

**Prognosis-Based Approach to Assessment and
Treatment of Acute Neck and Low Back Pain**

Handouts Package

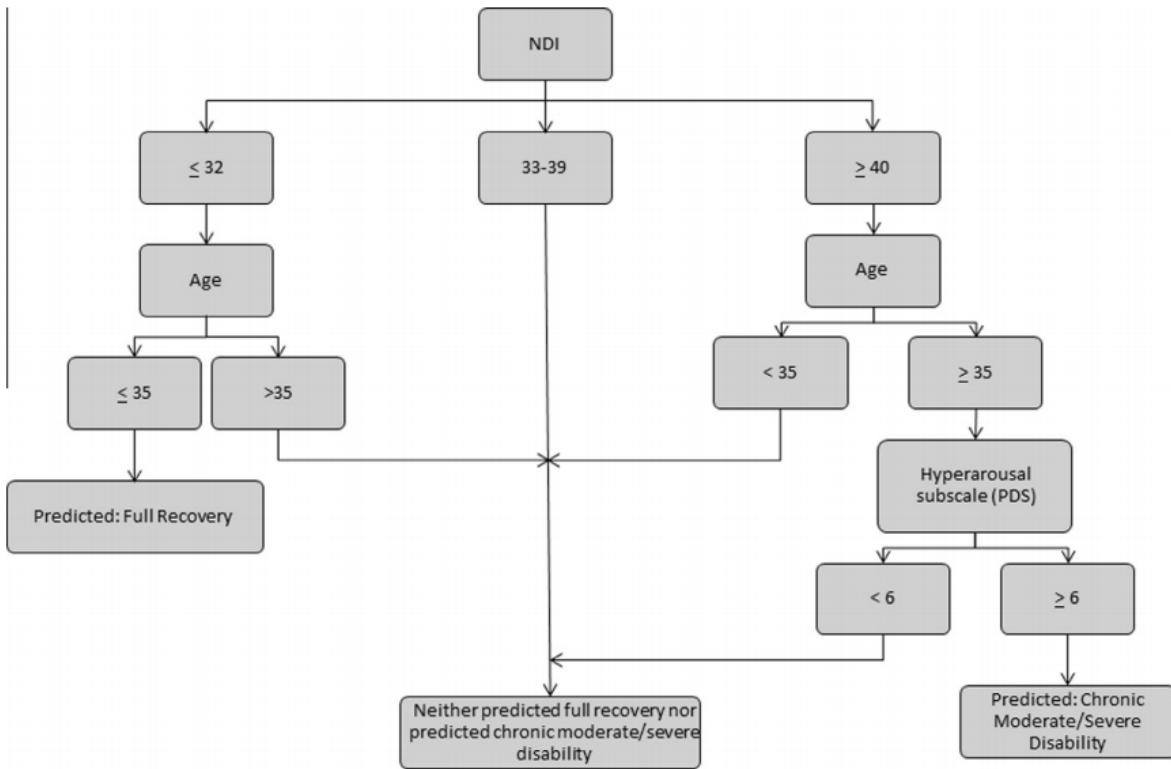
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Step 1: Does this person require treatment?

Acute neck trauma:

Sterling et al. Clinical Prediction Rule for Acute WAD



Acute Back Pain:

The Keele STarT Back Screening Tool

Patient name: _____ Date: _____

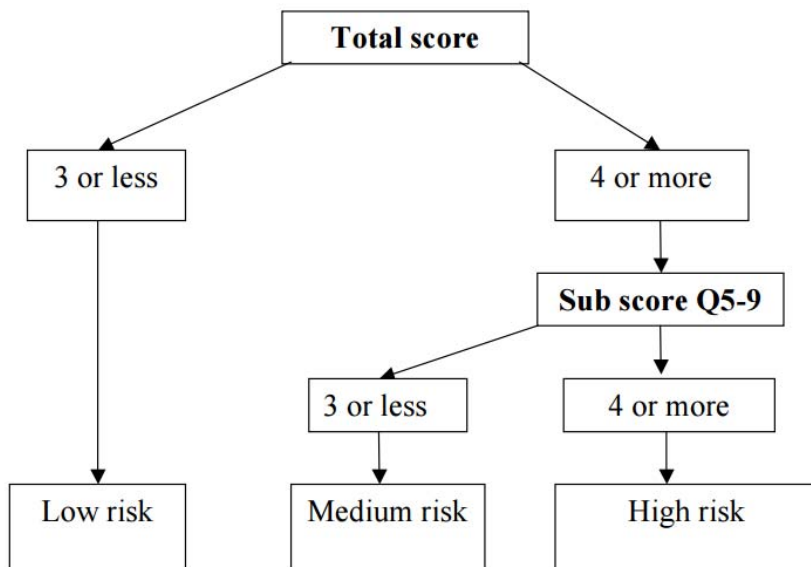
Thinking about the **last 2 weeks** tick your response to the following questions:

	Disagree 0	Agree 1
1 My back pain has spread down my leg(s) at some time in the last 2 weeks	<input type="checkbox"/>	<input type="checkbox"/>
2 I have had pain in the shoulder or neck at some time in the last 2 weeks	<input type="checkbox"/>	<input type="checkbox"/>
3 I have only walked short distances because of my back pain	<input type="checkbox"/>	<input type="checkbox"/>
4 In the last 2 weeks, I have dressed more slowly than usual because of back pain	<input type="checkbox"/>	<input type="checkbox"/>
5 It's not really safe for a person with a condition like mine to be physically active	<input type="checkbox"/>	<input type="checkbox"/>
6 Worrying thoughts have been going through my mind a lot of the time	<input type="checkbox"/>	<input type="checkbox"/>
7 I feel that my back pain is terrible and it's never going to get any better	<input type="checkbox"/>	<input type="checkbox"/>
8 In general I have not enjoyed all the things I used to enjoy	<input type="checkbox"/>	<input type="checkbox"/>

9. Overall, how **bothersome** has your back pain been in the **last 2 weeks**?

Not at all	Slightly	Moderately	Very much	Extremely
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	0	0	1	1

Total score (all 9): _____ **Sub Score (Q5-9):** _____



Brief Illness Perceptions Survey – Injury

We are interested in your beliefs about your injury. This includes pain or any other symptoms that you believe occurred or worsened as a result of your injury. Please answer the following questions by circling the number that BEST describes your beliefs about your symptoms:

<p>1. To what degree has your injury had a negative effect on your life?</p> <p style="text-align: center;">0 1 2 3 4 5 6 7 8 9 10</p> <p>No affect at all Severely affects my life</p>
<p>2. How long do you think your symptoms will continue?</p> <p style="text-align: center;">0 1 2 3 4 5 6 7 8 9 10</p> <p>A very short time Forever</p>
<p>3. How much control do you feel you have over your symptoms?</p> <p style="text-align: center;">0 1 2 3 4 5 6 7 8 9 10</p> <p>Absolutely no control Complete control</p>
<p>4. How much do you think your treatment will help your symptoms? This includes medication, physical therapy or other treatments.</p> <p style="text-align: center;">0 1 2 3 4 5 6 7 8 9 10</p> <p>Not at all Extremely helpful</p>
<p>5. Thinking of all of the symptoms that have arisen as a result of your injury, are you experiencing:</p> <p style="text-align: center;">0 1 2 3 4 5 6 7 8 9 10</p> <p>No symptoms at all Many different symptoms</p>
<p>6. How severe are the symptoms that you're experiencing as a result of your injury?</p> <p style="text-align: center;">0 1 2 3 4 5 6 7 8 9 10</p> <p>No symptoms at all Extremely severe symptoms</p>
<p>7. How concerned are you about your symptoms?</p> <p style="text-align: center;">0 1 2 3 4 5 6 7 8 9 10</p> <p>Not at all concerned Extremely concerned</p>
<p>8. How well do you feel you understand your symptoms?</p> <p style="text-align: center;">0 1 2 3 4 5 6 7 8 9 10</p> <p>Don't understand at all Understand very clearly</p>
<p>9. How easily do you feel it would be to injure yourself further?</p> <p style="text-align: center;">0 1 2 3 4 5 6 7 8 9 10</p> <p>No more easily than normal I could very easily be injured further</p>

