional common law there could be no recovery in tort without physical contact that caused bodily harm.⁴³¹ Assault was the only exception because assault was an injury to the plaintiff's right to be free from fear or apprehension of bodily harm and not an injury to the plaintiff himself.⁴³²

As society and technology have changed, the law has changed with them. Nonimpact damages are a result of that change. Medical monitoring, fear of future disease, and claims for enhanced risk of future disease are not separate intellectual doctrines, but are merely way-stations in a continuous stream that has been set in motion by the changes that have occurred in the second half of the twentieth century.

When injuries were limited to those that could be seen, and medicine was limited to setting broken bones, stopping bleeding, and applying leeches, there was no need for regular visits to a physician to see if one was developing signs of disease. However, in today's world medical monitoring to detect signs of cancer and allow for early treatment can be a lifesaving practice.⁴³³ Neither Lord Coke nor William Prosser encountered the situation where 100 people were exposed to an invisible but potent agent which, over the course of twenty years, will cause one of those persons to suffer from a deadly disease. They did not have to deal with diseases that might be successfully treated when detected early enough.⁴³⁴

430. See, e.g., Jeffery Trauberman, *Statutory Reform of 'Toxic Torts': Relieving Legal, Scientific, and Economic Burdens on the Chemical Victim*, 7 HARV. ENVTL. L. REV. 177, 188-89 (1983).

431. Pierce, *supra* note 251; W. PAGE KEETON ET AL., *supra* note 13, § 30, at 165.

432. W. PAGE KEETON ET AL., *supra* note 13, § 10, at 43.

433. Gara, *supra* note 141.

434. For the purpose of this discussion, this Article assumes that this situation results in a disease (like lung or breast cancer) that has both reliable tests for its occurrence and practical therapies for its detection. The Article also assumes that the increased survival rate is a factor of the early detection, and not just as result of a longer period to follow

The idea of medical monitoring damages developed in response to this type of situation. It is the first step in the line of nonimpact damages. Medical monitoring expenses are only a small step from the future medical expenses that are a regular and accepted part of all personal injury litigation.⁴³⁵ They are basically future medical expenses allowed for a different type of invisible and contingent injury. The courts have disagreed on how different and how contingent that injury can be,⁴³⁶ but these are differences in degree rather than kind. The nature of the remedy also remains unsettled. Some courts have awarded lump sums as a legal remedy while others have used their equitable powers to create trusts.

Much of the same evidence that supports medical monitoring is also necessary to support a claim for emotional distress caused by the fear of future injury. To recover for emotional distress, the plaintiff must prove that he has been exposed to the hazardous substance, that as a result of that exposure he has suffered emotional distress, and that the fear which causes his distress is "reasonable."⁴³⁷

This cause of action is also not without its variations. In some jurisdictions, the plaintiff may need to prove some form of physical impact or injury.⁴³⁸ The courts diverge greatly on what may constitute an impact or injury. In practice, the terminology employed by the court may not accurately reflect its doctrine and the line separating the two rules has blurred.

At the top of the pyramid of nonimpact damages is the chance of recovery for pure enhanced risk. Enhanced risk is a basic tort action in which the injury is the present risk of future disease. The enhanced risk cause of action is at the top of the pyramid from the plaintiff's perspective because it involves the greatest amount of money. Usually at issue is an increased risk of disabling or fatal diseases, frequently cancer.⁴³⁹ But,

the patient before his or her death because of the early detection. See Gots, *supra* note 154, at 24; Beeller & Sappenfield, *supra* note 58.

435. CHARLES T. MCCORMICK, *HANDBOOK OF THE LAW OF DAMAGES* § 90 (1935); *Hagerty v. L & L Marine Serv., Inc.*, 788 F.2d 315, 319, *modified*, 797 F.2d 256 (5th Cir. 1986).

436. The courts' answers have ranged from very to not at all. *Ayers v. Township of Jackson*, 525 A.2d 287 at 312 (N.J. 1987); *Ball v. Joy Technologies, Inc.*, 958 F.2d 36 (4th Cir. 1991).

437. Dworkin, *supra* note 174.

438. *Id.*

439. Brent Carson, Comment, *Increased Risk of Disease From Hazardous Waste: A Proposal for Judicial Relief*, 60 WASH. L. REV. 635 (1985).

because the cause of action rests on the mere potential to develop the disease, a plaintiff seeking damages for increased risk also faces the highest barriers to recovery. These barriers take the form of burdens of proof that in most jurisdictions require the plaintiff to show that he is more likely than not to develop the disease for which she is at risk.⁴⁴⁰ However, in most cases the science is not available that will allow the plaintiff to meet this burden.

