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# The EMMETT Technique in Action

## Cairns to Karumba Bike Ride

24 - 30 June 2017

The Cairns to Karumba Fundraising Bike Ride is an annual event that has been run over the past 22 years and was held again in 2017. This epic bike ride was supported by five EMMETT Therapists, Rusty Allen, Heather Clapham, Megan McQuillan, Jane Yeates and Fiona Phillips-Turner, who provided support to riders and volunteers over the seven-day event.

This year, 106 road riders, 73 dirt riders, 24 support personnel, 64 volunteers and 11 children took part in the 780 km ride.

In addition to offering daily EMMETT Therapy to participants, the EMMETT Therapists gathered valuable information on the benefits of EMMETT to long-distance bike riders. As can be seen from the data collected, there were a number of riders who were in considerable pain and discomfort prior to and during the event. However, all riders completed the event, with many attributing this to the regular access they had to the EMMETT Therapists, helping to restore their bodies to a comfortable state following a gruelling day in the saddle.

### Data Collection

The data gathered from this ride was from 105 individuals who received a total of 922 EMMETT sessions across 15 body locations.

Individuals seeking treatment were asked to fill out a form to rate each area where they were having pain. Fifteen conditions were recorded in this study. Each condition was given a pain rating from 0 to 10, with a 0 rating being 'No Pain'; and 10, the 'Worst Pain Possible'. Following the treatment session, the individual was asked to again rate each area they had previously identified on the pain scale. These ratings were recorded on individual sheets. Treatments were typically 2-10 minutes in duration.

### Data Analysis

Data was analysed using the statistical programs SAS Studio and JASP. All data analysed showed a statistically significant reduction in pain scale scores following an EMMETT Therapy intervention. Analysis of the overall data is provided below. Graphs from a number of individual body locations illustrate the consistent and significant reduction in pain that participants experienced following an EMMETT session.

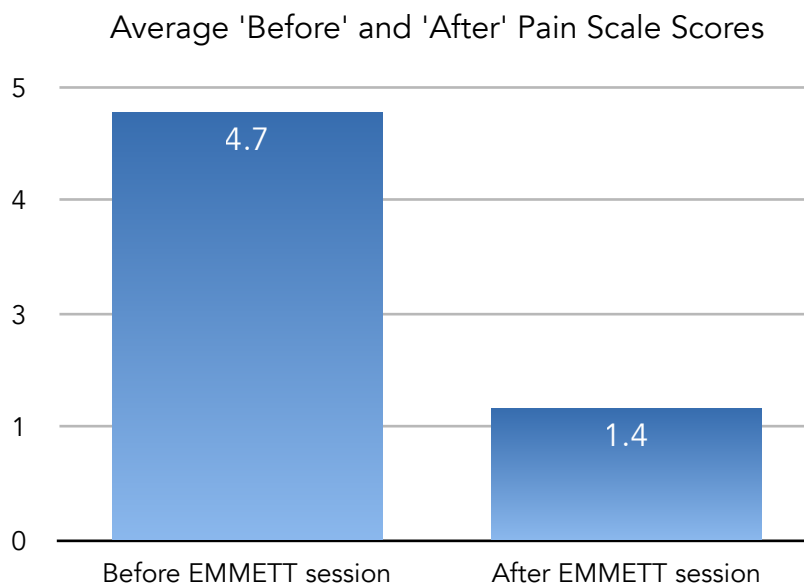
Twenty-one data sheets (2.3%) were incomplete, with either no pain scale scores being recorded, or only a before-score being provided with no after-score for comparison. These data sets were not included in the analysis.

The results of the analysis of EMMETT sessions conducted at this event are consistent with previous bike riding events conducted in Far North Queensland, Australia.

Analysis of the complete set of data using a Paired Sample T-Test, comparing 'before' scores with 'after' scores, resulted in a p-value indicating a statistically significant reduction of pain ( $p < 0.001$ ).

