IN THE DISTRICT COURT
AT WELLINGTON

I TE KŌTI-Ā-ROHE
KI TE WHANGANUI-A-TARA

[2023] NZACC 013 ACR 128/21

UNDER	THE ACCIDENT COMPENSATION ACT 2001
IN THE MATTER OF	AN APPEAL UNDER SECTION 149 OF THE ACT
BETWEEN	WARREN ADAMS Appellant
AND	ACCIDENT COMPENSATION CORPORATION First Respondent
AND	SILVER FERN FARMS LIMITED Second Respondent

Hearing:	9 November 2022
Heard at:	Wellington/ Te Whanganui-a-Tara
Addendum Received:	24 November 2022
Appearances:	A Brown for the appellant P McBride for the first respondent P White for the second respondent
Judgment:	31 January 2023

RESERVED JUDGMENT OF JUDGE D L HENARE
[Work-related Gradual Process Injury ss 30 (2)– Accident Compensation Act 2001]

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[1] The appellant, Warren Adams was employed as a meat processing worker by the second respondent (Silver Fern Farms) for some twenty-eight years. He challenges the decision of Work Aon, the accredited agent of Silver Fern Farms, which declined his claim for cover for lumbar spondylosis as a work-related gradual process injury.

[2] Mr McBride informed the Court that following review of the submissions of the parties and the surrounding evidence, the Corporation would abide the decision of the Court.

[3] Silver Fern Farms' position is that Mr Adams does not satisfy the criteria under the Accident Compensation Act 2001 (the Act) for grant of cover.

Post-hearing

[4] At hearing, the Court requested the parties file an addendum to the agreed statement of facts and issues to clarify:

> [i] the extent to which Mr Adams' prior 19 September 2017 claim ("the 2017 claim") and related suspension decision ("the suspension") were relevant to the issue currently before the Court; and
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> [ii] the relevance to the present appeal of the revocation of deemed cover for "repetitive strain injury" also contained within the 23 March 2020 AON decision.

[5] The Court has reviewed the memorandum concerning the 2017 claim and suspension and the repetitive strain injury revocation and accepts:

> [i] The parties' agreement that neither the suspension decision, nor Mr Adams' covered 2017 claim injuries are in issue in this appeal: and
>
> [ii] The correct focus is work related gradual process cover for lumbar spondylosis. Since repetitive strain injury was neither the correct diagnosis nor an appropriate diagnosis for a work-related gradual process claim, Mr Adams only sought to challenge the decline decision for cover for lumbar spondylosis at review.

[6] In the result, there is no other issue before the Court other than Mr Adams' claim for cover for lumbar spondylosis as a work-related gradual process injury.

Agreed facts

[7] The parties filed a comprehensive statement of agreed facts as follows:

> (1) Mr Adams worked as a Meat Processing Technician at Silver Fern Farms from 1990 to 2017.
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> (2) He has cover for non-work-related lumbar spine injuries suffered on the following dates:
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> - 14/3/2011
> - 3/1/2012
> - 3/6/2013

- 21/12/2014
- 26/7/2015
- 6/9/2016
- 19/9/2017

(3) An x-ray of Mr Adams' lumbar spine was taken on 15 June 2012. Noted was normal lumbar vertebral alignment with modest disc space narrowing at L5/S1 and L4/L5 with an end plate lipping. No acute bony injury was seen but that did not exclude acute disc pathology.

(4) An x-ray of Mr Adams lumber spine was taken on 6 June 2013. The indication was low back sprain with left sided sciatica. There was loss of disc height at L4/5 and L5/S1 with end plate osteophytes. There were low lumbar facet degenerative changes present. The conclusion was of low lumbar spondylotic degenerate changes.

2017 Injury

(5) On 20 September 2017 an x-ray was taken of Mr Adams' lumbar spine and compared with that taken in 2013. Disc space narrowing at L4/5 an L5/S1 had not changed. There was no new posterior element abnormality, and facet joint arthropathy at L4/5 and L5/S1 were noted. The conclusion was of lower lumbar spondylosis. No compression fracture was evidence.

(6) On 28 September 2017 Mr Adams' GP noted that he slipped on a step ladder and fallen on his back on 19 September 2017. He had been seen at the Accident and Medical Clinic. The impression was of a lumbar sprain. An injury claim form was completed.

(7) On 12 October 2017 Mr Adams was seen by his GP for follow up.

(8) Mr Adams' GP noted on 19 October 2017 that he was still suffering back spasms with lifting and could not work. Similar findings were recorded on 2 November 2017.

