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HEART ATTACK CASES UNDER THE WASHINGTON WORKMEN'S COMPENSATION ACT

FLOYD L. NEWLAND

The recent case of *Windust v. Department of Labor and Industries*¹ brought an important change in Washington workmen's compensation law with the overruling of a long-standing rule relating to recovery under workmen's compensation for heart failure. The *Windust* case apparently means there can be recovery for heart failure resulting from strain only when the strain is "unusual." It appears that if the worker is doing only a routine act there can be no recovery. Though the new rule is not definitively articulated at this point, this inquiry will attempt to assess what the Washington Supreme Court has done and indicate what it will do in the future.

The workmen's compensation act, as first enacted in 1911, allowed recovery for an injury which was the result of a "fortuitous event." Interpreting the original statute in *Frandila v. Department of Labor and Industries*,² the court allowed recovery for the death of a workman who suffered a fatal heart attack while chopping the roots of a tree at the bottom of a ditch. The court held that death in that instance was caused by a "fortuitous event" and said:

Where a workman, not in perfect health, during the course of his employment makes an extra exertion which, in addition to his infirmity, causes an injury, such injury is a fortuitous event, and brings him within the operation of the compensation.⁴

The legislature quickly enacted a new definition of the word "injury," embodied in the present statute, which reads:

"Injury." "Injury" means a sudden and tangible happening, of a traumatic nature, producing an immediate or prompt result, and occurring from without; an occupational disease; and such physical condition as results from either. RCW 51.08.100 [cf. Rem. Rev. Stat. (Sup.), 7675; Rem. Supp. 1941, 7679-1].

The leading case construing this definition of "injury" has been *McCormick Lumber Co. v. Department of Labor and Industries*.⁵ In

¹ 152 Wash. Dec. 1, 323 P.2d 241 (1958).

² The statutory definition of injury was ". . . only to an injury resulting from some fortuitous event as distinguished from the contraction of disease." Rem. Rev. Stat. § 7675, L. 1941, c. 74 § 3, p. 346.

³ 137 Wash. 530, 243 Pac. 5 (1926).

⁴ *Id.* at 537.

⁵ 7 Wn.2d 40, 108 P.2d 807 (1941).

that case the court examined each of its prior decisions and stated the following as a rule of law: "An accident arises out of the employment when the required exertion producing the accident is too great for the man undertaking the work, *whatever the degree of exertion or the condition of the workman's health.*"⁶ After discussing its prior cases, the court refused to require a showing that the workman was under an unusual strain. The court thought that to require such a showing would be to "introduce an element of uncertainty and confusion. . . ."⁷

It is to be noticed that RCW 51.08.100 is a definition of "injury," and the *McCormick* case is worded in terms of an accident arising out of employment. The court in the *McCormick* case was, however, considering the statutory definition of "injury." By the wording "a sudden and tangible happening, of a traumatic nature producing an immediate or prompt result and occurring from without," the statute requires what would normally be thought of as an event. These words shall be considered as referring to, and requiring, a particular event when used in this article. The other words in the statute, "an occupational disease; and such physical condition as results from either," refer to a condition which would normally be thought of as an injury. It seems, therefore, that the statute contains within its definition of "injury" both an event and an injury. The two in combination make what would be normally considered an accident, and it is submitted that this is what prompted the court to refer to an accident in the *McCormick* case. In the *McCormick* case the court was considering what the nature of the event must be. The *McCormick* case was not concerned with what causal connection there must be between the event and the resulting condition of the worker—in these cases, heart failure. In no sense should the *McCormick* case be read as doing away with the need of showing that the event did in fact cause the heart failure.

The court indicated that the Department of Labor and Industries was contending that a strain-caused heart attack was not "traumatic" unless it was caused by some violent, strenuous, or unusual exertion.⁸ The court did not expressly answer this contention, but it did decide that usual activity is an event which meets the requirements of RCW 51.08.100. This was done without an exhaustive analysis of the wording of the statute, but rather was based on prior decisions, which were

⁶ *Id.* at 59.

