

ISSUES

The ALJ found claimant's stroke was not caused by any unusual exertion or excessive temperatures encountered while working for respondent on August 27, 2003. Thus, her injury did not arise out of and in the course of her employment and her recovery was precluded by K.S.A. 44-501(e).

The claimant requests review of this decision alleging she is permanently and totally disabled as a result of a stroke, which she contends happened while she was working. Simply put, claimant's theory of recovery stems from the excessive heat present on August 27, 2003. Claimant contends the heat caused her to become dehydrated and led to hypercoagulation of her blood, which, in turn, resulted in the formation of a clot that caused her stroke.

Conversely, respondent argues the ALJ was correct in concluding that claimant's stroke did not arise out of or in the course of her employment. Respondent maintains the more credible medical evidence suggests claimant's high blood pressure and smoking led to her stroke, not any excessive heat condition within the workplace, and as such, the Award should be affirmed based upon the provisions of K.S.A. 44-501(e).

The issues to be decided by this appeal are as follows:

1. Whether claimant met with accidental injury arising out of and in the course of her employment in light of the provisions of K.S.A. 44-501(e). If claimant prevails on this issue, then the Board must address the following issues as well -
2. Claimant's entitlement to temporary total disability benefits from August 29, 2003 to March 22, 2004; and
3. Nature and extent of claimant's impairment.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

Having reviewed the evidentiary record filed herein, the stipulations of the parties, and having considered the parties' briefs and oral arguments, the Board finds the ALJ's Award should be affirmed in all respects.

The underlying facts of this case are not seriously in dispute. On August 27, 2003, claimant reported to work about 6:00 a.m. Her job required her to work in a large metal building that was not air conditioned, but did have fans to circulate the air. The weather records indicate that the temperatures in Manhattan, Kansas, on August 27, 2003, were as follows:

6:54 a.m.	70°F
7:54 a.m.	72°F
8:54 a.m.	75°F
9:54 a.m.	82.9°F
10.54 a.m.	86°F
11:54 a.m.	89.1°F ²

Claimant testified that after working 4 to 4-1/2 hours she developed a headache. She took a break and then returned to work. Claimant testified that there was nothing out of the ordinary about her work activities that caused her to exert herself in an unusual fashion. She did say that she believed it was hotter inside the building than outside.

Claimant's symptoms continued and she reported feeling hot and became nauseous and vomited. At approximately 11:00 to 11:30 a.m., claimant left work and went home where she remained for 2 days. According to claimant, she took a shower to cool off and went to bed. Over the next few days she reported feeling better, but her fiancé determined she was not well and he took her to the emergency room on August 29, 2003.

Upon presentation to the emergency room, claimant spoke with slightly slurred speech, she had a left sided facial droop and some weakness in her left upper extremity. She also reported a decrease in her level of consciousness. A number of tests were performed in an effort to diagnose her problem. A CT scan revealed that claimant had suffered a cerebral infarction involving the right frontal and parietal region of her brain, extending into her right anterior basal ganglia part of the brain. A number of other tests were run once claimant was admitted to the hospital and they will be discussed in more detail in connection with the medical testimony offered by the parties' experts.

Since August 29, 2003, claimant has not returned to work for respondent nor has she sought work from any other employer. She has undergone a period of restorative therapy and has been receiving Social Security Disability benefits.

Monty Longacre, a vocational rehabilitation counselor, performed an evaluation of claimant's work history and opined that she is presently incapable of working given her cognitive and physical impairments, and that her need for ongoing medications further impairs her marketability.

As of August 27, 2003, claimant was a long term smoker and had been diagnosed with high blood pressure in the 1970's. There is some suggestion in the medical records that claimant has a family history of stroke and hypertension. She testified that she

² Respondent's Brief, Ex. A at 2 (filed Apr. 14, 2005). (This information is weather documentation for Aug. 2003 and Aug. 27, 2003 for Manhattan, Kansas, which was stipulated to by the parties and presented in a Jan. 7, 2005 letter to the ALJ).

regularly took her blood pressure medicine, including diuretics, which she believed controlled this condition. She did not report any prior strokes although the CT scan performed at the hospital on August 29, 2003, revealed a previous infarction (stroke) involving the right occipital lobe. Apparently the effects of this earlier stroke were subtle and claimant was unaware of its existence.