Brief Pain Inventory - Revised

1. Please rate your pain by marking the box best describes your pain at its worst in the last 24 hours										
0	1	2	3	4	5	6	7	8	9	10
No Pain										Extreme Pain
2. Please rate your pain by marking the box beside the number that best describes your pain at its least (best) in the last 24 hours										
0	1	2	3	4	5	6	7	8	9	10
No Pain										Extreme Pain
3. Please rate your pain by marking the box beside the number that best describes your pain on average										
0	1	2	3	4	5	6	7	8	9	10
No Pain										Extreme Pain
4. Please rate your pain by marking the box beside the number that describes how much pain you have right now										
0	1	2	3	4	5	6	7	8	9	10
No Pain										Extreme Pain
5. Circle the number that describes how much, during the past 24 hours , pain has interfered with your:										
A. General Activity										
0	1	2	3	4	5	6	7	8	9	10
Does Not Interfere										Completely Interferes
B. Mood										
0	1	2	3	4	5	6	7	8	9	10
Does Not Interfere										Completely Interferes
C. Walking Ability										
0	1	2	3	4	5	6	7	8	9	10
Does Not Interfere										Completely Interferes
D. Normal Work (includes both work outside the home and housework)										
0	1	2	3	4	5	6	7	8	9	10
Does Not Interfere										Completely Interferes
E. Relations with other people										
0	1	2	3	4	5	6	7	8	9	10
Does Not Interfere										Completely Interferes
F. Sleep										
0	1	2	3	4	5	6	7	8	9	10
Does Not Interfere										Completely Interferes
G. Enjoyment of Life										
0	1	2	3	4	5	6	7	8	9	10
Does Not Interfere										Completely Interferes

Pain: (sum 1 to 4)/4 =

Physical Interference: (sum A, C, D)/3 =

Affective Interference: (sum B, E, G)/3 =

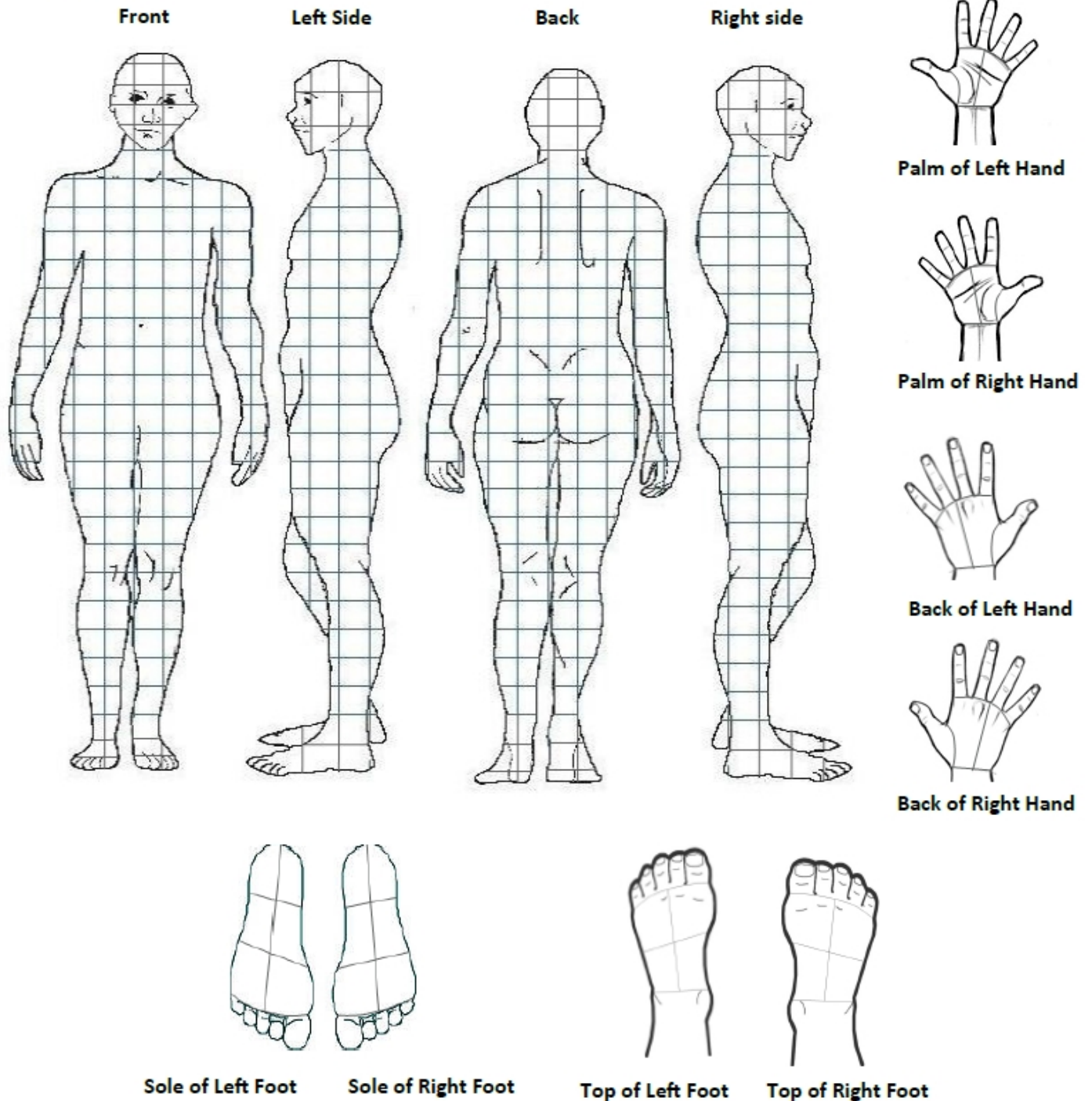
Sleep Interference (F) =

On the diagrams below, please indicate the areas in which you are *currently* feeling symptoms.

1. First, **shade (colour)** the areas in which you are feeling pain.

2. Next, **circle** the areas in which you are feeling tingling, pricking or burning.

3. Finally, **place an 'N'** near the areas where you are feeling numbness, heaviness, or other sensations.



P4 Instrument

When answering these questions, think only of the pain you are experiencing in relation to the problem for which you are having treatment.

Circle 1 number for each of the 4 questions.

On average, how bad has your pain been:

	No Pain										Pain as Bad as it Can Be
In the morning over the past 2 days?	0	1	2	3	4	5	6	7	8	9	10
In the afternoon over the past 2 days?	0	1	2	3	4	5	6	7	8	9	10
In the evening over the past 2 days?	0	1	2	3	4	5	6	7	8	9	10
With activity over the past 2 days?	0	1	2	3	4	5	6	7	8	9	10

Step 2: What type of treatment does this person need? Where are the highest priorities?

Nociceptive (Mechanical, Chemical, Thermal)	Peripheral Neuropathic	Central Neurogenic	Cognitive	Affective / Emotional	Social / Environmental
<i>Adaptive, Orthodromic, Protective May still exhibit signs of peripheral sensitization</i>	<i>Pathological, peripheral nerve injury, orthodromic and antidromic</i>	<i>Changes in the central N.S. that lead to an environment of nociceptive facilitation</i>	<i>Thoughts, beliefs, values or perceptions that affect interpretation and suffering</i>	<i>Diagnosable or definable clinical or subclinical psychopathology</i>	<i>Contextual factors that interact with bio and psych to influence interpretation, reporting, and other behaviors</i>
<ul style="list-style-type: none"> • ‘Mechanical’ pattern of reproduction – predictable and consistent • Makes anatomical sense • Local hyperalgesia • Responsive to appropriate OTC medication (e.g. NSAIDs) • Predictable diurnal patterns 	<ul style="list-style-type: none"> • History (obvious or likely) of nerve trauma • Non-mechanical patterns, spontaneous pain localized to innervation territory of lesioned nerve • Sensory loss: hypoesthesia, hypoalgesia • Sensory gain: Allodynia, Hyperalgesia • Dysesthesias: electric, shocking, burning, cold, heavy, itching, crawling • Screening tools: SLANSS ($\geq 12/24$), DN4 ($\geq 4/10$) or PainDETECT ($\geq 19/38$) • Localized wind-up pain 	<ul style="list-style-type: none"> • Longer-term duration of symptoms • Non-mechanical patterns of symptom reproduction • Diagnostic findings clear or equivocal • Widespread sensory hyperalgesia • Dysfunctional conditioned pain modulation • Central Sensitivity Index ($\geq 40/100$) • Usually associated with other symptoms incl. digestive, sleep, cognitive, sensory or motor interference • Poor laterality recognition 	<ul style="list-style-type: none"> • Catastrophic beliefs (PCS >20) • Fear of movement / injury (FABQ, TSK) • Sense of victimization (IEQ) • Low self-efficacy beliefs (PSEQ) • Poor expectations of recovery (BIPQ) • Generalized trauma-related distress (TIDS) • Any number of other cognitive tools 	<ul style="list-style-type: none"> • Major / Minor Depressive Disorder (PHQ-9 or HADS) • Generalized Anxiety Disorder (HADS, DASS) • Post-traumatic Stress Disorder (PCL, PDS, IES) • Somatoform Disorder • Borderline Personality Disorder, Narcissism • Social Phobias • Obsessive – Compulsive Disorder 	<ul style="list-style-type: none"> • Spousal responses • Job satisfaction • Job laterality • Unpaid / gendered roles • Compensation • Litigation • Access to care • Cultural norms • Ethnic norms • Previous life experiences

