Myelography, Laminectomy, and Fusion in Workman's Compensation - Compelling the Claimant to Submit

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MYELOGRAPHY, LAMINECTOMY, AND FUSION IN WORKMEN'S COMPENSATION CASES—COMPELLING THE CLAIMANT TO SUBMIT

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INTRODUCTION

Workmen's compensation acts and occupational disease acts have been adopted in every state. These acts provide benefits of various kinds in varying dollar amounts to employees who are accidentally injured or who contract diseases arising out of or in the course of their employment. Benefits include both the cost of reasonable and necessary medical treatment and additional disability payments to reimburse the employee for any loss of income or impairment of future earning power. The presence or absence of fault on the part of the employer is not considered in awarding benefits.

The employee's right to payment is not absolute, however. Certain defenses and protective devices are provided the employer or his insurer by provisions in the statutes or by judicial legislation. These include the right of the employer to insist upon a medical examination of the claimant-employee to determine the cause and extent of the injury or disease. Further, the employer or his insurer, at the employer's expense, may require the employee to submit to reasonable medical or surgical treatment in an effort to effect a cure or reduce the extent of disability or impairment, thereby reducing the ultimate financial responsibility to reimburse the employee for loss of future earning power.

Such requirements, whether statutorily provided or judicially developed, seem to be reasonable. By way of medical examination, the employer should be allowed to show that the employee's disability was caused by something other than an employment-related accident or disease, or to show that the extent of disability or impairment is less than was asserted. Similarly, an employee who refuses to accept a simple medical treatment which would improve his condition or cure him should be denied compensation payments which would become unnecessary if the condition or injury were properly treated.

Problems arise when the requested examination or treatment is not simple. For example, is a myelogram to be considered a reasonable part

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of a medical examination in a case involving a suspected herniated intervertebral disc? Is a myelogram actually a surgical procedure rather than an examination, and, as such, is it a part of a reasonable treatment procedure which is designed to reduce disability or impairment? Additionally, if the myelogram discloses the existence of a herniated disc, should the employee then be required to undergo such surgical procedures as a laminectomy, in which the disc is removed; or a spinal fusion, in which the involved vertebrae are joined. All these considerations prompt the overriding question: may compensation benefits be terminated or suspended upon the refusal of a claimant to submit to any or all of these procedures upon demand of the employer or his insurer?

In seeking answers to these questions, the legal requirements for such medical examinations and treatment, as they typically appear in the workmen's compensation acts or as they have been judicially evolved, must be delineated. The purposes and mechanics of myelography, laminectomy, and spinal fusion must be examined and an analysis undertaken to determine whether these medical procedures fit the established legal criteria which would require a denial or suspension of compensation benefits for failure to submit.

THE LEGAL QUESTION

Specific Statutory Requirements

The following excerpts from the Pennsylvania and Virginia statutes are offered as typical examples of provisions establishing the right of an employer to require examination and treatment as a condition to continued payment of benefits:

**Pennsylvania**

If the employee shall refuse reasonable services rendered by duly licensed practitioners of the healing arts, surgical, medical and hospital service, treatment, medicines and supplies, tendered to him by his employer, he shall forfeit all rights to compensation for any injury or any increase in his incapacity shown to have resulted from such refusal.¹

At any time after an injury the employee, if so requested by his employer, must submit himself for examination, at some reasonable time and place, to a physician or physicians legally authorized to practice under the laws of such place who shall be selected and

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paid by the employer. The refusal or neglect without reasonable cause or excuse of the employee to such examination ordered by the board shall deprive him of the right to compensation under this article, during the period of such neglect or refusal.

**Virginia**

The refusal of the employee to accept such service when provided by the employer shall bar the employee from further compensation until such refusal ceases, and no compensation shall at any time be paid for the period of suspension unless, in the opinion of the Industrial Commission, the circumstances justified the refusal. In any such case the Industrial Commission may order a change in the medical or hospital service.

After an injury and so long as he claims compensation, the employee, if so requested by his employer or ordered by the Industrial Commission, shall submit himself to examination at reasonable times and places, by a duly qualified physician or surgeon designated and paid by the employer or the Industrial Commission. If the employee refuses to submit himself to or in any way obstructs such examination requested by and provided for by the employer, his right to compensation and his right to take or prosecute any proceedings under this Act shall be suspended until such refusal or obstruction ceases, and no compensation shall at any time be payable for the period of suspension unless in the opinion of the Industrial Commission the circumstances justify the refusal or obstruction.

Provisions such as those shown above are included in most workmen's compensation acts in this country.

Courts have explained the purpose of the examination requirement in terms of an overriding interest in the prevention of the perpetration of frauds in the feigning of personal injuries. It follows that reasons given in support of any discovery procedures would also be applicable to workmen's compensation cases; among these reasons are the clarification of issues between the parties, the elimination of trial by am-

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2. Id. § 314.
4. Id. § 65-88.
bush, and the assurance of the effectiveness of the adversary system in establishing the truth by guaranteeing that all relevant facts are available to all parties.\(^7\)

The requirement that a claimant submit to medical treatment (within certain boundaries) likewise appears to be reasonable when an arbitrary refusal to accept a simple cure would extend the liability of an employer beyond that contemplated by the legislature, i.e., to provide benefits to employees who choose to work but cannot because of injury. A suspension of benefits is justified when a “claimant simply prefers to preserve the injury and to receive money instead of being cured.”\(^8\)

