BURST Statistical Mock-up Report

Inge Christoffer Olsen, PhD

20 July, 2023

Table of Contents

# Introduction

This is the report for the first interim analysis of the BURST trial. The data are based on an export from the Viedoc electronic data capture at 2023-07-04 system time stamped “\_20230704\_090943”.

While the results are based on real data, the treatment allocation has been drawn randomly for this report. Thus, this is a mock-up report intended to show how the final report will look like, without showing the actual results of the trial and the treatment differences.

There were 13 included patients of which 10 are included in the full analysis set.

# Demographics

## All randomised

| All randomised | |
| --- | --- |
| Demographics and baseline characteristics | |
|  | all obs |
|  | (N=13) |
| Site name |  |
| Akademiska | 6 (46.15%) |
| OUS | 7 (53.85%) |
| Gender |  |
| Male | 3 (23.08%) |
| Female | 10 (76.92%) |
| Age (years) |  |
| n | 13 |
| Mean (sd) | 52.90 (6.91) |
| IQR | 7.50 |
| min - max | 38.90 - 66.70 |
| Marital status |  |
| Married | 5 (38.46%) |
| Single | 1 (7.69%) |
| Divorsed | 1 (7.69%) |
| Cohabitant | 5 (38.46%) |
| Partner | 1 (7.69%) |
| Number of children |  |
| n | 13 |
| Mean (sd) | 1.54 (1.05) |
| IQR | 1.00 |
| min - max | 0.00 - 4.00 |
| Working? |  |
| Yes | 8 (61.54%) |
| No | 5 (38.46%) |
| Working hours per week |  |
| n | 8 |
| Mean (sd) | 31.62 (14.48) |
| IQR | 8.75 |
| min - max | 0.00 - 40.00 |
| Years not working |  |
| n | 5 |
| Mean (sd) | 1.80 (0.84) |
| IQR | 1.00 |
| min - max | 1.00 - 3.00 |
| Type of governmental support |  |
| Alderstrygd, førtidspensjon (AFP) eller etterlattepensjon | 0 (0.00%) |
| Sykepenger helt (er helt sykmeldt) | 1 (7.69%) |
| Sykepenger delvis (er delvis sykmeldt) | 1 (7.69%) |
| Arbeidsavklaringspenger (AAP) | 4 (30.77%) |
| Uføreytelse/pensjon, hel | 1 (7.69%) |
| Uføreytelse/pensjon, delvis | 1 (7.69%) |
| Mottar ingen stønad, får lønn fra arbeidsgiver | 5 (38.46%) |
| PCS Total score |  |
| n | 13 |
| Mean (sd) | 18.54 (6.89) |
| IQR | 12.00 |
| min - max | 8.00 - 28.00 |
| PCS Rumination |  |
| n | 13 |
| Mean (sd) | 7.85 (3.26) |
| IQR | 4.00 |
| min - max | 3.00 - 14.00 |
| PCS Magnification |  |
| n | 13 |
| Mean (sd) | 2.54 (1.66) |
| IQR | 3.00 |
| min - max | 0.00 - 5.00 |
| PCS Helplessness |  |
| n | 13 |
| Mean (sd) | 8.15 (3.34) |
| IQR | 5.00 |
| min - max | 4.00 - 14.00 |
| Treatment for neuropatic pain? |  |
| No | 8 (61.54%) |
| Yes | 5 (38.46%) |
| Amitriptyline |  |
| No | 11 (84.62%) |
| Yes | 2 (15.38%) |
| Gabapentin |  |
| No | 10 (76.92%) |
| Yes | 3 (23.08%) |
| Pregabalin |  |
| No | 11 (84.62%) |
| Yes | 2 (15.38%) |
| Duloxetine |  |
| No | 13 (100.00%) |
| Treatment with other non-opoids? |  |
| No | 3 (23.08%) |
| Yes | 10 (76.92%) |
| Paracetamol |  |
| No | 5 (38.46%) |
| Yes | 8 (61.54%) |
| NSAIDs |  |
| No | 9 (69.23%) |
| Yes | 4 (30.77%) |
| Antidepressiva |  |
| No | 13 (100.00%) |
| Treatmetn with opoids? |  |
| No | 8 (61.54%) |
| Yes | 5 (38.46%) |
| Total daily morphine milligram equivalents |  |
| n | 5 |
| Mean (sd) | 18.50 (9.97) |
| IQR | 17.00 |
| min - max | 7.50 - 30.00 |
| Previous physiotherapy? |  |
| Yes | 13 (100.00%) |
| Previous chiropractor? |  |
| No | 6 (46.15%) |
| Yes | 7 (53.85%) |
| Previous psychologist? |  |
| No | 11 (84.62%) |
| Yes | 2 (15.38%) |
| Previous TENS? |  |
| No | 3 (23.08%) |
| Yes | 10 (76.92%) |
| Other previous treatment? |  |
| No | 10 (76.92%) |
| Yes | 3 (23.08%) |
| Other previous treatment, specify |  |
| Dry needling, Blockad SI-led och rotblockad. | 1 |
| epidural injeksjon, iv infusjon lidokain, ketamin | 1 |
| Specialdiet via dietist, rotblockader x 2, ryggkirurgi, värmebad. | 1 |
| Current physiotherapy? |  |
| No | 9 (69.23%) |
| Yes | 4 (30.77%) |
| Current chiropractor? |  |
| No | 13 (100.00%) |
| Current psychologist? |  |
| No | 13 (100.00%) |
| Current TENS |  |
| No | 9 (69.23%) |
| Yes | 4 (30.77%) |
| Other current treatment? |  |
| No | 12 (92.31%) |
| Yes | 1 (7.69%) |
| Other current treatment, specify |  |
| Följer sjukgymnast-program hemma. | 1 |
| Current back pain? |  |
| No | 3 (23.08%) |
| Yes | 10 (76.92%) |
| Duration of pain (years) |  |
| n | 13 |
| Mean (sd) | 6.91 (9.90) |
| IQR | 8.30 |
| min - max | 0.40 - 36.00 |
| Duration of current pain level (years) |  |
| n | 13 |
| Mean (sd) | 2.63 (3.51) |
| IQR | 1.75 |
| min - max | 0.25 - 10.00 |