Quantitative Sensory Testing: Pressure Pain Detection Threshold

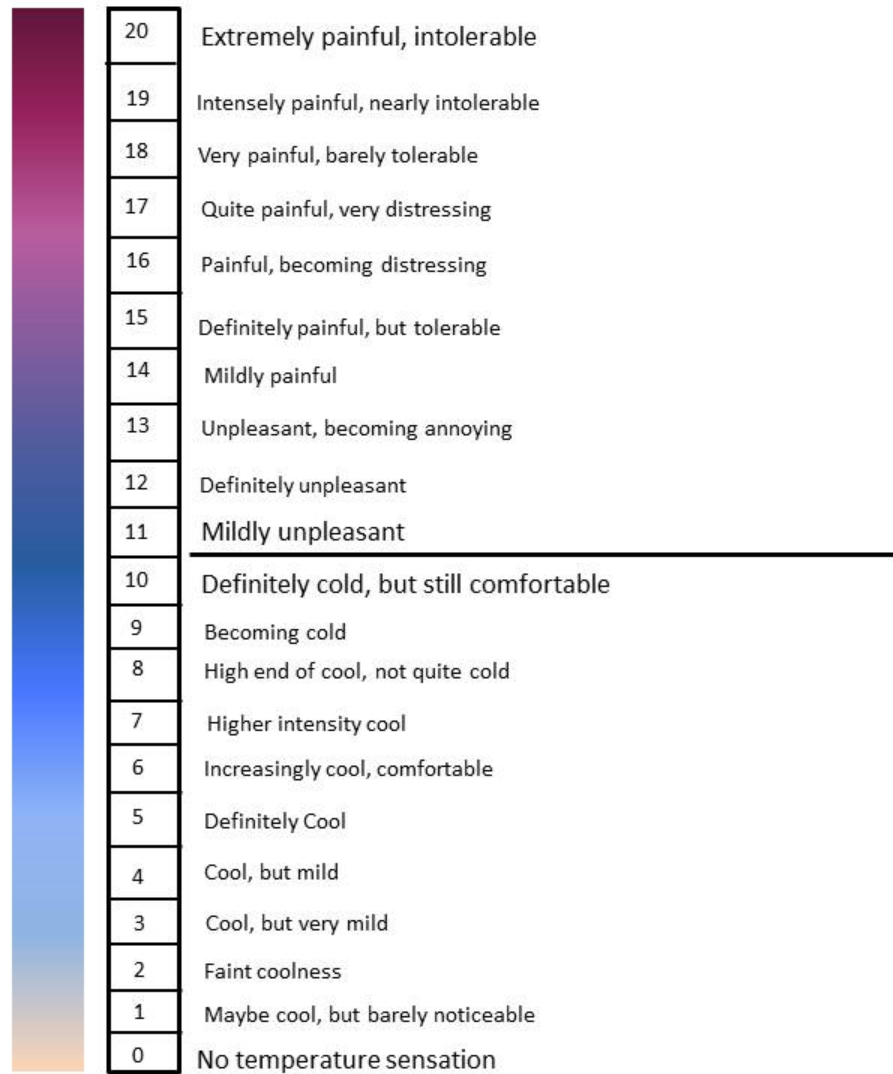
	Quartiles	1 st	2 nd	3 rd	4 th
Male	Lbf				
	UFT	<5.48	8.28	11.31	>11.31
	TA	<8.03	12.14	18.31	>18.31
	Kgf				
	UFT	<2.49	3.76	5.13	>5.13
	TA	<3.64	5.51	8.30	>8.30
Female	N				
	UFT	<24.36	36.81	50.26	>50.26
	TA	<35.67	53.97	81.37	>81.37
	Lbf				
	UFT	<3.63	5.48	8.13	>8.13
	TA	<5.06	8.31	11.32	>11.32
Female	Kgf				
	UFT	<1.64	2.49	3.69	>3.69
	TA	<2.29	3.77	5.13	>5.13
	N				
	UFT	<16.11	24.37	36.14	>36.14
	TA	<22.49	36.93	50.31	>50.31

Normative values for mechanical (pressure) pain threshold from a sample of 227 females and 82 males with neck pain of varying cause and duration. The values are thresholds between quartiles. For example, the value in the '1st' column is the threshold between the 1st (lowest 25%) and 2nd (25-50%) quartiles.

Used with permission of Dr. David Walton, Western University Canada. Email dwalton5@uwo.ca

An Android-based smartphone app for interpreting PPT scores can be downloaded for free from www.whipresearch.com/cwhip-tech/

Quantitative Sensory Testing: Cold Hypersensitivity



Cut-score for cold hyperalgesia to a 0°C stimulus = 13

Peripheral Neuropathic Pain

S-LANSS

Think about how the pain you have experienced as a result of your accident has felt over the last week. Please tick (✓) the descriptions that best match your pain. These descriptions may, or may not, match your pain, no matter how severe it feels.

<p>1. In the area where you have pain, do you also have 'pin and needles', tingling or prickling sensations?</p>	<p><input type="checkbox"/>NO I don't get the sensation</p>	<p><input type="checkbox"/>YES I do get these sensations (5)</p>
<p>2. Does the painful area change colour (perhaps looks mottled or more red) when the pain is particularly bad?</p>	<p><input type="checkbox"/>NO The pain does not affect the colour of my skin</p>	<p><input type="checkbox"/>YES I have noticed that the pain does make my skin different from normal (5)</p>
<p>3. Does your pain make the affected skin abnormally sensitive to touch? Getting unpleasant sensations or pain when lightly stroking the skin might describe this.</p>	<p><input type="checkbox"/>NO The pain does not make my skin in that area abnormally sensitive to touch</p>	<p><input type="checkbox"/>YES My skin in that area is particularly sensitive to touch (3)</p>
<p>4. Does your pain come on suddenly and in bursts for no apparent reason when you are completely still? Words like 'electric shocks', jumping and bursting might describe this.</p>	<p><input type="checkbox"/>NO My pain doesn't really feel like this</p>	<p><input type="checkbox"/>YES I get these sensations often (2)</p>
<p>5. In the area where you have pain, does your skin feel unusually hot like a burning pain?</p>	<p><input type="checkbox"/>NO I don't have burning pain</p>	<p><input type="checkbox"/>YES I get these sensations often (1)</p>
<p>6. Gently <u>rub</u> the painful area with your index finger and then rub a non-painful area (for example the skin further away from the area, or on the opposite side). How does this rubbing feel in the painful area?</p>	<p><input type="checkbox"/>The pain area feels no different from the non-painful area</p>	<p><input type="checkbox"/>I feel discomfort, like pins and needles, tingling or burning in the painful area that is different from the non-painful area (5)</p>
<p>7. Gently <u>press</u> on the painful area with your finger then gently press in the same way onto a non-painful area like you did in the last question. How does this feel in the painful area?</p>	<p><input type="checkbox"/>The pain area feels no different from the non-painful area.</p>	<p><input type="checkbox"/>I feel numbness or tenderness in the painful area that is different from the non-painful area (3)</p>

DN4 Questionnaire (*Douleur Neuropathique – 4*)

Please complete this questionnaire by ticking one answer for each item in the 4 questions below:

INTERVIEW OF THE PATIENT

Question 1: Does the pain have one or more of the following characteristics?

- 1 – Burning
- 2 – Painful cold
- 3 – Electric shocks

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

Question 2: Is the pain associated with one or more of the following symptoms in the same area?

- 4 – Tingling
- 5 – Pins and needles
- 6 – Numbness
- 7 – Itching

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

EXAMINATION OF THE PATIENT

Question 3: Is the pain located in an area where the physical examination may reveal one or more of the following characteristics?

- 8 – Hypoesthesia to touch
- 9 – Hypoesthesia to prick

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

Question 4: In the painful area, can the pain be caused or increased by:

- 10 – Brushing

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

The total score is calculated as the sum of the 10 items and the cut-off value for the diagnosis of neuropathic pain is a total score of 4/10.

