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THE EMOTIONAL WRECK

~ 3 Studies of Adult MVA Survivors ~

For: Soft Tissue Injury Conference 2003
Trial Lawyers Association of BC

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On Behalf Of: Behavioural Health Care

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10 **Wreckage**

11 It is now well established that vehicles are not the only kind of wreckage following
12 a motor vehicle collision. In the past decade, several prospective studies have
13 charted the course of psychological disorder following motor vehicle collisions.
14 Although these studies have methodological limitations, their combined
15 testimony is clear: emotional wreckage, or in legal language, ‘pain and suffering’
16 often occurs “after the crash” (Blanchard & Hickling, 1997). Emotional wreckage
17 from soft tissue injury presents a special challenge to both the legal and
18 rehabilitation communities. The associated costs represent a significant individual
19 and societal burden.

20 Of the 26 studies of accident victims cited by Blanchard & Hickling (1997)
21 between 1965 and 1996, I count 14 studies that used an MVA sample exclusively.
22 Of these 14 MVA samples, 4 studies had samples sizes greater than 100. Several
23 studies had the benefit of mixed samples that would allow comparison between
24 MVA and non-MVA psychological consequences.

25 However, I will focus on 3 recent studies of adult MVA survivors, one of which I
26 consider the best to date. I discuss diagnostic and disability findings. I note that
27 the diagnosis of psychological disorder implies impairment but not necessarily
28 disability. The standard classification of psychological disorders used in North
29 America, the Diagnostic & Statistical Manual, Fourth Edition, Text Revision
30 (DSM-IV-TR), typically contrasts disorder (abnormal behaviour) from normal
31 and subclinical conditions on the basis of impairment, such as in social or
32 occupational functioning. For example, a traumatized MVA victim may be
33 *impaired* by posttraumatic driving anxiety and thus unable to drive a car, yet not
34 be *disabled* from traveling altogether, such as traveling in a car as a passenger.
35 The distinction between psychological disorder/impairment and disability is
36 important to treatment planning and outcome as well as to the determination of
37 damages.

38 Study #1

39 Blanchard, E. B. & Hickling, E. J. (1997). *After the crash:*
 40 *Assessment and treatment of motor vehicle accident survivors.*
 41 Washington, APA.

42 In their book, After the Crash, Blanchard & Hickling (1997) describe the Albany
 43 MVA Project. Between September 1991 and May 1996 they recruited 158 adult
 44 survivors within 1 - 4 months of an MVA. These survivors had to have sought
 45 medical attention within 48 hours of their accident: 75% were treated in
 46 Emergency, and of these Emergency attenders 15% were admitted to hospital.
 47 Study volunteers underwent structured psychodiagnostic assessments including
 48 psychometric testing. They were reassessed at intervals of 6 months (N=145,
 49 92%) and 1 year (N=132, 84%). 94% were drivers or passengers in a car or a
 50 truck. Blanchard & Hickling also recruited a control sample of 93 individuals,
 51 matched on demographic variables, who had not been in an MVA in the
 52 previous year.

53 Diagnostic Findings. This study had the advantage of structured psychodiagnostic
 54 assessment by doctoral-level psychologists. Table 1 summarizes diagnostic
 55 findings over 3 assessment times within 12 months.

56 **Table 1. Diagnostic Status Over 1 Year**

<u>Diagnosis</u>	<u>MVA Sample</u>		
	<u>Initial</u>	<u>6-Month</u>	<u>12-Month</u>
<u>PTSD</u>	<u>39%</u>	<u>38%</u>	<u>36%</u>
<u>Subthreshold PTSD</u>	<u>29%</u>	<u>30%</u>	<u>32%</u>
<u>Non-PTSD</u>	<u>32%</u>	<u>32%</u>	<u>32%</u>
<u>Total Sample Size</u>	<u>158</u>	<u>145</u>	<u>132</u>

57 Posttraumatic Stress Disorder (PTSD) and subthreshold PTSD account for
 58 almost 70% of initial diagnoses in this sample. This diagnostic picture does not
 59 change over the course of a year!

60 A breakdown of other (non-PTSD) diagnoses at initial assessment shows a
 61 dominance of Major Depression, followed by Simple Phobia and Personality
 62 Disorder (see Table 2).