⁷ *Ibid.*

⁸ *Ibid.*

discussed extensively. In this way the department's contention relating to the word "traumatic" was recognized and then refused. In this case it was the usual activity, and not the subsequent heart failure, which was the event required by the statute.

In the *McCormick* case, the court did not rule as a matter of law that there was causation between the event and the heart failure. All the court did was to accept the finding of fact that death was caused by exertion which was usual for that workman. The court said this about the facts as reported to it: "[T]he joint board, after a review of the testimony, made a finding that Sellin's death was attributable to the exertion undertaken at the time of his injury and concluded that the death was compensable under the statute."⁹

The court was very specific in requiring a causal connection between the event required by RCW 51.08.100 and the heart failure in the recent case of *Mork v. Department of Labor and Industries*.¹⁰ Every time a worker does an act, there has been an event which very well might qualify as a happening of a traumatic nature, as defined by the statute and interpreted by the *McCormick* case; but that is not a sufficient basis upon which to ground a recovery. There must also be a causal connection, and the proof of cause must be substantial. In the *Mork* case the cause was alleged to be Mork's climb up a long ramp to his place of work. There was medical testimony to the effect that, if he had not climbed to his place of employment, he would have lived at least another minute. This was found not to be sufficient causation upon which to ground a claim under the workman's compensation statute. The court said:

Death, which is the last stage of a progressive disease, is not within the scope of the industrial insurance act. To be within the act, an *industrial injury must have a causal relation to the death of the workman, who otherwise would have lived for an indefinite and unpredictable time*. Mere acceleration of the final stage of a disease is not proof of the required causal relationship. (Emphasis added.)¹¹

The concept of causation includes the question of whether the event was of such a character that it should be given legal significance. This problem was faced in the *Mork* case, where the court thought that hastening death by one minute was not legally significant. If we accept the premise that death was hastened by one minute, then in some

⁹ *Id.* at 45.

¹⁰ 48 Wn.2d 74, 291 P.2d 650 (1955).

¹¹ *Id.* at 77.

degree there was causation between the act of climbing to the place of work and death. The court said:

The burden was upon respondent to prove that the deceased's climb to his station was an industrial injury in the sense that it was a *contributing cause of his death*, without which he would not have died when he did. *Petersen v. Department of Labor and Industries*, 40 Wn. (2d) 635, 245 P. (2d) 1161. *The theory that an acceleration of death by one minute meets this requirement, is unsound.* (Emphasis added.)¹²

This would seem to limit the rule of the *McCormick* case, which would allow recovery no matter what the condition of the workman's heart. In fact, however, the *McCormick* case has to do only with the degree of exertion needed to have an "event," while the *Mork* case has to do with the element of causation. The two cases do not meet on the same issue. Even though the *Mork* case may seem to indicate a change in attitude,¹³ it did not change the *McCormick* rule.¹⁴

The court held in *Cyr v. Department of Labor and Industries*¹⁵ that the causal connection between an event which qualifies as a "sudden and tangible happening" and a fatal heart attack must be proved by medical testimony. In that case a hypothetical question to a physician, who was testifying as an expert witness, assumed the workman was exerting effort when there was no evidence of exertion and assumed a pre-existing heart condition which was not proved. As the hypothetical question did not coincide with the proof, the expert medical testimony was of no value and left the plaintiff without any medical testimony. This justified the trial court in taking the case from the jury and directing a verdict for the Department of Labor and Industries.

While there is a requirement of proof of causal relation between the event and the heart attack, the court consistently has held this

¹² *Id.* at 76-77. This language explains what was meant by the court in *Petersen v. Department of Labor and Industries*, 40 Wn.2d 635, 640, 245 P.2d 1161 (1952) where the court said, "We have never dispensed with a minimum showing that the employment or an accident occurring during employment must have been, more likely than not, a contributing factor to the death, *without which the death would not have occurred when it did.*" (Emphasis added.)

¹³ Casenote, *Causation in Heart Cases*, 31 WASH. L. REV. 192, 194.