Requirements Without Specific Statutory Authority

In states where workmen’s compensation acts do not contain specific statutory provisions requiring a claimant to submit to examination or treatment, their equivalent is generally implied by the courts under various theories. In this vein, a Wisconsin court has held that the refusal of treatment may become an intervening cause of the employee’s disability by breaking the causal connection between the employment accident and such disability.\(^9\) Likewise, in New Hampshire and Louisiana, where the statutes of both states do not include examination or treatment requirements, the breach of a common law duty to minimize or mitigate damages by the refusal of medical treatment has been suggested as a basis upon which to deny compensation benefits.\(^10\) An Alaska court combined the mitigation and causal connection theories in *Phillips Petroleum Company v. Alaska Industrial Board*, in which it held:

> The law contemplates that the injured workman will do everything humanly possible to restore himself to his normal strength so as to minimize his damages, and where he fails to do so, the consequent disability results from the voluntary conduct of the employee and not the injury.\(^11\)

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10. Neault v. Parker-Young Co., 86 N.H. 231, 166 A. 289, 290 (1933) The court suggests the existence of a near universal rule in this regard:
But the cases are practically in harmony in adoption of the rule denying compensation for disability avoidable by an operation which ordinary prudence advises, although the act contains no express terms incorporating it. See also French v. Employers Mut. Liab. Co., 70 So. 2d 179 (La. App. 1954)
The Test

Reasonableness

It has been for the courts to develop a test for the determination of the validity and effect of the refusal by a claimant to submit to examination or treatment in a given case. In essence the test which has evolved is one of reasonableness. Most courts examine several factors to determine whether the employee's refusal was reasonable in a particular case, thereby not affecting his right to receive benefits.

With respect to a particular requested examination, the court will make certain that: (1) the examination involves no unreasonable risk to health; (2) the examination involves no appreciable pain or suffering; and (3) the examination will, with reasonable certainty, produce material and positive information.\textsuperscript{12}

With respect to a contemplated surgical procedure, the court ordinarily will require the claimant to submit if the operation is (1) safe and not extraordinary; (2) offers a reasonable prospect of relief, as determined by medical opinion; and (3) is an operation which a person of ordinary prudence and courage would undergo for his own benefit even in the absence of compensation considerations.\textsuperscript{13}

This latter statement is incorporated in a discussion by the West Virginia court in "Barnes v. State Compensation Commission."\textsuperscript{14} The Barnes court suggested that the law must demonstrate "humanly sympathetic sentiments," taking care not to be an "instrument of inhumane exaction or coercion." Put another way, a New Jersey court has said that:

Compulsion in such matters must needs be cautiously exercised. The employer's right in this regard is necessarily circumscribed by the correlative right of the employee to avoid, if he chooses, peril to life, however slight, and undue risks to the health and anguish that goes beyond the bounds of reason.\textsuperscript{15}

\textsuperscript{12} 99 C.J.S. Workmen's Compensation § 484 (1958).
\textsuperscript{13} Id. § 319.
\textsuperscript{14} 116 W. Va. 9, 178 S.E. 70 (1935).
\textsuperscript{15} Robinson v. Jackson, 116 N.J.L. 476, 184 A. 811, 812 (1936). The court observed that a refusal by a 62 year old man with a history of kidney difficulty to submit to a general anesthetic and an open reduction of a fracture could not as a matter of law be found unreasonable unless competent medical authority had determined that the operation was "free from danger to life and health and extraordinary suffering," and offered "a reasonable prospect of restoration or relief from disability." Even then the question of reasonableness was held to be one of fact.

Other examples of the application of the Barnes standard may be found in Hefley
The refusal of treatment may still be deemed reasonable, even in the face of a tragic and fatal error in judgment. Refusal to undertake painful, preventative hydrophobia treatment after a dog bite is not such an unreasonable refusal as to prevent the survivors of the victim from collecting benefits. A mere error of judgment does not represent unreasonableness.\textsuperscript{16}

**How Much Risk Makes a Refusal Reasonable?**

When "major" surgery is indicated, some courts have held that any mortality risk will justify refusal by the employee to submit.\textsuperscript{17} Courts tend to consider the refusal of "minor" surgery unreasonable, even though such surgery might require a general anesthetic, the use of which always involves some risk to life.\textsuperscript{18} Refusal to submit to minor amputations is also generally held to be unreasonable.\textsuperscript{19}

**Is the Procedure Necessary?**

In an examination of the requirement of necessity, as well as other elements of the test of reasonableness, the influence of the present state of medical science is a factor. What is deemed necessary today may have been highly speculative or unknown yesterday. Conversely, the necessity to submit to bleeding to discharge bad humours in the blood system may have been "necessary" yesterday and ridiculous today. Necessity for treatment in the context of the state of medical science is changing as is the degree of risk involved in a particular procedure. An amputation at Gettysburg in 1863 was a high-risk venture when compared with the mortality rate in such cases today. A refusal to submit to an x-ray examination was held to be reasonable in 1918, but such a decision today would, under normal circumstances, be most surprising.\textsuperscript{20} In this same way, the relative newness of myelography

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\item v. E.I. du Pont de Nemours & Co., 424 S.W.2d 396 (Ky Ct. App. 1968); Neault v. Parker-Young Co., 86 N.H. 231, 166 A. 289 (1933); K. Lee Williams Theaters, Inc. v. Mickee, 201 Okla. 279, 205 P.2d 513 (1949)
\item 16. Chandler v. Industrial Comm'n, 60 Utah 387 (1922).
\item 17. Monday v. Concho Sand & Gravel Co., 332 P.2d 965 (Okla. 1958)
\item 20. United States Fidelity & Guar. Co v Wickline, 103 Neb. 21, 170 N.W 193 (1918)
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and spinal surgery still has an adverse affect on attempts to compel an employee to submit to these procedures. Testimony by one doctor to the effect that the proposed surgery is unnecessary and a cure could be effected without it may destroy a claim of unreasonableness against an employee’s refusal to submit.21