63 **Table 2. Breakdown of Initial Non-PTSD Diagnoses**

Initial Non-PTSD Diagnoses	MVA Sample (N=158)
Major Depression	23%
Onset pre-MVA	5%
Onset post-MVA	18%
Dysthymia	6%
Bipolar	1%
Any Mood Disorder	29%
Panic Disorder	3%
Post-MVA Onset	2%
Social Phobia	6%
Simple Phobia	13%
Obsessive-Compulsive Disorder	1%
Generalized Anxiety Disorder	3%
Alcohol Abuse/Dependency	3%
Drug Abuse/Dependency	1%
Current/History Eating Disorder	6%
Current/History Psychosis	0
Personality Disorder	13%
Obsessive-Compulsive Personality Disorder	7%

64 Disability. Blanchard & Hickling rated disability according to 4 psychosocial
65 variables: (1) performance in major role function (work, school, or homemaking);
66 (2) family relations (average across all first-degree relatives and mate); (3)
67 relationships with friends, and (4) participation in recreational activity. The
68 PTSD group (39% of sample) reported greatest impairment on all 4 psychosocial
69 variables compared to the other 2 clinical groups and the control group. The
70 subthreshold PTSD group and the non-PTSD group also reported significantly
71 lower functioning than the non-MVA control group in major role performance
72 and participation in recreation.

73 The PTSD group was assessed again at 12-month follow-up for disability status.
74 The group was divided into remitter and non-remitter subgroups, both of which
75 showed improvement over the year in major role functioning and participation in
76 recreational activity. Those who continued to have PTSD at 12 months reported
77 that relationships with friends had deteriorated over time, but relationships with
78 close family members remained at a good level. Blanchard & Hickling wonder if
79 PTSD-related feelings of estrangement become reality as MVA survivors with
80 unremitting PTSD withdraw from friends and social activities over time.

81 Blanchard & Hickling also examined changes in travel behaviour as part of their
82 disability evaluation. They defined *driving phobia* as either complete elimination
83 or severe restriction of driving. They also employed the disability category of
84 *driving reluctance* that included avoidance of the MVA site, MVA-related weather
85 conditions, certain roads and traffic conditions, and travel for pleasure. Not
86 surprisingly, those with unremitting PTSD continued to have associated
87 posttraumatic driving phobia at 12 months (see Table 3). Happily, there was
88 modest decline in their driving reluctance. However, even among the remitted
89 PTSD group, there was still a substantial proportion (41%) who continued to
90 report driving reluctance of some kind.

91 **Table 3. Changes in Driving Behaviour over 12 Months Among MVA**
 92 **Survivors With Unremitting PTSD**

Travel Measure	MVA PTSD Sample	
	Initial	12-Month
Does not drive (no license)	4.8%	-
Driving phobia	13%	13%
Driving reluctance	88%	69%

93 **Study #2.**

94 **Mayou, R. & Byrant, B. (2001). *Outcome in consecutive***
 95 ***emergency department attenders following a road traffic accident.***
 96 **British Journal of Psychiatry, 179, 528-534.**

97 Mayou & Byrant (2001) describe a prospective study of 1148 adult MVA
 98 survivors who attended a hospital following their accident. Of these survivors,
 99 52% were vehicle drivers, 21% were vehicle passengers, and 12% were
 100 motorcyclists. The sample excluded those with a loss of consciousness greater
 101 than 15 minutes. 61% of the sample had minor physical injuries; 20% were
 102 uninjured; 22% (N=278) were admitted to hospital of whom only half were kept
 103 longer than one night. 36% found the MVA very frightening and 27% were highly
 104 distressed. Questionnaire data were collected at baseline (hospital visit), 6 months
 105 (N=865, 75%) and 12 months (N=774, 67%).

106 **Psychometric Findings.** This study did not have the advantage of
 107 psychodiagnostic assessment, but did use psychological questionnaires to indicate
 108 the likelihood of psychological conditions. One-third of the questionnaire
 109 responders had at least 1 of 4 psychological conditions at 3 months and 1 year:
 110 posttraumatic stress, phobic travel anxiety, general anxiety, and depression (see
 111 Table 4).

112

Table 4. Psychological Conditions (Questionnaire Data)

Psychological Condition	3 Months (N,%)	12 Months (N,%)
Posttraumatic Stress	198 (23%)	128 (17%)
Anxiety	147 (17%)	145 (19%)
Travel Anxiety	185 (22%)	127 (17%)
Depression	42 (5%)	47 (6%)
Any psychological problem	308 (36%)	248 (32%)
Total (N)	865	774

113 Approximately one-third of the sample had one or more of the 4 psychological
 114 conditions at 3 months (36%) and at 1 year (32%). Furthermore, over half the
 115 sample (55%) reported some kind of clinically significant psychological, medical,
 116 social or legal problem at 1 year!

