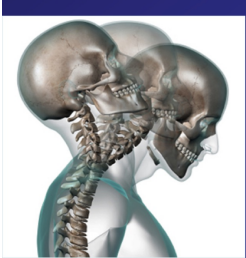
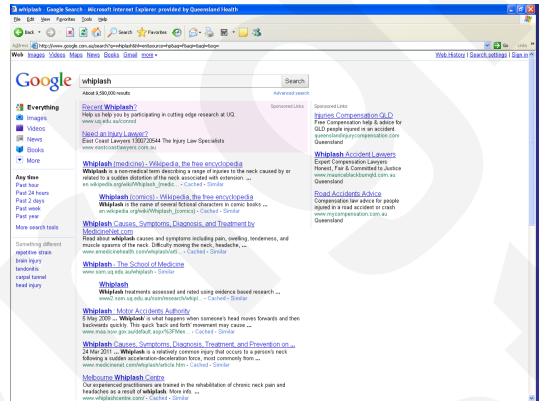




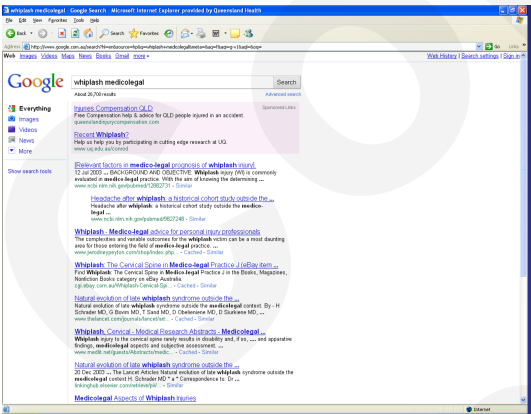
Whiplash Injury

M McCarthy

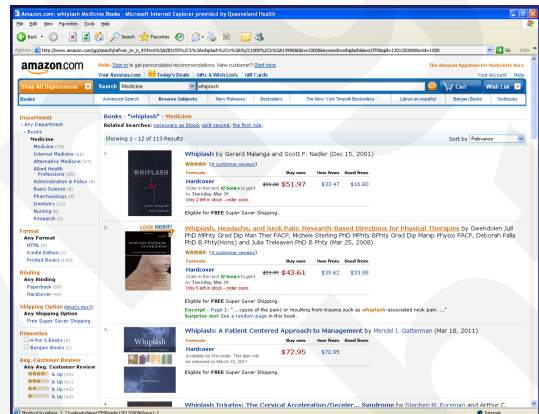


9,590,000 Hits



26,700 Hits



113 Medical Books on the Topic



NORTIN M. HADLER, M.D.
author of *Whirled Sick*

Stabbed in the BACK

CONFRONTING
BACK PAIN IN AN
OVERTREATED
SOCIETY

Whiplash and Other Useful Illnesses
Andrew Malleson



Back Column

Neck Pain? You May Have a Whiplash Injury

On the Job Injuries
Workers' Compensation
Chiropractic care for good results. Some 13 percent of workers in various states have reported that their chronic pain was caused by a workplace injury. That is not surprising, considering that the compensation costs for lost work are dramatically lower as well.

Chiropractic care usually involves more visits than medical care but it leads to fewer chronic cases and gets people back on their feet and back to work sooner. That is reason enough to choose chiropractic care for on the job injuries.

Insurance also allows you to use a chiropractor for a back injury that occurs on the job. Ask your employer if they have a chiropractor on their panel. If they do, have them refer you to one.

Car accidents, blows to the back in sports, and on the job injuries can easily leave you with a whiplash injury. While sometimes symptoms are felt immediately, often symptoms are delayed for days, months or even years. That's why we recommend getting checked out right away so these problems can be corrected.

The most common symptom of whiplash affecting 65 percent of those injured is neck pain, and it usually begins between two hours and two days after the accident. This is often the result of tightened muscles that react to other muscle tears or excessive movement of joints from ligament damage. The muscles tighten in an effort to splint up and support the head, limiting the excessive movement. While muscle relaxation can relieve some of the discomfort of these muscle spasms, using muscle relaxants without wearing a support collar to brace and hold the head in place can undermine this natural protection from the muscles and cause further injury.

As an estimated 66 percent to 70 percent of those suffering from whiplash complain of headaches. The pain may be on one side or both, on

agins and off again or constant, in one spot or more spread. These headaches, like neck pain, are often the result of tightened, tired muscles trying to keep the head stable and, like tension headaches, they are often felt behind the eyes.