## Excluded from FAS

| Excluded from Full Analysis Set | |
| --- | --- |
| Demographics and baseline characteristics | |
|  | all obs |
|  | (N=3) |
| Site name |  |
| Akademiska | 2 (66.67%) |
| OUS | 1 (33.33%) |
| Gender |  |
| Male | 0 (0.00%) |
| Female | 3 (100.00%) |
| Age (years) |  |
| n | 3 |
| Mean (sd) | 54.40 (4.51) |
| IQR | 4.05 |
| min - max | 49.20 - 57.30 |
| Marital status |  |
| Married | 0 (0.00%) |
| Single | 0 (0.00%) |
| Divorsed | 1 (33.33%) |
| Cohabitant | 2 (66.67%) |
| Partner | 0 (0.00%) |
| Number of children |  |
| n | 3 |
| Mean (sd) | 0.67 (0.58) |
| IQR | 0.50 |
| min - max | 0.00 - 1.00 |
| Working? |  |
| Yes | 2 (66.67%) |
| No | 1 (33.33%) |
| Working hours per week |  |
| n | 2 |
| Mean (sd) | 40.00 (0.00) |
| IQR | 0.00 |
| min - max | 40.00 - 40.00 |
| Years not working |  |
| n | 1 |
| Mean (sd) | 1.00 (NA) |
| IQR | 0.00 |
| min - max | 1.00 - 1.00 |
| Type of governmental support |  |
| Alderstrygd, førtidspensjon (AFP) eller etterlattepensjon | 0 (0.00%) |
| Sykepenger helt (er helt sykmeldt) | 0 (0.00%) |
| Sykepenger delvis (er delvis sykmeldt) | 1 (33.33%) |
| Arbeidsavklaringspenger (AAP) | 1 (33.33%) |
| Uføreytelse/pensjon, hel | 0 (0.00%) |
| Uføreytelse/pensjon, delvis | 0 (0.00%) |
| Mottar ingen stønad, får lønn fra arbeidsgiver | 1 (33.33%) |
| PCS Total score |  |
| n | 3 |
| Mean (sd) | 24.33 (3.06) |
| IQR | 3.00 |
| min - max | 21.00 - 27.00 |
| PCS Rumination |  |
| n | 3 |
| Mean (sd) | 9.67 (1.53) |
| IQR | 1.50 |
| min - max | 8.00 - 11.00 |
| PCS Magnification |  |
| n | 3 |
| Mean (sd) | 4.00 (1.00) |
| IQR | 1.00 |
| min - max | 3.00 - 5.00 |
| PCS Helplessness |  |
| n | 3 |
| Mean (sd) | 10.67 (3.21) |
| IQR | 3.00 |
| min - max | 7.00 - 13.00 |
| Treatment for neuropatic pain? |  |
| No | 2 (66.67%) |
| Yes | 1 (33.33%) |
| Amitriptyline |  |
| No | 3 (100.00%) |
| Yes | 0 (0.00%) |
| Gabapentin |  |
| No | 2 (66.67%) |
| Yes | 1 (33.33%) |
| Pregabalin |  |
| No | 3 (100.00%) |
| Yes | 0 (0.00%) |
| Duloxetine |  |
| No | 3 (100.00%) |
| Treatment with other non-opoids? |  |
| No | 0 (0.00%) |
| Yes | 3 (100.00%) |
| Paracetamol |  |
| No | 0 (0.00%) |
| Yes | 3 (100.00%) |
| NSAIDs |  |
| No | 2 (66.67%) |
| Yes | 1 (33.33%) |
| Antidepressiva |  |
| No | 3 (100.00%) |
| Treatmetn with opoids? |  |
| No | 1 (33.33%) |
| Yes | 2 (66.67%) |
| Total daily morphine milligram equivalents |  |
| n | 2 |
| Mean (sd) | 8.75 (1.77) |
| IQR | 1.25 |
| min - max | 7.50 - 10.00 |
| Previous physiotherapy? |  |
| Yes | 3 (100.00%) |
| Previous chiropractor? |  |
| No | 2 (66.67%) |
| Yes | 1 (33.33%) |
| Previous psychologist? |  |
| No | 3 (100.00%) |
| Yes | 0 (0.00%) |
| Previous TENS? |  |
| No | 1 (33.33%) |
| Yes | 2 (66.67%) |
| Other previous treatment? |  |
| No | 3 (100.00%) |
| Yes | 0 (0.00%) |
| Other previous treatment, specify |  |
| s\_summary |  |
| Current physiotherapy? |  |
| No | 1 (33.33%) |
| Yes | 2 (66.67%) |
| Current chiropractor? |  |
| No | 3 (100.00%) |
| Current psychologist? |  |
| No | 3 (100.00%) |
| Current TENS |  |
| No | 3 (100.00%) |
| Yes | 0 (0.00%) |
| Other current treatment? |  |
| No | 3 (100.00%) |
| Yes | 0 (0.00%) |
| Other current treatment, specify |  |
| s\_summary |  |
| Current back pain? |  |
| No | 0 (0.00%) |
| Yes | 3 (100.00%) |
| Duration of pain (years) |  |
| n | 3 |
| Mean (sd) | 0.97 (0.55) |
| IQR | 0.55 |
| min - max | 0.40 - 1.50 |
| Duration of current pain level (years) |  |
| n | 3 |
| Mean (sd) | 0.53 (0.41) |
| IQR | 0.38 |
| min - max | 0.25 - 1.00 |

