Supplementary Online Content

Supplementary Figure 1. Patient flow diagram.
Supplementary Figure 2. Annual admissions of acute electrical injuries at the *Ross Tilley Burn Centre*, Toronto, Canada.
Supplementary Figure 3. Kaplan-Meier Survival Curve**.**
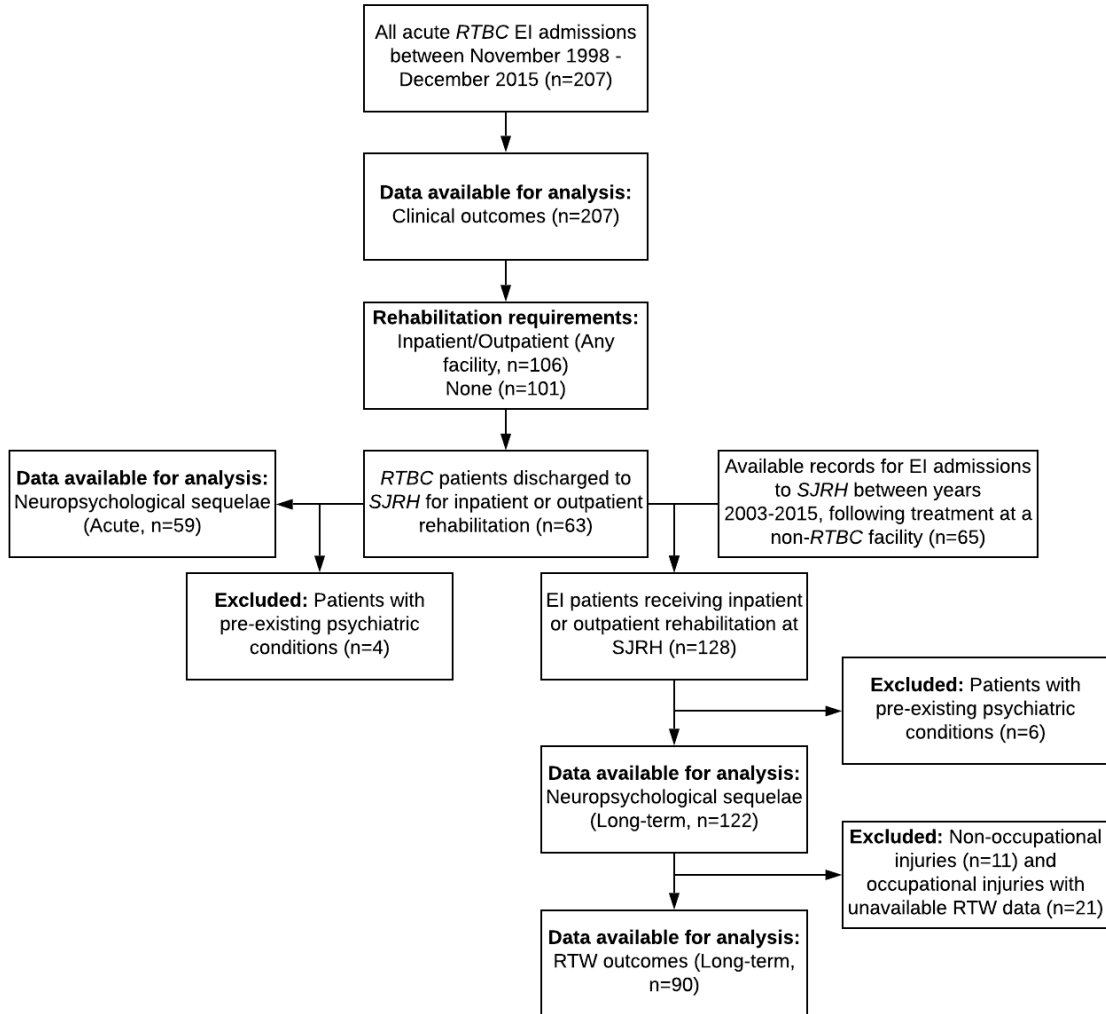**Supplementary Figure 4.** Rates of psychiatric diagnoses among the long-term cohort.