Four physicians have offered opinions as to the causal connection between the claimant's job duties, her workplace environment on August 27, 2003, and the stroke diagnosed on August 29, 2003. According to Dr. Joseph E. Bosiljevac, Jr., a vascular surgeon, who reviewed the medical records, claimant suffered from an occlusion of the anterior branches of the right middle cerebral artery. Dr. Bosiljevac testified that the doppler test on claimant's carotid artery revealed that she had no extracranial cerebrovascular insufficiency. In other words, her carotid arteries were not the source of the clot. Likewise, he testified that the echocardiogram and EKG revealed no cardiac source for her symptoms. At the time of her admission to the hospital, claimant's blood pressure was normal. He noted that her hemoglobin "dropped with IV hydration" and her total proteins and serum calcium levels were slightly elevated and decreased with hydration.³ Finally, her urine was amber colored, and the admission urinalysis was compatible with mild dehydration.⁴

Based upon these test results, Dr. Bosiljevac opined that "[a]lthough this patient had risk factors from smoking and hypertension, the main causal factor for her stroke appears to be dehydration, which could have lead to a low-flow state and relative hypercoagulability. This certainly could have been a result of the heat-related symptoms requiring her to leave work on August 27, 2003."⁵ Distilled to its essence, Dr. Bosiljevac contends that dehydration makes blood thicker, and as a result, a clot was formed in claimant's brain.⁶

When cross examined about this hypothesis, Dr. Bosiljevac indicated that the amount of time claimant spent at work on August 27, 2003 was somewhat inconsequential to his opinion. He merely relied on claimant's characterization that the building was hot on August 27, 2003, and when she presented to the hospital on August 29, 2003, she was mildly dehydrated.

Claimant's records were also reviewed by Dr. Dick Geis, a board certified internal medicine and occupational medicine doctor. In addition to his records review, Dr. Geis met with claimant on December 2, 2003. Following this examination, Dr. Geis opined that all

³ Bosiljevac Depo., Ex. 2.

⁴ *Id.*

⁵ *Id.*

⁶ *Id.* at 15-16.

of claimant's symptoms, while at work on August 27, 2003, are indicative of heat exhaustion. He further testified that her stroke which was identified on August 29, 2003, was a direct result of the heat related symptoms.⁷ Dr. Geis assigned a 35 percent permanent partial impairment pursuant to the 4th edition of the *Guides*.⁸ He further testified that claimant sustained a 50 percent task loss as a result of this occupational event. Interestingly enough, Dr. Geis does not typically treat stroke patients. He did not know claimant's core temperature on August 27, 2003, or at any time over the next 2 days until she was admitted to the hospital. Likewise, he did not know her blood pressure on August 27, 2003, or at any time over the next 2 days up to her hospital admission. He was also unaware of the precise temperature at claimant's work station at any time on the morning of August 27, 2003, and did not know how long claimant had been at work on August 27, 2003, nor did he know the nature of her job duties for respondent.

When asked, he testified that claimant's records contained no evidence of elevated blood pressure,⁹ but when provided with one of claimant's earlier hospital admission records from March 19, 2003, he conceded claimant's blood pressure readings of 173/88 on that date, would be considered high.

Claimant's records were also reviewed by Dr. Michael Farrar, a board certified cardiologist. According to Dr. Farrar, the location of claimant's stroke, within the basal ganglia, suggests that hypertension may well have played a significant role in the stroke.¹⁰ He testified that because claimant is black, it is more likely that she would experience strokes related to intracranial vascular disease, meaning restrictions within the brain, as opposed to extracranial disease, within the neck or elsewhere. The fact that claimant suffered an old infarction makes it "likely, very likely that she has intracranial vascular disease" and more than anything relates to her smoking and prior history of hypertension.¹¹ He also testified that the results of the echocardiogram and EKG do not necessarily rule out a cardiac source for claimant's stroke. He explained that those tests are not sensitive enough to allow the medical practitioner to rule out a cardiac problem as the source of the clot. The claimant should have had a transesophageal echocardiogram and a saline contrast study in order to conclusively rule out the cardiac contribution to this condition.