(9) On 16 November 2017 Mr Adams was seen by Pain Specialist Dr Gajendra Singh. Dr Singh's impression was that Mr Adam's GP noted that he still could not work. The impression was lumbar strain and underlying disc disease.

(10) On 23 November 2017 Mr Adams' GP noted that he still could not work. The impression was lumbar strain and underlying disc disease.

(11) On 23 November 2017 a Pain Management Programme commenced and was to run in conjunction with a Stay at Work Programme.

(12) Mr Adams was referred for specialist assessment on 8 December 2017.

(13) The MRI scan was taken on 22 December 2017. The conclusion was of lower lumbar degenerative disc disease and moderate facet joint arthropathy.

(14) Dr Singh reported again on 12 January 2018. Mr Adams reported improvement but had not returned to work because he could not undertake heavy lifting. The MRI had reported lower lumbar degenerative disc disease and moderate facet

joint arthropathy with a loss of disc signal and height at L4/5 and a minimal annular bulge. There were Modic type 2 end plate changes at L4/L5 and L5/S1. Dr Singh explained to Mr Adams that the findings were reassuring as there was nothing much in the lumbar disc and he might have strained facet joints which showed age related changes. There was a possibility of somatic referred pain and an element of myofascial pain. Injections could help and could also be used diagnostically. The injections were administered, and some improvement was noted.

(15) On 18 January 2018 Dr Singh responded to the Corporation's questions. The diagnosis was a contusion to the lower back, myofascial pain in the lumbar area, and facet joint sprain as a result of the 2017 fall in a degenerative lumbar spine condition. There was mechanical back pain because of the alteration of the mechanics of the facet joint due to degenerative disc at L4/5. It was not possible to measure resolution of a sprain other than via symptom improvement. If there was no recovery then there was a need to consider other diagnoses and sources of symptoms, the Corporation could revise the diagnosis based on the MRI scan. Mr Adams' ongoing incapacity was in part injury related, as prior to the injury he was asymptomatic in spite of arthritic changes in the spine; however, the pre-existing conditions were contributing to the timeframe of the ongoing symptoms. Mr Adams had degenerative changes in the spine according to the MRI scan but that did not mean he was immune to further injury to the arthritic facet joints. The myofascial pain could be due to both the facet joints and/or bruising as a result of the injury. Most of the time it was a combination.

(16) Dr Singh reported again on 19 January 2018. Mr Adams had had a good response to the injection, such that a further injection was administered. Mr Adams was described as a genuine person who was keen to return to work, but it was not clear whether light duties were available.

(17) On 27 February 2018 Dr Singh saw Mr Adams again. Mr Adams was making good progress. A further injection was administered.

(18) On 6 May 2019 Mr Adams was referred for orthopaedic assessment by his GP at the Corporation's request. The GP's provisional diagnosis was chronic lower back pain inhibiting to work.

(19) On 4 February 2019 Mr Adams' GP had cleared him to return to work at his request. He returned to work on 12 February 2019 but three weeks later had bent down and could not right himself due to his pain. He had not been able to return to work and he could not return part time.

Work Related Gradual Process Claim

(20) On 1 July 2019 Mr Adams' GP noted that the Union had advised him to have a claim lodged for repetitive strain injury/gradual process injury, due to repetitive bending and lifting as a factory labourer from 1990 to 2017 when he had to stop working. The claim for repetitive strain injury was lodged for repetitive bending and lifting as part of work duties on 1 July 2019, with a date of accident of 2 July 2007.

(21) On 12 August 2019 Mr Adams' GP completed the Medical Practitioner Cover Questionnaire. The likely cause of the diagnosis was stated as lower lumbar degenerative disc disease and facet joint arthropathy, with the first date of consultation noted as September 2017.

(22) Mr Adams was seen by Orthopaedic Surgeon Mr Jon Van Dalen on 3 September 2019. The problem was described as mechanical lower back pain due to L4/5 and L5/S1 disc lesions associated with facet joint dysfunction.

(23) Mr Van Dalen's opinion was that Mr Adams presented with mechanical low back pain due to lumbar spondylosis secondary to significant disc degeneration at the L4/5 level and to a lesser extent L5/S1, with probable associated facet joint dysfunction at those levels. He was managing relatively well with medication and now that he was no longer undertaking repetitive work, Mr Van Dalen felt it was not unreasonable to consider gradual repetitive injury considering the significant nature of the job he had. If his problems increased a fusion could be considered.

(24) Mr Adams completed the Claimant Questionnaire on 11 December 2019. He described his problems as back pain, first noted in 2007. He had worked for Silver Ferns from 18 March 1990 to 13 November 2018 for 40 hours per week. His work tasks he described as lifting carcasses, 25kg boxes, and bending and twisting. He believed repetitive movement had contributed to his condition.