¹⁴ *Petersen v. Department of Labor and Industries*, 40 Wn.2d 635, 245 P.2d 1161 (1952) is another case which shows the definite need to prove causation. In this case the court pointed out that the tangible happening requirement, recognized as needed in the *McCormick* case, was met, but there was no showing of causation between the act of rolling a heavy barrel and death.

¹⁵ 47 Wn.2d 92, 286 P.2d 1038 (1955); *accord*, *Dayton v. Department of Labor and Industries*, 45 Wn.2d 797, 278 P.2d 319 (1954).

requirement is met by a showing that the strain was more likely than not the cause of death. This was the holding in *Barnett v. Department of Labor and Industries*,¹⁶ handed down since the *Windust* case overruled *McCormick*. The court said:

The rule is that it must appear from medical testimony that the incident relied upon was more likely than not the cause of the injury claimed. *Stampas v. Department of Labor and Industries*, 38 Wn. (2d) 48, 227 P. (2d) 739). . . . The doctor's testimony on cross-examination only meant that the cause was not *certain*, and that there was the possibility that the incident was not a proximate cause of the coronary thrombosis.

This degree of uncertainty and speculation occurs in many medical diagnoses. It is consistent for a doctor to admit an element of speculation, and still be convinced that an incident is more likely than not the cause of the injury.¹⁷

It is to be noted that the court in this case mentions "proximate cause," which includes the idea that the event alleged to have caused the heart attack must be of enough importance to be given legal significance.

*Haerling v. Department of Labor and Industries*¹⁸ requires that a "sudden and tangible happening" be of such a character that it can be isolated at one particular point in time. A "happening" is required by the statute, and this would seem to indicate a particular affair isolated in time as opposed to a transaction or a state of flux. The court described the requirement in this way:

The cumulative effect of long continued routine and customary duties upon a workman, regardless of the hours devoted thereto, is not a sudden and tangible happening. The statute contemplates a *happening* of a traumatic nature, producing an immediate and prompt result. . . .¹⁹

Thus the *Haerling* case demonstrates that the rule of the *McCormick* case could be used only when there was a specific event which caused the heart attack, and could not be used if the cumulative effect of working on a particular job caused the heart failure. The *Haerling* case is not inconsistent with the *McCormick* case but only points out the need to have a particular isolated event.

The *Haerling* case may seem inconsistent with *McCormick*, inasmuch as *McCormick* would allow recovery no matter what the con-

¹⁶ 152 Wash. Dec. 378, 325 P.2d 896 (1958).

¹⁷ *Id.* at 380.

¹⁸ 49 Wn.2d 403, 301 P.2d 1078 (1956).

¹⁹ *Id.* at 405.

dition of the workman's heart. Thus it could be argued his heart was very weak and could not withstand usual strain. That is to say, this was the last event in a series which weakened his heart and, in the final analysis, caused the death. The *Haerling* case did not present this situation, since the plaintiff contended that death was the result of the long, strenuous overtime work which had been done over an extended period of time. Therefore the pre-*Windust* rule of law as to strain-caused heart attacks could be stated thus: **There had to be an event which more likely than not caused a strain which was too great for the workman in question, regardless of the degree of exertion or the condition of his heart.**

Into this situation *Windust v. Department of Labor and Industries* intruded.²⁰ The divided court²¹ overruled the *McCormick* case.²² The point at which the court struck was the rule allowing recovery whenever the exertion was too great for the particular worker, regardless of his physical condition. This rule, which was the law in Washington since even before the *McCormick* case,²³ has been replaced by a rule, the dimensions of which are not yet known.

In deciding to overrule the *McCormick* case, the court, although it professed not to rely on stare decisis, did rely on the *Mork* case, which was decided on causation reasoning. The majority seemed interested in the definition of "sudden and tangible happening," however, as it italicized those words when quoting the statutory definition of injury.²⁴

The court also relied on the *Haerling* case in its attempt to determine what the legislature meant by "injury." The inquiry in the *Haerling* case, however, was as to what constitutes an event, and in the *Windust* case (as in the *McCormick* case), the point of concern appears to be

²⁰ 152 Wash. Dec. 1, 301 P.2d 1078 (1958).