Total
<input type="text"/>

Date: _____ Patient: Last name: _____ First name: _____

How would you assess your pain now, at this moment?

0	1	2	3	4	5	6	7	8	9	10
none										
max.										

How strong was the **strongest** pain during the past 4 weeks?

0	1	2	3	4	5	6	7	8	9	10
none										
max.										

How strong was the pain during the past 4 weeks on average?

0	1	2	3	4	5	6	7	8	9	10
none										
max.										

Mark the picture that best describes the course of your pain:

	Persistent pain with slight fluctuations	<input type="checkbox"/>
	Persistent pain with pain attacks	<input type="checkbox"/>
	Pain attacks without pain between them	<input type="checkbox"/>
	Pain attacks with pain between them	<input type="checkbox"/>

Please mark your main area of pain



Does your pain radiate to other regions of your body? yes no

If yes, please draw the direction in which the pain radiates.

Do you suffer from a burning sensation (e.g., stinging nettles) in the marked areas?

never hardly noticed slightly moderately strongly very strongly

Do you have a tingling or prickling sensation in the area of your pain (like crawling ants or electrical tingling)?

never hardly noticed slightly moderately strongly very strongly

Is light touching (clothing, a blanket) in this area painful?

never hardly noticed slightly moderately strongly very strongly

Do you have sudden pain attacks in the area of your pain, like electric shocks?

never hardly noticed slightly moderately strongly very strongly

Is cold or heat (bath water) in this area occasionally painful?

never hardly noticed slightly moderately strongly very strongly

Do you suffer from a sensation of numbness in the areas that you marked?

never hardly noticed slightly moderately strongly very strongly

Does slight pressure in this area, e.g., with a finger, trigger pain?

never hardly noticed slightly moderately strongly very strongly

(To be filled out by the physician)

never	hardly noticed	slightly	moderately	strongly	very strongly
<input type="checkbox"/> x 0 = 0	<input type="checkbox"/> x 1 = <input type="text"/>	<input type="checkbox"/> x 2 = <input type="text"/>	<input type="checkbox"/> x 3 = <input type="text"/>	<input type="checkbox"/> x 4 = <input type="text"/>	<input type="checkbox"/> x 5 = <input type="text"/>

Total score

out of 35

Date: Patient: Last name: First name:

Please transfer the total score from the pain questionnaire:

Total score

Please add up the following numbers, depending on the marked pain behavior pattern and the pain radiation. Then total up the final score:



Persistent pain with slight fluctuations

0



Persistent pain with pain attacks

- 1

if marked, or



Pain attacks without pain between them

+ 1

if marked, or



Pain attacks with pain between them

+ 1

if marked



Radiating pains?

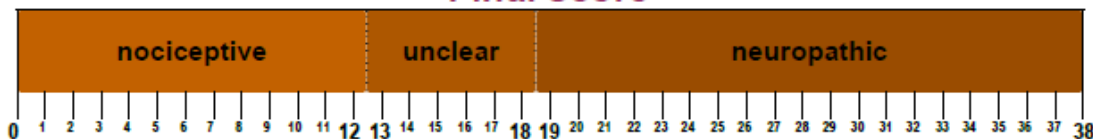
+ 2

if yes

Final score

Screening Result

Final score



A neuropathic pain component is unlikely (< 15%)

Result is ambiguous, however a neuropathic pain component can be present

A neuropathic pain component is likely (> 90%)

This sheet does not replace medical diagnostics. It is used for screening the presence of a neuropathic pain component.

Development/Reference: R. Freynhagen, R. Baron, U. Gockel, T.R. Tölle / Curr Med Res Opin, Vol.22, No. 10 (2006)

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Central Sensitivity Inventory

Part A

	Never	Rarely	Sometimes	Often	Always
1. I feel unrefreshed when I wake up in the morning	0	1	2	3	4
2. My muscles feel stiff and achy	0	1	2	3	4
3. I have anxiety attacks	0	1	2	3	4
4. I grind or clench my teeth	0	1	2	3	4
5. I have problems with diarrhea and/or constipation	0	1	2	3	4
6. I need help in performing my daily activities	0	1	2	3	4
7. I am sensitive to bright lights	0	1	2	3	4
8. I get tired very easily when I am physically active	0	1	2	3	4
9. I feel pain all over my body	0	1	2	3	4
10. I have headaches	0	1	2	3	4
11. I feel discomfort in my bladder and/or burning when I urinate	0	1	2	3	4
12. I do not sleep well	0	1	2	3	4
13. I have difficulty concentrating	0	1	2	3	4
14. I have skin problems such as dryness, itchiness or rashes	0	1	2	3	4
15. Stress makes my physical symptoms get worse	0	1	2	3	4
16. I feel sad or depressed	0	1	2	3	4
17. I have low energy	0	1	2	3	4
18. I have muscle tension in my neck and shoulders	0	1	2	3	4
19. I have pain in my jaw	0	1	2	3	4
20. Certain smells, such as perfumes, make me feel dizzy and nauseated	0	1	2	3	4
21. I have to urinate frequently	0	1	2	3	4
22. My legs feel uncomfortable and restless when I am trying to go to sleep at night	0	1	2	3	4
23. I have difficulty remembering things	0	1	2	3	4
24. I suffered trauma as a child	0	1	2	3	4
25. I have pain in my pelvic area	0	1	2	3	4
TOTAL SCORE					

Physical Symptoms (2, 6, 8, 9, 12, 17, 22)

Emotional Distress (3, 13, 15, 16, 17, 23, 24)

Headache/Jaw Symptoms (4, 7, 10, 19, 20)

Urological Symptoms (11, 21, 25)

Total score of >40 suggestive of strong central sensitization

Pain Catastrophizing Scale

Everyone experiences painful situations at some point in their lives. Such experiences may include headaches, tooth pain, joint or muscle pain. People are often exposed to situations that may cause pain such as illness, injury, dental procedures or surgery.

We are interested in the types of thoughts and feeling that you have when you are in pain. Listed below are thirteen statements describing different thoughts and feelings that may be associated with pain. Using the scale, please indicate the degree to which you have these thoughts and feelings when you are experiencing pain.

	Not at all	To a slight degree	To a moderate degree	To a great degree	All the time
1. I worry all the time about whether the pain will end	0	1	2	3	4
2. I feel I can't go on	0	1	2	3	4
3. It's terrible and I think it's never going to get any better	0	1	2	3	4
4. It's awful and I feel that it overwhelms me	0	1	2	3	4
5. I feel I can't stand it anymore	0	1	2	3	4
6. I become afraid that the pain will get worse	0	1	2	3	4
7. I keep thinking of other painful events	0	1	2	3	4
8. I anxiously want the pain to go away	0	1	2	2	3
9. I can't seem to keep it out of my mind	0	1	2	3	4
10. I keep thinking about how much it hurts	0	1	2	3	4
11. I keep thinking about how badly I want the pain to stop	0	1	2	3	4
12. There's nothing I can do to reduce the intensity of the pain	0	1	2	3	3
13. I wonder whether something serious may happen	0	1	2	3	4

Total score > 20: Suggestive of clinically relevant pain catastrophizing

Total score > 30: Strongly indicative of clinically relevant pain catastrophizing

TSK

ID: _____

Date: _____

Look at each of the following statements. Circle the number that corresponds with your level of agreement with each statement.

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. I'm afraid that I might injure myself if I exercise	0	1	2	3
2. If I were to try to overcome it, my pain would increase	0	1	2	3
3. My body is telling me I have something dangerously wrong	0	1	2	3
4. People aren't taking my medical condition seriously enough	0	1	2	3
5. My accident/injury has put my body at risk for the rest of my life	0	1	2	3
6. Pain always means I have injured my body	0	1	2	3
7. Simply being careful that I do not make any unnecessary movements is the safest thing I can do to prevent my pain from worsening	0	1	2	3
8. I wouldn't have this much pain if there weren't something potentially dangerous going on in my body	0	1	2	3
9. Pain lets me know when to stop exercising so that I don't injure myself	0	1	2	3
10. I can't do all the things normal people do because it's too easy for me to get injured	0	1	2	3
11. No one should have to exercise when he/she is in pain	0	1	2	3

Interpretation (not yet empirically supported):

Score > 13/33: Suggestive of clinically-relevant aversion to movement/exercise

Score >20/33: Strongly indicative of clinically-relevant aversion to movement/exercise

Pain Self-Efficacy Questionnaire

Please rate how **confident** you are that you can do the following things **at present** despite the pain. To indicate your answer circle one of the numbers on the scale under each item,

For example:

Not at	0	1	2	3	4	5	6	Completely
All confident	<hr/>							confident

Remember, this questionnaire is not asking whether or not you have been doing these things, but rather how confident you can do them at present, **despite the pain**.

