

**Back disability: the  
challenges of  
determining work  
relatedness and the  
role of “pre-existing”  
or degenerative  
conditions**



# Areas to be covered

- What are the common types of back injuries?
- What are “pre-existing conditions”, what is a “predisposition”, what are “degenerative conditions”?
- How can factors such as age or gender legitimately be considered in a no-fault system based on the Meredith principles?

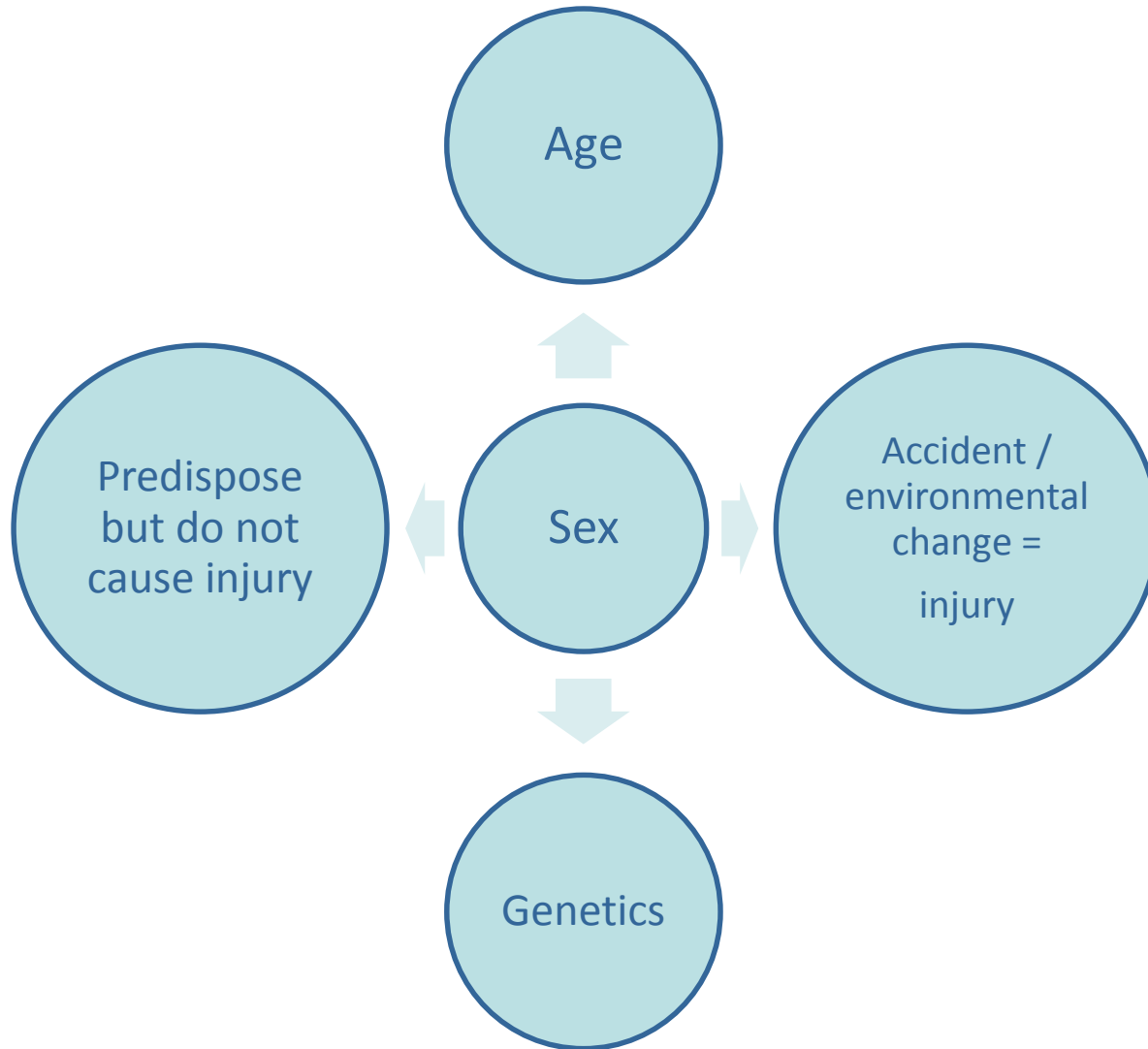
# Unveiling the Medico-Legal Myth of Degenerative and Pre-Existing Conditions

- What does degeneration mean? The use and abuse of an ambiguous word, by Richard Wigley, Christopher Walls, David Brougham, Peter Dixon, The New Zealand Medical Journal, 27 May 2011
- ACC and back injuries: the relevance of pre-existing asymptomatic conditions revisited, by Peter A Robertson, O Ross Nicholson, The New Zealand Medical Journal, 27 May 2011
- Orthopaedic surgeons and their review results and updating of the knowledge of the pathogenesis of tissue injury, the natural history of aging and related conditions, to assist with the New Zealand Accident Compensation System and the application of the Act on workers with back injuries

# Debunking the Myth

- Defining the terms:
  - **Degenerative / Degeneration:** they imply an age relationship and causation because they are loaded words by definition: changing from a higher to a lower form, i.e., a less functionally active form
  - Used to deny compensation entitlement: osteoarthritis (joints), tendinopathy (tendons), spondylosis (spine)
  - For radiologists degenerative changes are appearances from the cumulative effect of minor or major impacts: the changes are physiological and not just age related
  - Degenerative changes usually do not cause symptoms and can be clinically insignificant

# Immutable Risk Factors



# The Spine and Degeneration

- Spine degeneration – loss of disc height, traction spurs, annular osteophytes
- From chronic overload without symptoms
- There is no explicit definition for *Degenerative Disk Disease*
- Spondylosis – a better term because it does not imply a cause