**The Chance of Success**

The procedure contemplated must have a chance of success, because the refusal of a hopeless operation certainly could not be held unreasonable. Like risk and necessity, probability of success is a product of advancement in the medical arts. The courts have devised no magic formula for evaluating success probabilities, but will hear percentage estimates of expert witnesses and weigh those estimates on the scale with other factors of reasonableness. For example, a factual determination that knee surgery involved no appreciable risk to life and had a 95 percent chance of success led a Kentucky court to the conclusion that refusal of surgery was unreasonable.22

It would seem that something less than 100 percent probability will suffice, although few cases exist wherein a refusal was considered unreasonable where the success ratio dropped below 75 percent. In relatively minor surgical procedures and where risk is low and necessity high courts are satisfied with lower success predictions. In hernia cases, testimony establishing that there is a “reasonable prospect of success” has satisfied the test.23

**Fear**

Does fear, subjective fear, in the patient have a place in the test? The courts have not provided consistent answers to this query. A glance at the diverse holdings suggests an ad hoc treatment of this factor and an understandable tendency by courts to mention fear in fortifying a decision of reasonableness or unreasonableness based upon other factors. Thus, the court in *Palloni v. Brooklyn-Manhattan Transit Corp.*24 ruled

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that, as a matter of law, fright alone cannot justify refusal of surgery where the danger is minimal and the chance of success is high. The Maryland court was more emphatic in Watts v. J S. Young Company, holding: "The test is one of reasonableness. It is an objective standard. The claimant's own fears and beliefs have no bearing on the test except as they relate to how a reasonable man would act under the same circumstances." 25

Fear, when found to be genuine, is considered by at least some courts as a factor to be considered in the determination of whether the refusal was reasonable. 26 Judges often have become emotional when speaking of emotions. Thus, the Missouri intermediate appellate court held that "[t]he law does not require courts to deal with human beings as though they were inanimate objects devoid of all feelings, emotions and fears," and allowed the employee to continue to receive benefits notwithstanding his refusal to submit to rather routine surgery, a hernia repair. 27

It is submitted that to hold a refusal reasonable on the basis of the employee's fear is to overlook the meaning and purpose of workmen's compensation provisions. Workmen's compensation acts do not compel submission by the claimants to any medical treatment. The court cannot order a claimant to submit to the knife. If he is fearful, he need not undergo surgery. But, to receive "no fault" compensation from an employer, an employee must act reasonably in an attempt to effect a cure. He has an option: reasonable treatment and compensation or unreasonable refusal and no compensation. The court can force nothing more, nor should it permit anything less.

Reasonableness, objectively determined, is a fair test. No court will permit an employer to force an unreasonable treatment or examination upon an employee simply to limit his liability. 28 Reasonableness on the part of both parties should be required.

Application of the Test in Particular Situations

1 Repeat Surgery

A request for a repetition of an unsuccessful operation is subject to even more careful scrutiny than an original procedure. 29 In fact, cases

25. 245 Md. 277, 281, 225 A.2d 865, 867 (1967).
in Louisiana and Oklahoma suggest that refusal of repeat surgery can never be unreasonable. Second attempts at spinal fusion as a prerequisite to continued payment of benefits have not passed the test of reasonableness, and refusal has been held to be justified. On the other hand, the Watts case demonstrated that in particular circumstances where medical testimony conclusively establishes the advisability of the procedure, refusal of even repeat surgery may be unreasonable.

2. Amputations

The average layman mentally flinches at the thought of an amputation. It is, therefore, not unexpected to discover courts and workmen's compensation boards reacting similarly and refusing, in most instances, to find an employee's refusal of an amputation to be unreasonable. Even refusal to submit to the amputation of a little finger has been held reasonable, just as the refusal to submit to the majority of more serious amputations has also been found reasonable.

In amputation cases it is difficult for an employer to establish that the surgical procedure contemplated will actually reduce impairment, disability, or loss of function, or will effect a cure. However, the case can be hypothesized in which the removal of a painful limb, chronically and incurably infected, would reasonably increase employability. In fact, where doctors agree that a major amputation will not endanger life and will improve the general physical condition of the employee, the courts, on occasion, have conditioned continued receipt of benefits upon the employee's submission to such surgery, or have lowered the amount of benefits payable to an amount which represents the disability.

30. Reed v. Calcasieu Paper Co., 233 La. 747, 98 So. 2d 175 (1957); Burnett Haupert Lumber Co. v. Thompson, 185 Okla. 627, 95 P.2d 630 (1939).
34. Florczak v. Industrial Comm'n, 381 Ill. 120, 44 N.E.2d 936 (1942); Schaab v. Irwin, 298 Ky. 626, 183 S.W.2d 814 (1944); Russell v. Virginia Bridge & Iron Co., 172 Tenn. 268, 111 S.W.2d 1027 (1938); Stump v. Norfolk Shipbuilding & Dry Dock Corp., 187 Va. 932, 48 S.E.2d 209 (1948).
35. Mahone v. Workmen's Compensation Appeal Bd., 118 W Va. 587, 191 S.E. 289 (1937) (all doctors testifying agreed that the employee would be considerably better off if his leg were amputated below the knee and further agreed that the employee was physically able to withstand the surgery).
of the employee reduced to the extent that the refused amputation would have improved the employee's condition.  

This latter solution represents a meritorious, court-created compromise. The unreasonable refusal of an amputation by an employee precludes his recovery of full benefits, but the employer should not use such refusal as a means of avoiding all liability, including that which would have attached even if the surgery had been performed. Perhaps the non-consenting employee should also be given, as part of the "no-surgery but reduced compensation" choice, the cost in dollars of the surgery which the employer would have expended for the amputation.