²¹ Chief Justice Hill and Judges Donworth, Weaver, and Ott signed the majority opinion written by Judge Mallory. Judges Donworth and Ott concurred in overruling the *McCormick* case but with reservations about what was said as to the applicability of the doctrine of stare decisis. Judge Foster's dissent was concurred in by Judge Rosellini. Judge Rosellini also concurred in the dissenting opinion written by Judge Finley. Judge Hunter did not participate.

²² The court also overruled all the cases following the *McCormick* case, and in so doing specifically overruled: *Summerlin v. Department of Labor and Industries*, 8 Wn.2d 43, 111 P.2d 603 (1941); *Cooper v. Department of Labor and Industries*, 11 Wn.2d 248, 118 P.2d 942 (1941); *Northwest Metal Products Inc. v. Department of Labor and Industries*, 12 Wn.2d 155, 120 P.2d 855 (1942); *Guy F. Atkinson Co. v. Webber*, 15 Wn.2d 579, 131 P.2d 421 (1942); *Olympia Brewing Co. v. Department of Labor and Industries*, 34 Wn.2d 498, 208 P.2d 1181 (1949); *Fleischman v. Department of Labor and Industries*, 34 Wn.2d 631, 209 P.2d 363 (1949); *Merritt v. Department of Labor and Industries*, 41 Wn.2d 633, 251 P.2d 158 (1952).

²³ See *Metcalf v. Department of Labor and Industries*, 168 Wash. 305, 11 P.2d 821 (1932).

²⁴ 152 Wash. Dec. 1, 5, 323 P.2d 241 (1958).

how violent or unusual the event must be. This is not to be confused with the *Mork* case (in which the event was climbing the ramp to the place of employment), where the court concluded that the event did not have enough effect on the worker to be considered in law as the cause of his death, since it only hastened his death by one minute.

The best way to illustrate the difference between the *Haerling* case and the *Windust* case is by a comparison of their facts. In *Haerling* that which was alleged to have been a "sudden and tangible happening" was the long, hard work which eventually was too much for the worker's heart. In the *Windust* case, the decedent was a driver of a ready-mix concrete truck who, during the course of his duties, was required to look into the drum of the truck to determine how much concrete remained. To do so, he had to walk along a catwalk and step up about two feet, and while so stepping up he had a heart failure. Since stepping up to look into the drum of the truck was one specific incident which could be isolated in time, the case is clearly different from the *Haerling* case.

The court could have attempted to decide the case along the line of the *Mork* case; that is, to ask whether the event was causally related to the death. However, the court chose to decide whether the act of stepping up to look into the drum of the concrete truck was a "happening" of the character required by RCW 51.08.100. The court said:

Dr. Sloan's testimony followed the customary pattern that, if the workman had not engaged in his work but had been receiving proper medical treatment at the time he looked into the drum, he would not have died.

This satisfied the rule of *McCormick Lbr. Co. v. Department of Labor and Industries*, 7 Wn. (2d) 40, 108 P. (2d) 807 . . .²⁵

In overruling the *McCormick* case, the court gave very little insight into what would, in the future, be considered a "sudden and tangible happening." It said: "We are constrained to hold that the routine act of ten years' standing is not an injury as a matter of law."²⁶ The word "injury" in that context refers to the statutory definition of that word.

Since the *Windust* case, the same problem has been faced twice by the court. In *Kruse v. Department of Labor and Industries*,²⁷ the court refused recovery for the death of a workman who died while

²⁵ *Id.* at 2.

²⁶ *Id.* at 5.

²⁷ 152 Wash. Dec. 391, 326 P.2d 58 (1958).

performing his normal duties. The court emphasized the words "sudden and tangible happening, of a traumatic nature,"²⁸ then went on to say:

The exertion required in the normal routine duties of a job is not, in itself, an injury within the purview of the statute. *There must be some unusual strain placed upon the workman by the work he is called upon to perform which is the cause of his injury* or death before compensation can be awarded. (Emphasis added.)²⁹

Similarly, in *Hodgkinson v. Department of Labor and Industries*³⁰ recovery was refused for death from heart failure occurring while an employee was performing his regular duties.