(25) Mr Adams' employer completed the Employer Questionnaire on 9 January 2020. The dates provided by Mr Adams were confirmed, although it was noted he stopped working in 2017 and had never returned due to a non-work back injury. The employer was unsure if Mr Adams suffered from his condition prior to starting work. The employer confirmed no-one else performing similar work had suffered from the condition and did not consider that those performing the work tasks were at greater risk than those who did not.

(26) On 23 January 2020 an Occupational Therapist completed a Task Analysis of Mr Adams' various work roles throughout his time at Silver Fern Farms. The tasks included heavy lifting, bending and squatting, and forceful pushing and pulling of varying frequency, from occasional to constant depending on the task. Some tasks that had been done manually were now done by machine.

(27) On 28 February 2020 Occupational Physician Dr David Ruttenberg provided a file review assessment of Mr Adams' claim. Dr Ruttenberg reviewed the documentation and noted Mr Adams had a history, symptoms, and signs compatible with a diagnosis of lumbar spondylosis. Dr Ruttenberg was unable to identify any employment tasks or characteristics of the work environment that had caused and contributed to the condition. Mr Adams performed a variety of work tasks during the period in question requiring him to stand, walk, repetitively bend, twist, and perform lifting and carrying actions.

(28) Dr Ruttenberg was not aware of good quality peer reviewed literature that would suggest any such tasks resulted in the structural change identified. There was literature that suggested genetic factors were important. There was no peer reviewed literature showing those who worked in abattoirs had an increased potential for the development of lumbar spondylosis. There were some dated studies suggesting an increased risk for nurses and truck drivers. The diagnosis was wholly and substantially a result of the ageing process.

Decision at issue

(29) On 23 March 2020 Work AON advised Mr Adams that he had deemed cover for the repetitive strain injury due to failure to meet timeframes. However, that cover was revoked. The letter also confirmed that cover was declined for lumbar

spondylosis under the claim, as the evidence did not support that the diagnosis was the result of a work injury claim.

Subsequent Evidence

(30) Occupational Physician Dr David Black provided a report dated 19 October 2020, also a file review, although he did speak with Mr Adams by telephone. Dr Black described the diagnosis as mechanical low back pain without radiculopathy, caused by degenerative disc and facet joint disease at L4/5 and L5/S1. The condition had a contribution from the work tasks, exacerbated by injury. He opined that the tasks had contributed substantially to the cause of the condition as Mr Adams' work was heavy and repetitive. It was clear to Dr Black, from experience and conventional textbook wisdom, that persons performing such tasks were at significantly greater risk of suffering low back pain and damage to the discs and facet joints than those who did not. He referred to the NIOSH finding of an association between lifting and forceful movements and back disorders, which had never been overturned despite the suggestion that genetic factors also played a role. Dr Black considered the literature but ultimately concluded that epidemiology could not be taken as conclusive of the issue.

(31) Dr Ruttenberg provided further comment on 18 November 2020. Dr Ruttenberg concluded that it was not possible to state conclusively that manual handling work tasks in meat workers were a cause of lumbar spondylosis, notwithstanding that there was some disagreement also as to whether lumbar spondylosis caused back pain.

Review

(32) The review hearing was held on 1 December 2020 and adjourned part heard to allow for Dr Ruttenberg's response to be received and for a reply from Dr Black. Mr Adams gave evidence but unfortunately the recording was lost.

(33) Dr Black responded on 21 February 2021. Nothing in Dr Ruttenberg's further report altered his opinion.

(34) In a review decision dated 3 May 2021, the Reviewer dismissed the application.

Subsequent Evidence

(35) The Corporation's Clinical Advisory Panel ("CAP") provided a comment dated 24 February 2022. CAP considered both whether Mr Adams' condition was due to personal injury by accident or work-related gradual process and determined the condition could not be attributed to either.

(36) Dr Black provided a response to the CAP comment on 14 June 2012.

Relevant Law

[8] Section 30 of the Act sets out the criteria to bet met for grant of cover for a work-related gradual process, the relevant parts of which provide:

Personal injury caused by work-related gradual process, disease, or infection

(1) Personal injury caused by a work-related gradual process, disease, or infection means personal injury—

(a) suffered by a person; and

(b) caused by a gradual process, disease, or infection; and

(c) caused in the circumstances described in subsection (2).