⁷ Geis Depo. at 11.

⁸ American Medical Ass'n, *Guides to the Evaluation of Permanent Impairment*, (4th ed.). All references are to the 4th ed. of the *Guides* unless otherwise noted.

⁹ Geis Depo. at 31.

¹⁰ Farrar Depo. at 10.

¹¹ *Id.* at 20.

Dr. Farrar completely disagreed with Dr. Bosiljevac's opinion that claimant suffered from heat exhaustion, or that heat exhaustion and dehydration are risk factors for stroke. While he agreed that upon admission to the hospital claimant may have been volume depleted due to her diuretics, he testified that it was unlikely that she suffered from any heat related illness on August 27, 2003. He explained that the timing between her work activities and her hospital admission weigh against such a conclusion. Moreover, her work activities took place in the morning before the heat of the day was at its worst, and claimant was acclimated to her work environment, having worked there for a few months.

Had claimant been profoundly dehydrated upon her admission to the hospital, Dr. Farrar would have expected her to experience kidney failure and renal insufficiency. Yet, her test results do not bear that out. Her albumin and creatinine levels were normal as were her liver enzymes. He went on to say that "[f]or a low flow state to cause a focal stroke is ridiculous. It doesn't happen. It's not something that we see."¹² Dr. Farrar specifically stated that volume depletion cannot lead to hypercoagulability of the blood.¹³

Dr. Michael Ryan, a board certified neurologist, also reviewed claimant's records and examined her, and weighed-in on the causation aspect of this claim. According to Dr. Ryan (and Dr. Farrar), a neurologist diagnoses and treats those who suffer from strokes, and for that reason, is most qualified to render an opinion on the causative factors in any given situation.

Dr. Ryan took a history from claimant and according to his records, claimant reported feeling dizzy on the morning of August 27, 2003 before she reported to work. Although claimant denies telling Dr. Ryan she was dizzy, or that she had any symptoms before she arrived at work that morning. Dr. Ryan testified that claimant presented at the emergency room 2 days after her symptoms with slurred speech, a facial droop and a decrease in her level of consciousness. Her blood pressure was normal and her potassium levels were low, possibly due to the diuretics she had been taking for her hypertension.¹⁴ The rest of her lab work was normal and he concluded, based upon her blood work and her urinalysis, claimant was not dehydrated and she had not suffered any sort of heat stroke.

Dr. Ryan testified that dehydration does not make blood thicker, and even if it did, there is no evidence that claimant's blood was hypercoagulated as of August 29, 2003. Ultimately, he maintains that claimant's history of hypertension and smoking caused her stroke.

¹² *Id.* at 30.

¹³ *Id.* at 35.

¹⁴ Ryan Depo. at 15.

Quite clearly, claimant had a cerebrovascular event sometime between August 27, 2003, with the onset of her symptoms, and August 29, 2003, when she was admitted to the hospital. K.S.A. 44-501(e) provides that “[c]ompensation shall not be paid in case of coronary or coronary artery disease or cerebrovascular injury unless it is shown that the exertion of the work necessary to precipitate the disability was more than the employee’s usual work in the course of the employee’s regular employment.” (Heart Amendment).

Here, claimant has testified that the work she performed in the morning of August 27, 2003 was nothing out of the ordinary and required no additional exertion. Claimant concedes this point in her brief by stating that “[t]his case . . . is not a run-of-the-mill Heart Amendment case. There is no contention that claimant performed any physical work outside the realm of her usual daily physical exertion level. . . .”¹⁵ Thus, in order to avoid the preclusive effect of the Heart Amendment she must establish that an external force, here heat in the workplace, was the precipitating cause of her stroke and resulting disability.¹⁶

Whether an external force or agency produced a worker’s disability is a question of fact.¹⁷ The required elements for “external force” are as follows:

To support a finding that claimant’s cardiac or vascular injury is the product of some extreme external force, the presence of a substantial external force in the working environment must be established and there must be expert medical testimony that the external force was a substantial causative factor in producing the injury and resulting disability.¹⁸

The Kansas Supreme Court has said that -

With respect to an injury sustained by a workman resulting from exposure to natural elements, such as excessive heat, the general rule is that if the nature of [her] employment, that is, the work [she] is doing, subjects [her] to a greater hazard or risk from the elements than that to which [she] otherwise would be exposed, so that there may be said to be a causal connection between the conditions under which the work is performed and the resulting injury, the injury is deemed to be an accidental injury arising out of the employment within the meaning of the workmen’s compensation act.¹⁹

¹⁵ Claimant’s Brief at 7 (filed Mar. 25, 2005).