# Spine Degeneration and Risk Factors


- Diffusion of nutrients and oxygen across the inter-vertebral disc matrix
- Soluble regulators of cell function
- Mechanical load including:
  - acute, repeated and gradual process injuries
  - excessive spinal loading or obesity
- Immutable risk factors: age, sex, genetics
- It is important to assess the risk factors in each case

# What is lumbar spondylosis/disc degeneration?

- Changes in the lumbar spine that show on plain x-rays:
  - disc space narrowing
  - osteophyte or spondylophyte formation
  - vertebral end-plate sclerosis
- MRI Scans will show:
  - disc desiccation
  - annular disruption with disc bulging, disc prolapse, annular tears, end plate changes



# Degenerative Disc Disease or Asymptomatic?

- These changes are called disc degeneration or spondylosis and can appear as “pre-existing” MRI abnormalities
- When there is ***associated mechanical axial pain, the term degenerative disc disease applies; otherwise, the worker is “asymptomatic”***
- Asymptomatic  DDD

# Age + Degeneration = Disease?

- The current scientific findings do not support this equation:
  - 20 years of MR scans demonstrate more abnormalities with age in asymptomatic people
  - Yet recent findings show that these changes do not predict disability: not now or later
- Boos et al: it is the psychological and physical aspects of related work that predict disability and not MR findings
- Borenstein et al: new low back symptoms not related to MRI abnormality that predated symptoms/MRI changes
- Jarvik et al: depression a better predictor of low back pain vs. MRI finding, except with a new disc herniation

# The Sum of It

“In essence, these authors showed that the common aging changes in the lumbar spine are not predictive of subsequent pain and disability and therefore the concept that a person with pre-existing MRI abnormality would have a likelihood of going on to develop significant pain and disability is incorrect.”

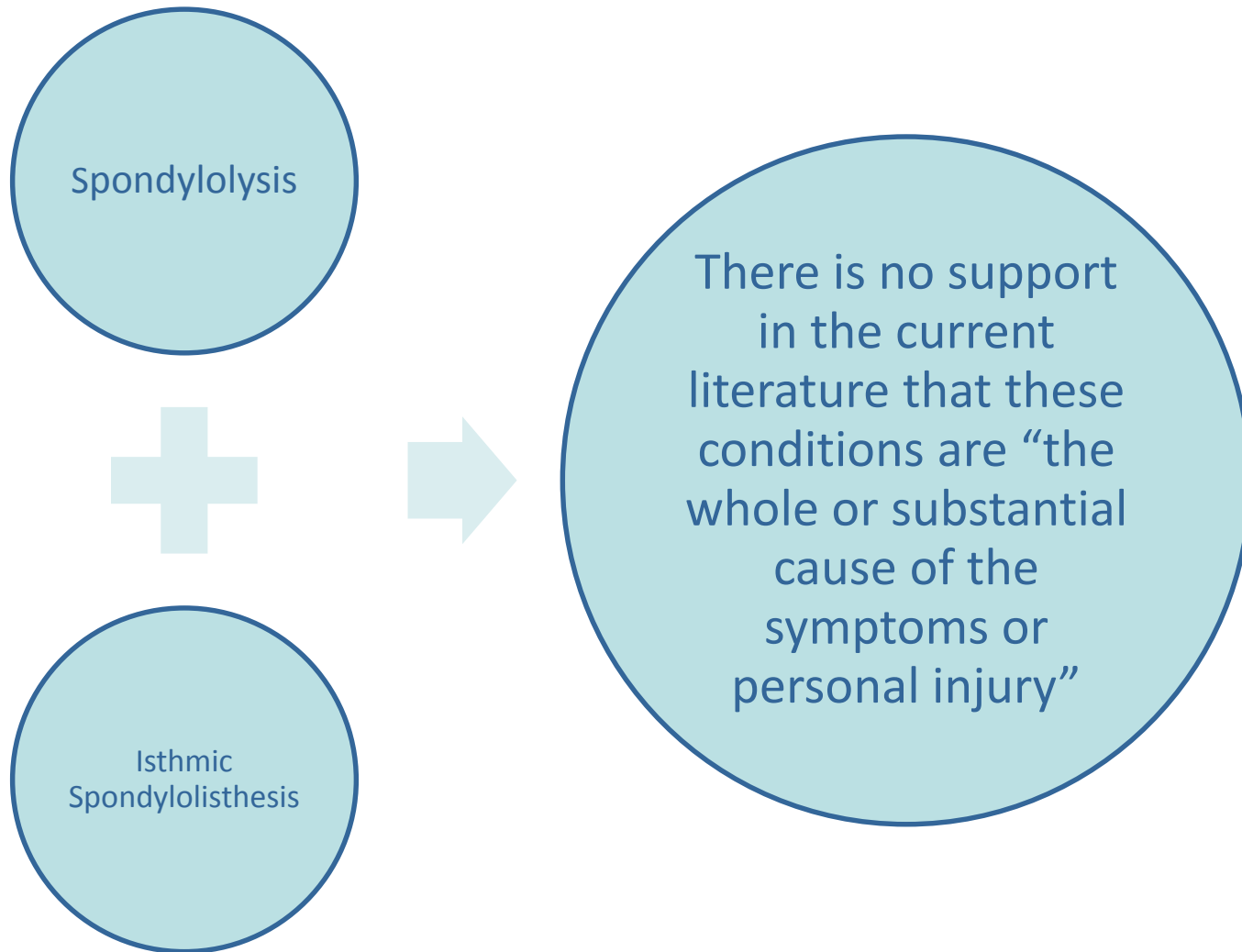
# In the workers' compensation context...