1. I can enjoy things, despite the pain.

Not at	0	1	2	3	4	5	6	Completely
All confident	<hr/>							confident

2. I can do most of the household chores (e.g. tidying up, washing dishes, etc.), despite the pain.

Not at	0	1	2	3	4	5	6	Completely
All confident	<hr/>							confident

3. I can socialize with my friends or family members as often as I used to, despite the pain.

Not at	0	1	2	3	4	5	6	Completely
All confident	<hr/>							confident

4. I can cope with my pain in most situations.

Not at	0	1	2	3	4	5	6	Completely
All confident	<hr/>							confident

5. I can do some form of work, despite the pain. (Work includes housework, paid and unpaid work.)

Not at	0	1	2	3	4	5	6	Completely
All confident	<hr/>							confident

6. I can still do many of the things I enjoy doing, such as hobbies or leisure activity, despite the pain.

Not at	0	1	2	3	4	5	6	Completely
All confident	<hr/>							confident

7. I can cope with my pain without medication.

Not at	0	1	2	3	4	5	6	Completely
All confident	<hr/>							confident

8. I can still accomplish most of my goals in life, despite the pain.

Not at	0	1	2	3	4	5	6	Completely
--------	---	---	---	---	---	---	---	------------

All confident _____ confident

9. I can live a normal lifestyle, despite the pain.

Not at 0 1 2 3 4 5 6 Completely
All confident _____ confident

10. I can gradually become more active, despite the pain.

Not at 0 1 2 3 4 5 6 Completely
All confident _____ confident

Total score = sum all items as score /60

Estimated MDC₉₅ = 9 points (Calculated from Nicholas et al. 2007)

Traumatic Injuries Distress Scale

RATE THE EXTENT TO WHICH YOU HAVE BEEN BOTHERED BY THE FOLLOWING SYMPTOMS SINCE YOUR ACCIDENT:	Never	Occasionally	Often or All of the time
1. Difficulty maintaining your concentration	0	1	2
2. Difficulty thinking about anything other than the pain	0	1	2
3. A feeling of being overwhelmed by pain or other symptoms	0	1	2
4. Flashbacks of the accident while you're awake that feel very real	0	1	2
5. Feeling 'wound up', agitated or scared when in a place that reminds you of the accident (e.g. In a car, at work or on a slippery surface)	0	1	2
6. Frustration at your inability to control your pain	0	1	2
7. Loss of motivation to get up and start a new day	0	1	2
8. Pain that lasts an entire day without easing	0	1	2
9. Loss of interest in your appearance	0	1	2
10. Difficulty doing the things that you would normally enjoy	0	1	2
11. Feeling 'numb' or disengaged, as if you were watching the world through a window	0	1	2
12. Anger directed at others	0	1	2

Walton et al. (in review)

To score:

Negative Affect Scale = Items 1 + 7 + 9 + 10 + 11 + 12 (score /12)

Uncontrolled Pain Scale = Items 2 + 3 + 6 + 8 (score /8)

Intrusion / Hyperarousal Scale = Items 4 + 5 (score /4)

Good prognosis:

TIDS Subscale	Disability Outcomes		Pain Outcomes		Affective Outcomes	
	Good	Bad	Good	Bad	Good	Bad
Prognosis						
Negative Affect	<2	>5	<2	>5	<5	>6
Uncontrolled Pain	<2	>4	<2	>4	N/A	N/A
Intrusion / Hyperarousal	N/A	N/A	N/A	N/A	<2	4

Patient Health Questionnaire - 9

Please answer every question to the best of your ability unless you are requested to skip a question.

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself, or that you are a failure, or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite-being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself in some way	0	1	2	3

Major Depressive Disorder:

i: Response to *either* item 1 or 2 is at least ‘more than half the days’

ii: 5 or more responses to all items is at least ‘more than half the days’

Special consideration (requires follow-up):

iii: Response to item 9 is at least ‘more than half the days’

Hospital Anxiety and Depression Scale

Please read each item below and circle the reply which comes closest to how you have been feeling in the past week. Don't take too long over your replies; your immediate reaction to each item will probably be more accurate than a long thought out response.

<p>1. I feel tense or 'wound up'</p> <p>a. Most of the time</p> <p>b. A lot of the time</p> <p>c. From time to time, occasionally</p> <p>d. Not at all</p>	<p>8. I feel as if I am slowed down:</p> <p>a. Nearly all the time</p> <p>b. Very often</p> <p>c. Sometimes</p> <p>d. Not at all</p>
<p>2. I still enjoy the things I used to enjoy:</p> <p>a. Definitely as much</p> <p>b. Not quite so much</p> <p>c. Only a little</p> <p>d. Hardly at all</p>	<p>9. I get a sort of frightened feeling like 'butterflies' in my stomach:</p> <p>a. Not at all</p> <p>b. Occasionally</p> <p>c. Quite often</p> <p>d. Very often</p>
<p>3. I get a sort of frightened feeling as if something awful is about to happen:</p> <p>a. Very definitely and quite badly</p> <p>b. Yes, but not too badly</p> <p>c. A little, but it doesn't worry me</p> <p>d. Not at all</p>	<p>10. I have lost interest in my appearance:</p> <p>a. Definitely</p> <p>b. I don't take as much care as I should</p> <p>c. I may not take quite as much care</p> <p>d. I take just as much care as ever</p>
<p>4. I can laugh and see the funny side of things:</p> <p>a. As much as I always could</p> <p>b. Not quite so much now</p> <p>c. Definitely not so much now</p> <p>d. Not at all</p>	<p>11. I feel restless as if I have to be on the move:</p> <p>a. Very much indeed</p> <p>b. Quite a lot</p> <p>c. Not very much</p> <p>d. Not at all</p>
<p>5. Worrying thoughts go through my mind:</p> <p>a. A great deal of the time</p> <p>b. A lot of the time</p> <p>c. From time to time but not too often</p> <p>d. Only occasionally</p>	<p>12. I look forward with enjoyment to things:</p> <p>a. As much as I ever did</p> <p>b. Rather less than I used to</p> <p>c. Definitely less than I used to</p> <p>d. Hardly at all</p>
<p>6. I feel cheerful</p> <p>a. Not at all</p> <p>b. Not often</p> <p>c. Sometimes</p> <p>d. Most of the time</p>	<p>13. I get sudden feelings of panic:</p> <p>a. Very often indeed</p> <p>b. Quite often</p> <p>c. Not very often</p> <p>d. Not at all</p>
<p>7. I can sit at ease and feel relaxed.</p> <p>a. Definitely</p> <p>b. Usually</p> <p>c. Not often</p> <p>d. Not at all</p>	<p>14. I can enjoy a good book or radio or TV program:</p> <p>a. Often</p> <p>b. Sometimes</p> <p>c. Not often</p> <p>d. Very seldom</p>

SCORING Step 1: assign 0, 1, 2, 3 to each item, reverse-score items 1, 3, 5, 6, 8, 10, 11, 13. Step 2: Calculate anxiety subscale (sum 1, 3, 5, 7, 9, 11, 13) and depression subscale (sum 2, 4, 6, 8, 10, 12, 14). Step 3:

Interpret: Normal (0-7), Mild (8-10), Moderate (11-14), Severe (15-21)

PTSD Checklist – Civilian version

Below is a list of problems and complaints that people sometimes have in response to traumatic events like getting injured. Please read each one carefully, and circle the number to indicate how much you have been bothered by that problem in the past month.