Shoulder pain, often described as pain radiating down the side of the neck into the shoulder blade area, also may be the result of tired muscles.

Muscle tears often are described as burning pain, prickling or tingling. More severe disc damage may cause sharp pain with certain movements which are relieved by holding your hand over your head.

If you experience any of these symptoms, you may have a whiplash injury that, left uncorrected, can cause more serious problems months or even years later. Right work care immediately after an injury.

The Quebec Automobile Insurance Society released an extensive study of more than 10,042 whiplash injuries and concluded most interventions in whiplash were unproven, including soft cervical collars and

neckties. Yet they recommended spinal manipulation as clearly effective. So if you suspect you have a whiplash injury, choose a specialist in spinal injuries, your chiropractor, who has proven methods of care for whiplash. We now combine physical therapy with chiropractic to increase the benefits of treatment.

Basic Whiplash Symptoms

- Neck Pain
- Headache
- Shoulder Pain
- Low Back Pain
- Difficulty Swallowing
- Blurred Vision
- Ringing in Ears
- Nausea
- Fatigue or Weakness
- Irritability

Source: www.malleson.com

Whiplash injury resulting from dodgems - Microsoft Internet Explorer provided by Queensland Health

Can dodgems lead to a successful whiplash injury claim?

Anecdotal evidence provides several stories of people acquiring a whiplash injury from dodgem cars (or bumper cars) rather than from a car accident. However, this type of hyperflexion is, it seems, yet to make an impression on personal injury compensation claims.

An investigation of the legal record does not show a single successful compensation claim for whiplash resulting from use of dodgem cars. In fact, more than one firm of solicitors uses the level of impact one would receive from a dodgem crash as an example of where a neck injury compensation claim would not succeed.

However, the information-providing website connectmedical.com states clearly that "if you've ever been on the dodgems at the fair you will have experienced the same level of whiplash as you would in an accident between a stationary car and one going at ten miles an hour."

This is not to say, though, that the personal injury received in an average dodgem collision will result in costs to the sufferer, compared to a real car crash, it would need to be a notably severe bump to be eligible for compensation, and some fault must be shown on either the part of another dodgem driver or in the ride owner's negligence. This is not impossible, but has not been successfully claimed yet.

Except...

A YOUNG woman has been awarded £7,000 for whiplash when she was struck by a "rogue driver" in a dodgem car ride.

Article: A YOUNG woman has been awarded "£7,000 for whiplash when she was struck by a "rogue driver" in a dodgem car ride.

Article from: Irish Independent (Dublin, Republic of Ireland)
Article date: July 17, 2009 [Comment](#)

Only in Ireland!

Woman wins £7,000 for dodgem whiplash

A YOUNG woman has been awarded £7,000 for whiplash when she was struck by a "rogue driver" in a dodgem car ride.

Language student Rosam Harkin (22), of Croagh, Dúnkineely, Co Donegal, won her action for pain, suffering and inconvenience against Bandon Adventure Park Ltd, trading as Harrison's Amusements at the Sea Front, Bandon, Donagel, arising from the incident on July 29, 2004.

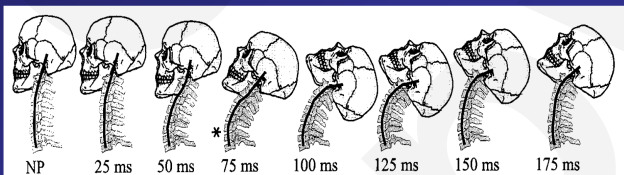
A High Court judge said she had been deliberately targeted by two teenage boys, who drove their car in the wrong direction, hitting her head on.

She sued the amusement arcade after ...

[Read all of this article with a FREE trial](#)

With all of this in mind...

- **Whiplash**
 - an injury to one or more elements of the cervical spine that arises from inertial forces being applied to the head in the course of a motor vehicle accident resulting in the perception of neck pain



Demographics

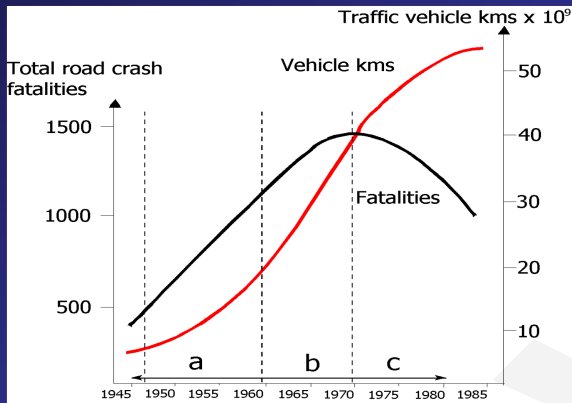
- Annual incidence 0.1-7 /1000
- Aged 20-40yrs
- 25% of injured develop chronic pain
- 10% of injured develop constant severe pain