- Asymptomatic spondylosis is not a clinical problem to be addressed because of an accident
- And it is not “age / degeneration / disease” that caused the new pain / disability post accident
- The accident is the whole or substantial cause of the pain; and otherwise, the spondylosis would have remained asymptomatic

# Pre-existing / Underlying / Degenerative Spondywhat?

- ❖ Dysplastic Spondylolisthesis: developmental in intrauterine phase or early childhood – gradual and developmental and excluded from coverage
- ❖ Degenerative Spondylolisthesis: with facet joint arthritis and to some extent disc degeneration – gradual and symptomatic and excluded from coverage
- ❖ Spondylolysis & Isthmic Spondylolisthesis: failure or stress fracture of the pars interarticularis under flexion; acquired condition of late adolescence and usually asymptomatic – **the scientific literature does not show those with these conditions are predisposed to back pain or disability as adults; they are not gradual processes or part of the aging process**

# But are they the cause of the disability?



# Work-relatedness & Pre-existing / Degenerative Conditions

- The most common types of back injuries:
  - lumbar strain: one time or cumulative lifting
  - lumbar sprain: one time or cumulative lifting
  - herniations : loading with or without twisting
  - traumatic spine injuries: fractures / bony disorders / sequestered disc injury – piece of disc has broken off
  - whole body vibration

# Proving Causation

## History

- Accident history
- Medical reporting and history
- Effects of the injury post accident at work , home, medically

## Medical

- Compatibility of the diagnosis to the accident history
- Is there medical evidence of a pre-existing impairment or condition
- Is the pre-existing condition asymptomatic or symptomatic (treatment and impact on ability to work within one to two years of the accident)
- If there is evidence of an asymptomatic pre-existing condition or a related impairment, does the evidence support post accident deterioration

## Linking

- Obtain a medical opinion in instances where there is a concern raised about a pre-existing condition or impairment and obtain clarification on the severity of the accident
- Assess relevant policies: initial and recurrence entitlement, permanent impairments, including the rating process for permanent impairments in the event of pre-existing impairments / pre-existing conditions
- Obtain and review previous WSIB claim files;



# Significant Contribution

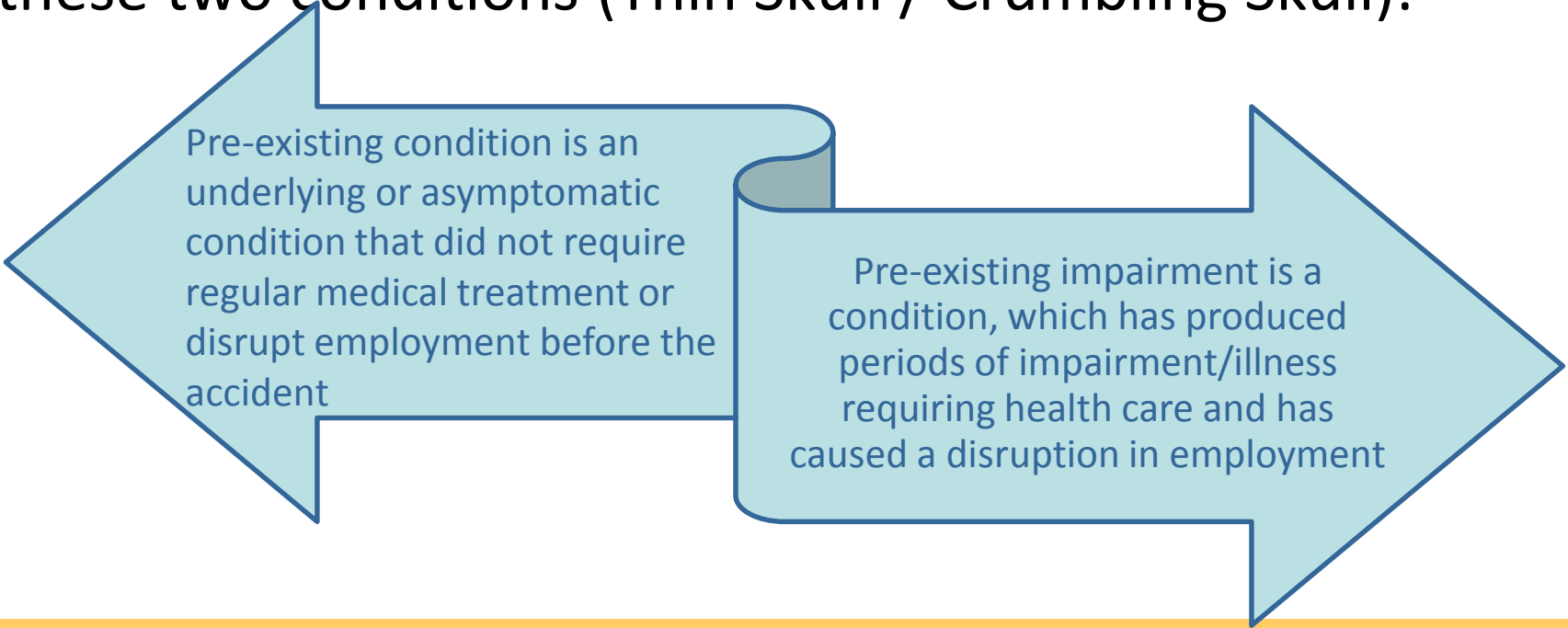
- Excellent application / description of the significant contribution test in WCAT Decision 72, 1986
- Since then it has appeared in over 1600 decisions in Ontario
- The test asks if the work activities significantly contributed to the development of the condition
- When the evidence for or against is equal, the case is resolved in the worker's favour
- The accident does not have to be the sole cause or even the major cause

# But what if there are multiple causes?

- **Thin Skull Doctrine:** the employer takes the worker as they find them; the susceptibility to injury from a pre-existing condition is not relevant; and, compensation ought to be provided if the pre-existing condition increases the severity of the injury
- **Crumbling Skull Doctrine:** workers with pre-existing impairments are compensated until they return to the pre-accident state (i.e., aggravation basis entitlement); and, does the medical evidence show that the accident advanced the pre-accident impairment