	Not at all	A little bit	Moderately	Quite a bit	Extremely
1. Repeated, disturbing memories, thoughts or images of the event	1	2	3	4	5
2. Repeated, disturbing dreams of the event	1	2	3	4	5
3. Suddenly activating or feeling as if the event were happening again (as if you were reliving it)	1	2	3	4	5
4. Feeling very upset when something reminded you of the event	1	2	3	4	5
5. Having physical reactions (e.g. heart pounding, trouble breathing, sweating) when something reminded you of the event	1	2	3	4	5
6. Avoiding thinking about or talking about the event or avoiding having feelings related to it	1	2	3	4	5
7. Avoiding activities or situations because they reminded you of the event	1	2	3	4	5
8. Trouble remembering important part of the event	1	2	3	4	5
9. Loss of interest in activities that you used to enjoy	1	2	3	4	5
10. Feeling distant or cut off from other people	1	2	3	4	5
11. Feeling emotionally numb or being unable to have loving feelings for those close to you	1	2	3	4	5
12. Feeling as if your future will somehow be cut short	1	2	3	4	5
13. Trouble falling or staying asleep	1	2	3	4	5
14. Feeling irritable or having angry outbursts	1	2	3	4	5
15. Having difficulty concentrating	1	2	3	4	5
16. Being 'super-alert', watchful or on guard	1	2	3	4	5
17. Feeling jumpy or easily startled	1	2	3	4	5

Interpretation:

Option 1: Sum all items (range 17-85), score of 44 or greater most accurate cut point for diagnosis of PTSD (Blanchard et al. 1996, Ruggiero et al. 2003)

Option 2: Consider actual DSM-IV criteria, requires endorsement of at least 1 'intrusion' symptom (1 – 5), 3 'avoidance/numbing' symptoms (6 - 12), and 2 'hyperarousal' symptoms (13 - 17). Consider any item scored 3 or greater as 'endorsed'.

Case 1: Frank Mielowski



Frank is 38 years old, married with two children aged 8 and 10. He is an Executive Assistant for an international Import/Export company called Vandelay Industries. He was involved in a motor vehicle accident in which He was hit from behind while at a stop light 1 week ago.

Having a busy life and being the primary bread winner for his household, He carried on with his normal activities for the next 2 days. On the 3rd day following the accident He awoke with a severe neck stiffness and a supraorbital headache bilaterally. He tried to work but had to leave half way through the day to visit his family doctor. His doctor diagnosed him with 'whiplash' and sent him to see physio.

When you see him He is clearly uncomfortable, tending to support his neck with his hand during the interview. He rates his pain at 8/10 currently and at its worst over the past 2 days.

Question: How concerned are you that He is at risk of a chronic problem based on the information you have so far?

Low Moderate High

Defend your position

An excerpt from the patient interview follows:

PT: Tell me about the symptoms you've been having since your accident.

Frank: Well they didn't start for a couple of days after the accident, but on the 3rd day I thought my head was going to explode [laughs slightly]. I woke up in the morning with I swear the worst headache I've ever had. I had just filed my taxes though and owed a bit, so I had to go to work that day. I was scared even driving to work. I could barely turn my neck and couldn't see what was beside me or behind me really. I've just got this crick in my neck that, I don't know, it feels like my joints must be all screwed up or something.

PT: Have the headaches or the neck pain changed at all since it started?

Frank: Gotten worse, definitely gotten worse over the past couple of days. [Pauses] I'm starting to get a little scared now, you know? I remember when my Dad was in a car accident back when I was a kid and he was messed up for ages. Couldn't work. I can't let...can't have that happen to me.

PT: What symptoms have gotten worse?

Frank: The headache hasn't really changed, but my neck, my neck, I just can't do anything. This is terrible. The pain is ridiculous. Why does it hurt so much?

PT: We're going to see if we can figure that out as we go today. Are you experiencing any symptoms in places other than your head and neck?

Frank: Like what do you mean?

PT: Like numbness or pain in your arms or hands, weakness, that sort of thing.

Frank: I don't think so. It's hard to think about anything other than this neck pain though, so there could be something there that I'm just not aware of. I will say I've been feeling some pain in my lower back as well, not sure if that means anything?

PT: We'll explore that as well. Have you tried anything to make yourself feel better?

Frank: Tried to get my wife to rub my neck, but it hurt like hell when she even touched it. Tried ice but that just made things worse. My doctor gave me some pain relievers, Tylenol 3 I think, so I've been using those.

PT: Do they work?

Frank: Don't know, haven't stopped taking them so I can't tell you what it would be like if I wasn't on them. Doc told me to take some extras today before I came to see you since you'd likely hurt me.

PT: Well I hope that's not the case, but a little discomfort is expected. Have you been able to sleep?

Frank: Off and on. I'm getting about 2 hours at a time. Then I'm up for an hour and might drift off here and there until morning.

PT: *How much sleep would you usually get?*

Frank: *I wasn't a great sleeper at the best of times, but 4 or 5 hours would probably be average for me.*

Question:

Now how concerned are you that He is at risk of a chronic problem based on the information you have so far?

Low

Moderate

High

Defend your position

Clinical Exam findings:

Neck Disability Index: 38/50

Pain Intensity: Current 8/10, Worst 48h 8/10

BIPQ:

1:	6
2:	7
3:	1
4:	2
5:	6
6:	8
7:	10
8:	2
9:	5
10:	9

SLANSS: 14/20

PCS: 32/52

PPT: Local (UFT): 1.0 kgf
Distal (TA): 5.24 kgf

CPM: Able to hold hand in water for 32 seconds. PPT at UFT 60 seconds after immersion: 1.45kgf

Wind-up: Start: 4/10, End: 7/10

Job Satisfaction: Says He enjoys his job, but it's fairly high stress. Has some flexibility in his hours but is largely expected to be present during normal operating hours. He enjoys the mix of autonomy in decision making with more structured demands at times.

Family: Spouse is currently on long-term disability due to a work-related injury 2 years ago. He is supportive but unable to help much with jobs around the house. His kids are active in dance and are at the studio 4 nights per week.

Doctor: His primary care physician has been supportive so far. He says he offered his opioids but He didn't want them, favouring the Tylenol 3's instead.

Medicolegal: He has initiated a claim with his automobile insurance company. So far He says the process is going smoothly. He has not yet involved a lawyer.

Question: What other questions/information would you like?

Exercise: Try to complete the radar plot you've been given.

Exercise: Look at your radar plot, and come up with a *risk-targeted treatment priority* for the initial stages of his treatment.

NRS: 3/10 at best, 8/10 at worst past 48 hours
 RMQ: 7/24
 PCS: 9/52
 SLANSS: 2/24

Sensory testing:

PPT (lbf)

Location	1	2	3	Mean
R QL (near L4/5)	9.86	10.23		10.05
L QL (near L4/5)	13.56	14.23		13.90
R TA	15.32	16.15		15.74
L TA	14.89	17.53	17.36	16.59

Cold reactivity (0 deg. C)

Location	1	2	3	Mean
R L4/5	5	6		5.5
L L4/5	5	4		4.5

Other sensory

Wind-up pain: Not detected

Allodynia: Not detected

Hypoesthesia: Not tested

Clinical observation:

Lumbar AROM:

Flexion: 70%, painful catch ~30deg., requires use of hands from there and to return

Extension: 50%, pain on R

L SF: 50%, 'pulling' pain on R

R SF: 50%, pain on R

L rot: 100%

R rot: 90%, mild pain on R

SLR: 60deg. R with slight P1, 70deg. L with h/s tightness

PAs: Increase P1 with PA L4/5 region

Slump: -ve

Carol Van Dusen

Carol is 48 years old, mother of two children, and a partner in a large accounting firm. Two days ago she was stopped at a traffic light when she was struck from behind by a driver distracted by his cell phone. She remembers hearing the squealing brakes and estimates the bullet vehicle was traveling about 30mph at impact. Her newer model SUV was deemed a write-off by her insurance company. She denies any loss of consciousness and is able to remember the events surrounding the collision fairly well. She remembers thinking the squealing brakes were coming from beside her and had her head turned to the right at the time of impact. Her headrest was in place and she believes it was adjusted properly.

Carol reports that she is otherwise healthy. She is perhaps slightly overweight but not obese. She appears slightly older than her age. She reports recurrent bouts of neck pain in the past that she attributes to her work habits, but nothing that has required formal treatment.

Carol presents to your clinic on the suggestion of her family doctor with right-sided neck pain that radiates as far as her lateral right arm and into her mid-scapular area on the right side. She also reports a mild (3/10) right-sided supra-orbital headache that seems to be related to her neck movements. She describes difficulty driving since the event due mostly to problems checking her blind spot.