Demographics

- Lithuania – whiplash not a recognised condition
 - Neck pain in car occupants involved in MVAs equal to that in the general population
- New Zealand vs Victoria
 - Cultural effect of no fault compensation system and effects of legislation changes
 - Influences whiplash...
- Culture or Reality?
- The metropolitan plague?...

Economic Cost

- UK – £3.64 billion / yr
- 76% of Motor Insurance Claims



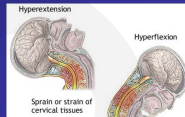
Aetiology Pathomechanics

- 90% RTAs occur at < 14mph
- These are the ones that get whiplash!
- Whiplash disability
 - Proportional to differential velocity of head and torso
 - Inversely proportional to tyre skid size and degree of vehicle damage
- 50% cases = Rear End Shunt



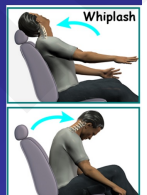
Aetiology Pathomechanics

- Change velocity 2.5mph sufficient to cause symptoms
- Speed of 8.7mph required to cause damage to vehicle
- Variables:
 - Speed
 - Direction of impact
 - Head / neck position
 - Size of vehicle

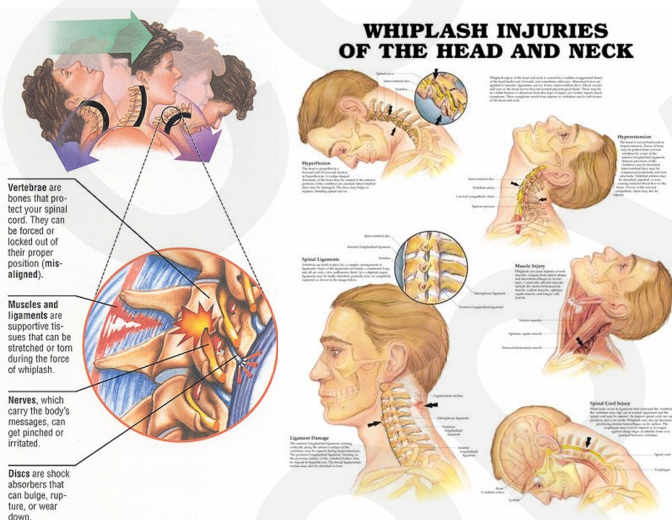


Aetiology Pathomechanics

- Trunk forced backwards and ramps up the back of the seat
- Neck hyperextends then recoils forward
- Displacement increased with
 - Heavier vehicle
 - Females
 - neck thinner and less rigid
 - ¾ neck rests incorrectly positioned



WHIPLASH INJURIES OF THE HEAD AND NECK



Mechanics of Whiplash

Accelerating Phase	Duration	Acceleration	Head-Neck Movement
Phase 1	0-60 msec.	0 g	Rest State
Phase 2	60-120 msec.	0.3 g	Head rise, neck flexion and TL extension
Phase 3	120-200 msec.	4.3 g	Neck extension
Phase 4	200-300 msec.	2.8 g	Head and neck hyperextension
Phase 5	300-400 msec.	1.0 g	Head forwards with neck flexion (whiplash)
Phase 6	+ de 400 msec.	0.8 g	Little flexion, back to starting position

Symptoms



- ALL rear end collisions
 - 15-20% experience pain
- ED attendees
 - 37% immediate onset pain
 - 62-65% within 12 hours
 - 90% within 24 hours
 - Early presentation – more symptomatic

Symptoms

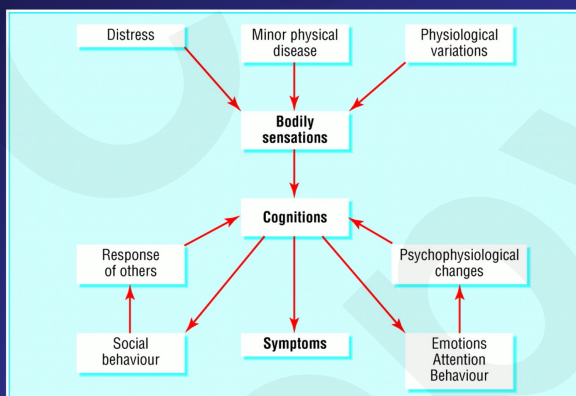
- 2/3 women take time off work within first 2 months of injury
- 50% of all cases upper limb pain and weakness occur > 1 week after injury