# Pre-existing Condition vs. Impairment

- So far there is no Ontario WSIB policy on pre-existing conditions
- Introduction in 2005 of an aggravation basis policy that provides the adjudicative distinction between these two conditions (Thin Skull / Crumbling Skull):



Pre-existing condition is an underlying or asymptomatic condition that did not require regular medical treatment or disrupt employment before the accident

Pre-existing impairment is a condition, which has produced periods of impairment/illness requiring health care and has caused a disruption in employment

# Ontario WSIB Policy:

## Pre-existing condition vs. Impairment

- **Second Injury Enhancement Fund Cost Relief Policy:**
  - “If a prior disability caused or contributed to the compensable accident, or if the period resulting from an accident becomes prolonged or enhanced due to a pre-existing condition, all or part of the compensation and health care costs may be transferred from the accident employer in Schedule 1 to the SIEF.”
- **Aggravation Basis Policy:**
  - Pre-existing impairment recognized via allowance on an aggravation basis
  - The severity of the accident is determined, and if minor, entitlement is limited to a return to the pre-accident state
  - There can be a permanent aggravation of the pre-existing impairment, even if the accident is minor

# Possible Policy Changes in Ontario

- As a result of the release of KPMG's Value for Money Audit in 2011, Jim Thomas, Independent Chair, provided a report to the WSIB on the benefits policy review consultation process:
  - **Pre-existing conditions policy**
  - **Recurrences, in relation to pre-existing conditions**
  - **Permanent Impairments, in relation to pre-existing conditions**
  - **Aggravation basis, in relation to any new policy regarding pre-existing conditions**

# Meredith Principles and using age and gender to deny entitlement?

No fault compensation

Exclusive jurisdiction

Collective liability

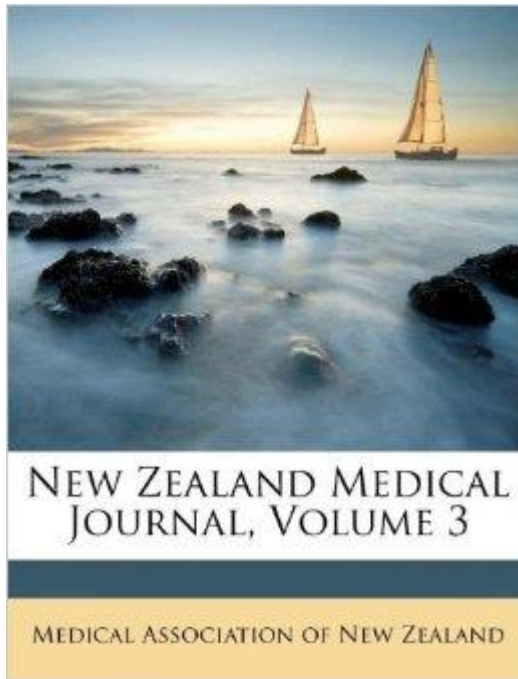
Administration by an independent agency

Security of payment

# Summary: Science and Reform

- There is no provision within the foundation of the Act to deny injured workers compensation based on age or gender
- Any reforms made to policy and any introduction of new policy on pre-existing conditions ought to reflect the Meredith principles
- The New Zealand articles provide an exciting opportunity to bring to the fore the current science on pre-existing conditions and degeneration that we can apply to our casework and policy changes

# *Using Medical Literature At WSIAT*



**Decision 976/13** (Marafioti, Tracey, Ferrari – 19-Jul-2013)

**Decision 360/14** (Crystal – June 10, 2014)



# *The Reality Is....*

In the OWA's November 2012 submission to the Benefits Policy Consultation, it was noted that WSIB staff have been:

**“...moving forward with new adjudicative practices even though the relevant policies have not been changed.”**

# *WSIAT Decision Review*

**We conducted a review of recent WSIAT decisions to see what the Tribunal has said about the Board's current practice about pre-existing conditions and degeneration...**

**WSIAT 2012:**



**WSIAT 2014:**



# *So What ARE The Relevant Policies?*

**Board staff sometimes / maybe/ perhaps used to have regard for the language found in a variety of policies to adjudicate cases in which there was said to be a pre-existing condition:**

**#11-01-15** entitled “Aggravation Basis”

**#14-05-03** “Second Injury and Enhancement Fund (SIEF)”

**#18-05-05** entitled “Effect of a Pre-Existing Impairment”

# *The Strange Case Of The Shrinking NEL Award*

- Suffered right shoulder injury on June 22, 2002, as a result of turning large valve located above shoulder injury
- WSIB in a February 2003 decision allowed entitlement on an “aggravation basis only” because of a pre-existing condition
- Needed surgery in September of 2003

# *The Strange Case Of The Shrinking NEL Award*

**WSIAT DECISION 142/12 issued on May 2, 2012:**

**“We find ...on the balance of probabilities the worker’s daily job duties... between 1968 and 2002 were a significant contributing factor in the progressive deterioration of his underlying right shoulder osteoarthritis... The worker .... Has entitlement to a permanent impairment award for right glenohumeral osteoarthritis.”**

# *The Strange Case Of The Shrinking NEL Award*

## **WSIB Decision Dated**

**May 22, 2012**

- Whole person impairment of 14.25 per cent
- $75\% \times 19 = 14.25\%$
- “...deduct due to pre-existing osteoarthritis”

**That’s a “moderate”  
Pre-existing impairment  
as per #18-05-05!**

# *The Strange Case Of The Shrinking NEL Award*

**Uh, we had meant to say your client had a “major” impairment!**

**WSIB Decision Dated  
June 13, 2012**

**“The NEL rating was adjusted for major non measurable pre-existing impairment ... reducing NEL benefit from 14.25 % to 9.5%”**