117 Disability. Mayou & Bryant used several variables of relevance to disability status.
 118 In Table 5, I have included 2 variables of relevance to disability in addition to the
 119 4 psychological conditions already noted: (1) health in last month and (2) bodily
 120 pain in last month.

121

Table 5. Disability Sources & Indicators Over 1 Year

Potential Disability Sources	3 Months (N,%)	12 Months (N,%)
Health in last month:		
Fair/Poor	197 (23%)	139 (18%)
Excellent/Good	656 (77%)	635 (82%)
Bodily pain in last month:		
Very Severe/Moderate	238 (28%)	171 (22%)
Mild/None	615 (72%)	602 (78%)

Disability Indicators	3 Months (N,%)	12 Months (N,%)
Medical Recovery:		
Major Problems	57 (7%)	46 (6%)
Minor Problems	409 (47%)	301 (39%)
Back to Normal	398 (46%)	426 (55%)
Not Working	264 (31%)	201 (26%)
Work problems:		
Major	Not Asked	44 (6%)
Minor	Not Asked	130 (17%)
Limited daily activities:		
Extremely/Moderate	197 (23%)	132 (17%)
Slight/None	656 (77%)	641 (83%)
Limited social life:		
Extremely/Moderate	183 (21%)	108 (14%)
Slight/None	677 (79%)	665 (86%)
Total (N)	865	774

122 One-third of the sample was not working at 3 months and 26% were not at work
123 by 12 months. A minority of the sample were significantly curtailed in daily
124 activities and social life at 3 months (23%, 21%) and 1 year (17%, 14%). Most
125 participants (69%) were working at 3 months, half of whom were off work for less
126 than a week.

127 In addition to the 4 psychosocial conditions already described, 23% of the sample
128 had only fair - poor health at 3 months and 28% had moderate - severe pain
129 complaints. These ratings improved somewhat at 1-year follow up.

130 Study #3

131 Large, M. (2001). *Relationship between compensation claims for*
132 *psychiatric injury and severity of physical injuries from motor*
133 *vehicle accidents*. Medical Journal of Australia, 175, 129-132.

134 Dr. Matthew Large was interested in examining the relationship between MVA
 135 injuries and subsequent compensation claims for psychiatric disorder. His
 136 sample consisted of 559 consecutive claims that were referred by an insurance
 137 company to its legal services provider after the claimant had retained legal
 138 counsel. Most claimants were passengers or drivers (73%).

139 Diagnostic Findings. After exclusions due to missing data or deaths, 522 adult
 140 MVA survivors remained of whom 102 (19.5%) submitted an insurance claim for
 141 psychiatric injury (excluding traumatic brain injury). These 102 psychiatric injury
 142 claims were supported by reports from psychiatrists (65) psychologists (28) or
 143 other medical practitioners (9). The average time between accident and report
 144 date was over 2 years. The diagnostic status of the sample is reported in Table 6
 145 in order of frequency.

146 **Table 6. Psychiatric Injury Claims by Adult MVA Survivors**

Psychiatric Disorder	Injury Claim (N = 522)
Posttraumatic Stress Disorder	48 (9.2%)
Depressive Disorders	46 (8.8%)
Traumatic Brain Injury	17 (3.3%)
Non-PTSD Anxiety Disorders	15 (2.9%)
Adjustment Disorders	12 (2.3%)
Somatoform Disorders	8 (1.5%)
Substance Abuse	3 (0.6%)
Other Disorders	6 (1.1%)
Total Psychiatric Injury or Traumatic Brain Injury	113 (21.6%)
Total Psychiatric Injury	102 (19.5%)

147 Summary of Findings. The 3 studies all confirm the predominance of anxiety
 148 conditions following an MVA, especially PTSD and subclinical posttraumatic
 149 symptomatology. These conditions can remit over the course of 1 year, usually
 150 by 3 - 6 months. However, there remains a minority of MVA survivors who do

151 not recover within a year and who continue to report significant disability in major
152 role functioning, social relationships and driving behaviour.