Acute and Chronic

- 3 months = Chronic
- Clinical findings similar to acute
- Addition of remote neurology
 - eg carpal tunnel syndrome; relieved by CTR despite normal NCS
- No consensus on how many go on to develop chronic Sx
 - literature ranges from 1% to 78%
 - varies with ethnicity
 - some still have pain / psych. at 17 years

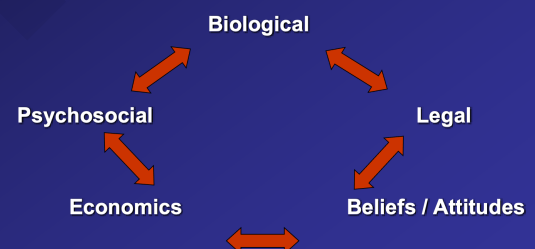
Prolonged and Escalated Symptoms

Excess stress	10% have WAD symptoms for > 2 years after accident:
Psychosocial difficulties	
Anxiety (approx 40%)	Caused by...
Depression (approx 40%)	
PTSD	
Poor sleep	Poor sleep
Ear pain	Depression, Anxiety, Stress
Poor posture	Psychosocial difficulties
Dizziness	Pre-existing conditions
Memory problems	Inappropriate therapeutics
Concentration problems	Prolongation of litigation
Headaches	
Movement difficulty	



Chronic Whiplash

Complex interaction between many factors:



Psychological factors are also hypothesized to influence the existence of whiplash-related cognitive impairments.

Investigations

- Clinical history and examination
 - Note pre-existing physical problems, social and psych., litigant
- Plain radiographs inc obliques
- Flexion / Extension views
- CT scan
- MRI scan
- Isotope bone scan
- Rule out acute injuries!

Investigations

- No association between late development of degenerate neck changes and neck symptoms

SPINE Volume 35, Number 18, pp 1684–1690
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Prospective Ten-Year Follow-up Study Comparing Patients With Whiplash-Associated Disorders and Asymptomatic Subjects Using Magnetic Resonance Imaging

Morio Matsumoto, MD,* Eijiro Okada, MD,* Daisuke Ichihara, MD,* Kazuhiro Chiba, MD,* Yoshiaki Toyama, MD,* Hirokazu Fujiwara, MD,† Suketaka Momoshima, MD,‡ Yuji Nishiwaki, MD,‡ Takeshi Hashimoto, MD,§ Tomoo Inoue, MD,¶ Masahiko Watanabe, MD,|| and Takeshi Takahata, MD**

Conclusion. The results of this study suggest that, although some WAD patients are more likely to suffer from long-lasting neck pain, MRI findings cannot explain the symptoms.

Key Points

- A prospective 10-year follow-up study of patients with whiplash-associated disorder (WAD) and asymptomatic volunteers was conducted.
- Progression of decrease in signal intensity was observed in 109 WAD patients (82.0%), and 132 control subjects (59.2%), posterior disc protrusion in 101 (75.9%) and in 155 (69.5%), disc space narrowing in 33 (24.8%) and in 59 (26.5%), and foraminal stenosis in 6 (4.5%) and in 20 (9.0%).
- Neck pain was observed in 34 WAD patients (25.6%) and 22 control subjects (9.9%) ($P < 0.0001$).
- There was no statistically significant correlation between neck pain and progression in each MR finding in either group.
- Whiplash injury may not accelerate the structural deterioration of the cervical spine during 10 years after the injury.

SPINE Volume 35, Number 9, pp 948–954
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Magnetic Resonance Imaging Findings of Fatty Infiltrate in the Cervical Flexors in Chronic Whiplash

James M. Elliott, PT, PhD,*†† Shaun O'Leary, PT, PhD,* Michele Sterling, PT, PhD,*† Joan Hendrikz, BSc(Hons), PGDip,‡ Ashley Pedler, PT, PhD-c,*† and Gwen Jull, PT, PhD*

Table 1. Descriptive Statistics (Mean (SD) [Range]) for Both the WAD and Control Groups

Descriptive	WAD (n = 78)	Controls (n = 31)	t Test (P)
Age (yr)	29.9 (7.77) [18–45]	27.0 (5.47) [20–39]	0.02
Body mass index (BMI)	25.2 (5.74) [18.3–49.6]	22.8 (4.62) [16.8–37.2]	0.04
Neck disability index	45.3 (15.96) [16–92]	n/a	
Injury duration (mo)	20.5 (8.47) [3–36]	n/a	
MFI-mean all cervical levels	0.24 (0.039) [0.14–0.33]	0.16 (0.033) [0.12–0.24]	<0.0001
CSA-mean all cervical levels	113.5 (15.33) [78.48–182.72]	90.4 (23.06) [54.50–153.93]	<0.0001

Significant between group differences ($P < 0.05$) are evident for the variables of age and BMI.