C. *The Limited Utility of Federal Statutes*

Federal laws currently are of little help to plaintiffs seeking redress for non-impact toxic torts. The only remedies available pursuant to CERCLA and RCRA are for medical monitoring. Under these statutes, a plaintiff may have more hoops to jump through than under state law.

The Federal Tort Claims Act waives sovereign immunity for the United States in state law negligence actions. However, the utility of this waiver is limited in medical monitoring cases. The Act prohibits recovery in actions yielding equitable remedies and therefore may block recovery if the applicable state law employs such a remedy. When the Act prevents a victim who has been exposed to hazardous substances due to the negligent actions of the federal government from recovering for his injuries, it defeats both the purpose of tort law and the intent of the FTCA. Accordingly, the statute should be changed to allow recovery of all compensatory damages available under the law of the state, whether their origins sound in equity or tort.

The final hope for plaintiffs is the Agency for Toxic Substances and Disease Registry. This agency must undertake formal health assessments at all CERCLA NPL sites, and other sites as it deems necessary. The agency also may initiate periodic medical surveillance. Unfortunately for plaintiffs, no private party can exert any control on how the agency carries out this function.

D. *A Unified Theory?*

The common thread running from medical monitoring through damages for fear of future disease to claims for increased risk of future

440. DORE, *supra* note 18, at § 7-16.3; Ashton, *supra* note 273.

disease is the attempt of the law of torts to adapt to new kinds of injuries. Exposure to toxic substances is injury and risk is injury.⁴⁴¹ However, they are injuries that for reasons of both practicality and policy cannot be fully compensated in present terms or current dollars. That there are some cases where injury may go uncompensated is not a new concept in tort law. Professor Keeton has noted that "it does not lie within the power of any judicial system to remedy all human wrongs."⁴⁴² Mere exposure without physical effect is the part of the "human overhead" that is allocated to the individual as his share of "the cost of living in an organized society."⁴⁴³

To the extent that an individual exposed to toxic substances is forced to undergo medical testing and monitoring due to his exposure, he suffers a compensable injury. His remedy is a claim for medical monitoring expenses.⁴⁴⁴ The measure of his recovery is the expected cost of those procedures required for the protection of his health. This amount, though still subject to dispute and debate and differing opinions is something that the law is quite capable of valuing, more or less accurately.⁴⁴⁵

Likewise, if an exposed individual suffers damage and injury due to the emotional distress resulting from the knowledge of his exposure, he can recover for that distress. While this is not as easily valued as the cost of medical testing, it is still something that is well within the experience and ability of the courts to handle.⁴⁴⁶ While less precise in amount than medical monitoring expenses, damages for emotional distress still involve valuing events that have already happened. Therefore, a factual basis exists upon which to make an award. The fear of fraud in the area of emotional distress has led to certain procedural requirements and increased burdens of proof such as the requirement of physical injury, but this is not an unexpected or unreasonable development.⁴⁴⁷

What is going to happen in the future is the key question for claims for increased risk claims. It is a question that is beyond the ability of the courts to accurately answer. Because of that, the chance of a wrong

441. See Rosenberg, *supra* note 5.

442. W. PAGE KEETON ET AL., *supra* note 13, § 4, at 23.

443. Gilliam v. Stewart, 291 So. 2d 593 (Fla. 1974).

444. Ayers v. Township of Jackson, 525 A.2d 287, 312 (N.J. 1987).

445. DORE, *supra* note 18, at § 7.05[1].

446. Dworkin, *supra* note 174.

447. *Id.*; Payton v. Abbott Labs, 437 N.E.2d 171 (Mass. 1982).

answer which either grants compensation needlessly or erroneously denies it is very high. This large chance of error causes the hurdle of the burden of proof to be set so high that only the clearest and most convincing of cases can surmount it. Exposure to a hazardous substance resulting in an increase in one's risk of getting a serious disease is an injury, but one that, in most cases, is beyond the ability of medicine, science or the courts to quantify. Furthermore, in the absence of physical harm simple exposure ought not be compensated, because it is too small, too uncertain, and too widespread.⁴⁴⁸

As the likelihood of the possible harm increases, it may reach the point where it becomes more likely than not the disease in question will occur. The harm then becomes compensable. Fifty percent is admittedly an arbitrary figure but it is a reasonable enough figure, particularly when a later cause of action for the future disease is allowed if and when the disease occurs.

Nonimpact damages are how tort law has responded to new and differing mechanisms of injury. They serve the aims of society by attempting to allocate costs between those who benefit from the defendant's acts, and those that are the unintentional victims of it. Unfortunately, neither the courts nor the federal government has yet articulated a coherent, just policy to compensate parties suffering nonimpact injuries.

448. W. PAGE KEETON ET AL., *supra* note 13, § 4, at 23; *Gilliam v. Stewart*, 291 So. 2d 593 (Fla. 1974).