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IN THE DISTRICT COURT OF APPEAL

OF FLORIDA

SECOND DISTRICT

GEORGE F. DAVID, Appellant, v. NATIONAL RAILROAD PASSENGER CORPORATION, Appellee.	)	Case No. 2D00-815

Opinion filed August 17, 2001.

Appeal from the Circuit Court for Hillsborough County; Gregory P. Holder, Judge.

Gary F. Easom of Easom & Pierce, Jacksonville, and Joel D. Eaton, of Podhurst, Orseck, Josefsberg, Eaton, Meadow, Olin & Perwin, P.A. Miami, for Appellant.

Daniel J. Fleming and Jose A Gutierrez of Melkus & Fleming, Tampa, for Appellee.

NORTHCUTT, Judge.

George David sued his employer, National Railroad Passenger Corporation, under the Federal Employers' Liability Act, 45 U.S.C. § 51, et. seq. (FELA). David claimed that his work at the railroad exposed him to excessive repetitive trauma to

his upper extremities and that he developed carpal tunnel syndrome and other maladies as a result. During the course of discovery, he identified four expert witnesses who would connect his injuries to his job. On the railroad's motions, the circuit court struck all David's experts. It then granted summary judgment in favor of the railroad because David could not prove causation, a necessary element of a FELA cause of action. See Rogers v. Mo. Pac. R.R. Co., 352 U.S. 500 (1957). We reverse.

David initially identified three experts: Dr. Robert Andres, an ergonomist; Dr. William Greenberg, a neurologist; and Dr. John Baker, an orthopedic surgeon. The court struck them because it found there was a lack of general acceptance in the scientific community for their opinions that repetitive trauma from occupational hand use can cause carpal tunnel syndrome, citing Frye v. United States, 293 F. 1013 (D.C. Cir. 1923), and Daubert v. Merrill Dow Pharmaceuticals, Inc., 113 S. Ct. 2786 (1993).[1] After David moved for rehearing, the court entered a second order striking the witnesses. Some language in that order might imply the court believed Greenberg's and Baker's opinions were based on insufficient information, but this belief seems inextricably intertwined with the court's rejection of the underlying scientific theory.[2] David subsequently identified a fourth causation expert, Dr. Jacob Green. The railroad moved in limine to exclude his testimony,

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[1] In determining admissibility of scientific evidence, courts in Florida must apply the test in Frye v. United States, 293 F. 1013 (D.C. Cir. 1923). Our supreme court has declined to apply the test announced in Daubert v. Merrill Dow Pharmaceuticals, Inc., 113 S. Ct. 2786 (1993). See Flanagan v. State, 625 So. 2d 827 (Fla. 1993).

[2] As to Baker and Greenberg, the court noted that the medical histories they took were "insufficient, unsupported, and do not reflect even a scintilla of scientific knowledge or validity."

and again the circuit court granted the motion, finding that Green's opinion was "based on . . . junk science."

When determining whether to admit expert testimony about a new scientific theory, courts in Florida employ a four-step process. Once a court discerns that expert testimony would assist the jury, a point not contested in this appeal, it must then conduct a Frye hearing to "decide whether the expert's testimony is based on a scientific principle or discovery that is 'sufficiently established to have gained general acceptance in the particular field in which it belongs.'" Ramirez v. State, 651 So. 2d 1164, 1167 (Fla. 1995) (quoting Frye). In order to make this determination, the court should generally conduct an evidentiary hearing. As the Ramirez court noted, "a hearing on the admissibility of novel scientific evidence is an adversarial proceeding in which conflicting evidence is presented to the trial judge as the trier of fact." Id. at 1168; see also Brim v. State, 779 So. 2d 427, 434 (Fla. 2d DCA 2000) ("Brim II") (explaining that "a trial judge involved in a Frye hearing must listen to the scientific evidence and resolve any disputed question of fact using the same method employed in any other nonjury hearing."); but see U.S. Sugar Corp. v. Henson, 26 Fla. L. Weekly D1062 (Fla. 1st DCA Apr. 20, 2001) (remarking that Ramirez does not mandate an evidentiary hearing on Frye issues).