## Full analysis set

| Full analysis set | |
| --- | --- |
| Demographics and baseline characteristics | |
|  | all obs |
|  | (N=10) |
| Site name |  |
| Akademiska | 4 (40.00%) |
| OUS | 6 (60.00%) |
| Gender |  |
| Male | 3 (30.00%) |
| Female | 7 (70.00%) |
| Age (years) |  |
| n | 10 |
| Mean (sd) | 52.45 (7.63) |
| IQR | 7.27 |
| min - max | 38.90 - 66.70 |
| Marital status |  |
| Married | 5 (50.00%) |
| Single | 1 (10.00%) |
| Divorsed | 0 (0.00%) |
| Cohabitant | 3 (30.00%) |
| Partner | 1 (10.00%) |
| Number of children |  |
| n | 10 |
| Mean (sd) | 1.80 (1.03) |
| IQR | 0.75 |
| min - max | 0.00 - 4.00 |
| Working? |  |
| Yes | 6 (60.00%) |
| No | 4 (40.00%) |
| Working hours per week |  |
| n | 6 |
| Mean (sd) | 28.83 (16.01) |
| IQR | 15.75 |
| min - max | 0.00 - 40.00 |
| Years not working |  |
| n | 4 |
| Mean (sd) | 2.00 (0.82) |
| IQR | 0.50 |
| min - max | 1.00 - 3.00 |
| Type of governmental support |  |
| Alderstrygd, førtidspensjon (AFP) eller etterlattepensjon | 0 (0.00%) |
| Sykepenger helt (er helt sykmeldt) | 1 (10.00%) |
| Sykepenger delvis (er delvis sykmeldt) | 0 (0.00%) |
| Arbeidsavklaringspenger (AAP) | 3 (30.00%) |
| Uføreytelse/pensjon, hel | 1 (10.00%) |
| Uføreytelse/pensjon, delvis | 1 (10.00%) |
| Mottar ingen stønad, får lønn fra arbeidsgiver | 4 (40.00%) |
| PCS Total score |  |
| n | 10 |
| Mean (sd) | 16.80 (6.83) |
| IQR | 9.50 |
| min - max | 8.00 - 28.00 |
| PCS Rumination |  |
| n | 10 |
| Mean (sd) | 7.30 (3.50) |
| IQR | 3.75 |
| min - max | 3.00 - 14.00 |
| PCS Magnification |  |
| n | 10 |
| Mean (sd) | 2.10 (1.60) |
| IQR | 2.00 |
| min - max | 0.00 - 5.00 |
| PCS Helplessness |  |
| n | 10 |
| Mean (sd) | 7.40 (3.13) |
| IQR | 3.75 |
| min - max | 4.00 - 14.00 |
| Treatment for neuropatic pain? |  |
| No | 6 (60.00%) |
| Yes | 4 (40.00%) |
| Amitriptyline |  |
| No | 8 (80.00%) |
| Yes | 2 (20.00%) |
| Gabapentin |  |
| No | 8 (80.00%) |
| Yes | 2 (20.00%) |
| Pregabalin |  |
| No | 8 (80.00%) |
| Yes | 2 (20.00%) |
| Duloxetine |  |
| No | 10 (100.00%) |
| Treatment with other non-opoids? |  |
| No | 3 (30.00%) |
| Yes | 7 (70.00%) |
| Paracetamol |  |
| No | 5 (50.00%) |
| Yes | 5 (50.00%) |
| NSAIDs |  |
| No | 7 (70.00%) |
| Yes | 3 (30.00%) |
| Antidepressiva |  |
| No | 10 (100.00%) |
| Treatmetn with opoids? |  |
| No | 7 (70.00%) |
| Yes | 3 (30.00%) |
| Total daily morphine milligram equivalents |  |
| n | 3 |
| Mean (sd) | 25.00 (6.24) |
| IQR | 6.00 |
| min - max | 18.00 - 30.00 |
| Previous physiotherapy? |  |
| Yes | 10 (100.00%) |
| Previous chiropractor? |  |
| No | 4 (40.00%) |
| Yes | 6 (60.00%) |
| Previous psychologist? |  |
| No | 8 (80.00%) |
| Yes | 2 (20.00%) |
| Previous TENS? |  |
| No | 2 (20.00%) |
| Yes | 8 (80.00%) |
| Other previous treatment? |  |
| No | 7 (70.00%) |
| Yes | 3 (30.00%) |
| Other previous treatment, specify |  |
| Dry needling, Blockad SI-led och rotblockad. | 1 |
| epidural injeksjon, iv infusjon lidokain, ketamin | 1 |
| Specialdiet via dietist, rotblockader x 2, ryggkirurgi, värmebad. | 1 |
| Current physiotherapy? |  |
| No | 8 (80.00%) |
| Yes | 2 (20.00%) |
| Current chiropractor? |  |
| No | 10 (100.00%) |
| Current psychologist? |  |
| No | 10 (100.00%) |
| Current TENS |  |
| No | 6 (60.00%) |
| Yes | 4 (40.00%) |
| Other current treatment? |  |
| No | 9 (90.00%) |
| Yes | 1 (10.00%) |
| Other current treatment, specify |  |
| Följer sjukgymnast-program hemma. | 1 |
| Current back pain? |  |
| No | 3 (30.00%) |
| Yes | 7 (70.00%) |
| Duration of pain (years) |  |
| n | 10 |
| Mean (sd) | 8.69 (10.74) |
| IQR | 7.53 |
| min - max | 1.00 - 36.00 |
| Duration of current pain level (years) |  |
| n | 10 |
| Mean (sd) | 3.26 (3.81) |
| IQR | 3.27 |
| min - max | 0.25 - 10.00 |