In the *Windust, Kruse, and Hodgkinson* cases, the court makes it appear that there is now a rule of law that before a workman can recover under the workmen's compensation statute, he must show that the cause of his injury was some unusual strain. The court at no point in any of the discussions declares which particular words in RCW 51.08.100 make an unusual strain an essential element of an "injury." It would seem that the words in the statute most likely to require this result are "of a traumatic nature." That this should be so is indicated by *Petersen v. Department of Labor and Industries*,³¹ where the court was considering a case in which the claim was based on a death resulting from rolling a heavy barrel up a ramp. The court said:

The "traumatic nature" of the "tangible happening" (barrel rolling), in this case, is not readily apparent. However, our decisions, under the doctrine of *stare decisis*, unmistakably dispense with the showing of an external physical violence.³²

In the *Petersen* case, the court was unconvinced, it appears, that "traumatic" implied no external violence.

The words "of a traumatic nature, producing an immediate or prompt result, and occurring from without," when read in the context of the legislature's enactment of a new definition of "injury" immediately following the *Frandida* case, could be read to require an external force applied to the body of the workman. If the court is to adopt that understanding of the statute, it would appear that not even unusual strain would be an injury under the statute. However, the

²⁸ *Id.* at 393.

²⁹ *Ibid.*

³⁰ 152 Wash. Dec. 437, 326 P.2d 1008 (1958).

³¹ 40 Wn.2d 635, 245 P.2d 1161 (1952).

³² *Id.* at 638.

court said in very deliberate dictum in the *Kruse* case that an unusual strain would be a sufficient showing under RCW 51.08.100.³³

Because the *Windust* case involves only usual strain, it overrules only the Washington law concerning usual strain. This means *Porter v. Department of Labor and Industries*,³⁴ giving relief to a one hundred twenty-nine-pound man who was given work requiring him to carry chokers weighing between seventy-five and eighty pounds across rugged terrain, when his normal duties were as a log marker and brander, has not been overruled. The *Porter* case is clearly a case involving unusual exertion. However, that case loses a great deal of its authority when it is realized that, at the time the case was decided, the *McCormick* case was still the law. The *McCormick* case, allowing, as it did, recovery for damage done as a result of usual effort, made a situation where the court had no need to decide whether recovery should be given if there is unusual strain, as this is well within the rule of the *McCormick* case. However, in the *Porter* case Chief Justice Hill concurred specially to point out that the opinion was delayed nine months because of "disagreements within the court. These disagreements have been happily resolved and all are agreed, at least as to the result of the opinion."³⁵ This statement makes possible the inference that the court was at that time reconsidering the *McCormick* case. This would lead one to surmise that unusual exertion, the key fact of the *Porter* case, will be the point where the court will allow recovery. This prospect is enhanced by the narrow margin by which the *McCormick* case was overruled.

The "unusual exertion" problem is not peculiar to Washington. Many courts have had to decide whether their statute would allow recovery for heart attacks. The various state courts began to differentiate between "usual" and "unusual" strain because of the interpretation they had placed on the word "accident" as it was found in their particular statutes. In most states the statutes required that the workman suffer an accident as a prerequisite to recovery of workmen's compensation. There has long been a conflict in the cases over whether there can be an accident when a man doing an intentional act is injured. Some cases hold there is no accident, because the worker did what he expected to do, and only the result was unexpected. These courts would require the means causing the injury to be unexpected or accidental, whereas in other states it is held that

³³ 152 Wash. Dec. 391, 393, 326 P.2d 58 (1958).

³⁴ 51 Wn.2d 634, 320 P.2d 1099 (1958).

³⁵ *Id.* at 639.

an unusual result from an intentional act is an accident.³⁶ Larson says, "The number one issue here, in theoretical terms, is whether a court in construing 'accident' will require an accidental cause or will be satisfied with an accidental result."³⁷

When the courts of the various states find themselves in a position where they must determine if there is an accident when the worker was injured because of strain or exertion, they employ the definition of "accident" they already have formed. Hence, if the court in a given state requires an unexpected cause, then usual strain will not meet the requirement. If, however, the court will allow recovery for an unexpected result, then usual strain is all that is required for a recovery, provided, of course, there is the necessary causation.