Key Points

- MRI muscular fatty infiltration (MFI) and changes in CSA were found in the anterior muscles in the cervical spine in subjects suffering from chronic WAD.
- Subjects with WAD had significantly larger MFI in the anterior muscles (longus capitis/colli and SCM) compared to the healthy control group.
- MFI occurred to a larger extent in the longus capitis/colli muscles when compared to the SCM in those subjects suffering from chronic WAD.
- MFI was inversely related to age, BMI, and pain and disability in those with chronic WAD but was directly proportional to duration of symptoms.
- These data may reflect a myriad of mechanisms including disuse and/or chronic denervation.

Conclusion. There is significantly greater MFI and CSA in the anterior neck muscles, especially in the deeper longus capitis/colli muscles, in subjects with chronic WAD when compared to healthy controls. Future studies are required to investigate the relationships between muscular morphometry and symptoms in patients suffering from acute and chronic WAD.

The Injury / Pathology

- Facet joint
- Intervertebral disc
- Anterior spinal muscles
- Ligamentous injury (ALL, Alar)

- Brain
- Temporo-mandibular joint
- Sympathetic trunk
- Oesophagus
- Middle Ear injuries



The Injury / Pathology

- Rupture facet joint capsule
- Tear ALL, ISL
- Annular tear
- Articular pillar #
- Subchondral plate #
- Endplate #



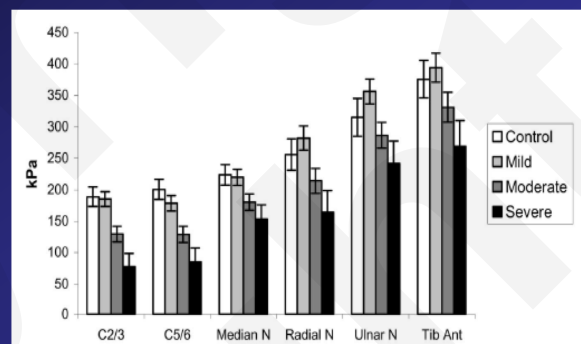
soft tissue sprain to facet joint capsule

Grading

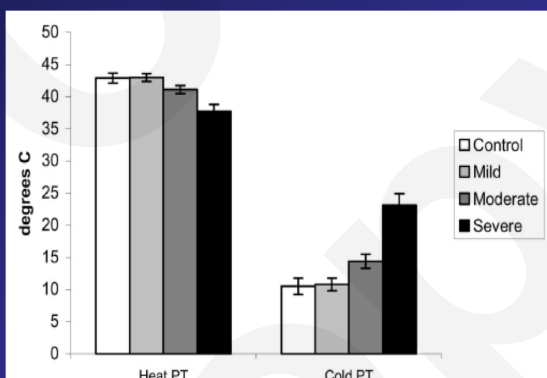
- Gargan and Bannister

Grade	Symptoms
A	Free from discomfort. Complete recovery
B	Mild symptoms which do not interfere with work or leisure
C	Intrusive symptoms Frequent intermittent analgesia
D	Severe symptoms. Regular analgesics required Frequent medical consultations

Pressure Pain Threshold



Temperature Pain Threshold



Quebec Classification For Whiplash Associated Disorders

Grade

- 0 No complaints
- 1 Neck pain, stiffness, tenderness
- 2 Neck complaint + musculoskel signs
- 3 Neck complaint + neurological signs
- 4 Neck complaint + # / dislocation

Suissa et al. Spine 1995; 20: 12-39

Quebec

- Quebec Task Force (QTF) on Whiplash-Associated Disorders 1995
 - comprehensive systematic review
 - few high-quality studies were available for evidence-based recommendations