# Dosage

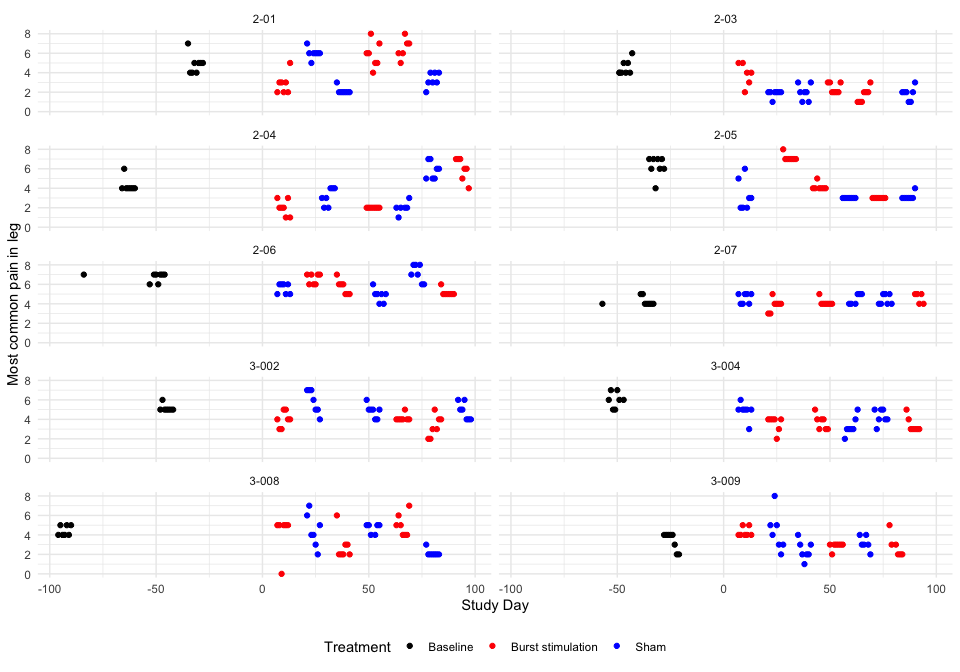
Information on dosage:

| Full analysis set | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Baseline | Pair 1 | | Pair 2 | | Pair 3 | |
|  | Baseline | Burst stimulation | Sham | Burst stimulation | Sham | Burst stimulation | Sham |
| 2-01 |  |  |  |  |  |  |  |
|  | 0 | 0.45 | 0 | 0.5 | 0 | 0.55 | 0 |
| 2-03 |  |  |  |  |  |  |  |
|  | 0 | 0.6 | 0 | 0.6 | 0 | 0.6 | 0 |
| 2-04 |  |  |  |  |  |  |  |
|  | 0 | 0.6 | 0 | 0.6 | 0 | 0.6 | 0 |
| 2-05 |  |  |  |  |  |  |  |
|  | 0 | 0.6 | 0 | 0.6 | 0 | 0.6 | 0 |
| 2-06 |  |  |  |  |  |  |  |
|  | 0 | 0.6 | 0 | 0.6 | 0 | 0.6 | 0 |
| 2-07 |  |  |  |  |  |  |  |
|  | 0 | 0.6 | 0 | 0.6 | 0 | 0.6 | 0 |
| 3-002 |  |  |  |  |  |  |  |
|  | 0 | 0.2 | 0 | 0.05 | 0 | 0.1 | 0 |
| 3-004 |  |  |  |  |  |  |  |
|  | 0 | 0.3 | 0 | 0.15 | 0 | 0.6 | 0 |
| 3-008 |  |  |  |  |  |  |  |
|  | 0 | 0.5 | 0 | 0.25 | 0 | 0.6 | 0 |
| 3-009 |  |  |  |  |  |  |  |
|  | 0 | 0.4 | 0 | 0.45 | 0 | 0.6 | 0 |