3 Minor Operations

Refusal of minor operations, wherein the risk, pain, and inconvenience is minimal and the chance of success, degree of improvement in physical condition, and employability is predictably high, would seem unreasonable. When medical testimony establishes that no appreciable pain or risk is involved in a minor operation which is necessary to effect a probable cure or a likely reduction of disability percentages, there is no apparent reason for the courts not to enforce the statutory or common law conditions of submission to reasonable examination and treatment precedent to continued benefits.

Another interest which must be recognized is the religious belief of some employee-patients which will not permit them to submit to even routine medical procedures. It is submitted that courts need not balance the workmen's compensation act against the religious liberty issue. Members of religious sects seeking cures from sources beyond the medical profession are granted no automatic reduction in F.I.C.A. payments because they may never choose to avail themselves of Medicare benefits. Conversely, an employee who chooses not to submit to minor surgery for religious reasons should be barred from claiming further statutory benefits. Viewed in this light, the denial of death benefits to the surviving dependents of a Jehovah's Witness, whose refusal of a blood transfusion was the sole cause of his death, is more easily justified and appears less inhumane than it does at first glance.  

4 Examinations

An employer or his insurer is entitled to require medical examination of the claimant. But, as with treatment, reasonableness is required. An employer may not establish intolerable requirements of time or place for an examination. When the reasonableness of an examination is challenged, the determination of reasonableness is often left to the fact finder's sound discretion. Rather extensive and radical examinations, when such procedures have been found to be necessary for proper diagnosis, have been deemed reasonable under certain circumstances, and refusal thereof unreasonable. Such examinations include a cystopic examination and an intervenous pyelogram.

Medical Witnesses in Conflict

Rarely will courts declare a refusal of examination or treatment unreasonable in the face of conflicting medical testimony as to the necessity, risk, or chances of success. The layman-judge can hardly declare that the refusal of a medical procedure by a non-physician employee is unreasonable when reasonable medical men themselves cannot agree. When a genuine medical question is unresolved by experts, should not the option be truly the patient's, without the extraneous pressure of prospective loss of benefits? Until a new medical procedure is so uniformly recognized and accepted as necessary, proper, and safe as to eliminate the probability of conflict in medical testimony the option should belong to the employee.

It is unfortunate, however, that an unwavering application of the rule which permits refusal of surgery without penalty when one physician raises a question can lead to rather unjust results. An employee, deprived of a chance to forum shop by the exclusiveness of the workmen's compensation remedy, may be inclined to shop for the one M.D., D.O., or chiropractor who may provide the conflict of medical testimony essential to legal recovery.

39. Tibbals Flooring Co. v. Marcum, 218 Tenn. 509, 404 S.W.2d 498 (1966)
41. A pyelogram is an x-ray study of kidney and ureter often accomplished by an injection of radiopaque material into the blood stream enabling the radiologist to follow the progress of the dye through the vessels of these organs. Allan & Christensen, The Language of Medicine 52-53 (1965).
42. Burn's Case, 298 Mass. 78, 9 N.E.2d 719 (1937).
When experts differ on the question of whether the proposed surgery involves a risk to life, courts do not differ in refusing to consider unreasonable a refusal of such surgery. Likewise, a disagreement concerning the probability of success or likelihood of improvement of a condition as a result of the treatment will enable the claimant to refuse treatment without penalty.

A Question of Fact or Law?

When the refusal by the employee to submit to examination or treatment has been held reasonable, appellate courts have considered the issue as one of fact. As such, the courts have been unwilling to reverse the determination, whether made by a referee, commission, board, or trial court, unless the determination is shown on the record to be clearly erroneous. When the fact finder holds the refusal to be unreasonable, however, appellate courts tend to apply a different rule. The fact that an aura of compulsion surrounds such a finding makes the entire matter a question of law, according to one court.

A determination by the fact finder of unreasonable refusal in the face of conflicting medical evidence has been considered an abuse of discretion. When the evidence is clear and uncontradicted, the court may treat a conclusion contrary to this evidence by the fact finder as an error of law, reversing the fact finder’s determination.

43. Russell v. Virginia Bridge & Iron Co., 172 Tenn. 268, 111 S.W.2d 1027, 1029 (1938)

The court stated the rule clearly:

Where there is a difference of expert opinion as to whether an operation would be attended with serious risk of life or member, or as to the advisability and result of such operation, the injured employee is under no duty to submit to such an operation.


**Burden of Proof**

No uniformity is found in the decisions concerning which party has the burden of proving the refusal of examination or treatment to be reasonable or unreasonable. While burden of proof questions lie at the foundation of any attempt to resolve a dispute by judicial process, the sharp focus upon problems, such as going forward with the evidence, reasonable doubt, or greater weight of evidence in a formal court proceeding, may be somewhat blurred during a less formal administrative hearing. The questions, nonetheless, remain important ones to be answered in every case in each jurisdiction prior to hearing. Moreover, it should be remembered that the impact of the burden problem and its solution is felt more directly in jurisdictions such as Louisiana, where the courts, rather than administrative boards, hear all workmen's compensation claims, or Texas, where the appellant in workmen's compensation cases is entitled to a trial de novo in a court.

One might expect that the burden of proving the reasonableness of a refusal to submit to treatment should rest with the claimant, because it is he who is charged with the burden of proving the elements essential to recovery from the defendant. Some courts do place the burden on the claimant. Taking a contrary view, the Missouri courts have reasoned that it is a forfeiture of an otherwise payable benefit which is involved, and, since forfeiture provisions should be strictly construed, the burden of proof is placed upon the party seeking the forfeiture. Nebraska has similarly placed upon the employer the “burden of proof to establish that the tendered operation is simple, safe, and reasonably certain to effect a cure.” Other courts simply state that the burden of showing that there was an unreasonable refusal of treatment is always on the employer.