The statistical prediction of the likelihood a change would occur is reported using a Cohen's d score. The scale of Cohen's d effect size is a positive number from 0 and above. A result of 0.2 indicates a small effect and a score of 0.8 would be considered a large effect size. Significantly, analysis of the data collected resulted in a Cohen's d of 2.02, suggesting that the likelihood of change after an EMMETT session is 'very large'.

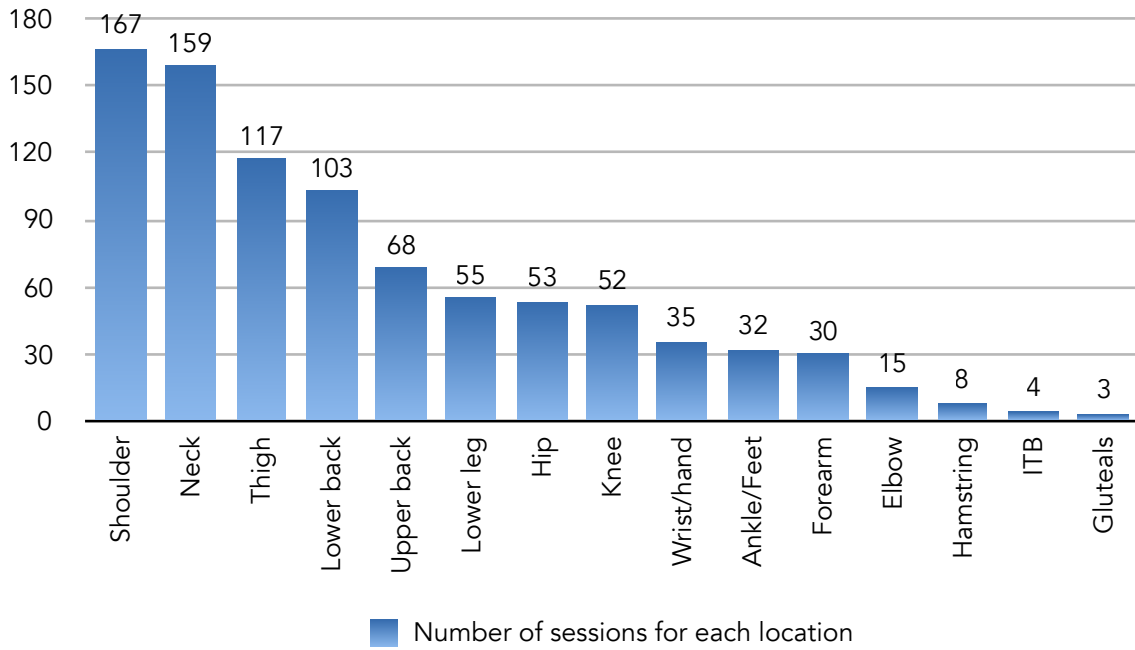
The graphic below displays the average 'before EMMETT' and 'after EMMETT' pain scale scores from all participants.



## Frequency of Location

Riders identified 15 areas of the body where pain and discomfort was experienced. The pain area most frequently identified was the shoulder, with 167 sessions (18%) provided, and the least frequent location was the gluteals, with only three sessions requested (0.3%). Body location and session frequency is presented in the graph and table below.