# Analysis

## Primary outcome: Usual pain intensity in lower extremity (NRS)

### Plot



### Descriptive table

| Most common pain in leg | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Full analysis set | | | | | | | |
|  | Baseline | Pair 1 | | Pair 2 | | Pair 3 | |
|  | Baseline | Burst stimulation | Sham | Burst stimulation | Sham | Burst stimulation | Sham |
| 2-01 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 7 | 6 | 7 |
| Mean (sd) | 4.88 (0.99) | 2.86 (1.07) | 6.00 (0.58) | 5.86 (1.35) | 2.14 (0.38) | 6.50 (1.05) | 3.29 (0.76) |
| IQR | 1.00 | 1.00 | 0.00 | 1.50 | 0.00 | 1.00 | 1.00 |
| min - max | 4.00 - 7.00 | 2.00 - 5.00 | 5.00 - 7.00 | 4.00 - 8.00 | 2.00 - 3.00 | 5.00 - 8.00 | 2.00 - 4.00 |
| 2-03 |  |  |  |  |  |  |  |
| n | 8 | 6 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 4.50 (0.76) | 3.83 (1.17) | 1.86 (0.38) | 2.43 (0.53) | 2.00 (0.82) | 1.71 (0.76) | 1.86 (0.69) |
| IQR | 1.00 | 1.50 | 0.00 | 1.00 | 1.00 | 1.00 | 0.50 |
| min - max | 4.00 - 6.00 | 2.00 - 5.00 | 1.00 - 2.00 | 2.00 - 3.00 | 1.00 - 3.00 | 1.00 - 3.00 | 1.00 - 3.00 |
| 2-04 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 6 | 7 | 7 |
| Mean (sd) | 4.29 (0.76) | 2.00 (0.82) | 3.14 (0.90) | 2.00 (0.00) | 2.00 (0.63) | 6.00 (1.15) | 5.86 (0.90) |
| IQR | 0.00 | 1.00 | 1.50 | 0.00 | 0.00 | 1.50 | 1.50 |
| min - max | 4.00 - 6.00 | 1.00 - 3.00 | 2.00 - 4.00 | 2.00 - 2.00 | 1.00 - 3.00 | 4.00 - 7.00 | 5.00 - 7.00 |
| 2-05 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 6.25 (1.04) | 7.14 (0.38) | 3.29 (1.60) | 4.14 (0.38) | 3.00 (0.00) | 3.00 (0.00) | 3.14 (0.38) |
| IQR | 1.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| min - max | 4.00 - 7.00 | 7.00 - 8.00 | 2.00 - 6.00 | 4.00 - 5.00 | 3.00 - 3.00 | 3.00 - 3.00 | 3.00 - 4.00 |
| 2-06 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 6.75 (0.46) | 6.57 (0.53) | 5.57 (0.53) | 5.71 (0.76) | 4.86 (0.69) | 5.14 (0.38) | 7.14 (0.90) |