# The NEL Reduction Cases

***As per 18-05-05, “Effect of a Pre-existing Impairment:”***

**If the pre-existing impairment is not measurable, the WSIB rates the total area's impairment, and reduces this rating according to the significance of the pre-existing impairment (see pre-accident disability in [14-05-03, Second Injury and Enhancement Fund](#)).**

- if minor, there is no reduction
  - if moderate, there is a 25% reduction
  - if major, there is a 50% reduction.
- 
- **DECISION 1350/13** (McLellan – August, 22, 2013)
  - **DECISION 204/14** (Netten – February 12, 2014)
  - **DECISION 1970/13** (McKenzie, Trudeau, Gillies – February 25, 2014)



# *Pre-Accident Impairment Defined*

**“... is a condition, which has produced periods of impairment/illness requiring health care and has caused a disruption in employment. (Although the period of time cannot be defined, a decision-maker may use a one to two year timeframe as a guide.)”**

**FROM THE “AGGRAVATION BASIS” POLICY # 11-01-15**

## *In Operational Policy #14-05-03:*

***Pre-existing disability*** is defined as:

**“... a condition which has produced periods of disability in the past requiring treatment and disrupting employment.”**

***Pre-existing condition*** is defined as

**“...an underlying or asymptomatic condition which only becomes manifest post-accident.”**

# *A Rope By Any Other Name....*

*Determining a Permanent Impairment when there is a Pre-existing Factor*

## **Permanent Impairments for Work-Related Injuries**

But he was fine before this happened...

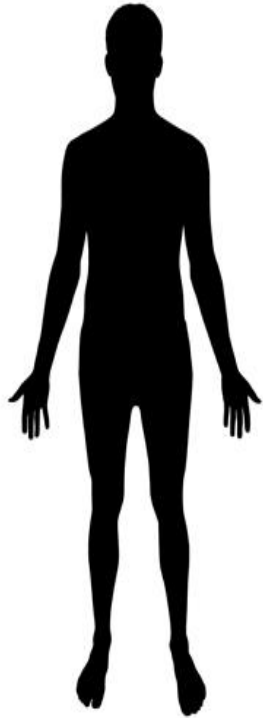
Joe suffered a low back strain at work. The employer says that Joe has a 20 year history of recurrent mechanical low back pain. Also, he has a couple of prior claims for the back but each time he managed to go back to his regular job. Joe says he was feeling fine before this last incident at work. The employer wants him fully recovered before he comes back but the recovery is taking a long time. He's been referred to a specialist. Joe says he's seen this specialist before. Joe is starting to worry that he won't be able to go back to work this time

**Prepare for a PI decision at the beginning of a case, not the end.**

At the initial assessment, gather information about the worker's life to clarify his/her level of functionality prior to the accident. This is done by having conversations with the worker and asking probing questions:

- ***How did you spend your time before the accident***

# The Worker In Decision 1350/13



## *WSIAT Decision 1350/13...*

**“The evidence before this Panel clearly establishes that the worker was capable of performing his regular duties as a gas fitter without any functional limitations prior to the injury of July 2005. The evidence clearly establishes that any pre-existing condition which the worker had was asymptomatic and without any functional effects prior to July 2005. Within the meaning of Board OPM Document #18-05-05, the worker’s pre-existing impairment must be considered as *minor...*”**

# *The Worker In Decision 204/14*



## *WSIAT Decision 204/14...*

**“In the absence of any evidence that the degenerative changes in the worker’s right shoulder had required treatment in the past and had disrupted her employment, this degenerative condition is not a pre-existing impairment within the meaning of Board policy. Consequently, there is no basis upon which the NEL award may be reduced pursuant to OPM Document No. 18-05-05.”**

# *The Worker In Decision 1970/13*





## *WSIAT Decision 1970/13...*

**“The Panel has concluded that the worker was engaged in a job that required physical labour prior to his compensable accident, and that he had been conducting those duties for some time with no indication of having a right ankle impairment. There is no evidence that he suffered any lost time from work as a result of his right ankle for a period of three years prior to reporting right ankle symptoms in the fall of 2002.”**



**“The WSIB does not consider the impact of pre-existing conditions when determining initial entitlement. Once initial entitlement is established, decision makers consider the impact, if any, of pre-existing conditions on the worker’s ongoing impairment.”**

# *Pre-Existing Conditions and Initial Entitlement*

## The Worker In WSIAT Decision 627/14



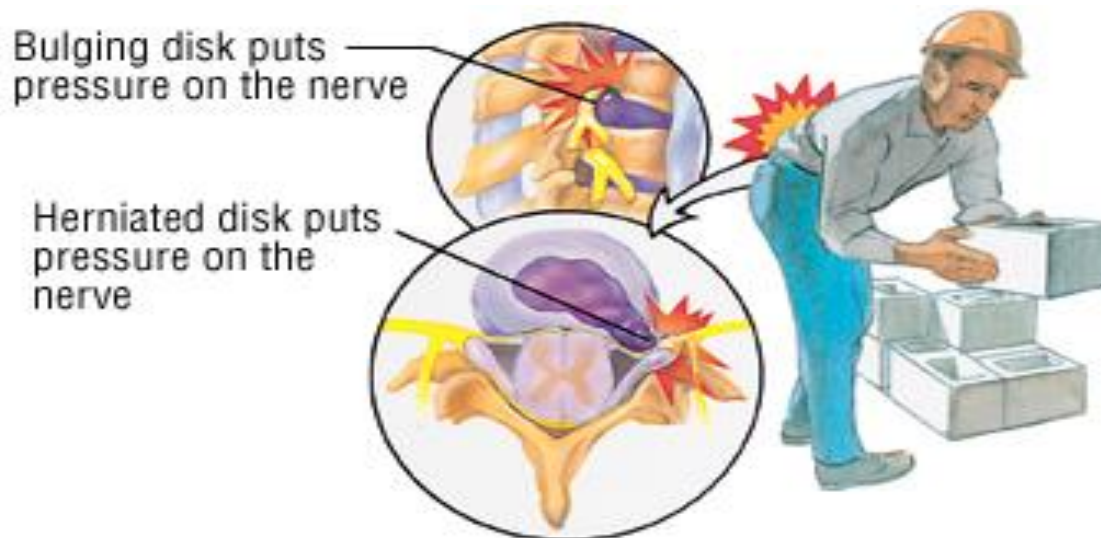
# *Pre-Existing Conditions and Initial Entitlement*