(2) The circumstances are—

(a) the person—

(i) performs an employment task that has a particular property or characteristic; or

(ii) is employed in an environment that has a particular property or characteristic; and

(b) the particular property or characteristic—

(i) causes, or contributes to the cause of, the personal injury; and

(ii) is not found to any material extent in the non-employment activities or environment of the person; and

(iii) may or may not be present throughout the whole of the person's employment; and

(c) The risk of suffering the personal injury-

(i) Is significantly greater for persons who perform the employment task than for persons who do not perform it;or

(ii) Is significantly greater for persons who are employed in that type of environment than for persons who are not.

[9] The key requirements under s30 are whether it has been established on the balance of probabilities that:

- A personal injury has been suffered which was caused by gradual process in the prescribed circumstances

- These circumstances are an employment task with a particular property or characteristic which

- Causes or contributes to the personal injury and not found in non employment activities and

- The risk of suffering that personal injury is significantly greater for persons who performed the employment task in the particular environment compared with those who are not in that environment.

Issues

[10] The agreed issue is whether lumbar spondylosis satisfies the criteria for work related gradual process cover.

[11] Accordingly, the issues in dispute engage s30(2) (a) (b) and (c) of the Act:

[a] Whether Mr Adams performed particular work tasks that caused or contributed to the cause of his personal injury as required by s30(2) (a) and (b) (i)(ii)(iii); and

[b] Whether the risk of suffering Mr Adams' personal injury was significantly greater for those performing his work tasks than for those who did not as required by s 30(2) (c).

The case for Silver Fern Farms

[12] In his written submissions, Mr White submitted it is not in dispute Mr Adams suffered a personal injury because "He has lumbar spondylosis that includes bony changes with osteophytes. Modic changes and facet joint changes and degenerative disc disease. It is that physical condition that causes Mr Adams' back pain".

[13] Mr White submitted Mr Adams does not satisfy the causal connection required under the Act because the evidence shows lumbar spondylosis is substantially or wholly caused by age related or wear and tear changes which occur without any external forces, and there is no contribution from his work tasks or work environment. The opinions of Dr Singh, Dr Ruttenberg and the Clinical Advisory Panel (CAP) should be preferred over the reports of Mr van Dalen and Dr Black.

[14] Mr White submitted there is difficulty in identifying exactly the requisite property or characteristic of the work because of the variety of work tasks undertaken by Mr Adams. Further, when Mr Adams performed heavy work, such as lifting carcasses, this was occasional rather than frequent.

[15] Mr White submitted the next most substantial contributing causal factors are Mr Adams' non employment injuries.

[16] Relying on evidence from the CAP, Mr White submitted the significantly greater risk test has not been met with CAP disputing that meat processing workers are at greater risk of developing chronic, gradual spinal deterioration than the rest of the population.

Issue One – Whether Mr Adams performed particular work tasks that caused or contributed to the cause of his personal injury

[17] There is no need for the Court to repeat the factual detail in the evidence, comprehensively referred to in the agreed statement of facts. The Court observes Silver Fern Farms is candid in the employer questionnaire that it is unsure whether injury is related to employment tasks and/or work environment and it relies on the task analysis report.

[18] The clinical observations and radiological results in this case are not much in dispute. Work Aon's decision declined the claim for cover for lumbar spondylosis. In September 2019 Mr van Dalen diagnosed lumbar spondylosis secondary to disc degeneration at L4/5 and to a lesser extent the L5/S1 level, a diagnosis supported by Dr Black. Dr Ruttenberg stated there is no argument Mr Adams' suffers mechanical back pain and right radiculopathy which relates to structures in the lumbar spine including bony, discal and ligamentous type structures.

[19] There is specialist agreement too on work history, the nature of injury events and Mr Adams' work tasks. Both Dr Black and Dr Ruttenberg agreed the tasks described in the roles undertaken in the task analysis report that Mr Adams had been engaged in "very heavy lifting and carrying, forceful pushing and pulling, bending, twisting, reaching up, overhead work, squatting, standing and walking in a frequent and repetitive manner in a chilled environment".

[20] CAP described the tasks as "physically strenuous, seasonal work tasks" and some of these tasks may have flared up low back pain symptoms, despite the 15 minute task cycles. Notwithstanding the frequent breaks, the occupational therapist noted the work as heavy, for example when lifting carcasses.

[21] Dr Ruttenberg and CAP saw no evidence the various meat processing tasks caused or contributed to cause lumbar spondylosis and disc degeneration which they opined were

substantially caused by age related and genetic factors. They place overwhelming weight on degeneration due to age and genetic predisposition.

[22] Dr Black places emphasis on the course of events in which Mr Adams undertook heavy lifting work that loaded his spine in various ways including twisting postures. Dr Black acknowledged while Mr Adams did not have daily exposure to the same kind of heavy lifting, he had it over 28 years.