| IQR | 0.25 | 1.00 | 1.00 | 1.00 | 0.50 | 0.00 | 1.50 |
| min - max | 6.00 - 7.00 | 6.00 - 7.00 | 5.00 - 6.00 | 5.00 - 7.00 | 4.00 - 6.00 | 5.00 - 6.00 | 6.00 - 8.00 |
| 2-07 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 6 | 5 | 7 |
| Mean (sd) | 4.25 (0.46) | 3.86 (0.69) | 4.57 (0.53) | 4.14 (0.38) | 4.50 (0.55) | 4.60 (0.55) | 4.43 (0.53) |
| IQR | 0.25 | 0.50 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| min - max | 4.00 - 5.00 | 3.00 - 5.00 | 4.00 - 5.00 | 4.00 - 5.00 | 4.00 - 5.00 | 4.00 - 5.00 | 4.00 - 5.00 |
| 3-002 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 5.14 (0.38) | 4.00 (0.82) | 5.86 (1.21) | 4.14 (0.38) | 4.86 (0.69) | 3.29 (1.11) | 4.86 (0.90) |
| IQR | 0.00 | 1.00 | 2.00 | 0.00 | 0.50 | 1.50 | 1.50 |
| min - max | 5.00 - 6.00 | 3.00 - 5.00 | 4.00 - 7.00 | 4.00 - 5.00 | 4.00 - 6.00 | 2.00 - 5.00 | 4.00 - 6.00 |
| 3-004 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 6.00 (0.82) | 3.57 (0.79) | 4.86 (0.90) | 3.71 (0.76) | 3.29 (0.95) | 3.43 (0.79) | 4.29 (0.76) |
| IQR | 1.00 | 0.50 | 0.00 | 1.00 | 0.50 | 0.50 | 1.00 |
| min - max | 5.00 - 7.00 | 2.00 - 4.00 | 3.00 - 6.00 | 3.00 - 5.00 | 2.00 - 5.00 | 3.00 - 5.00 | 3.00 - 5.00 |
| 3-008 |  |  |  |  |  |  |  |
| n | 7 | 6 | 7 | 7 | 6 | 7 | 7 |
| Mean (sd) | 4.43 (0.53) | 4.17 (2.04) | 4.43 (1.72) | 2.86 (1.46) | 4.67 (0.52) | 5.00 (1.15) | 2.14 (0.38) |
| IQR | 1.00 | 0.00 | 2.00 | 1.00 | 0.75 | 1.50 | 0.00 |
| min - max | 4.00 - 5.00 | 0.00 - 5.00 | 2.00 - 7.00 | 2.00 - 6.00 | 4.00 - 5.00 | 4.00 - 7.00 | 2.00 - 3.00 |
| 3-009 |  |  |  |  |  |  |  |
| n | 8 | 7 | 6 | 7 | 8 | 6 | 6 |
| Mean (sd) | 3.38 (0.92) | 4.29 (0.49) | 4.50 (2.07) | 2.86 (0.38) | 2.50 (0.93) | 2.83 (1.17) | 3.17 (0.75) |
| IQR | 1.25 | 0.50 | 1.75 | 0.00 | 1.00 | 1.00 | 0.75 |
| min - max | 2.00 - 4.00 | 4.00 - 5.00 | 2.00 - 8.00 | 2.00 - 3.00 | 1.00 - 4.00 | 2.00 - 5.00 | 2.00 - 4.00 |