153 **Complications**

154 All 3 studies found that injury characteristics were predictive of outcome for some
155 but not all. For example, Blanchard & Hickling found that the extent and severity
156 of physical injury made a significant contribution to psychological outcome, but
157 predicted only a portion of such outcome. Similarly, Dr. Large found that injury
158 severity predicted insurance claims for psychiatric injury in accidents resulting in
159 loss of consciousness or a fatality. However, a third of his insurance claimants
160 had physical injuries that were of insufficient severity to warrant even a trip to
161 Emergency. Mayou & Bryant found that the very small proportion of seriously
162 injured MVA survivors were twice as likely to report PTSD, travel anxiety,
163 financial and work problems at 1-year follow up. However, "... the important
164 finding of this study is that many of those in the much larger majority with less
165 serious or no injuries also suffer long-term consequences that are largely unrelated
166 to the type of injury" (p. 532).

167 Emotional wreckage can get complicated and result in a "little ding, big disability"
168 phenomenon. Several explanations for this phenomenon are addressed by the
169 studies.

170 Co-morbidity. This is a complicating factor because it tends to compound
171 disability, prolong recovery, makes treatment more difficult and can even eclipse
172 the presence of an underlying psychological disorder. For example, almost half
173 (44%) of Blanchard & Hickling's MVA-PTSD group also developed major
174 depression following the accident. 21% of this group also developed specific
175 phobia, especially posttraumatic driving phobia. By contrast, Dr. Large found
176 that only 36 (7%) MVA survivors claimed more than one psychiatric injury at 2
177 years or more following their accident.

178 Pre-disposing Factors. All 3 studies found indications of predisposing factors.
179 Such factors can inform a diathesis-stress model of disproportionate disability.
180 Prior conditions can render an MVA survivor especially vulnerable to the stress of
181 the accident incident, such as pain and fear of death, but also to subsequent
182 stressors, such as disruption of mundane routines, exposure to the medical system

183 and multiple investigations, the process of litigation, dwindling financial resources
184 and uncertainties about recovery and return to work.

185 Prior psychiatric history was best investigated by Blanchard & Hickling (see Table
186 7).

187 **Table 7. Psychiatric History of Some Adult MVA Survivors**

<u>Psychiatric History</u>	<u>MVA Sample (N=158)</u>
<u>Major Depression History</u>	<u>34%</u>
<u>Dysthymia History</u>	<u>6%</u>
<u>Bipolar History</u>	<u>4%</u>
<u>Any Mood Disorder History</u>	<u>37%</u>
<u>History of Panic Disorder</u>	<u>6%</u>
<u>Anxiety disorder history</u>	<u>20%</u>
<u>Alcohol/Drug History</u>	<u>28%</u>
<u>Somatoform History</u>	<u>0</u>
<u>Current/History Eating Disorder</u>	<u>6%</u>
<u>Current/History Psychosis</u>	<u>0</u>
<u>Personality Disorder</u>	<u>13%</u>
<u>Obsessive-Compulsive Personality Disorder</u>	<u>7%</u>

188 Blanchard & Hickling found that a prior history of major depression is a risk
189 factor for developing PTSD after an MVA. For example, 50% of their MVA
190 survivors who developed PTSD had a history of previous major depression, as
191 compared with 23% of those with subthreshold PTSD. A prior history of PTSD
192 was also associated with developing PTSD or a subthreshold variant.

193 By contrast, Dr. Large found that only 5% of those who had submitted a claim for
194 psychiatric injury had a pre-existing depression or anxiety disorder.

195 Litigation Factors. Blanchard & Hickling found variables of relevance to litigation
 196 status at 1 year (see Table 8).

197 **Table 8. Correlates of Litigation Status at 1 Year**

<u>Data</u>	<u>MVA Sample (N=132)</u>		
	<u>Litigation Settled Within 1 Yr.</u>	<u>Litigation Not Settled Within 1 Yr.</u>	<u>Non-litigants</u>
<u>Age (With Standard Deviation)</u>	<u>42 (14)</u>	<u>35 (11)</u>	<u>36 (14)</u>
<u>Gender (M/F)</u>	<u>7/11</u>	<u>15/34</u>	<u>21/44</u>
<u>Employed Prior to MVA</u>	<u>13 (72%)</u>	<u>39 (80%)</u>	<u>44 (68%)</u>
<u>Initial Injury Score</u>	<u>High</u>	<u>Medium</u>	<u>Low</u>
<u>Initial PTSD</u>	<u>8 (44%)</u>	<u>23 (47%)</u>	<u>18 (28%)</u>
<u>Initial Subthreshold PTSD</u>	<u>5 (28%)</u>	<u>15 (31%)</u>	<u>22 (34%)</u>
<u>Initial Non-PTSD</u>	<u>5 (28%)</u>	<u>11 (22%)</u>	<u>25 (38%)</u>
<u>Total Sample Size</u>	<u>18 (14%)</u>	<u>49 (37%)</u>	<u>65 (49%)</u>

198 In their sample 132 MVA survivors at 1-year follow up, approximately half were
 199 non-litigants. Of the half that was litigants, 14% had settled their litigation whereas
 200 37% had not. Those litigants with more serious injuries had tended to settle
 201 within 1 year, perhaps reflecting the greater credibility that obvious and well-
 202 documented injury afforded them.