Even though the Washington workmen's compensation statute does not use the word "accident," the same problem must be faced. The Washington statute, being framed with the word "injury," still leaves open the problem of whether an unexpected result of a usual or ordinary act is compensable, as the phrase "sudden and tangible happening, of a traumatic nature" is not specific in this matter. It appears that, through the interpretation of these words in the *Windust* case, the court decided there must be an unusual strain before compensation can be granted in the heart cases, and thereby the Washington court lined up with the minority position.

This requirement of unusual strain can lead to some hard fact questions. In *Margolies v. Crawford Clothes*,³⁸ New Jersey held that a salesman who was to move several hundred overcoats from one part of the store to another, was exerting unusual strain, even though the clothes were moved four times a year. Even when a truck driver unloaded a large amount of cement, bricks, and sheetrock on a hot day, the resulting heart failure was compensable under the New Jersey statute.³⁹ In granting recovery the court said, "So in the instant case the heat, the extraordinary volume of materials delivered and their heavy weights combined to create unusual exertion . . ."⁴⁰

However, a carpenter standing on a scaffold five feet off the ground, who had to reach just above his head to cut two-by-four beams was not making an unusual exertion⁴¹ under the same New Jersey statute.

³⁶ 1 LARSON, WORKMEN'S COMPENSATION, 518-26 (1952).

³⁷ *Id.* at 518.

³⁸ 24 N.J.Super. 598, 95 A.2d 413 (1953).

³⁹ *Moleski v. Bohon*, 1 N.J.Super. 136, 62 A.2d 745 (1948).

⁴⁰ *Id.* at 745.

⁴¹ *Gaudette v. Miller*, 1 N.J.Super. 145, 62 A.2d 749 (1948).

And a New Jersey workman, whose normal duty was to remove a metal crucible weighing approximately one hundred thirty pounds from a heating unit with the aid of a pulley, was using unusual exertion when he worked unloading forty-pound ingots by hand from a freight car. In this case, the workman had been required to load ingots once or twice a month or sometimes every six weeks, always during overtime.⁴² It may be that it was hard fact questions such as these which led the New Jersey court recently to overrule its prior cases requiring unusual exertion.⁴³

The Washington court, having stated as a matter of law that there must be some unusual exertion before a workman can recover for a heart attack resulting from on-the-job exertion, will invite a great amount of litigation over what is "unusual." There are several other states which require a claimant under their workmen's compensation acts to show some unusual strain as a prerequisite to recovery, though this is a minority rule.⁴⁴ Larson believes the distinction between usual or unusual is not a valid distinction, in that the criterion assumes there is a particular amount of exertion necessary or usual for a particular job. It is Larson's view that one cannot, at the beginning of employment, know what amount of exertion is going to be needed for the job undertaken.⁴⁵

In the *Windust* case the court decided that a routine act is not the kind of event required by RCW 51.08.100; it did not decide the question of causation. Had the court discussed the problem of causation, it still might have overruled the *McCormick* case if it had believed certain medical authorities who say that usual strain cannot, from a medical standpoint, be considered the cause of a heart attack.

These medical authorities would not deny that, the greater the exertion one makes, the greater the demand will be on the heart.⁴⁶ It is contended, however, that the heart will adapt itself to the individual's usual exertion. The worker is warned of his condition and "usually protects himself against exertion greater than maximal because he experiences shortness of breath or other discomforts."⁴⁷ Therefore,

⁴² *Franklin v. U.S. Bronze Powder Works*, 6 N.J.Super. 320, 71 A.2d 226 (1950).

⁴³ *Ciuba v. Irvington Varnish & Insulator Co.*, 27 N.J. 127, 141 A.2d 761 (1958). 1 LARSON, WORKMEN'S COMPENSATION, 519-30 (1952) lists cases from each jurisdiction illustrating whether usual or unusual exertion was required, and what is considered usual and unusual in each jurisdiction.