Quebec Task Force

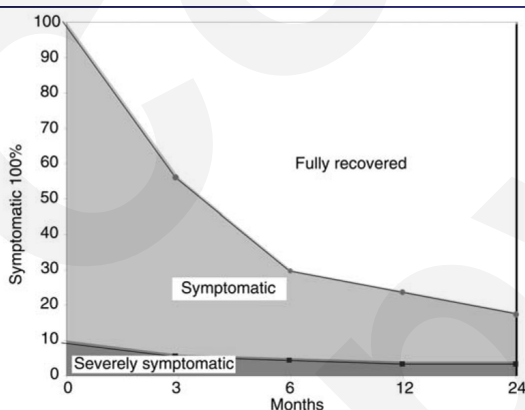
- 66 prognostic articles reviewed
- Only 11 were accepted as scientifically meritorious and clinically relevant
- Analysis of the 55 rejected articles → 48 were clinically relevant but scientifically inadmissible

Quebec Task Force

- Did not find any population-based studies
- Concluded that whiplash is a self-limited condition with a favorable prognosis for most patients
 - Recognised the lack of rigorous prognostic studies

Natural History

- Longer the symptoms the worse the prognosis!
- Lack of uniform outcome measures in literature
- 50% make a full recovery
- 14 - 42% → chronic neck pain
- 4.5% permanently disabled
- 88% free from Sx at 2/12 and 93% at 3/12
 - Remain Sx free at 2 years



Recovery curve for acute whiplash, based on data from Radanov et al.⁹ Full recovery was seen in 56% of patients at 3 months, in 70% at 6 months, in 76% at 12 months, and in 82% at 24 months.

Outcome / Prognosis

- 25% better within one week
- Most better within 1 month
- Only 2% not recover at 1 yr
- With other injuries:
 - 19% better within 1 wk
 - 30% within 1 month
 - 4% not recover at 1 yr
- N=2810 (all waiting for compensation)

The Effect of Socio-Demographic and Crash-Related Factors on the Prognosis of Whiplash. J Clin Epidemiol Vol. 51, No. 5, pp. 377-384, 1998

Psychological Outcome

- Patients tend to have normal psychological profiles early after injury
 - Pain leads to psychological sequelae
- Depressive symptoms tend to manifest after 6 weeks (excluding PTSD)
 - Similar to patients suffering multiple fractures
- Driving anxiety improves in all cases
- Mood disorder at 1 year 2x that of population

SPINE Volume 28, Number 9, pp 896-901
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Recovery From Acute Whiplash

The Role of Coping Styles

J. Buitenhuis, MD,* J. Spanjer, MD,† and V. Fidler, PhD‡

■ Key Points

- The role of coping styles in the development of late whiplash syndrome was investigated.
- Palliative reaction and the seeking social support coping style were found to be associated with the duration of neck complaints.
- The locus of control and emotional aspects could play a role in the recovery from whiplash.

Prognosis

SPINE Volume 26, Number 19, pp E445-E458
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A Systematic Review of the Prognosis of Acute Whiplash and a New Conceptual Framework to Synthesize the Literature

Pierre Côté, DC, MSc,*† J. David Cassidy, DC, PhD,‡ Linda Carroll, PhD,‡
John W. Frank, MD, MSc,*†§|| and Claire Bombardier, MD, FRCP*¶#**

■ Key Points

- Limited but important knowledge about the prognosis of whiplash has been gained since the Quebec Task force report.
- Older age, female gender, baseline neck pain and headache intensity, and baseline radicular signs/symptoms are predictors of delayed recovery.
- Insurance and compensation systems have an important impact on the prognosis of whiplash.

Poor Prognostic Indicators 1

- Rapid onset pain
- Severity of neck pain
- Acute hospital admission
- Radiation of pain to upper limb
- Headache
- Neurological deficit, stiffness, tenderness
- Premorbid psychiatric disease
- Responsibility for dependents
- Above average premorbid GP attendance (unrelated disorders)

Bannister et al. JBJSB 2009

Poor Prognostic Indicators 2

- Older age
- Female Sex
- Lower educational achievement
- Part time employment
- Heavy labour
- Pre-existing neck and low back pain
- Previous whiplash

Bannister et al. JBJSB 2009

Table 1. Studies giving the relative risk of chronic symptoms vs none after whiplash injury