203 When comparing litigant and non-litigant groups, Blanchard & Hickling found
 204 that litigants tended to report greater initial and ongoing distress, and in particular
 205 had higher rates of initial PTSD diagnosis (or subthreshold PTSD) than non-
 206 litigants. However, by 1 year litigants and non-litigants reported a decrease in
 207 posttraumatic distress. Thus, contrary to a malingering or symptom exaggeration
 208 hypothesis of litigant status, even those litigants who had pending lawsuits were
 209 significantly less symptomatic over time.

210 Blanchard & Hickling found a mixed pattern of relationships between disability
211 indicators and litigation status at 1 year. For example, litigation status was
212 unrelated to family relationships, all of which were rated as good. However,
213 litigants whose claims had not been settled within 1 year reported a post-MVA
214 deterioration in relationships with friends compared to their pre-MVA estimates
215 and also to non-litigants. The findings with regard to major role functioning were
216 not supportive of malingering or symptom exaggeration hypotheses of disability.
217 Although litigants who had not settled within 1 year reported poorer initial
218 functioning than non-litigants, they reported marked improvement in their
219 functioning over the course of a year. However, when comparing litigation status
220 of MVA survivors with pre-accident employment who were working at 1 year,
221 litigants who had unsettled lawsuits were less likely to be working than non-
222 litigants. Even so, many such litigants were back to work either full time (67%) or
223 part time (16%) at 1 year. Given previously described findings of greater distress
224 and especially posttraumatic symptoms in litigants, this finding supports a
225 “working wounded” hypothesis: many litigants manage to return to work while
226 continuing to present with significant psychological distress at 1 year follow up.

227 Compared to the findings of Blanchard & Hickling, Mayou & Bryant found that
228 similar proportions of their sample could be divided into litigants with settled
229 compensation claims (11%), unsettled claims (33%) and non-litigants (55%). Like
230 Blanchard & Hickling, Mayou & Bryant also found that seeking compensation
231 was significantly associated with greater injury severity and worse psychological
232 outcomes.

233 Dr. Large found substantial differences between the proportion of psychiatric
234 injury in his litigant sample (19%) compared to that of all MVA victims during the
235 same period in New South Wales (4.6%) and compared to a recent
236 epidemiological survey of the Australian population. He suggests that his findings
237 in this regard support an association between psychiatric injury and legal
238 representation.

239 Comparisons

240 I compare the 3 studies of adult MVA survivors in Table 9. The prospective
241 studies (Studies #1, #2) afford a longitudinal view of MVA survivors over 1 year,

242 whereas the cross-sectional study (#3) is limited to a ‘snap-shot’ of MVA litigants 2
 243 years or more post-accident.

244 **Table 9. Correlates of Litigation Status at 1 Year**

Variable	Study #1		Study #2		Study #3
Authors	Blanchard, Hickling		Mayou, Bryant		Large
Design	Prospective		Prospective		Cross-Sectional
Collection Times	Initial, 6 Mo, 12 Mo		3 Mo, 12 Mo		> 2 Yrs.
Collection Method	Interview, Questionnaire		Questionnaire		File Audit
Sample Size (N)	158		1148		522
Litigants	51%		46%		100%
Psychological Problems	100%		36%		20%
PTSD	Initial	39%	Initial	—	9%
	6 Mo	38%	3 Mo	23%	
	12 Mo	36%	12 Mo	17%	
Depression	Initial	18%	Initial	—	9%
	6 Mo	—	3 Mo	5%	
	12 Mo	—	12 Mo	6%	
Travel Anxiety	Initial	17%	Initial	—	—
	6 Mo	—	3 Mo	22%	
	12 Mo	2%	12 Mo	17%	
Disability (Not Working)	Initial	27%	Initial	—	—
	6 Mo	—	3 Mo	31%	
	12 Mo	1%	12 Mo	26%	

245 The first study incorporated the use of both psychodiagnostic interviews and
246 psychometric questionnaires and could therefore submit psychological diagnoses
247 and psychometric data. These 2 sources of information could be used to check
248 each other and thus strengthen the reliability of study findings. Study #2 was most
249 reliant on self-report data, but had the advantage of using the same questionnaires
250 for all participants. Study #3 had the benefit of expert written opinion but unlike
251 the other studies, the number of experts and their use of diagnostic classifications
252 and testing material remains unknown. Dr. Large wonders whether the experts
253 under-reported pre-existing psychiatric disorders and how much they were
254 influenced by their role in an adversarial legal system.