⁴⁴ 1 LARSON, WORKMEN'S COMPENSATION, 519-26 (1952).

⁴⁵ *Id.* at 546.

⁴⁶ Viko, *Medical Legal Problems of the Heart in Relation to Injury*, 23 UTAH B. BUL. 47, 51 (1953).

⁴⁷ *Ibid.*

it is contended that, in making a determination of what is unusual exertion or strain, all of the activities of the worker should be considered.⁴⁸ A committee of the Washington State Heart Association, organized to study what effect exertion has on an injured heart, is of the opinion that all the activities of the worker on the job and off should be considered in attempting to determine if, as a matter of medical fact, the activity in question was the cause of the heart failure.⁴⁹

The medical authorities are in general agreement that exertion cannot, except in very rare instances, injure a healthy heart.⁵⁰ It would therefore seem wise to have a presumption against causation, even by unusual effort, when the claimant has had no prior heart damage. This is not to say that this presumption should apply merely because the prior heart condition has gone undetected until the injury.

Coronary occlusion due to coronary thrombosis is thought by many to be the natural result of coronary arteriosclerosis. In some cases there is a hemorrhage which causes the clot, and this may or may not be the result of strain. Dr. L. E. Viko, of the University of Utah Medical School states:

In most instances coronary occlusion occurs when the disease has narrowed the artery to a point that the fatty degeneration or calcium deposit erodes the surface of the endothelium [inner lining of artery] permitting the formation of a blood clot to plug the lumen. Under such a mechanism the occlusion may be considered the natural course of the disease and little related to exertion or emotion. Professor Gunn states that in *some uncertain percentage of cases*, the occlusion is caused by hemorrhage into the vessel wall. It is in such mechanism that *exertion might reasonably be a causal factor*. (Emphasis added.)⁵¹

Dr. Meyer Texon, of New York City, in summarizing the work of Dr. Arthur M. Master, states it is Master's position that "nothing has been demonstrated to indicate a causal relationship between effort and thrombosis or intimal hemorrhage."⁵² He quotes Master as saying, "Nothing you can do can accelerate the actual occlusion and nothing you can do thus far can prevent the actual occlusion."⁵³ And

⁴⁸ *Ibid.*

⁴⁹ Aronson, *Effects of Effort on the Diseased Heart*, 55 NORTHWEST MED. 54 (1956).

⁵⁰ Viko, *op. cit. supra* note 47 at 51. Accord, Phipps, *The Effect of Work on the Diseased Heart*, U.S. Dept. of Labor, Bull. No. 2, 175 (1934) (A study of cross-country runners.)

⁵¹ Viko, *op. cit. supra*, note 47 at 53.

⁵² Texon, *Heart Disease and Industry*, 289 (1954).

⁵³ *Ibid.*

Dr. Samuel Aronson, of the Washington State Heart Association's Subcommittee on Trauma and Strain, states:

Coronary artery occlusion by a thrombus or an atheromatous plaque, with or without intimal hemorrhage, is one of the end stages of coronary atherosclerosis. Coronary atherosclerosis, in turn, is a slowly progressive pathologic disease entity whose development is not dependent upon exertion, injury or emotional strain.⁵⁴

These authorities differ only in that some think strain cannot cause intimal hemorrhage or thrombosis, regardless of the degree of strain, while others feel the condition may be caused or aggravated by unusual strain. Dr. Viko is of the opinion that "coronary thrombosis with myocardial infarction"⁵⁵ does not occur from exertion or emotion or anoxia except where there is preceding arteriosclerosis.⁵⁶ Then he goes on to say that only exertion which is unusual for the particular individual can be considered the cause of coronary thrombosis with myocardial infarction.⁵⁷ Even then he would consider it causative only if the symptoms occur in less than twelve hours following the unusual strain.⁵⁸ Dr. Texon, in summarizing the work of Strong, states that it was Dr. Strong's opinion that effort may cause myocardial infarction only when relatively excessive for the individual.⁵⁹ Dr. Ernest P. Boas, of Columbia Medical School, seems to be in disagreement as to the conclusions expressed above.⁶⁰ Whether his opinion would be different from another authority in a particular case is not known, but it may be that he too is considering unusual strain as the causal requisite, as he is not explicit.