[23] Dr Black noted no particular evidence of genetic disposition, while also acknowledging genetics "are a contributor to everything". Dr Black opined even if there was genetic disposition, that would not of itself establish that Mr Adams' condition was caused wholly or substantially by natural degeneration. He stated it was important to consider the nature of the tasks and the forced required, which elements were present here. Referring to the radiological evidence of changes at L4/5 and L5/S1, but no deterioration at other levels, Dr Black said there was clear evidence that the progression of spondylosis is work related.

[24] Dr Ruttenberg referred to the NIOSH study as recognising an association between forceful and awkward postures, force and lifting and twisting actions and the development of low back disorders, but not lumbar spondylosis.

[25] Dr Black acknowledged the NIOSH study did not define back pain in terms of lumbar spondylosis or facet joint pain because the study was looking at the symptoms of that pain in relation to particular classes of work. Dr Black stated the NIOSH study supported his opinion that Mr Adams' work tasks had contributed to the cause of his condition. In the absence of specific referencing by Dr Ruttenberg in support of his opinion on the significance of genetics, Dr Black assumed Dr Ruttenberg was referring to radiological studies such as the 2009 Twin Spine Study.

[26] Dr Black was critical of the way in which the Twin Spine Study had been interpreted (or misinterpreted). Dr Black cited the 2019 Battie Study, by the same authors of the original Twin Spine Study, which indicated there was "moderate evidence suggesting a modest association between occupational loading and disc degeneration*"* and suggested further research into that association was required.

[27] Ms Brown submitted the Courts have also addressed the ongoing relevance of the NIOSH findings and those of the original Twin Spine Study. In *Simmons,*[1] a case in which a shearer sought work related gradual process cover for his lumbar disc degeneration, Judge Powell (as he then was) undertook an analysis of the epidemiology. His Honour noted the arguments made by the Corporation's specialists that NIOSH was too broad in its focus on low back disorder and pain rather than specific degenerative pathology, and that its findings had been overtaken by those of the Twin Spine Study. Judge Powell made the following relevant findings:

> [14] Having considered Dr Prestage's report carefully, a number of matters emerge. First, the NIOSH study provides evidence for a causal connection between the type of work undertaken by Mr Simmons and the type of low back musculoskeletal disorders at issue in this appeal. Second, Dr Prestage does not suggest that the evidence identified by NIOSH has in fact been overturned or invalidated by the Twin Spine Study, nor that the Twin Spine Study precludes occupational causation of the type of lower back injury experienced by Mr Simmons. As the Battie Study, referred to by Dr Prestage, noted:
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> > Knowledge gained through the twin spine study has added to other efforts over more than a decade to enhance our understanding and revise views of disc degeneration. **Disc degeneration is now considered a condition that is genetically determined in large part with environmental factors, although elusive, also playing an important role**.
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> [15] Instead what Dr Prestage says is that the Twin Spine Study indicates that "**disc degeneration** appeared to be predominantly … determined by genetic influences and that **physical loading specific to occupation played a relatively minor role**", and that work factors of the type experienced by Mr Simmons were not "significant causes of degenerative spinal conditions". Thus Dr Prestage, although obviously minimising the factors identified by NIOSH in favour of the genetic influences identified as a result of the Twin Spine Study did not exclude a causal connection, and his final conclusion must be seen in that light.
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> [16] This is important because, as noted above, the test with regard to s 30(2)(b) does not require a finding that the work tasks have caused the injury. Instead, all that the section requires is that the employment task "contributes to the cause of the personal injury". In my view, taken as a whole, when Dr Prestage's conclusions with regard to both the NIOSH study and the Twin Spine Study are applied correctly to the test set out in s 30(2)(b) Dr Prestage's report in fact supports Mr Simmons' claim rather than providing any basis for the Corporation to decline.
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> …
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> [18] The question of significance was subsequently picked up in Dr Beaumont's conclusion when he notes that there was "no evidence of an association of great enough significance as to be likely to be causative of the pathology identified in [Mr Simmons'] lumbar spine". As noted with regard to Dr Prestage's report, this was not the legal test to be applied which requires only a property or characteristic that contributes to causation.
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> [Emphasis added]

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1 *Simmons v Accident Compensation Corporation* [2015] NZACC 181.