Supplementary Table 1. Demographics and injury characteristics of patients treated acutely at the burn centre.
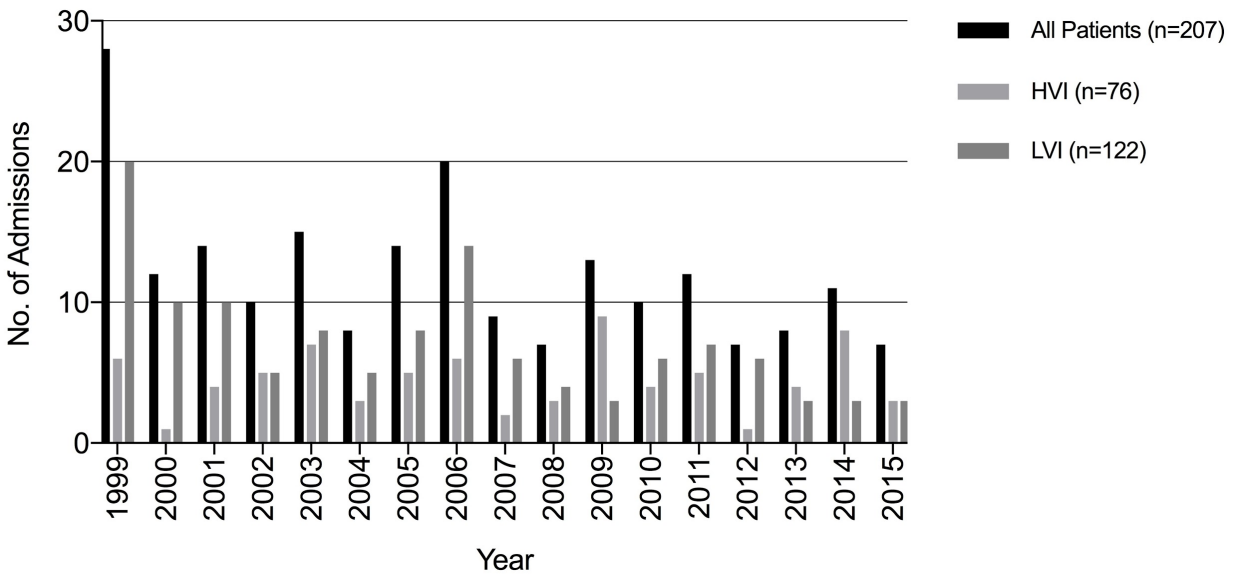**Supplementary Table 2.** Demographics and injury characteristics of the long-term cohort.
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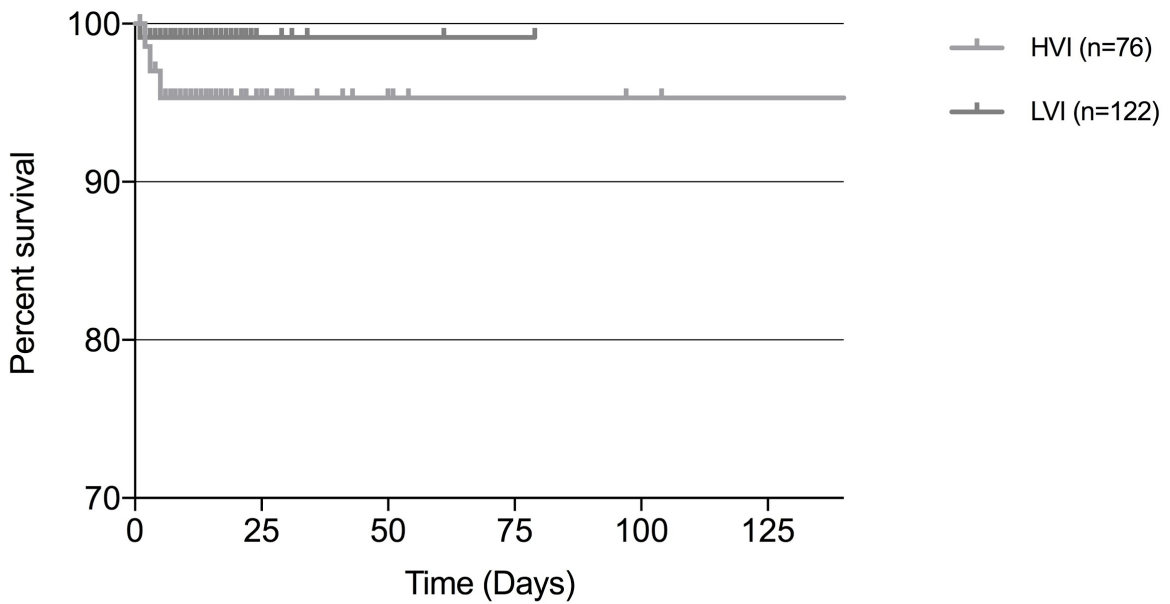
Supplementary Figure 1. Patient Flow Diagram. Abbreviations: RTBC, Ross Tilley Burn Centre; SJRH, St. John's Rehabilitation Hospital; RTW, return-to-work.