ASSESSMENT FINDINGS

Initial tools:

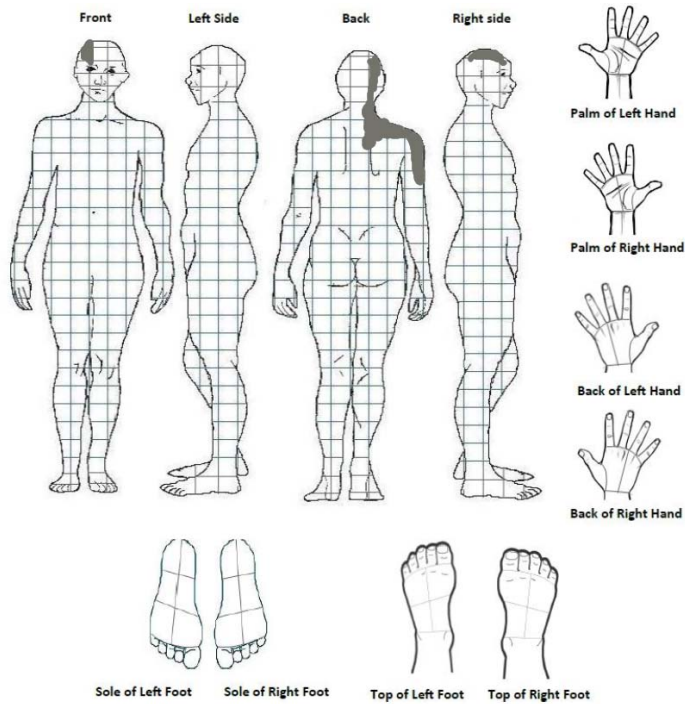
NRS: 4/10 at worst, 0/10 at best, 3/10 currently

NDI: 8/50

BIPQ:

1. Negative effect	6
2. Expected duration	3
3. Control	6
4. Belief in treatment	9
5. Number of symptoms	2
6. Severity of symptoms	4
7. Concern	3
8. Understanding	3
9. Fragility	2
10. Emotional effect	2

Body diagram:



Additional tests:

Pressure Pain Detection Threshold:

kgf	Test 1	Test 2	Mean	Quartile
R UFT	1.63	1.58	1.61	1 st
L UFT	2.42	2.30	2.36	2 nd
R Tib Ant	4.02	3.99	4.01	3 rd
L Tib Ant	4.15	4.22	4.19	3 rd

Cold pressor / Conditioned pain modulation:

Endurance: 50 seconds

Descending Nociceptive Inhibitory Control (DNIC)

Post-immersion PPDT (R): 2.02 kgf

Range of motion:

	Flexion	Extension	R SF	L SF	R rot	L rot	Circumduction
Range	Full	Full	80%	Full	90%	Full	Catch R. post. Quadrant x2
Response	Post. pull	R post. pain	R. post. pain	R. post. pull	R. post. pain	Minor R. pull	Pain R. post quadrant

Cognitions and Affect:

TIDS:

	Score	Relevant cut score
Uncontrolled pain	5	High (>4)
Negative affect	3	Mod (2-5)
Intrusion/Hyperarousal	0	Low (<2)

BriefPCS (pain catastrophization scale)-Acute: 2/16 (13%)

Impact Events Scale (IES): 12/88 (cut scores are 24, 33 and 37)

Indicates she is angry towards the bullet driver, feels as though she has been unfairly victimized

Neuropathic:

SLANSS: 4/24

Allodynia: Mild on light stroking

Social:

2 children aged 22 and 18

Lives with husband and youngest child, both healthy

Reports a good relationship with her family doctor

Indicates that so far relationship with insurance company has gone smoothly

Is not currently considering litigation

Sofia Gonzalez

Sofia is 37 years old, married with 3 children aged 8, 11 and 13, and works two jobs as a bartender and coffee shop barista. Four months ago she was pulling out of her kids' school pick-up area when she was t-boned in the left front panel of the family's early model hatchback by a sedan traveling an estimated 20 mph in the school zone. The impact spun her vehicle 180 degrees to rest on the grass median. She only knows this from photos of the collision as she is unable to recall most of the key events. She is unsure whether she lost consciousness but recalls hearing her 8 year-old child crying in the back seat that let her know he was at least still alive. Her memories start again as she was being extracted from the vehicle by paramedics and firefighters, but she recalls it as though time were in slow motion and she was watching the events from outside of herself. She saw her son, bloodied on the face from broken glass, extracted and placed onto a stretcher, and recalls watching as the police had to constrain the driver of the bullet vehicle who was acting belligerent and later revealed to be high on heroin.

As a result of the collision Sofia suffered a fracture distal radius, extensive bruising up the left side of her arm, thorax and breast, neck pain and stiffness, and intermittent headaches. Prior to the collision Sofia reports a history of mild depression that was being effectively managed by medication. During the questioning she reveals that her childhood was difficult as she lived with a father with alcoholism and had to work for a living from an early age. She indicates her marriage is strong and her spouse is supportive although neither make much money.

Today Sofia presents to your clinic indicating resolution of the distal radius fracture and the bruising but is describing bilateral neck and shoulder girdle pain, mid-scapular pain, and feelings of weakness/clumsiness in both arms. She denies tingling or numbness. The headaches have improved but are still occasionally present and she finds it difficult to focus or concentrate especially when reading. She states problems sleeping, and when asked about weight change she indicates she has lost weight due to lack of appetite and new digestive problems. She has yet to return to driving instead relying on her husband to get her kids to school and her to appointments.

ASSESSMENT FINDINGS

Initial tools:

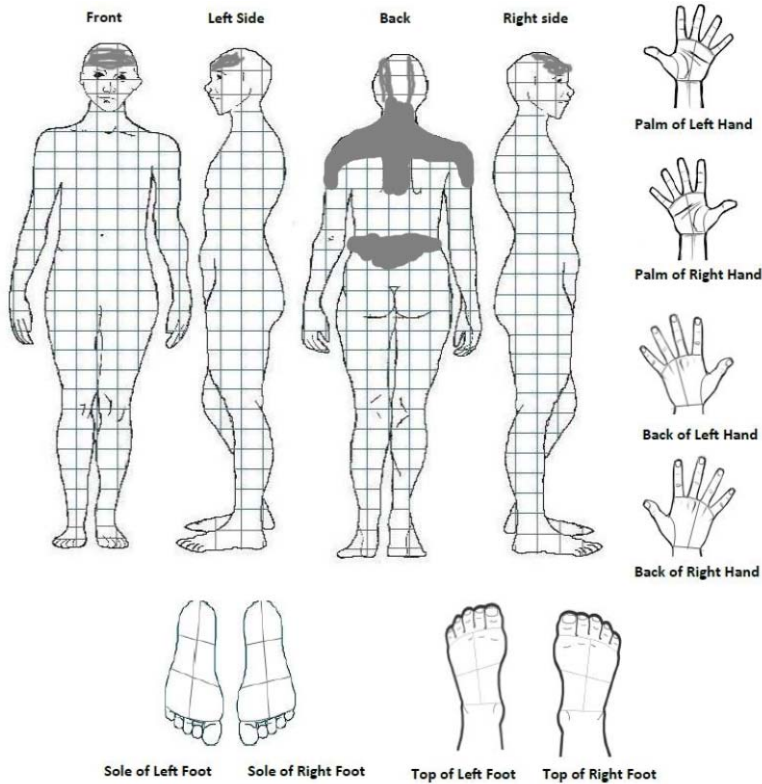
NRS: 9/10 at worst, 3/10 at best, 5/10 currently

NDI: 32/50

BIPQ:

1. Negative effect	8
2. Expected duration	7
3. Control	3
4. Belief in treatment	5
5. Number of symptoms	6
6. Severity of symptoms	9
7. Concern	10
8. Understanding	3
9. Fragility	8
10. Emotional effect	9

Body diagram:



Additional tests:

Pressure Pain Detection Threshold:

kgf	Test 1	Test 2	Test 3	Mean	Quartile
R UFT	0.98	1.98	1.21	1.39	1 st
L UFT	0.87	0.97		0.92	1 st
R Tib Ant	3.75	3.80		3.78	3 rd
L Tib Ant	3.12	3.98	3.69	3.60	2 nd

Cold pressor / Conditioned pain modulation:

Endurance: 60 seconds

Post-immersion PPDT (L UFT): 0.80 kgf

Range of motion:

	Flexion	Extension	R SF	L SF	R rot	L rot	Circumduction
Range	75%	66%	66%	66%	80%	80%	Very small

Response	Post. pull	Bilat. Post. Pain, stretch ant.	Guarded, bilat. pain	Guarded, bilat. pain	Grimacing, bilat. pain	Grimacing, bilat. pain	Grimacing and guarded, groaning through entire range
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Cognitions and Affect:

TIDS:

	Score	Relevant cut score
Uncontrolled pain	7	High (>4)
Negative affect	10	High (>6)
Intrusion/Hyperarousal	4	High (4)

BriefPCS-Chronic: 12/16 (75%)

IES: 42/88 (cut scores are 24, 33 and 37)

Patient health questionnaire (PHQ-9): 16/27 (meets criteria for depressive disorder)

Neuropathic:

SLANSS: 8/24

Allodynia: Mild on light stroking

Wind-up: tender to pin prick but no obvious increase in symptoms after 30 seconds @ 1Hz

Social:

Has a grade 12 education from native Venezuela.