**The Effect of Unreasonable Refusal**

Although statutory language may call for a total suspension of benefits subsequent to an unreasonable refusal of treatment, many courts,

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like those in Colorado, will simply award benefits at a lower figure equivalent to the probable benefits which would have accrued had the proposed treatment been successfully undertaken. Other courts apply the letter of the law. While the employee is given the right to refuse unreasonably a restorative operation tendered "without expense to him and involving no unusual risk and making no harsh exaction," such unreasonable refusal necessarily leads to total suspension of benefits until such time as the employee submits.

Summary

The test, therefore, is one of reasonableness: the reasonableness of the examination or treatment contemplated and the reasonableness of the refusal to submit to such procedure. In determining reasonableness, the court looks to the factors of necessity, accuracy, pain, risk of harm, and probability of success. The refusal may be said to be unreasonable if the procedure involves "no unusual pain or risk and is such a course as an ordinarily prudent and courageous person would take for his own betterment, regardless of compensation." As Professor Larson has written,

The difficulty arises when reasonableness has to be defined. The judgment usually resolves itself into a weighing of the probability of the operation's successfully reducing the disability by a significant amount, against the risk of the operation to the claimant. If the risk is insubstantial and the probability of a cure high, refusal will result in a termination of benefits. But if there is a real risk involved, and particularly, if there is a considerable chance that the operation will result in no improvement or even perhaps a worsening of the condition, the claimant cannot be forced to run the risk at peril of losing his statutory compensation rights.

53. Stahura v. Industrial Comm'n, 103 Colo. 451, 86 P.2d 1080 (1939)
54. Ouachita Marine & Industrial Corp. v. Morrison, 246 Ark. 850, 440 S.W.2d 216 (1969); South 41 Lumber Co. v. Gibson, 438 S.W.2d 343 (Ky 1969)
56. Fidelity & Cas. Co. v. Whitehead, 114 Ga. App. 630, 152 S.W.2d 706 (1966); Gennet Lumber Co. v. Sizemore, 441 S.W.2d 429 (Ky 1969) (The Kentucky court seems to have modified the view expressed in South 41 Lumber Co. or to have undertaken the calculation without formula on a case by case basis); Mahone v Workmen's Compensation Appeal Bd., 118 W Va. 587, 191 S.E. 289 (1937).
57. Barnes v. State Compensation Comm'n, 116 W Va. 9, 10, 178 S.E. 70 (1935)
58. 1 A. Larson, WORKMEN'S COMPENSATION LAW § 13.22 (1968)
The Medical Procedures

Before attempting to analyze myelography and spinal surgery in the light of the tests described above, it is appropriate to examine the medical procedures themselves in some detail.

**Intervertebral Discs**

The spinal cord, the core of the nervous system, is protected by a sac containing the cerebrospinal fluid enclosed by the skeletal spinal column. This column itself consists of vertebral blocks of varying sizes running from the axis upon which the skull may pivot, down through cervical, dorsal, and lumbar vertebrae of the neck and back to the sacral segments of the lower back. Interposed between the adjacent surfaces of the vertebrae are intervertebrae discs forming the chief bonds of connection between the vertebrae. These discs, 23 or 24 in number, vary in shape, size, and thickness, and constitute about one-fourth of the vertebral column. They serve as important shock absorbers. Each disc contains a gelatinous substance at the center known as *nucleus pulposus* encased in tough interlacing fibrocartilage known as *annulus fibrosis*. A thin cartilage end plate attaches the disc to the adjacent vertebrae.69

The terms "slipped," "herniated," or "ruptured" discs, following trauma or resulting from degenerative or infectious processes, imply a protrusion of a disc or of disc material into the space surrounding the spinal cord, impinging on or compressing nerve roots or the cord itself.60 Such a condition typically results in varying degrees of disabling pain of a radiating type, together with a variety of neurological symptoms and changes.

**Myelography**

Roentgenography, or x-ray study, is recognized as an essential diagnostic procedure in cases involving back pain. Visualization of soft tissues including intervertebral discs and nerve roots, however, is impossible through standard x-ray procedures, because such substances are

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60. Knapp, The Intervertebral Disc, 5 Lawyer's Medical J. 255 (1969). Technically, a slipped, bulging, or protruding disc normally may be treated conservatively in an effort to obtain retraction or withdrawal of the disc into its proper position. Herniated or ruptured discs involve an actual tearing of the *annulus fibrosis* and an extrusion or protrusion of *nucleus pulposus* from within the disc into the adjoining space.
Radiolucent and appear with insufficient clarity for diagnostic purposes. Radiopaque substances of various types are therefore injected into the sub-arachnoid space, the area surrounding the spinal cord and containing the cerebrospinal fluid. These substances coat or outline the space so that visualization of the space and any invading object is possible. The nature of the contrast medium or radiopaque substance utilized has varied since the procedure first was utilized in 1924, progressing from air to lipidol and other solutions, and finally to pantopaque (iophendylate), an oil of organic iodine, which is used most frequently today.

Myelograms have been deemed essential to the diagnosis of intervertebral disc difficulty, particularly when the patient's history and physical findings are atypical or suggest the involvement of more than one nerve root. Myelograms are utilized to: (1) exclude the existence of an operable lesion; (2) confirm the existence of a lesion, absent otherwise unequivocal symptomology; (3) establish the extent of a known lesion; (4) locate the exact level or location of the problem; (5) exclude the presence of multiple lesions; or (6) investigate post-operative complaints. Few orthopedic surgeons or neurosurgeons would consider performing a laminectomy or spinal fusion without the benefit of a recent myelogram confirming the diagnosis and establishing the exact location of the disc involved.