### Frequency of Locations



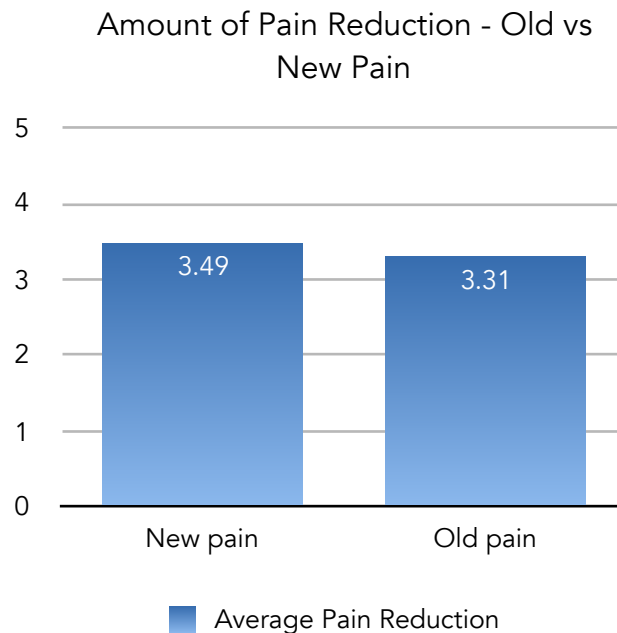
### Frequency of Locations

Location	Frequency	Percentage
Shoulder	167	18.1%
Neck	159	17.2%
Thigh	117	12.7%
Lower back	103	11.2%
Upper back	68	7.4%
Lower leg	55	6.0%
Hip	53	5.7%
Knee	52	5.6%
Wrist/hand	35	3.8%
Ankle/Feet	32	3.5%
Forearm	30	3.3%
Elbow	15	1.6%
Hamstring	8	0.9%
ITB	4	0.4%
Gluteals	3	0.3%
Incomplete data	21	2.3%
<b>Total</b>	<b>922</b>	<b>100.0%</b>

## Old vs New pain scores

Differences in reduction of pain between old and new pain was explored, to see if pre-existing injuries responded as well to EMMETT treatment as new injuries.

The following graph illustrates that the difference between the reduction of pain in areas of old or new pain was minimal. 'Before' scores were subtracted from 'after' scores to give the amount of pain reduction. For example, if the 'before' score was 6 and the 'after' score was 2, then pain was reduced by 4 points (N=441).



No statistically significant difference was found in the reduction of pain between existing and new injuries ( $p$ -value = 0.261); indicating that EMMETT treatment achieved similar results with both new and existing injuries.

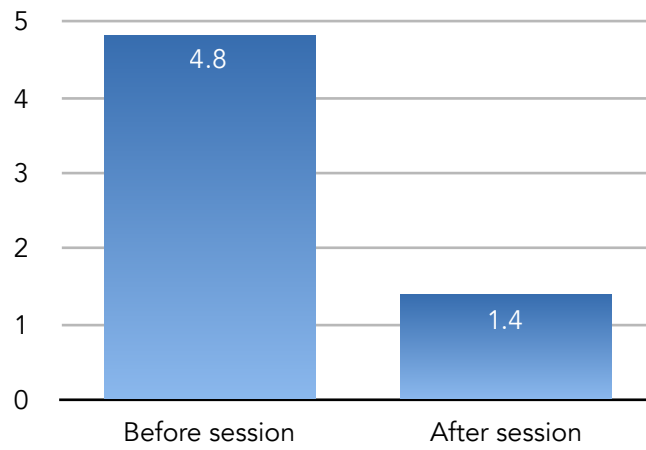
## Individual Body Locations

Graphs of the five most frequently treated body locations are presented below to illustrate the reduction of pain and discomfort for riders following an EMMETT session. All show statistically significant reductions in pain scale scores.

### Shoulder

Shoulder pain was the most frequently treated area during this event; 167 times, or nearly 1 in every 5 EMMETT sessions. The average reduction of pain from these sessions can be seen in the graph below.