All acute *RTBC* EI admissions between November 1998 - December 2015 (n=207)

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Data available for analysis: Clinical outcomes (n=207)

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Rehabilitation requirements: Inpatient/Outpatient (Any facility, n=106) None (n=101)

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Data available for analysis: Neuropsychological sequelae (Acute, n=59) ← *RTBC* patients discharged to *SJRH* for inpatient or outpatient rehabilitation (n=63)

Available records for EI admissions to *SJRH* between years 2003-2015, following treatment at a non-*RTBC* facility (n=65)

Excluded: Patients with pre-existing psychiatric conditions (n=4)

EI patients receiving inpatient or outpatient rehabilitation at SJRH (n=128)

→ **Excluded:** Patients with pre-existing psychiatric conditions (n=6)

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Data available for analysis: Neuropsychological sequelae (Long-term, n=122)

→ **Excluded:** Non-occupational injuries (n=11) and occupational injuries with unavailable RTW data (n=21)

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Data available for analysis: RTW outcomes (Long-term, n=90)

Supplementary Figure 2. Annual admissions of acute electrical injuries at the *Ross Tilley Burn Centre*, Toronto, Canada. A total of 9 admissions were of unknown voltage. Abbreviations: HVI, high-voltage injury; LVI, low-voltage injury.
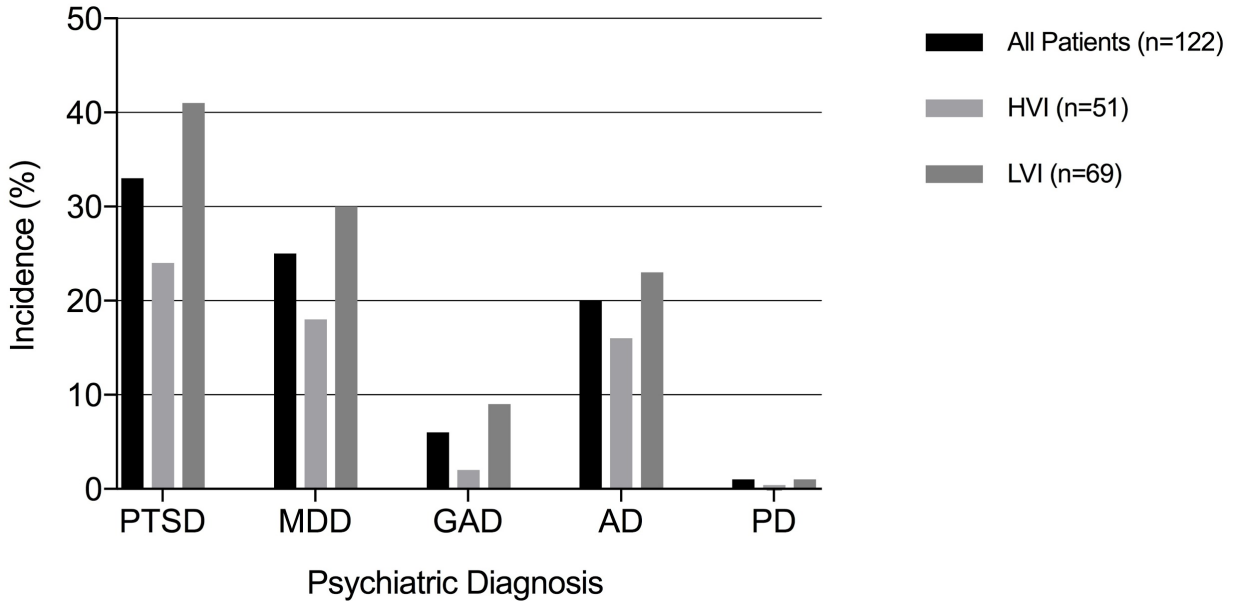

Supplementary Figure 3. Kaplan-Meier Survival Curve. Abbreviations: HVI, high-voltage injury; LVI, low-voltage injury;

No. at risk

HVI:	76	18	7	3	2	1
LVI:	117	5	2	1	0	0

Supplementary Figure 4. Rates of psychiatric diagnoses among the long-term cohort.

Abbreviations: HVI, high-voltage injury; LVI, low-voltage injury; PTSD, post-traumatic stress disorder; MDD, major depressive disorder; GAD, generalized anxiety disorder; AD, adjustment disorder; PD, panic disorder.

Supplementary Table 1. Demographics and injury characteristics of patients treated acutely at the burn centre.

	All Patients[a]	HVI	LVI	*P*
No. of patients	207	76	122	
Age, years, mean (SD)	41 (13)	40 (14)	41 (13)	0.64
Male, no. (%)	198 (96)	72 (95)	117 (96)	0.74
Inhalation injury, no. (%)	4 (2)	1 (1)	3 (2)	>.99
Work-Related, no. (%)	171 (83)	57 (75)	107 (88)	.03
Classification, no. (%)				
Contact	67 (32)	11 (14)	18 (15)	>.99
Flash	115 (56)	10 (13)	101 (83)	<.001
Contact and Flash	15 (7)	46 (61)	3 (2)	<.001
Lightning	4 (2)	4 (5)	0 (0)	.02
Unspecified	6 (3)	5 (7)	0 (0)	.008

Abbreviations: HVI, high-voltage injury; LVI, low-voltage injury; TBSA, total body surface area.
[a] Includes patients whose voltage was not otherwise specified (n=9).