A myelogram is administered by inserting a needle into the back at a level generally below the second lumbar vertebrae into the sub-arachnoid space between the arachnoid and pia mater layers of the meninges, which are the inner two of the three protective coverings of the spinal cord. This space contains the cerebrospinal fluids, a quantity of which, usually not exceeding 12 cc., is removed and tested as a by-product of the procedure. A small preliminary injection of dye substance is made and followed by a fluoroscopic study to confirm the location of the needle. An additional quantity of radiopaque solution is then injected into the space in an amount necessary to coat properly the area to be visualized. The needle remains in the patient while fluoroscopy is performed, and the patient may be tilted to cause the dye to flow.

62. Shapiro, Myelography Yearbook 25 (1962)
64. Shapiro, supra note 62, at 23.
65. Kambin, Smith & Hoerner, Myelography and Myeography in Diagnosis of Herniated Intervertebral Disc, 181 J. AM. MEDICAL ASS'N 472-75 (1962)
throughout the desired area. The space thus becomes a radiopaque sleeve outlining, in effect, the spinal cord and nerve sleeves or roots. Lesions infringing upon these areas prevent the dye from occupying the affected space and are seen as “filling defects,” or areas not visualized when they should normally be. Following completion of the x-ray studies, as much pantopaque as possible is withdrawn before removing the needle. The patient is then confined to prone bed rest and administered fluids and analgesics if needed.66

Laminectomy

Following the diagnosis of disc pathology and the failure of conservative procedures such as bed rest, traction, or physical therapy to relieve symptoms, surgery may be performed. A laminectomy semantically suggests a removal of bony lamina to reach a disc, but refers essentially to the removal of the protruding disc material and usually most of the residual degenerated disc material remaining in the interspace. Hospital stays following such surgery are generally no more than seven days. Successful results occur in 80 to 90 percent of the cases.67 Admittedly, such surgery is not life-saving and is destructive of tissue, but it is designed to alleviate symptoms, particularly pain, and thus reduce disability.68 The patient should be back to work in three weeks to two months following surgery.69

Fusion

The removal of disc material by laminectomy eliminates one shock absorber, one cushion which previously helped absorb and distribute the forces of movement and the bearing of weight. A degree of instability necessarily results. For this reason, at the time of laminectomy or subsequent thereto a spinal fusion is sometimes performed. In this procedure the instability between as well as the motion involving two or more vertebrae is eliminated by grafting a piece of bone obtained from another site, often the pelvis, against the anterior or posterior side of the vertebrae. Such bone strip will grow against the vertebrae forming a permanent splint, or arthrodesis. An alternative method involves the use of a bone “plug” between the vertebrae achieving the same result.

67. Epstein, supra note 59, at 142.
68. IB Gordy & Timmey, supra note 61, § 15.72.
A stable, pain-free back area is thus created at the cost of some permanent loss of motion. There is then a three to six month disability period while the fusion heals solidly.\(^\text{70}\)

**Can These Procedures Pass the Reasonableness Test?**

The reasonableness of refusal test, as discussed above, incorporates several semi-objective standards: necessity, accuracy or chance of success, pain, and risk. From a strictly medical standpoint, the application of these standards will be examined in relation to the spinal procedures outlined.

**Necessity**

If disc surgery is contemplated, the use of myelography to confirm diagnosis and locate the situs of the problem is essential. Myelography can rule out tumors, neoplasms, arachnoiditis, vascular problems, congenital abnormalities, and hysteria—any of which may produce symptoms resembling a herniated disc.\(^\text{71}\) While ruling out such disc herniation mimics, the myelogram may incidentally confirm a causal connection between the medical problem and the work performed during the course of employment.

The underlying question, however, is whether the surgery itself is necessary if the myelogram reveals an operable condition. If under no circumstance will a court deem a refusal of back surgery unreasonable, it is unlikely that the diagnostic myelogram preliminary to surgery would be ordered by the court as a condition precedent to continued benefit payments.

With respect to back surgery, conflict in medical testimony, whether in the nature of natural conflict between the practitioner favoring conservative treatment in nearly every case and the more daring surgeon or a genuine difference in opinion between surgeons of similar philosophy, will probably be fatal to any legal attempt to compel surgery by terminating compensation. Nevertheless, with increasing frequency, medical experts are supporting each other in testimony urging the necessity of back surgery in aggravated cases. Even twenty years ago, one legal writer observed:

The author believes that the consensus of expert medical opinion is certainly to the effect that when pain, caused by a clinically

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determined disc lesion, is so disabling as to actually cripple the patient either socially or economically, operation is advisable.72

**Accuracy and Chance of Success**

In the past, serious questions have been raised concerning the reliability of myelography and the ability of this procedure to yield valuable, conclusive, and material information. Studies now indicate that a positive myelogram, one demonstrating a disc defect, is 95 percent accurate. A negative myelogram is less reliable and does not conclusively prove the non-existence of a defect.73

As to the probabilities of success in laminectomy and fusion operation, medical opinion is not uniform. The problem may be one of definition. Some physicians regard only a painless, fully mobile back as a successful result, while others define success as constituting any substantial improvement in the patient's condition. Consequently, while many medical witnesses talk in terms of 50-50 chances, most qualified medical specialists predict an 80-90 percent chance of success in laminectomy and fusion.74