	Relative risk
Pre-accident symptom/sign	
Neck pain	10.1 ¹² 3.1 ¹¹ 1.2 ¹
Psychiatric history	10.1 ¹² 1.8 ¹ 3.8 ¹¹ 2.1 ¹
Whiplash injury	3.3 ¹¹ 1.1 ¹
Post-accident symptoms	
Early < 2 days	1.2 ¹ 4.1 ¹¹
Visual analogue scale > 55%	3.2 ¹²
Initial severe pain	1.6 ¹¹
Radiating pain	1.2 ¹ 2.8 ¹¹ 1.8 ¹
Post-accident symptoms/signs	
Neck tenderness	1.8 ¹ 1.2 ¹¹ 2.1 ¹¹
Neck stiffness	2.1 ¹¹ 3.1 ¹⁰ 2.1 ¹¹
Headache	1.2 ¹ 3.3 ¹¹
Neurological signs	2.1 ¹¹ 3.3 ¹¹
Depression/psychiatric disease	2.1 ¹¹ 2.1 ¹¹ 3.2 ¹¹
Later symptoms after three months	
Symptom-free	0.08 ¹¹
Symptomatic	4.1 ¹¹

Abnormal Illness Behaviour after Compensable Injury

Accident neurosis	Accident victim syndrome
Aftermath neurosis	American disease
Attitudinal pathosis	Barristogenic illness
Compensatory hysteria	Compensationitis
Compensation neurosis	Fright neurosis
Functional overlay	Greek disease
Greenback neurosis	Invalid syndrome
Justice neurosis	Perceptual augments
Post accident anxiety syndrome	Pensionitis
Postaccident fibromyalgia	Post-traumatic syndrome
Profit neurosis	Psychogenic invalidism
Railway spine	Secondary gain neurosis
Traumatic hysteria	Symptom magnification syndrome
Traumatic neurasthenia	Traumatic neurosis
Triggered neurosis	Unconscious malingering
Vertebral neurosis	Wharfie's back
Whiplash neurosis	

Mendelson, 1984

Secondary Gain Pre-disposition

Potential Claimants

- Military patients nearing severance
- Workers under retirement age
- Workers soon to be made redundant
- Low job satisfaction

Non-economic motivation

- Members of support groups
- Loneliness
- Depression
- Anxiety
- Difficulty expressing emotional pain
- Previous history of attention seeking when ill



Factors affecting employment after whiplash injury

C. Gozzard, G. Bannister, G. Langkamer,
S. Khan, M. Gargan, C. Foy
From Southmead General Hospital, Bristol, England

Of 586 employed patients with a whiplash injury 40 (7%) did not return to work. The risk was increased by three times in heavy manual workers, two and a half times in patients with prior psychological symptoms and doubled for each increase of grade of disability. The length of time off work doubled in patients with a psychological history and trebled for each increase in grade of disability. The self-employed were half as likely to take time off work, but recovered significantly more slowly than employees.

Return to work

- Clerical employees return to work twice as quickly as manual workers
- Self-employed half as likely to take time off work but twice as long to fully recover
- 8% unable to work

Gozzard et al. JBJSB 2001
Bannister et al. JBJSB 2009

Treatment

- Analgesics, NSAID, Antidepressants
- Physiotherapy
- Manipulation
- Cervical collar
- Intra-articular injection
- Acupuncture
- TENS
- The list goes on...

Treatment Evidence

- Soft collar less effective than normal activity or physiotherapy
- Early physio – RR improvement - 1.2
– Better for those at risk of poor outcome (see later)
- NSAIDS – better movement at 2 weeks
- Chronic Whiplash – treatments relatively ineffective

Treatment Evidence

“ Early active mobilisation with patient education ”

Patient Education

Explain benign nature of WAD
Avoid confusing and conflicting info
Watch for factors leading to pain chronicity
Home / work programmes as effective as physiotherapy
Teach relaxation and stress management
Educate posture and neck care
Ergonomics at home and work
Home program of heat and cold & exercises
Self Monitor stress, sleep and mood
Headaches
Avoid excessive investigation

Preventing Chronicity of Pain

Teach professionals
Educate patients
Avoid anxiety provoking terms e.g. “PTFS” or “disc bulge”
Avoid excessive investigation & test – iatrogenesis
Be rational
Avoid prolonged litigation involvement
Make patient aware of lengthy outcomes of litigation

Acute Rational Care

Take good history
Physical examination
X-ray of cervical spine
Analgesics and muscle relaxants
Use of local cold and heat
Cervical collar for a few days
NSAIDS for few weeks
Gradual mobilization
Correction of disturbed sleep

Active Intervention in Patients with Whiplash-Associated Disorders Improves Long-Term Prognosis A Randomized Controlled Clinical Trial

Mark Rosenfeld, RPT*†, Aris Seferiadis, RPT*, Jane Carlsson, RPT, PhD*, and Ronny Gunnarsson, MD, PhD†‡

■ Key Points

- In a randomized controlled study, active intervention after a whiplash injury decreased neck pain and sick leave more than a standard intervention. Furthermore, early active intervention retained/regained cervical range of motion.
- The active intervention consisted of frequently repeated active cervical rotation followed, if needed, by assessment and intervention according to the McKenzie protocol.
- An average of four treatment sessions were needed with the active intervention.