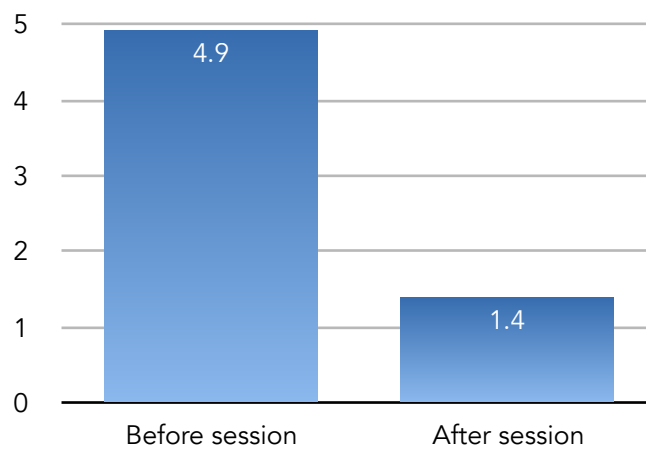
Shoulder - Average Pain Scale Scores



**Neck**

The neck was the second most frequent area treated. One hundred and fifty nine sessions (17.2% of all sessions) were for the neck area.

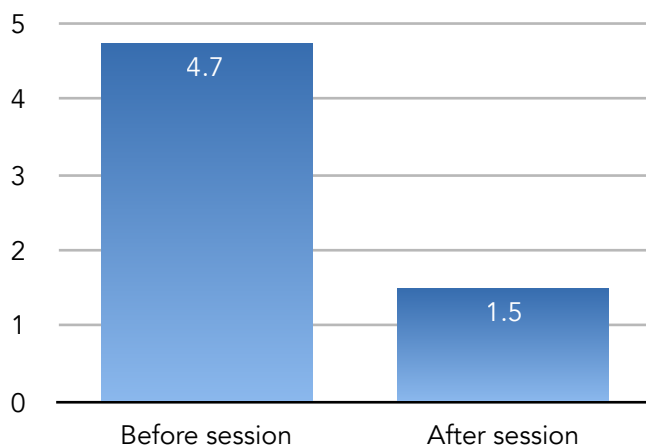
Neck - Average Pain Scale Scores



**Thigh**

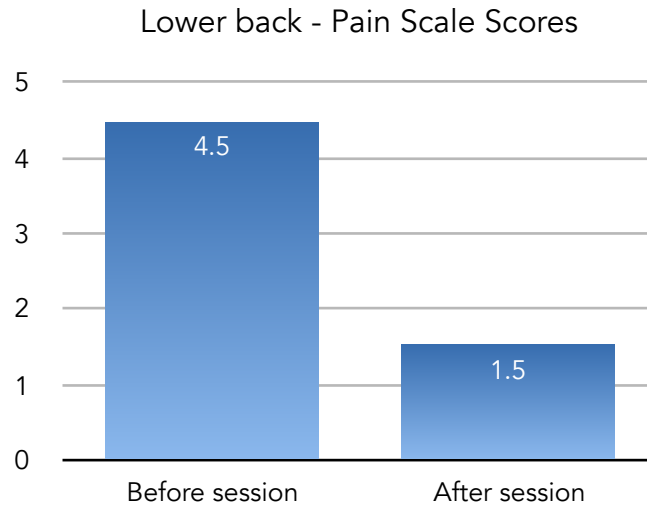
One hundred and seventeen EMMETT sessions were conducted on thighs (12.7% of all sessions).

Thigh - Average Pain Scale Scores



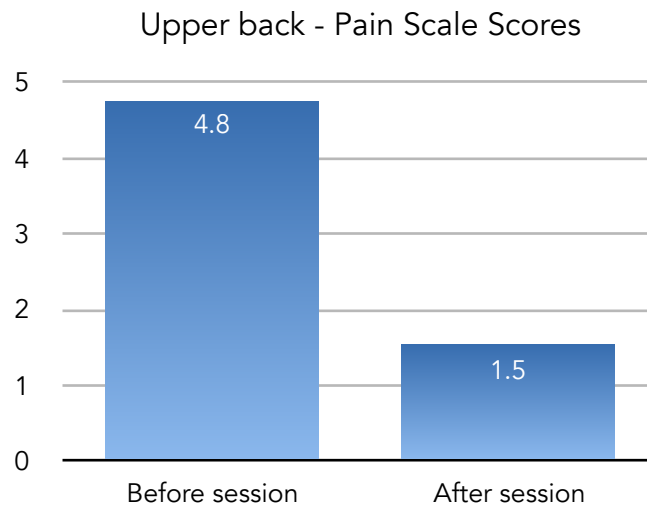
### Lower Back

One hundred and three sessions (11.2% of sessions) were provided to the lower back region.