**Decision 627/14** (Frenschkowski, Wheeler, Carlino – Aug. 1, 2014)

**“Although the worker had a pre-existing, symptomatic condition and only sustained a minor accident, as defined under OPM Document No. 11-01-15, this should not result in a denial of initial entitlement, but a limitation of subsequent benefits until such time as the worker returned to his pre-accident state after surgery. The OPM Document addressing the aggravation of pre-existing conditions is intended for circumstances such as the one in this appeal.”**

# *DDD and Heavy Work*

- **DECISION 2264/13** (MacAdam, Young, Broadbent – January 14, 2014)
- **DECISION 1858/12** (Goldberg – November 7, 2012)
- **DECISION 2341/08** (Moore – Sept. 17, 2009)



# *The Worker In Decision 2264/13..*

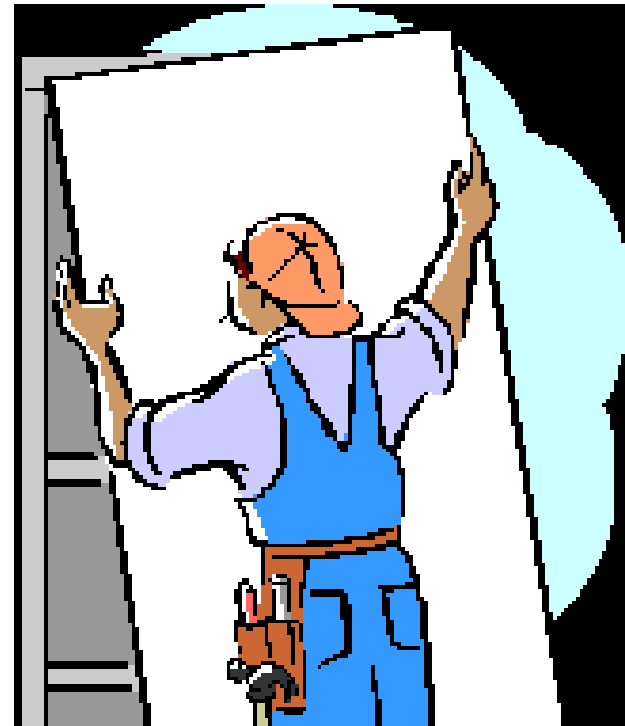


## ***WSIAT Decision 2264/13..***

**“The underlying condition in this case is DDD in the low back. The issue is whether the job duties - repetitive lifting, bending, and twisting over the three year period from 2009 to 2012, when the worker was already symptomatic - whether those job duties made a significant contribution to the pace and extent of any deterioration.**

**In summary, we find that the worker’s job duties exacerbated his degenerative low back condition after it became symptomatic in 2009 until the point where the worker could no longer perform his repetitive physical job duties in March 2012.”**

# *The Worker In Decision 1858/12*





## *WSIAT Decision 1858/12...*

**“Dr. Wong concluded the worker’s primary environmental cause was “overloading the spine” which occurred when the worker did the heavy lifting required of him as a drywall installer, and while supporting heavy loads during installation. He concluded that the worker’s occupation was a significant contributing factor to the worker’s degenerative spine issues... (we find the medical opinions... persuasive...”**

## *WSIAT Decision 2341/08...*

**“...the essential requirement for entitlement for an aggravation injury is that there be evidence that a workplace injuring process has, in a material way, advanced the pathology of the pre-existing condition. If the underlying pathology is materially advanced, this constitutes injury. However, merely making an underlying condition painful or noticeable does not constitute injury. It is the change in the underlying pathology that constitutes an injury by aggravation. The presence of new symptoms may suggest advancement of the underlying pathology but may also suggest that the underlying condition has become more noticeable because of certain activities. In the end, the medical evidence must determine the outcome.”**

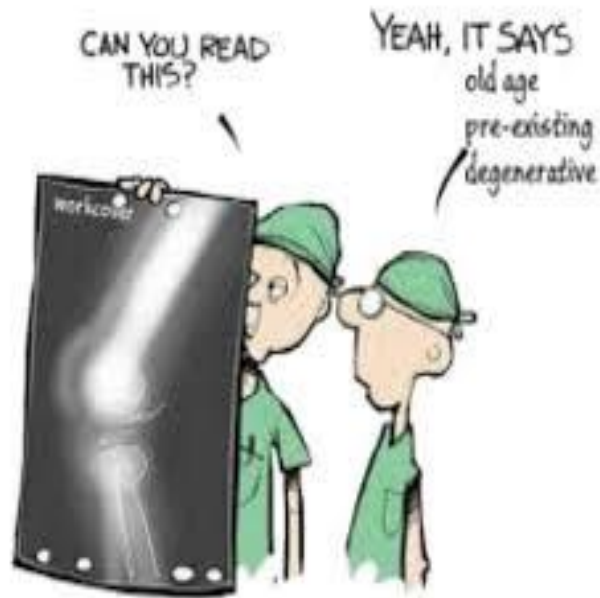
# Medical Evidence the key.....