Surgery

- No role in acute whiplash
 - If a surgically-treatable injury is found, the diagnosis is incorrect
- Chronic
 - Median nerve entrapment thought to be to blame in chronic neck, shoulder and arm pain
 - minimal hand Sx; normal NCS

Surgery

- Alpar et al. JBJSB 2002
 - 68 pts with chronic neck and shoulder pain 2^o whiplash
 - all had ↑ substance P and CGRP of normal population
 - minor hand symptoms only
 - all had normal NCS and EMG

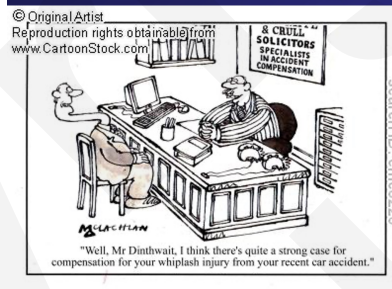
Surgery

- Alpar et al. JBJSB 2002
 - 38 received open CTR
 - followed for 18mths
 - all biochemistry dropped to normal
 - 90% had resolution of symptoms
 - 30 treated conservatively
 - 2 of 30 improved
 - no change in biochemistry

Surgery

- ACDF for brachialgia
 - 1/3 success
- Subacromial decompression for impingement after whiplash injury
 - 50% improve

Litigation



Litigation

- Litigation settles and symptoms improve / patient returns to employment
 - THIS IS UNSUPPORTED BY THE LITERATURE
 - Financial gain ≠ resolution of symptoms
- Continued litigation IS associated with more severe pain

Other Countries 1

Mills & Horne 1986 – New Zealand

Very low incidence

Significantly lower than Australia

Difference in process of dealing with: insurance companies
lawyers
therapists

Awerbuch 1992 - Australia

WAD claims dropped from 6000 to 2000 / year in 1987

Legislative changes limited compensation and claim sizes

Claimants had to: bear initial cost of claim
report to police
have minimum 30% disability

Other Countries 2

Cassidy et.al 1995 – Canada

27% reduction in claims under a “no fault system” in courts
Statute of limitations to 200 days after accident
“No Crash No Cash”

Obelieniene 1999 – Lithuania

No notion of chronic pain resulting from rear end collision
No fear of long term disability
No involvement of lawyers

Partheni et.al 1997 – Greece

91% of WAD victims recover in 4 weeks

Litigation

- Recovery quicker in countries that:
 - Have no-fault compensation
 - eg Canada
 - Historically less litigious
 - eg Greece
 - Don't compensate for whiplash
 - eg Lithuania

Whiplash as a “Pseudo Psychiatric” Condition?

One of a family of fashionable conditions, including:

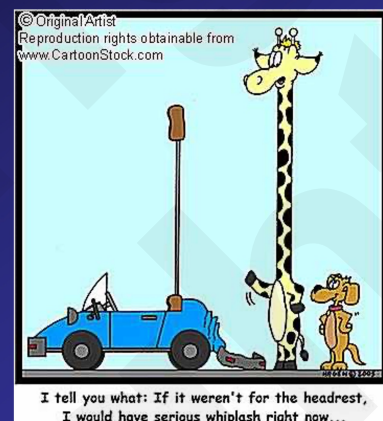
Fibromyalgia
Repetitive strain injury
Chronic fatigue syndrome
Occupational back pain
Chronic pain syndrome

Are these diagnoses are offered to patients who are either consciously or unconsciously seeking an escape from the pressures of modern life into the roles of sickness and victimhood?

Do these conditions risk degrading medicine and bankrupting health services? Worst of all, they condemn patients to disorders from which there is little hope of recovery

Malleson 2002

Prevention



Prevention

- Prevent collisions
 - Braking systems
- Car design
 - More elastic seat back
 - High head rest – correctly positioned

Summary

- Diagnosis of exclusion
- Pathology unknown
- Generally gets better but can cause significant disability
- Treat early
- Identify poor prognostic indicators
- Avoid lawyers