### Upper Back

There were 68 sessions (7.4%) for upper back pain over the seven-day event.



## Individual Rider Results

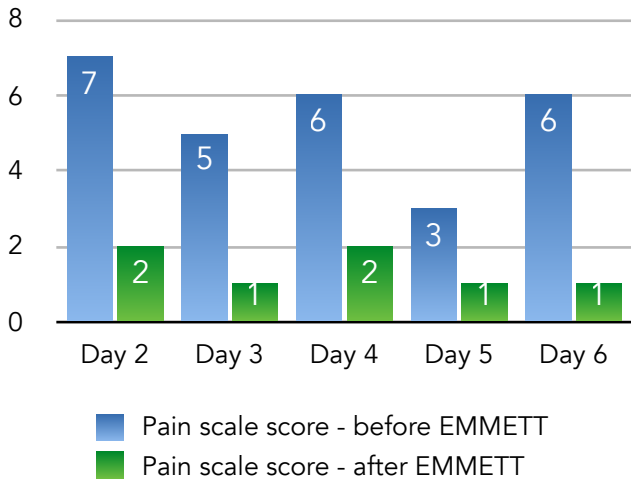
To highlight the importance of EMMETT sessions to riders over the seven-day event, data from the two riders who received the highest number of sessions was analysed. These riders had pain scale scores of 7 and 8 before EMMETT sessions. Pain scores of 7 and 8 fall in the 'very severe' range and would have greatly impeded the individual's riding performance, endurance and ability to complete the ride.

However, after EMMETT intervention, both riders were able to finish the event as their pain levels were reduced to comfortable daily scores ranging from 0 to 2, which is in nil-to-mild pain range.

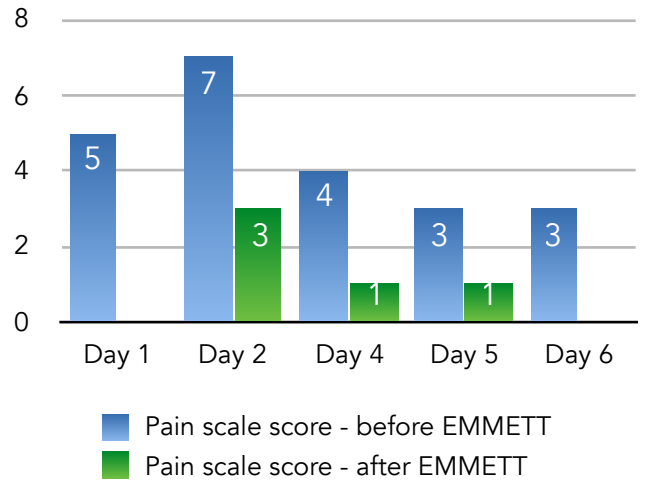
### Rider 1

Rider 1 received 23 EMMETT sessions over the first six days of the event. The graphs below show the six body locations that received treatment.