255 Despite strength in data collection, the first study had the smallest sample size and
256 used a self-selected sample of injured MVA survivors rather than a random
257 sample, thereby raising the issue of sampling bias. For example, Blanchard &
258 Hickling question the greater frequency of PTSD in their study compared to
259 other studies (39% vs. 30% on average, respectively), but attribute this finding to
260 the greater sensitivity of their structured diagnostic interview for PTSD. The
261 second study had a sample size over 1000 but was itself threatened by selection
262 bias due to higher responder attrition over time. This bias was somewhat offset
263 by finding few important differences between study participants and both non-
264 respondents and drop-outs. The third study was also threatened by sample bias
265 because of its exclusive use of insurance claimants.

266 **Pain**

267 I was surprised by the virtual absence of somatoform disorders, especially Pain
268 Disorder, given my impression of frequent soft tissue injuries and associated pain
269 complaints among MVA survivors. Such pain complaints can generate
270 psychological distress but also have potential to impede psychological recovery.
271 For example, MVA patients tell me that their pain complaints can cue upsetting
272 memories of their accident and thus contribute to the perpetuation of post-MVA
273 distress and especially posttraumatic avoidance.

274 I note that Blanchard & Hickling found a statistically significant correlation
275 between improvement in posttraumatic symptoms and in physical injury. They
276 refer to anecdotal participant remarks regarding persistent, nagging injuries,

277 “especially the soft tissue injuries of whiplash” (p. 169), which can interfere with
278 psychological recovery.

279 Mayou & Bryant refer to 6 patients with “severe chronic pain syndromes that
280 appeared out of proportion to the physical impairment” (p. 529). Mayou &
281 Bryant also identify whiplash injury as the most frequent type of injury in their
282 study. However, they did not report any significant association between type of
283 injury and outcomes at either 3 months or 1 year.

284 Dr. Large collected data regarding self-reported neck or back pain regardless of
285 physical or radiological signs but did not find such pain complaints associated with
286 a psychiatric injury.

287 The presence and influence of pain complaints may have been under-estimated
288 in the 3 studies due to selection bias, the tendency for pain complaints to be
289 overshadowed by other more dramatic symptoms, and inadequate questioning
290 regarding pain.

291 **Summary**

292 ➤ A substantial minority of MVA survivors develops debilitating psychological
293 conditions, especially PTSD with co-morbid depression and/or travel anxiety.

294 ➤ Post-MVA distress is often preceded by a psychiatric history, especially mood
295 disorder, anxiety disorder or a substance-related disorder.

296 ➤ A small proportion of injuries will be severe and highly associated with
297 psychological consequences, both short- and long-term. However, most
298 injuries will be comparatively minor and yet followed by long-term
299 psychological distress.

300 ➤ The “little ding, big disability” phenomenon can be explained by such
301 complications as co-morbidity, the recurrence of prior psychological
302 conditions and litigation factors.

303 ➤ Post-MVA difficulties can significantly interfere with major role functioning,
304 friendships and recreational activities. Although most disability declines within

305 6 months and most survivors return to work, many may return as the “working
306 wounded” - with lingering anxiety, mood disturbance and pain complaints.

307 ➤ The effects of litigation are mixed. Many litigants report symptom
308 improvement with time. Indeed, *many return to work despite unresolved*
309 *claims*. Yet litigants with unsettled lawsuits who were working before their
310 accidents were more likely to report ongoing psychological distress and less
311 likely to be working at 1 year than non-litigants. Furthermore, *contacting a*
312 *lawyer was the strongest predictor of posttraumatic symptoms* in Study 1.

313 If you have any comments or questions, please feel free to contact me at your
314 convenience at the Main Office (Surrey) of Behavioural Health Care (592-8348).

A handwritten signature in cursive script that reads "M. Wesley Buch". The signature is written in black ink and is positioned above the typed name and title.

315

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