### Hypothesis test

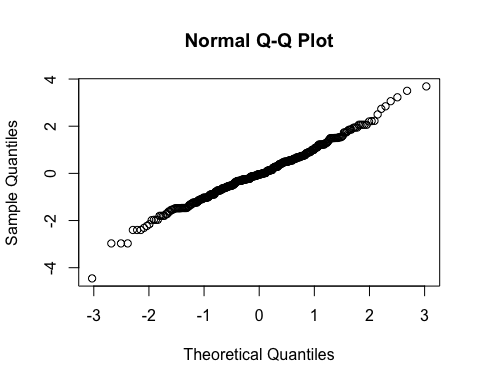
Most common pain in leg

| Subject ID | Difference Pair 1 | Difference Pair 2 | Difference Pair 3 | Overall difference |
| --- | --- | --- | --- | --- |
| 2-01 | -3.143 | 3.714 | 3.214 | 1.262 |
| 2-03 | 1.976 | 0.429 | -0.143 | 0.754 |
| 2-04 | -1.143 | 0.000 | 0.143 | -0.333 |
| 2-05 | 3.857 | 1.143 | -0.143 | 1.619 |
| 2-06 | 1.000 | 0.857 | -2.000 | -0.048 |
| 2-07 | -0.714 | -0.357 | 0.171 | -0.300 |
| 3-002 | -1.857 | -0.714 | -1.571 | -1.381 |
| 3-004 | -1.286 | 0.429 | -0.857 | -0.571 |
| 3-008 | -0.262 | -1.810 | 2.857 | 0.262 |
| 3-009 | -0.214 | 0.357 | -0.333 | -0.063 |

Values are Burst stimulation - Sham.

P-value of the null hypothesis test: 0.7.