**DECISION 1122/13** (Lang-Christie-Signoroni - October 16, 2013):

**“As the medical evidence documents, this permanent impairment consists of a soft tissue injury superimposed on a pre-existing degenerative condition.”**

# *Symptomatic or Asymptomatic?*

What Board Staff  
Often Do Now



# Symptomatic or *A*symptomatic?

## What They SHOULD Be Doing Is Asking...



- Was there actually an identified and SYMPTOMATIC condition pre-accident?
- Were there medical precautions prior to the injury? Accommodations?
- Was the claimant receiving health care for this problem pre-accident?
- Was there lost time from work due to the condition?

# *Pre-Accident Impairment Defined*

**FROM THE “AGGRAVATION BASIS” POLICY # 11-01-15**

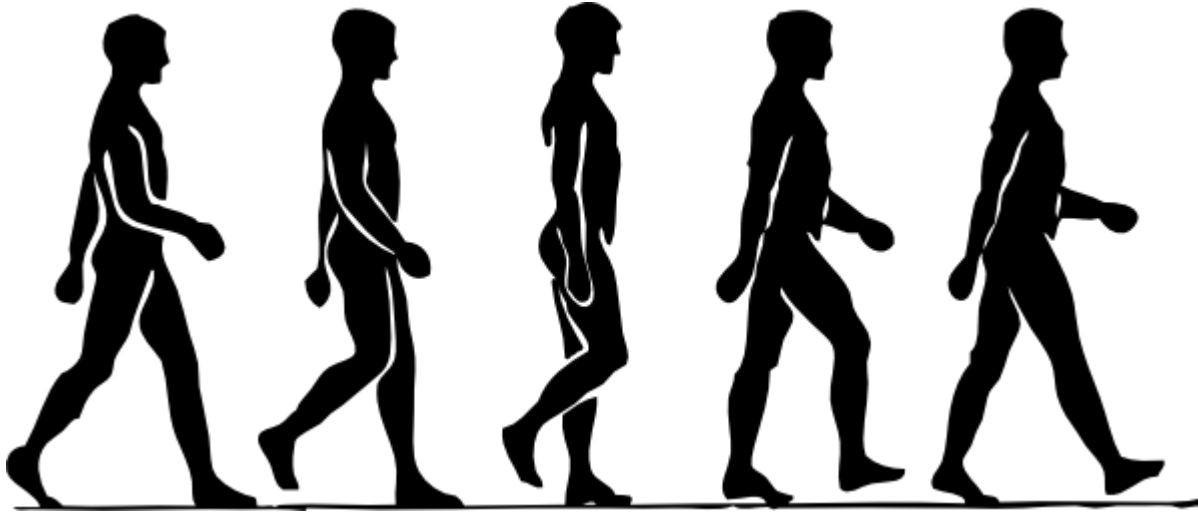
**“... is a condition, which has produced periods of impairment/illness requiring health care and has caused a disruption in employment. (Although the period of time cannot be defined, a decision-maker may use a one to two year timeframe as a guide.)”**

# *Symptomatic vs Asymptomatic*

**(Although the period of time cannot be defined, a decision-maker may use a one to two year timeframe as a guide.)”**

- **DECISION 260/11** (MacAdam-Trudeau-Crocker – April 7, 2011)
- **DECISION 2300/06** (Parmar – Wheeler – Crocker – November 30, 2006)

# *The Worker In Decision 260/11*



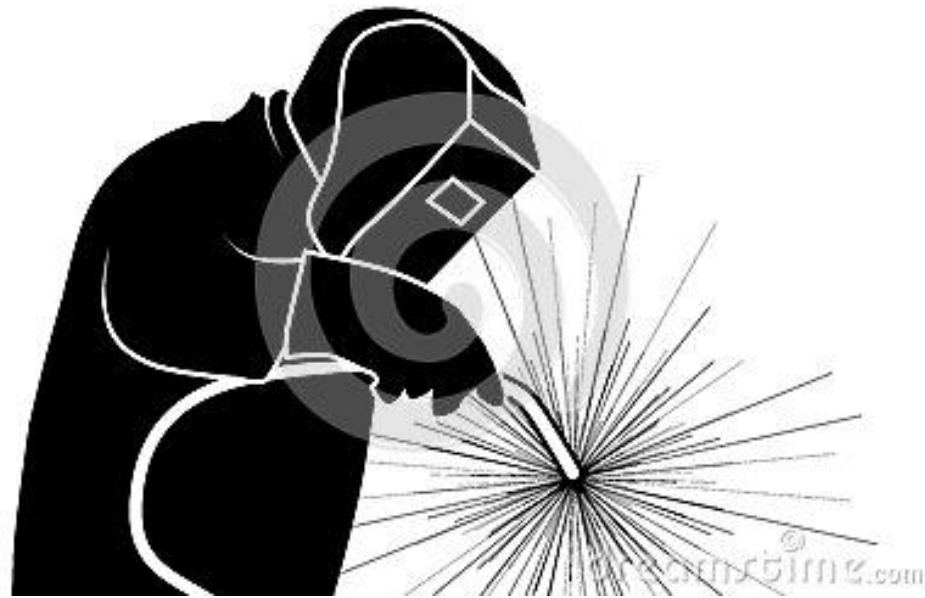


# *WSIAT Decision 260/11...*

**“We find that the worker’s pre-existing knee condition was largely asymptomatic prior to the August 5, 2009 accident. We find that it and the accident were significant contributing factors that led to the worker needing a total left knee replacement...**

**Both the worker and employer’s evidence indicates that the worker has had some left knee symptomology prior to August 5, 2009, though there is no evidence that those symptoms required health care or caused a disruption in employment...” (emphasis added)**