**Pain**

A myelogram may produce pain. While the irritation of the meninges associated with the radiopaque previously employed has been greatly reduced with the use of pantopaque, such irritation does occur. The headache and trunk stiffness associated with any spinal tap still appear. It is not unusual for the myelogram patient to complain of mild to severe headaches for from one day to one week, and nausea may be an additional unpleasant accompaniment.75 Increased fluid intake and analgesics are effective in minimizing and shortening the period of discomfort. Pain can occur from contact between the needle and a nerve during the injection or removal of pantopaque when a nerve root is

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73. Shapiro, *supra* note 62, at 23. Many factors may affect reliability. A disc protruding posteriorly is difficult to visualize, being surrounded by dye on three sides. An unusually shaped dural sac containing spinal fluid will change x-ray appearances, as will the use of too little dye or the presence of residual dye material from a prior myelogram. Intravenous, sub-dural, or extradural injection or leakage of pantopaque can produce artifacts and false conclusions.
sucked against the needle. Some physicians suggest a connection between the severity of the headache and the quantity of pantopaque allowed to remain in the body after myelography.

Spinal surgery itself involves no greater pain than other major surgical procedures performed under anesthetic. The surgical convalescence discomfort is minor when compared with the pain prior to surgery.

**Risk**

Medical literature reveals no significant mortality rate connected with the myelogram procedure, although complications can occur. Hypersensitive individuals have developed pantopaque meningitis, and in other individuals arachnoiditis has developed to the extent that the surrounding membrane “hugs” the spinal cord, constricting the cord or its blood supply. Acute meningeal reactions have on rare occasions developed in the use of some dyes, with at least one case terminating in death. Careless needle insertion may damage a disc or the spinal cord itself if injection is made above the first lumbar vertebrae. An intravenous injection may produce a small pulmonary emboli, or a vein not entered may be traumatized by the needle.

In short, there is some risk associated with any spinal tap, and injections of any foreign substance into the body will admittedly affect the individual who is sensitive to the solution. Dr. Epstein nonetheless observes that “the risks of the study are minimal and are far outweighed by its advantages.” Therefore, aside from unexpected allergic reactions or instances of genuine malpractice, the risk is minimal in myelography and is no greater in back surgery than in any major surgical procedure which involves the administration of general anesthesia.

**Compelling the Claimant to Submit**

It appears from the foregoing analysis that myelography, laminectomy, and fusion might well be expected to pass the test of reasonable-

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79. Erickson & van Barran, 153 J. A.M. Medical Ass’n 636-39 (1953)
ness, and therefore in most instances, a refusal to submit should be declared unreasonable by the courts. This, however, is not the prevailing view

**Negative Judicial Decisions**

Major surgery involving the back seems to evoke the same judicial hesitation in compelling the claimant to submit as does a major amputation. The mysterious spinal column is involved and, in the background, the spectre of paralysis. Myelography and spinal surgery are, respectively, diagnostic and destructive procedures. The courts have simply been reluctant to penalize the employee who refuses back surgery.

In 1945 such results were predictable and justified. Myelography using lipidol was observed by a California court to be a “new field,” “60 to 70 percent successful,” and in seriousness just short of heart surgery. In 1947 a myelogram was described as “an extensive operation” susceptible to the “possibility of accident.” In 1954 myelography was considered 70 percent successful, non-curative, and certain to cause a ten day head and backache. In 1963 the whole procedure was still quite “iffy” in Pennsylvania:

Therefore, we are resolved into a series of “ifs.” If a myelogram were taken, if a herniated disc were discovered, and if it were discovered a laminectomy or spinal fusion may be necessary, and, if the operation were performed, it might correct the claimant’s incapacity, and after the “ifs” are checked off, the claimant could not return to his regular employment because the defendant’s medical testimony reveals that they cannot recommend such employment to one having submitted to such surgical procedures.

In 1957 a Tennessee court reported that laminectomy success probabilities had risen to 85-90 percent with a mortality below one percent, but for this court the danger was still too great to justify suspension of benefits for refusal to submit particularly if through malpractice a nerve was severed. In 1958 a federal court in New Mexico described a laminectomy as a serious procedure wherein a “slip of the knife” could

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render an employee's legs useless.\textsuperscript{87} Even in 1968 the Tennessee court still refused to suspend compensation for a refusal to undergo surgery so "major" as a laminectomy \textsuperscript{88} Illinois in 1966 held a refusal of a laminectomy with an 85 percent success prediction to be reasonable and in good faith. The court suggested that freedom of choice should be preserved if the refusal is within the bounds of reason.\textsuperscript{89}

It is suggested, however, that the freedom of choice is always present. One may always undertake a cure and receive benefits, or refuse treatment and receive no benefits. Freedom of choice is not eliminated by making submission to reasonable medical treatment a requirement for the continued receipt of benefits. To receive Veteran's benefits, one must serve in the Army. This appears no more violative of an enlistee's freedom of choice than does submission to reasonable treatment required of a claimant of workmen's compensation benefits. In order to receive benefits, one must comply with the requirements of the acts.

It is useful to note that not all courts are guided by freedom of choice in determining the reasonableness of the requested procedure. Thus, Florida has applied a more subjective test and denied an employer's request for myelography upon a showing of genuine fear of the procedure and the impending laminectomy.\textsuperscript{90}

As in other surgical operations, second tries at myelography and fusion may reasonably be refused. A New Hampshire court so held in a 1960 case,\textsuperscript{91} describing some rather bizarre and singularly unique medical testimony regarding a possible "irrevocable shock—shock from which the man just does not recover" resulting from spinal fusion.