¹⁶ See *Dial v. C.V. Dome Co.*, 213 Kan. 262, 266, 515 P.2d 1046 (1973).

¹⁷ *Suhm v. Volks Homes, Inc.*, 219 Kan. 800, Syl ¶4, 549 P.2d 944 (1976).

¹⁸ *Makalous v. Kansas State Highway Commission*, 222 Kan. 477, 484-85, 565 P.2d 254 (1977).

¹⁹ *Taber v. Tole Landscape Co.*, 181 Kan. 616, 313 P.2d 290, Syl. ¶1 (1957).

The ALJ concluded “it has neither been shown that the [c]laimant performed any unusual exertion that day or that the temperature was more than that she would have experienced any other day that summer or that the heat that day was oppressive.”²⁰ He went on to conclude that “[c]laimant has not proven that she became dehydrated because of any work condition. Even had their [sic] been some degree of dehydration, the [c]ourt finds the opinions of Dr. Farrar and [Dr.] Ryan to be persuasive that this contributed in no way to the stroke; the opinion of Dr. Bosiljevac on this point is not persuasive. Instead, it is clear the stroke came about because of the [c]laimant’s preexisting cerebral vascular disease and her hypertension and smoking.”²¹

The Board has considered the evidence contained within the record and the parties’ briefs and finds the ALJ’s Award should be affirmed. Like the ALJ, the Board is not persuaded that claimant was subjected to any unusual external force, specifically heat, while in respondent’s employ on August 27, 2003. While the evidence suggests that claimant’s workplace was at times hot, this was not a condition that was new to her. Claimant had worked for respondent in this capacity for a period of months. On August 27, 2003, claimant went to work at 6:00 a.m., and by her own testimony, was beginning to feel symptoms within 2-4 hours. The temperature at that time was in the 70’s. Even assuming the temperature was higher indoors, that extent of heat is not what one would typically consider excessive such that it would constitute an unusual external force.

Likewise, the Board remains unpersuaded that claimant was dehydrated on August 27, 2003 and that this dehydration somehow led to “thicker” blood, thus causing a clot. This theory was refuted by both Drs. Ryan and Farrar. Moreover, although claimant’s generic symptoms of feeling “hot”, dizzy and nauseas might be indicative of heat exhaustion, Dr. Farrar testified that it is difficult to diagnose her condition on August 27 based upon test results tendered on August 29, 2003, 2 days later. Indeed, the record is silent upon claimant’s activities while at home from noon on August 27 until she entered the hospital. She testified she remained in bed, getting up only to shower and to eat.

The Board is persuaded that claimant’s preexisting cerebral vascular disease, as evidenced by an earlier infarction in the occipital area of the brain, along with her longstanding hypertension and smoking, both of which are well documented risk factors for stroke, to be the cause of her present condition. The Board finds claimant has failed to meet her burden of proof and as such, the ALJ’s Award is hereby affirmed in all respects.

²⁰ ALJ Award (Feb. 10, 2005) at 3.

²¹ *Id.* at 3-4.

AWARD

WHEREFORE, it is the finding, decision and order of the Board that the Award of Administrative Law Judge Bryce D. Benedict dated February 10, 2005, is affirmed.

IT IS SO ORDERED.

Dated this _____ day of June, 2005.

BOARD MEMBER

BOARD MEMBER

BOARD MEMBER

c: Jeff K. Cooper, Attorney for Claimant
Lynn M. Curtis, Attorney for Respondent and its Insurance Carrier
Bryce D. Benedict, Administrative Law Judge
Paula S. Greathouse, Workers Compensation Director