[28] This Court adopts Judge Powell's approach and accepts that:

- There is no need to resolve the differences between the NIOSH and Twin Spine studies.
- The Twin Spine study has not overturned or invalidated the NIOSH findings.
- Whilst the role played by occupational factors in disc degeneration may be less than previously thought, the Twin Spine Study, and the more recent study by the same authors, confirm they nevertheless continue to play an important role, specifically in respect of the development of disc degeneration.
- Section 30(2)(b)(i) only requires a contribution to the cause of the degeneration from the work tasks.
- A claimant does not need to establish the work tasks constituted a significant or substantial cause in order to satisfy s 30(2)(b)(i).
- Further, merely because genetic factors or ageing may be important contributors to the cause of lumbar disc degeneration, a sufficient occupational contribution is not precluded.

[29] The Court notes Mr Adams had other covered injuries affecting his back. While they may have been soft tissue injuries, they cannot logically be separated from the probable wear caused by longstanding heavy work. It is probable the heavy work culminated in the painful condition that persevered from 2007 on analgesics, later aggravated by his other injuries.

[30] I find Dr Black took head on the CAP proposition that lumbar spondylosis and disc degeneration were substantially the result of chronic deterioration. Dr Black noted the eventual anatomical changes are the radiological signs of arthropathy, lumbar disc degeneration and changes in the bony lumbar spine (spondylosis) are consequences of heavy work.

[31] Dr Black considered while CAP's conclusion that lumbar spondylosis was most likely the result of chronic progressive age-related deterioration of his lumbar spine was partly true, recurrent injury and micro-trauma played at least a substantial part. The appearance of

lumbar spondylosis arose from the facet joint changes and lumbar disc deterioration, the condition was chronic and progressive, age and genetics were factors, but with the compelling evidence of recurrent trauma.

[32] As already noted, Mr Adams sustained other non-employment injuries affecting his back. The question arises whether the particular property or characteristic is found to any material extent in Mr Adams' non-employment activities or environment.

[33] There is no suggestion by any specialist that the same properties or characteristics of his strenuous work as a meat process worker, entailing heavy and repetitive lifting and carrying, forceful pushing and pulling, bending and twisting is found to any material extent in Mr Adams' non-employment activities. Accepting this question does not appear to be disputed, it follows cover is not precluded on this basis.

[34] Ms Brown submitted the reports of Mr Van Dalen and Dr Black are comprehensive and should be preferred by the Court. Mr White submitted though Dr Black refers to his experience in his reports, he does not say what that experience is. The judgments of this Court in the jurisdiction acknowledge that Dr Black is an experienced and highly regarded specialist in occupational medicine.[2]

[35] In this case, I prefer the explanations provided by Dr Black and find his reasoning is plausible.

Conclusion

[36] I have difficulty in accepting the logical basis for the view that genetic and environmental influences would necessarily be wholly or substantially the cause for degeneration. The effects of gradual process trauma and single events appear to have gone hand in hand, resulting in consequences that were probably at least as significant as any genetic factor.

[37] On causation, only a part contribution to the total degenerative picture is required. Age- related or genetic degeneration may be pre-existing and even continuing to progress at

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2 For example, *Oliver v Accident Compensation Corporation* [2015] NZACC 139.

its own rate alongside the traumatic/work-related degeneration. There will nevertheless be cover if the work tasks have contributed to the overall level of degeneration.

[38] In the end, I am satisfied the evidence favours a probability of contributory cause that Mr Adams' work tasks contributed to cause his lumbar spondylosis that was not wholly or substantially caused by ageing or genetic factors alone.

Issue Two – Whether Mr Adams work tasks led to a significantly greater risk of personal injury

[39] Relying on the opinions of Dr Ruttenberg and the CAP, Mr White submitted "there is no convincing medical evidence that any aspect(s) of the nature, duration or intensity of his work tasks or environment increased his risk of developing lumbar spondylosis".

[40] Mr White cited *Knox*[3] and *Turner*.[4] Knox sets out steps for evaluation of risk. In this case, there is no specific evaluation undertaken. Rather, the issue of risk is largely argued by specialists on the basis of general risk having regard to epidemiology.

[41] In *Turner*,[5] the significantly greater risk test was discussed by Judge Ongley who stated:

> [59] A further point of law on which counsel were not in agreement is the meaning of "significantly" in the expression "significantly greater risk" in s33(2)(c)[the corresponding provision in the Accident Insurance Act 1998]. The word is open to two different interpretations. In this jurisdiction, the approach to construction of the statute should be generous rather than niggardly: ...
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> [60] Once causation is established and attributed to work tasks or work environment, it would seem to be an unfair barrier to obtaining cover for a work related gradual process injury if the risk factor had to be markedly or substantially greater than the risk occurring in the general population. The degree of heightened risk would also be difficult to define in order to achieve consistency between claims. The alternative approach to construction, as Mr Beck submitted, is to regard "significantly" to mean more than marginally, or a statistically significant increased risk. That is a construction more in line with the purpose of the legislation to provide for a fair and sustainable scheme for managing personal injury.
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> …
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> [62] There is less reason to suppose that the legislature wished to indicate a requirement for a much greater or substantially greater risk. A likely purpose for using the expression would have been that the risk should not be measured by balancing general probabilities, but there should be a proper evidential basis to reach a comparison that is significant or

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3 *Knox v Accident Rehabilitation & Compensation Insurance Corporation* [2000] NZHC 1215.
4 *Turner v Accident Compensation Corporation* [2007] NZACC 229.
5 Ibid n4.