In this case, the circuit court did not conduct an evidentiary hearing on the disputed scientific issues, an omission that has a direct bearing on our review of the matter. District courts review a circuit court's order on Frye issues de novo. Brim v. State, 695 So. 2d 268 (Fla. 1997) ("Brim I"). To conduct such a de novo review, we must examine "expert testimony, scientific and legal writings, and judicial opinions" to determine

whether the scientific principles at issue are generally accepted in the relevant scientific community. Hadden v. State, 690 So. 2d 573, 578 (Fla. 1997); Brim II, 779 So. 2d at 428.

In Brim II, this court reviewed numerous judicial opinions in which DNA evidence, the scientific principle at issue in that case, was routinely admitted in trial courts in many states. But the Brim II court noted its extreme difficulty with the process of reviewing scientific literature on the subject. Id. at 429. The parties in that case had not included any literature in the record and had not supplemented the record with any recent writings on the subject of DNA evidence. Cf. Kaelbel Wholesale, Inc. v. Soderstrom, 785 So. 2d 539, 548 n.3 (Fla. 4th DCA 2001) (noting it was extremely helpful to the court's review that the relevant scientific publications were filed in the circuit court record). The Brim II court concluded it would be improper to undertake an examination of extra-record, nonlegal matters in order to determine the scientific acceptability of DNA principles. As such, the record in Brim II was inadequate for the court to determine the Frye issue, and we remanded for an additional evidentiary hearing.

As in Brim II, our record in this case is woefully inadequate. We too have reviewed cases from Florida and other jurisdictions and have found numerous examples in which experts have been permitted to testify that repetitive hand motion can lead to carpal tunnel syndrome.[3] Yet our record contains only a few articles, appended to a motion, that

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[3] See, e.g., Festa v. Teleflex, 382 So. 2d 122 (Fla. 1st DCA 1980); Attala County Nursing Ctr. v. Moore, 760 So. 2d 784 (Miss. App. 2000); Tolbert v. Alascom, Inc., 973 P.2d 603 (Alaska 1999); Morgan v. Union Pac. R.R. Co., 979 S.W. 2d 477 (Mo. App. 1998); Norfolk & W. Ry. Co. v. Johnson, 465 S.E. 2d 800 (Va. 1996); Hardyman v. Norfolk & W. Ry. Co., 243 F.3d 255 (6th Cir. 2001); Aparicio v. Norfolk & W. Ry. Co., 84 F.3d 803 (6th Cir. 1996); Magdaleno v. Burlington N. R.R. Co., 5 F. Supp. 2d 899 (D. Colo. 1998); White v. Chicago Pneumatic Tool Co., 994 F. Supp. 1478 (S.D. Ga. 1998); Bowers v. N. Telecom, Inc., 905 F. Supp. 1004 (N.D. Fla. 1995).

indicate this is a generally accepted scientific theory, and only citations to articles that dispute the theory. It appears that the evidence before the circuit court simply was insufficient to permit a reasoned assessment of whether the relevant scientific community generally accepts the theory that repetitive motion causes carpal tunnel syndrome. The record is certainly inadequate to permit our review of the orders. Therefore, we reverse the orders striking the experts and the resultant summary judgment entered in the railroad's favor and remand to the circuit court with directions to conduct an evidentiary Frye hearing on the scientific issue.

Because our record indicates there is some debate in the scientific community about whether repetitive motion can cause carpal tunnel syndrome, we point out that the circuit court's role is to determine whether the "basic underlying principles of scientific evidence have been sufficiently tested and accepted by the relevant scientific community." Brim I, 695 So. 2d at 272. However, as the Brim I court went on to observe, this test does not require unanimity in the scientific community.

> It is clear that scientific unanimity is not a precondition to a finding of general acceptance in the scientific community. People v. Dalcollo, 282 Ill. App. 3d 944, 218 Ill. Dec. 435, 445, 669 N.E.2d 378, 387 (1996). Instead, general acceptance in the scientific community can be established "if use of the technique is supported by a clear majority of the members of that community." People v. Guerra, 37 Cal. 3d 385, 208 Cal. Rptr. 162, 183, 690 P.2d 635, 656 (1984). "Of course, the trial courts, in determining the general acceptance issue, must consider the quality, as well as quantity, of the evidence supporting or opposing a new scientific technique. Mere numerical majority support or opposition by persons minimally qualified to state an authoritative opinion is of little value . . . ." People v. Leahy, 8 Cal. 4th 587, 34 Cal. Rptr. 2d 663, 678, 882 P.2d 321, 336-37 (1994). Therefore, while a "nose count" is not alone sufficient to establish general acceptance in the scientific community, such acceptance likewise need not be predicated upon a unanimous view.