Another form of heart attack, coronary insufficiency, is present when the demand for oxygen by the heart cannot be met by the quantity of blood which is supplied.⁶¹ This can be brought on by exertion in a normal heart, but is more generally found in a heart already damaged.⁶²

The committee of the Washington Heart Association which studied

⁵⁴ Aronson, *op. cit. supra*, note 49.

⁵⁵ Viko, *op. cit. supra*, note 47, at 54 defines myocardial infarction as "the series of changes taking place in the structures of the heart wall, first of damage, later of repair, and ultimately leading to a scar in which cases that do end fatally before the fully sequence of pathologic changes occurs. Particularly in the case of death, coronary thrombosis may occur without myocardial infarction.

⁵⁶ *Id.* at 55.

⁵⁷ *Ibid.*

⁵⁸ *Ibid.*

⁵⁹ Texon, *op. cit. supra*, note 54, at 290.

⁶⁰ Boas, *Trauma and Heart Disease*, 2 NACCA LAW JOURNAL 113.

⁶¹ Texon, *op. cit. supra*, note 54, at 295.

⁶² *Ibid.*

the problem of strain-caused heart failure produced a general guide for medical witnesses. It was the opinion of this committee that usual strain should not be considered the cause of the following kinds of heart failure: death from acute coronary disease, coronary occlusion with myocardial infarction, acute coronary insufficiency, and acute pulmonary edema.⁶³

This showing of some current medical opinion is offered only to show that a substantial group of specialists agree that usual strain should not be considered the cause of heart attack. The holding in the *Windust* case that there must be, as a matter of law, unusual effort on which to base a claim for heart failure does not appear to be out of line with current medical opinion. However, as this is a matter which may be subject to further refinement in the future, it would seem preferable to put it in the form of a rebuttable presumption.

The result of the *Windust* case, being a decision of law, may have a valuable social result. In the past it has been very difficult for a person with a weakened heart to find employment. Dr. Donal R. Sparkman, chairman of the Committee on Cardiac Rehabilitation, Washington State Board Association, described both the need for employing such persons and the difficulty of finding jobs for them when he said:

It is our experience that a substantial number of patients may perform useful occupations without harm to themselves, and that in many cases, the emotional frustration resulting from non-employment is more harmful to the patient than is properly directed occupational effort. . . .

While our clinic has been operating since January, 1954, it has met with only moderate success in placing its patients suffering from cardiovascular disorders. The reason usually assigned for such resistance is fear of increased industrial costs under the Washington Workmen's Compensation act.⁶⁴

The fear of expense seems well-founded, as is exemplified by the fact that in 1956 the cost to an employer for the death of one workman was well in excess of ten thousand dollars.⁶⁵

The *Windust* case, holding that usual effort is not a basis for recovery for workmen's compensation, should remove this fear of employers in hiring a worker who has a history of heart disease. It may be that

⁶³ Aronson *op. cit. supra*, note 50.

⁶⁴ Letter from Donal R. Sparkman to L. H. Bates, June 28, 1955.

⁶⁵ Rutledge, *Proposed Procedure for Administering Heart Cases Under the Washington Industrial Insurance Act*, 31 WASH. L. REV. 67 (1956).

such a legal decision is needed to dispel employers' fear of loss due to the death or disability of such persons.

SUMMARY

1. Under the *McCormick* case there could be recovery for strain-caused heart failure, regardless of the amount of exertion or the condition of the worker's heart.

2. Under the *Windust* case no recovery will be granted for a heart failure caused by usual effort.

a. What constitutes unusual exertion is normally considered a fact question.

b. There is no current holding which definitely decides whether a heart failure resulting from unusual exertion is a satisfactory basis for recovery.

3. There is creditable medical opinion that usual strain cannot, from a medical standpoint, be considered the cause of heart failure. In this context, usual strain must be considered as encompassing all the activities of the individual.

4. The result of the *Windust* case may aid workmen who have had heart disease, and who again are able to work, find employment.