> measurable. If the answer to the risk question were that the nature of the work tasks suggests that there is probably a greater risk to persons doing those tasks, that would not be enough. But if there is expert opinion either that an aspect of the tasks poses a special risk, or that epidemiological studies show that there is a palpably greater risk for the occupational group measured against the general population excluding persons doing that task, then the test would be satisfied without requiring proof that the difference is major or substantial. In my view that is the meaning ascertainable from the text of the statute in the light of its purpose.

[42] I turn to consider the evidence.

[43] Dr Black is of the clear view that persons who performed repetitive heavy lifting, bending and squatting, twisting and forceful pushing and pulling tasks undertaken by Mr Adams were at significantly greater risk of suffering damage to the lumbar spine (discs and facet joints) than those who did not perform those same tasks. Dr Black cited *Hunter's Diseases of Occupation* referred to by the Corporation's specialist in *Simmons*.[6] The Court observes the work tasks at issue in *Simmons* (heavy and repetitive bending, lifting, twisting and awkward postures) are similar tasks undertaken by Mr Adams' history of employment with Silver Fern Farms. In *Simmons*, His Honour stated:

> *Hunter's Diseases of Occupation* has suggested that the relative risk for such work tasks as undertaken by Mr Simmons may be between 1.2 and 1.4. This means that if the proportion of lumbar disc degeneration in a non-exposed population is 30%, then the addition of exposure to workplace risk factors could increase it to 39%. ...

[44] Judge Powell therefore concluded that:

> [27] In the present case Dr Beaumont has opined that the risk for the type of work tasks undertaken by Mr Simmons would be in the vicinity of 1.2-1.4 times that of the non-exposed population. That is therefore 20-40% higher than the non exposed population. It therefore seems to me that whichever of the approaches identified by Judge Ongley in Turner is taken, such an increased risk would indeed be a "significantly greater risk", and Dr Beaumont's conclusion that the increased risk he identified was not sufficiently significant was accordingly wrong.

[45] Dr Ruttenberg criticised Dr Black's reliance on "textbook wisdom"., though Dr Ruttenberg relies on the American Mediacla Association Guides to the Evaluation of Disease and Injury Causation (published in 2014.)

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6 Ibid n1.

[46] I accept Ms Brown's submission that the Corporation's specialist in *Simmons* noted that *Hunter's Diseases of Occupation* is a valuable tool for specialists to assess causation and risk.

[47] Dr Black also relied on the NIOSH study, where the authors concluded there was strong evidence that low back disorders were associated with work-related lifting and forceful movements, with objective assessments identifying odds ratios ranging from 2.2 to 11. Studies using objective measures to examine specific lifting activities generally demonstrated risk estimates above 3 and evidence of an association with awkward postures, with results consistent in showing positive associations and several risk estimates also above 3.

[48] Dr Ruttenberg noted since the authors of the 2019 Battie Study had recommended further research, that did not negate the actual results of the study. The Court accepts Ms Brown's submission that Dr Ruttenberg did not respond to the authors' conclusion that "*there was moderate evidence suggesting a modest association between occupational loading and disc degeneration*." Nor does he acknowledge that the original Twin Spine Study recognised a link, albeit minor, between disc degeneration and environmental/occupational factors.

[49] In the 2019 Battie Study, 17 studies were included in the review. Ten studies evaluated the association of occupational loading with disc degeneration (signal intensity), four of which were pooled into a meta-analysis. Of the ten studies, only two did not identify a relationship between occupational loading and disc degeneration. A meta-analysis including four of the studies demonstrated an association between higher loading and degeneration for all spinal levels, with odds ratios between 1.6 and 3.3.

[50] While Dr Ruttenberg accepts mechanical stress is capable of being a contributing factor no evidence has been provided which indicates that those Mr Adams was exposed to in his work tasks amount to a significant increase in risk. Dr Black argues the characteristics of Mr Adams' work make it comparable to ordinary heavy labour so general findings can apply. As such, the findings of the NIOSH study have relevance. When all is said and done, the NIOSH study is accepted as quality research and its relevance here is that supports that occupational loading can place a worker at significantly greater risk of developing disc degeneration.