3 children aged 8, 11 and 13

Lives with husband and all 3 children. Both patient and husband work 2 part-time jobs and have had to rely on social assistance at times.

Believe her relationship with her doctor is as good as anyone else's, not entirely sure she (Dr.) always believes her (patient's) complaints but has been generally willing to take action when pushed.

States her insurance company is starting to question some of her claims and has not been as forthcoming with financial aid as they were at first, but so far she continues to receive wage indemnity benefits.

Has considered litigation and her doctor is encouraging it but is fearful of the cost, time and stress involved.

John Turwilliger

John is 29-year-old PhD student at the local university. Two days ago he was stopped at a traffic light when a driver traveling approximately 35 mph struck him from behind. He states he was unaware of the pending impact as there were no (to his recollection) sounds of squealing brakes. The insurance company deemed his 2002 Toyota Corolla a write-off. He states he may have lost consciousness but he is able to recall some aspects of the collision. In particular, he remembers his head was turned to the left while attempting to make a right hand turn. He vaguely recalls the EMS team asking if he was ok while he was laying on a backboard. He reports his headrest was probably a bit lower than it should have been.

John reports that he is, for the most part, healthy. He regularly visits the gym 3-4 times per week for weight-training and general fitness. He played high-school football and enjoys motor-cross for recreation. He reports having had a few 'zingers' during high-school football and has fractured his collar-bone (x3) falling from his motorbike. He reports recurrent bouts of neck and headache pain in the past that he attributes to his previous athletic endeavors and his current status as a PhD student where he spends 'a lot' of time in front of a computer. He frequently visits a chiropractor and massage therapist for occasional 'tune-ups', which seem to provide some, albeit temporary, relief.

John presents to your clinic on the referral from his primary care physician (a previous patient of yours) with left-sided neck pain that radiates and affects the back of his head (right and left sides). He states his vision appears 'off' and this has affected his reading of papers and working on his computer, stating his eyes become 'fatigued' quickly after he starts reading. This also tends to increase his headache that he rates as a 4/10 while reading and an 8/10 when moving his neck. He describes difficulty driving since the event and he informs that it is difficult to concentrate when attending to his peripheral vision. He denies numbness/tingling into his upper or lower extremities.

ASSESSMENT FINDINGS

Initial tools:

NRS for headache: 8/10 at worst, 3/10 at best, 4/10 currently

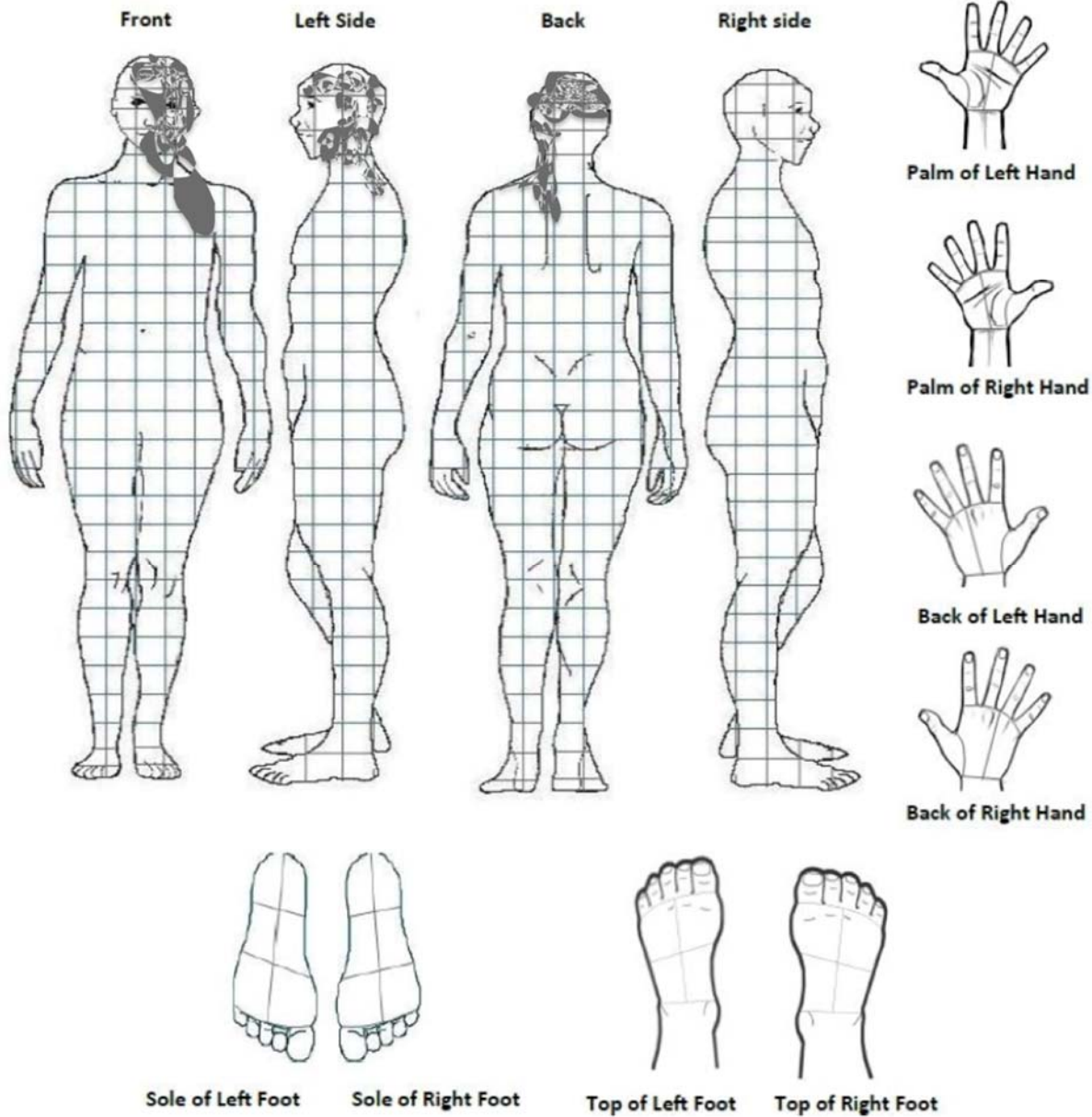
NRS for neck pain: 7/10 at worst, 3/10 at best, 4/10 currently

NDI: 16/50

BIPQ:

11. Negative effect	2
12. Expected duration	4
13. Control	8
14. Belief in treatment	3
15. Number of symptoms	5
16. Severity of symptoms	8
17. Concern	6
18. Understanding	5
19. Fragility	8
20. Emotional effect	5

Body diagram:



Additional tests:

Pressure Pain Detection Threshold:

kgf	Test 1	Test 2	Mean	Quartile
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R UFT	2.14	2.16	2.15	1 st
L UFT	2.12	2.10	2.11	2 nd
R Tib Ant	6.7	6.9	6.8	3 rd
L Tib Ant	7.15	7.12	7.14	3 rd

Cold pressor / Conditioned pain modulation:

Endurance: 50 seconds

Post-immersion PPDT (R UFT): 2.6 kgf

Alar Ligament test – increases dizziness/headache – but inconclusive

VBI test - inconclusive

Oculomotor tests

- 1) Near point convergence (NPC) insufficiency with headache (symptom provocation and NPC distance (measured as average of three trials) – 10 cm (Normal= ≤ 5 cm)
- 2) Smooth Pursuit increases dizziness/unsteadiness
- 3) + Cover/Uncover test with exophoria

Range of motion:

	Flexion	Extension	R SF	L SF	R rot	L rot
Range	50%	20%	50%	10%	60%	20%
Response	Post. Pulling and increased dizziness	L > R post. Pain and increased headache/dizziness	L. post. Pain/pull	L. post. pain	B. post. pain	B. post pain

Cognitions and Affect:

TIDS:

	Score	Relevant cut score
Uncontrolled pain	3	High (>4)
Negative 24affect	4	Mod (2-5)
Intrusion/Hyperarousal	3	Low (<2)

IES: 26/88 (cut scores are 24, 33 and 37)

Indicates he is very angry towards the bullet driver, feels as though he has been unfairly victimized

Neuropathic:

SLANSS: 4/24

Social:

0 children

Lives with girlfriend and reports a great relationship

Reports a good relationship with his family doctor

Indicates that so far relationship with insurance company has not gone smoothly

Is currently considering litigation