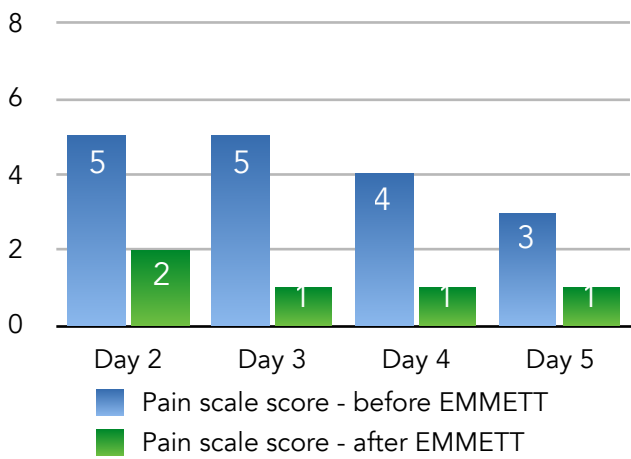
### Hip



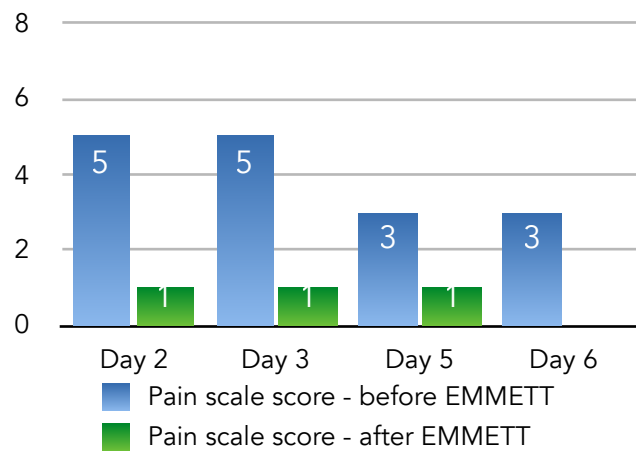
### Lower Back



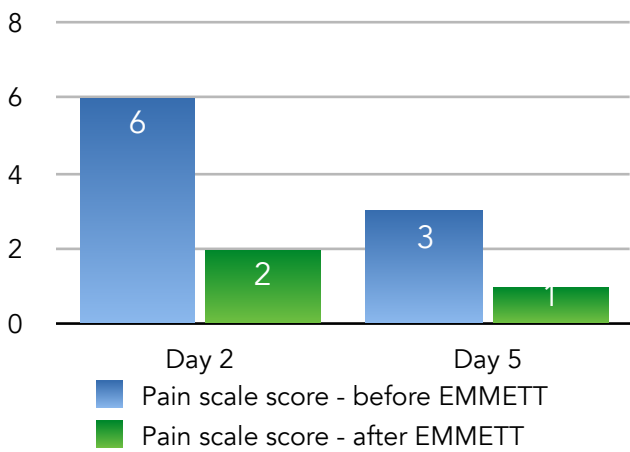
### Shoulder



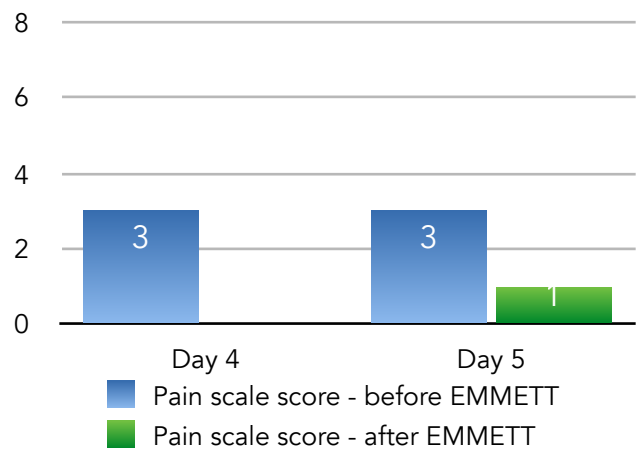
### Thigh



### Upper Back

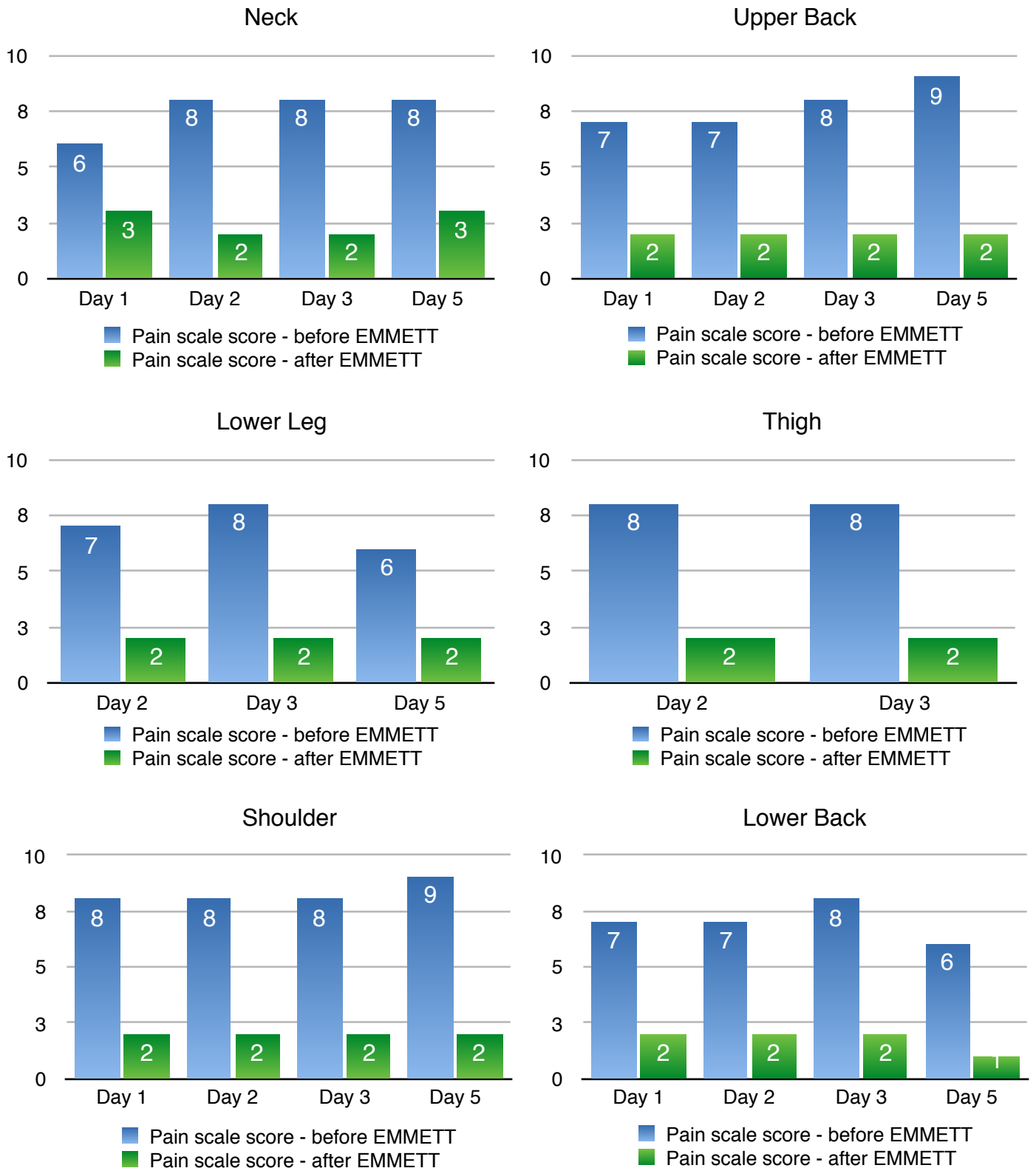


### Wrist/Hand



## Rider 2

Rider 2 received 25 EMMETT sessions over days 1, 2, 3 and 5; with treatment to shoulder, neck, upper back and lower back areas performed on each occasion.



Research compiled by:

Greg Wills BAppSci (OT) MHSci

on behalf of Emmett Therapies HQ (© 2018 Emetros Pty Ltd)

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