[51] Literature and epidemiological arguments aside, a review of the case law confirms the courts have taken a common-sense approach, particularly when the evidence of causation is robust in *Ambros.*[7] Ms Brown referred to some of the Court's decisions addressing lumbar conditions.

[52] In *Phillips,*[8] the claimant had been employed as a carton handler in a freezing works and had ceased work after a strain injury had revealed chronic degeneration of the L4/L5 disc. She contended that her back degeneration had occurred over a period of years as a consequence of the constant lifting, twisting, and bending involved in her employment. Judge Beattie recognised that every occupation worldwide "would not have nice, neat studies available", noting:

> It cannot be that the mere fact that there is no research into the particular employment tasks under consideration that it should mean that a worthy claimant must fail when the specialist medical evidence in the particular case identifies that there is a significantly greater risk for persons who carry out the particular work tasks in question.

[53] Judge Beattie accepted the specialist's evidence that:[9]

> Whilst there is little epidemiological evidence to refer to when assessing risk, **it is common sense** that if a person has to work eight to ten hours a day with lumbar spine flexed at 15 degrees and rotating one way, as well as having to carry boxes, for what was an accumulative distance per day, this causes greater stress on the lumbar spine than for a person who is not performing this particular job.

[54] In *Nicol*[10] Judge Barber also applied a common sense approach and found in favour of the appellant's claim for cover of cervical degenerative changes and cervical disc prolapse arising out of his work as a forklift operator.

[55] In *Meek,*[11] Judge Barber found the medical evidence did not support a significantly greater risk. However, His Honour found in favour of the appellant that cover was appropriate, taking a common-sense approach. His Honour stated:

> I am conscious that medical evidence opines that the risk test is not satisfied in this case. **However, there seems some conjecture involved in that and, understandably, that medical evidence is unable to be definitive in this case.**

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7 *Accident Compensation Corporation v Ambros* [2007] NZCA 304, [2008] 1 NZLR 340.
8 *Phillips V Accident Compensation Corporation* [2004] NZACC 237 at [15].
9 Ibid n8 at [6].
10 *Nicol v Accident Compensation Corporation* [2003] NZACC 159.
11 *Meek v Accident Compensation Corporation* [2010] NZACC 103 at [41] and [42].

> When I stand back and absorb all the evidence, I consider that on the balance of probabilities the significantly greater risk test is satisfied. I therefore allow the appeal. **Simply put, as a matter of common-sense it seems to me that a person working at material times as did the appellant is clearly at a significantly greater risk of tenosynovitis than someone not so employed**.
>
> [Emphasis added]

[56] Similarly, in *Hill*,[12] Judge Ongley found, as a matter of common-sense, that a person performing repetitive work tasks of heavy and forceful demand was clearly at significantly greater risk of lumbar degeneration than someone not so employed.

[57] In *Haronga*,[13] this Court adopted the approach in *Turner*, noting the evidence from the appellant's specialist that:

> … on the basis of the NIOSH report together with published research he co-authored, supports that a sufficient exposure to Mr Haronga's work as a meat process worker "that contains known risk factors leads to a significant excess of this injury (lumbar disc injury and secondary lumbar spondylosis) above the community rate of this condition."

[58] The Court discerns a general trend from the medical literature that increased mechanical stress correlates with increased disc degeneration. Since no evidence of specific evaluation is provided whether the mechanical stress sustained by Mr Adams at work was sufficient to result in a statistically significant increased risk, the court can only rely on the general risk. Reliance on general risk was determined in *Simmons* to be sufficient.

[59] Standing back and assessing all the evidence in the round, the Court finds that Mr Adams' work tasks have placed him at significantly greater risk of suffering lumbar spondylosis, to satisfy the significantly greater risk test.

Decision

[60] The Court concludes Mr Adams meets the criteria for cover for work related gradual process injury.

[61] Accordingly, Mr Adams is entitled to cover for work related gradual process injury being lumbar spondylosis and disc related changes.

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12 *Hill v Accident Compensation Corporation* [2014] NZACC 148.
13 *Haronga v Accident Compensation Corporation* [2021] NZACC 18 at [75].

[62] The appeal is allowed. The review decision dated 3 May 2021 is quashed and Work Aon's decision is set aside.

[63] Mr Adams is entitled to costs. If these cannot be agreed within one month, I will determine the issue following the filing of memoranda.

Judge Denese Henare
District Court Judge

Solicitor: John Miller Law, Wellington, for the appellant
McBride Davenport James, Wellington, for the first respondent
Paul White, Quay Chambers, Wellington, for the second respondent