Id.

At this point we also need to address the circuit court's implication that two of David's medical experts did not have sufficient information on which to base their opinions. Baker, an orthopedic surgeon, performed endoscopic surgery on David's carpal tunnels. Baker took a history from David, performed a physical examination, and reviewed medical records from two doctors, including nerve conduction tests that are used to diagnose carpal tunnel syndrome. He knew David's height and weight. He testified that David had no history of cancer, diabetes, tuberculosis or heart trouble, but did have high blood pressure and arthritis. Baker performed laboratory tests that ruled out arthritis as a possible cause of the carpal tunnel syndrome, and he also ruled out other potential causes such as diabetes or hypothyroidism. Baker talked to David about the duties he performed on the job and reviewed a video of David working at his trade. David told him he did the same type of work over and over and that it involved using screwdrivers and other hand tools. Baker knew of scientific literature that showed a relationship between carpal tunnel syndrome and repetitive trauma and also knew of literature that came to the opposite conclusion. Baker testified that if "the video matches what the man actually does, he spends a very significant portion of his day doing exactly the type of repeated medium-to-light work that will aggravate your carpal tunnels." In his opinion, the type of work David performed either caused or aggravated the problem with his carpal tunnels.

Greenberg's physical examination of David was not as comprehensive as Baker's, but he obtained a medical history from David, confirmed his diagnosis of carpal tunnel syndrome with electrodiagnostic testing, assessed the presence of occupational

and nonoccupational risk factors for the syndrome, and excluded nonoccupational causes. He also concluded that David's work was the source of his carpal tunnel problems.

It appears that both these physicians used a differential diagnosis method to determine the cause of David's carpal tunnel syndrome. This is an accepted method for establishing causation of medical conditions. See Berry v. CSX Transp., Inc., 709 So. 2d 552, 571 (Fla. 1st DCA 1998) (holding that physician's opinion based on the plaintiff's personal history, medical records, tests and examinations was admissible because it was based on sufficient epidemiological data, facts and personal observations); Hardyman v. Norfolk & W. Ry. Co., 243 F. 3d 255 (6th Cir. 2001). It seems likely that these experts will flesh out their testimony at the evidentiary hearing. If the court determines that their opinions are based on an acceptable underlying scientific theory, and that they have used the differential diagnosis method to arrive at their theories of causation, it should permit them to testify. Although the circuit court struck Green because his opinion was based on "junk science," not because he lacked sufficient information, we note that he also appeared to use the differential diagnosis method in arriving at his opinion. Any deficiencies in the experts' opinions are appropriate matters for cross-examination and consideration by the jury.

As to Andres, another court found that his testimony showed "there were ergonomic risk factors and known remedial measures that had been described and accepted by the scientific community. This information was widely published in trade and scientific journals." Aparicio v. Norfolk & W. Ry. Co., 84 F.3d 803, 811 (6th Cir. 1996), abrogated on other grounds by Reeves v. Sanderson Plumbing Prod., Inc., 530 U.S. 133 (2000). Indeed, the district court in that same case permitted Andres to testify about work-

related factors that could lead to carpal tunnel syndrome, finding him to be "an acknowledged expert in ergonomic bioengineering." Aparicio v. Norfolk & W. Ry. Co., 874 F. Supp. 154, 159 (N.D. Ohio 1994), reversed on other grounds, 84 F.3d 803. The circuit court here struck Andres's testimony because it believed it would confuse the jury, as "[t]here is only a slight distinction between opinions that [David's] injury was caused by his work environment, and opinions that [David's] work environment contains risk factors which can cause [c]arpal [t]unnel [s]yndrome." If the court finds that the underlying scientific theory is accepted in the relevant community, it should permit Andres to testify.

Reversed and remanded.

ALTENBERND, A.C.J., and GREEN, J., Concur.