Requests for orders for a suspension of compensation payments after fusion is refused have been denied even more readily than requests relating to a proposed laminectomy.\textsuperscript{92} Where medical testimony indicates a success probability of less than 75 percent for spinal surgery and suggests possibilities that the patient will be forever prevented from performing heavy labor after the operation, refusals have been found

\begin{itemize}
  \item 88. Bland Casket Co. v. Davenport, 221 Tenn. 492, 427 S.W.2d 839 (1968).
  \item 90. Sultan & Chera Corp. v. Tallas, 59 So. 2d 535 (Fla. 1952).
\end{itemize}
to be justified. The result is understandably the same when further expert testimony suggests that considerable pain may be expected as a result of the surgery.

Generally, where expert witnesses have differed regarding the necessity and chance of success of the spinal surgery, a holding that a refusal was reasonable will not be disturbed on appeal. The court in *Bethlehem Mines Corporation v. Hall* stated:

The rule is that if there is a difference of opinion as to a) the danger or b) the result of an operation, the employee's refusal to submit to it cannot be held unreasonable as a matter of law against a decision of the board which in effect has declined to find it so as a matter of fact. Conceding further that texts and decisions of yesterday are constantly being outmoded and rendered inapplicable by the swift progress of medical science still the process by which we must be brought up to date in a case of this kind is through the testimony of witnesses. One of the physicians having said that the operation is not advisable at present, we think there was room for difference of opinion as to whether appellee's persistence in refusing an operation was unreasonable. Hence it was within the province of the board to say, and we cannot disturb its finding.

Even where all medical experts agree that a lamuneectomy is necessary, the absence of testimony concerning the risk involved or the chance of success may give the court an opportunity to hold that the refusal was not unreasonable.

*The Possibility of Change*

As the medical procedures involved become more commonly accepted, and as risks decrease and results improve, courts tend to limit

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96. 379 S.W.2d 58, 59 (Ky 1964).
the right of unpunished refusal. The first steps in this direction have been taken by some courts with respect to spinal surgical procedures. A few cases have now held that where the factfinder has determined that refusal of myelography, laminectomy, or fusion was unreasonable, the findings will not be overturned by the reviewing court.\textsuperscript{98} A finding by a compensation board that a refusal by an employee to submit to a fusion was unreasonable was upheld by the court in \textit{Acquorulo v. Bot-\textsuperscript{99}}

\textit{zinek Brothers, Inc.} The court noted in this opinion that the claimant's personal physician concurred in the recommendation of surgery as the only hope for a cure. In 1969 Arkansas went further in sustaining the actions of the industrial commission in refusing to award compensation until a myelogram was obtained and in then denying compensation when the results were negative.\textsuperscript{100}

In several decisions, Texas courts have declined to suspend payments because of refusal to submit to spinal surgery, but have based the decisions on technical defects in the employer's demand or in the manner of proof. These separate opinions imply that but for these procedural defects the results would have been different.\textsuperscript{101} The employer's demand for submission to surgery by the claimant must, however, be timely. \textit{Textile Corp. v. Ryder}\textsuperscript{102} held that a refusal of laminectomy was not arbitrary or capricious when the company delayed three years in making demand and never adequately explained the procedure to the claimant.

It is interesting to note a corollary case involving a converse situation. In \textit{Caldwell v. Joseph E. Vesteal & Son, Inc.},\textsuperscript{108} the employee had demanded a myelogram, laminectomy, and fusion which the employer had refused to furnish because it believed they were unnecessary. The employee proceeded anyway, and the procedures confirmed the existence of the suspected herniated disc. The Arkansas court in this case


\textsuperscript{99.} 139 Conn. 684, 96 A.2d 752 (1953).

\textsuperscript{100.} Plants v. Townsend Curtner Lumber Co., 247 Ark. 824, 448 S.W.2d 349 (1969).


\textsuperscript{102.} -- N.H. --, 281 A.2d 53 (1971).

\textsuperscript{103.} 237 Ark. 142, 371 S.W.2d 836 (1963).
ordered the employer to pay all expenses incurred in connection with these procedures.

THE PROGNOSIS

As medical knowledge and techniques advance and thereby reduce surgical risks, eliminate pain, and increase chances of success, it can be expected that expert medical witnesses will become more consistent in recommending and courts less reluctant in ordering spinal surgical procedures. Medically and scientifically, it is predictable that the myelography of tomorrow will become as routine as the ordinary x-ray of today, and that laminectomy and fusion will be considered to be only as serious as an appendectomy or tonsillectomy. The legal future of these procedures is not as certain. Myelography, a procedure developed over forty years ago, should have progressed more rapidly up the scale of judicial acceptability than it has. Laminectomy and fusion should already have reached the level of the ordinary hernia repair when comparing the nearly equivalent results and success of these procedures.

It is submitted that these procedures may never pass the reasonable refusal test because a new consideration has arisen in the field. The shift of legal thought to a concentration on the private personal rights of the individual is influencing courts in workmen's compensation cases just as it is in many areas of the law. As medicine has proceeded forward, the expected extension of compulsive submission to examination and treatment in compensation cases has not occurred. The right to refuse surgery for whatever reason, unreasonable or not, without the indirect compulsion occasioned by a required sacrifice of the scintilla of family security that compensation benefits furnish may be the rule of the future, notwithstanding medical and scientific advances.

Workmen's compensation acts represent one of the earliest attempts at formulating social legislation. Perhaps in this age of obsession with private personal rights it is fitting that it is in this oldest of welfare programs that legal ideas such as the duty to mitigate damages, the effect of intervening causes, and even theories of mutuality of obligations should be subordinated to the individual's concept of his right to be free from all forms of coercion. It is submitted, however, that this retreat from the basic tenets of correlative rights and duties, as they have been incorporated into the medical provisions of the acts, is most difficult to accept.