# *The Worker In Decision 2300/06*



## *WSIAT Decision 2300/06...*

**“There is no evidence of a symptomatic medical condition, no evidence of any work restrictions, no evidence of any lost time from work, and no evidence of regular healthcare treatments for some two years prior to the compensable accident.**

**In our opinion, the totality of the evidence does not suggest that the worker had a pre-existing impairment of his back as contemplated in OPM No. 11-01-15.”**

## *Symptomatic vs Asymptomatic*

**“(Although the period of time cannot be defined, a decision-maker may use a one to two year timeframe as a guide.)”**

**Board training document says “Medical chart notes up to 5 years should be obtained, 2 years as a minimum...”**

- **DECISION 1212/11** (M. Smith – June 27, 2011)
- **DECISION 973/14** (S. Clement, B. Davis, M. Ferrari – July 31, 2014)

# *The Worker In Decision 1212/11*



## *WSIAT Decision 1212/11...*

**“... There were several times in the past when she had been symptom-free for two or three years, and then, for no apparent reason, experienced an onset of symptoms. In light of this pattern over the past 30 years, I find it more appropriate to look at the worker’s over-all history than to look only at the previous two years.”**

# *The Worker In Decision 973/14...*



# *Decision In WSIAT 973/14...*

## **Compensable injury on May 24, 2010**

“The worker sustained a workplace injury in April 1992 and was paid temporary total benefits for his loss of wages from **April 8, 1992 to May 9, 1992**, thus there is **evidence of a pre-accident impairment**.....In his testimony before the ARO, the worker said he did have injuries to his right shoulder while playing hockey in 1995 or 1996. He said he has not played hockey or golf in 15 years. ....”



# *Board staff sometimes need reminding ...*

## **“Asymptomatic pre-existing condition does not limit entitlement”**

The Fair Practices Commission’s Annual Report for 2013 discusses the case of “Mr. B”

- Collected medical records going back two years before the accident
- Spoke to employer
- Sent to medical consultant for review

## *The Board NEEDS reminding ...*

**“The vice-president said he would use this case as a teaching example of the type of inquiries case managers need to undertake in cases where workers do not return to work in the time expected.”**

# *Did The Accident Generate A Permanent Impairment?*

- **DECISION 789/13** (Kalvin – May 3, 2013)
- **DECISION 1122/13** (Lang-Christie-Signoroni - October 16, 2013)
- **DECISION 1242/09** (McLellan – June 26, 2009)

# *The Worker In Decision 789/13*



## *WSIAT Decision 789/13...*

**“It is not controversial that the worker suffers from a degenerative condition in his spine that pre-dated and therefore was not caused by the compensable accident of September 26, 2002. However, the existence of a pre-existing condition does not disentitle the worker to benefits for a permanent back impairment if the compensable accident worsened or aggravated the pre-existing condition on a permanent basis.”**

# *The Worker In Decision 1122/13...*



**Worker 68 years old  
at time of accident**

# *WSIAT Decision 1122/13*

WSIB Case Manager found that the worker had reached Maximum Medical Recovery (MMR) and he had suffered no permanent impairment as a result of the accident and that, pursuant to the assessment at the Board's Regional Evaluation Centre, there were no restrictions on his ability to return to work.

**“... had the advantage of treating the worker on a regular basis following his injury. In his view, it was obvious that the worker had medical restrictions since he experienced pain with prolonged sitting and driving.”**

# *The Worker In Decision 1242/09*





# *WSIAT Decision 1242/09...*

**“In the case before me, the worker's impairment in the lumbar spine does not constitute a divisible injury, and therefore apportioning compensation benefits between competing causes, in this case, between the workplace accident versus the aging process, contradicts the fundamental principle that causation is determined on the basis of a significant contributing factor.... Board *Operational Policy Manual*, Document #18-05-09, entitled “Redeterminations and Recalculations,” makes no provision for proportionate benefits in the NEL redetermination process.”**

# SIEF Cases

- **DECISION 197/12** (McCutcheon – September 27, 2012)
- **DECISION 766/13** (Nairn - August 7, 2013)

# *Is DDD A Pre-Existing Condition?*

WSIAT Decision 766/13 involved worker who was 62 years old at the time of his accident

**“Tribunal decisions have generally held that normal conditions, such as DDD consistent with a worker’s age, do not constitute pre-existing conditions for the purposes of SIEF relief.”**

# Benefits Policy Review Casebook

- The WSIB created this casebook as a resource for the 2012-13 Benefits Policy Consultation. It's comprised of a sample of decisions made by the Workplace Safety and Insurance Appeals Tribunal (WSIAT) which are related to the **four areas of policies** included in the Benefits Policy Consultation:
  - recurrences
  - permanent impairments
  - work disruptions and
  - aggravation basis
- The casebook does not constitute an exhaustive collection of decisions, nor does the WSIB represent that these cases are authoritative on the associated policies.
- Notably many of the decisions deny worker's appeals.

## Providing for the Damaged Workman



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compensation only  
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appointed Sir William  
became the  
Compensation.

2

revision of the Workmen's

the draft act

"Received your letter informing me that you had advanced the necessary balance per month for me. Also received cheque. I wish to express how grateful I was for your kindness, and I also offer my greatest thanks."

"Years of the 22nd in hand advising me of your award of £25 per month for myself and children. It will greatly assist me to help my wife and children. I am very grateful to the members of the Act for their forwardness in taking this Act past. Again thanking you."

"Now that I am able to write a little I desire to thank you for your generous award of £25 per month. I wish my fingers were quick and strong, the Commission would have paid me, as being a soldier for two years a little more. I am very grateful to the members of the Act for their forwardness in taking this Act past. Again thanking you."

"I am glad to hear that you followed  
the Commission's award. Medical  
expenses were paid; £75 was paid for  
between the date of accident and  
the Commission's monthly pension of £20 for