Supplementary Table 2. Demographics and injury characteristics of the long-term cohort.

	All Patients[a]	HVI	LVI	*P*
No. of patients	122	51	69	
Work-Related, no. (%)	111 (91)	47 (92)	62 (90)	>.99
Available RTW data, no. (%)	90 (81)	39 (83)	49 (79)	.54
Pre-Injury Occupation, no. (%)				
Electrician	26 (29)	6 (15)	19 (39)	.02
Mechanic	3 (3)	0 (0)	3 (6)	.25
Maintenance Worker	4 (4)	0 (0)	4 (8)	.13
Powerline Technician	13 (14)	13 (33)	0 (0)	<.001
Construction Worker	4 (4)	4 (10)	0 (0)	.04
Self-Employed	2 (2)	2 (5)	0 (0)	.19
Truck Driver	3 (3)	3 (8)	0 (0)	.08
Other	29 (32)	8 (21)	21 (43)	.04
Unknown	6 (7)	3 (8)	2 (4)	.65

Abbreviations: HVI, high-voltage injury; LVI, low-voltage injury; RTW, return-to-work.
Analysis excludes patients with documented pre-existing psychiatric conditions.
[a] Includes patients whose voltage was not otherwise specified (n=2).

Supplementary Table 3. Time to diagnosis (from day of injury) of psychiatric conditions during the long-term period of treatment.

	All Patients	HVI	LVI	*P*
All Conditions (n=101), days, median (IQR)[a,b]	315 (117-957)	384 (161-1461)	272 (114-904)	.20
PTSD (n=40), days, median (IQR)	263 (78-937)	325 (153-1495)	253 (75-843)	.41
MDD (n=30), days, median (IQR)	531 (213-1061)	684 (265-1897)	402 (151-1013)	.33
GAD (n=7), days, median (IQR)	402 (261-1060)	-	374 (252-891)	-
Adjustment Disorder (n=23), days, median (IQR)[b]	177 (88-771)	177 (63-1042)	177 (99-358)	.82
Panic Disorder (n=1), days, median (IQR)	-	-	-	-

Abbreviations: HVI, high-voltage injury; LVI, low-voltage injury; PTSD, post-traumatic stress disorder; MDD, major depressive disorder; GAD, generalized anxiety disorder.
Analysis excludes patients with documented pre-existing psychiatric conditions.
[a] Conditions include PTSD, MDD, GAD, adjustment disorder and panic disorder.
[b] Patients without documented diagnoses dates were excluded from analysis (n=1).

Supplementary Table 4. Rates of neuropsychological symptoms in patients formally diagnosed with a psychiatric condition in the long-term cohort.

	PTSD	MDD	GAD	Adjustment Disorder	Panic Disorder
No. of patients	40	30	7	24	1
Depressed Mood, no. (%)	34 (85)	29 (97)	7 (100)	24 (100)	1 (100)
Anxiety, no. (%)	38 (95)	28 (93)	7 (100)	21 (88)	1 (100)
Flashbacks, no. (%)	23 (58)	13 (43)	2 (29)	13 (54)	1 (100)
Avoidance, no. (%)	17 (43)	15 (50)	4 (57)	10 (42)	1 (100)
Hypervigilance, no. (%)	8 (20)	9 (30)	1 (14)	2 (8)	0 (0)
Hyperarousal, no. (%)	13 (33)	8 (27)	1 (14)	5 (21)	1 (100)
Nightmares, no. (%)	21 (53)	16 (53)	6 (86)	14 (58)	0 (0)
Sleep Difficulties, no. (%)	37 (93)	28 (93)	7 (100)	22 (92)	1 (100)
Social Withdrawal, no. (%)	10 (25)	8 (27)	2 (29)	4 (17)	0 (0)
Suicidal Ideations, no. (%)	18 (45)	15 (50)	4 (57)	9 (38)	1 (100)
Memory/Concentration Difficulties, no. (%)	33 (83)	29 (97)	7 (100)	21 (88)	1 (100)
Dizziness, no. (%)	7 (18)	7 (23)	2 (29)	7 (29)	0 (0)
Headaches, no. (%)	19 (48)	15 (50)	4 (57)	17 (71)	0 (0)
Phantom Limb Pain, no. (%)	2 (5)	2 (7)	1 (14)	1 (4)	0 (0)
Chronic Pain, no. (%)	24 (60)	23 (77)	3 (43)	16 (67)	0 (0)

Abbreviations: PTSD, post-traumatic stress disorder; MDD, major depressive disorder; GAD, generalized anxiety disorder.
Analysis excludes patients with documented pre-existing psychiatric conditions.