### Treatment effect estimates

QQ-plot 

By subject

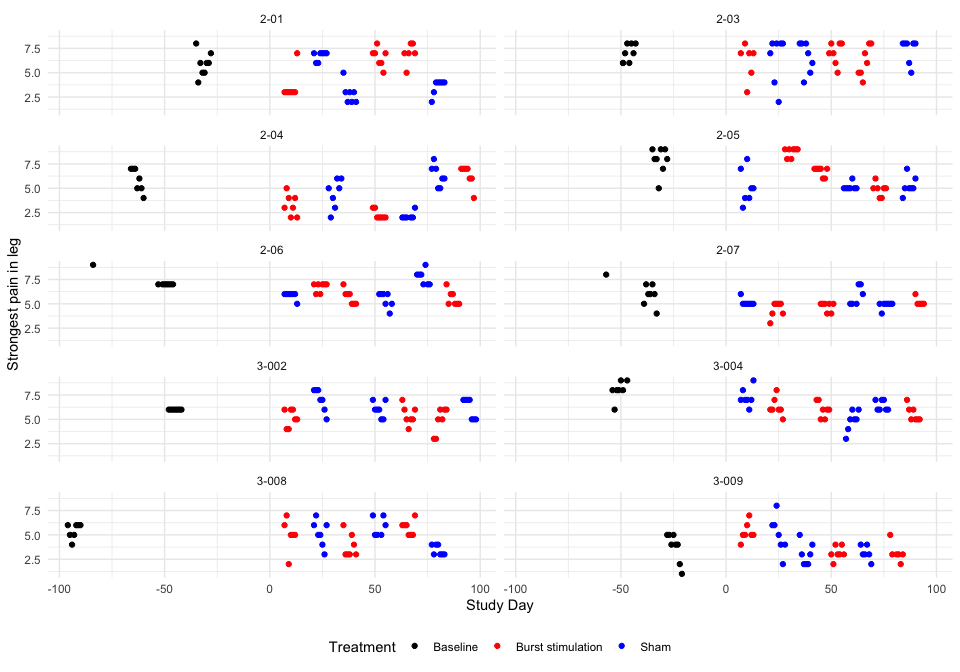
| Subject ID | Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- | --- |
| 2-01 | 1.031 | 0.28 | 0.000 | 0.482 | 1.581 |
| 2-03 | 0.626 | 0.28 | 0.026 | 0.076 | 1.176 |
| 2-04 | -0.275 | 0.28 | 0.327 | -0.825 | 0.275 |
| 2-05 | 1.382 | 0.28 | 0.000 | 0.832 | 1.931 |
| 2-06 | -0.021 | 0.28 | 0.939 | -0.571 | 0.528 |
| 2-07 | -0.250 | 0.28 | 0.372 | -0.800 | 0.299 |
| 3-002 | -1.144 | 0.28 | 0.000 | -1.694 | -0.594 |
| 3-004 | -0.462 | 0.28 | 0.099 | -1.012 | 0.087 |
| 3-008 | 0.297 | 0.28 | 0.289 | -0.252 | 0.847 |
| 3-009 | -0.005 | 0.28 | 0.985 | -0.555 | 0.545 |

Overall

| Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- |
| 0.118 | 0.28 | 0.675 | -0.432 | 0.667 |

## Secondary outcome: Highest pain intensity in lower extremity (NRS)

### Plot



### Descriptive table

| Strongest pain in leg | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Full analysis set | | | | | | | |
|  | Baseline | Pair 1 | | Pair 2 | | Pair 3 | |
|  | Baseline | Burst stimulation | Sham | Burst stimulation | Sham | Burst stimulation | Sham |
| 2-01 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 7 | 6 | 7 |
| Mean (sd) | 5.88 (1.25) | 3.57 (1.51) | 6.71 (0.49) | 6.57 (0.98) | 2.86 (1.07) | 7.00 (1.10) | 3.57 (0.79) |
| IQR | 1.25 | 0.00 | 0.50 | 1.00 | 1.00 | 0.75 | 0.50 |
| min - max | 4.00 - 8.00 | 3.00 - 7.00 | 6.00 - 7.00 | 5.00 - 8.00 | 2.00 - 5.00 | 5.00 - 8.00 | 2.00 - 4.00 |
| 2-03 |  |  |  |  |  |  |  |
| n | 8 | 6 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 7.00 (0.93) | 6.17 (1.83) | 6.43 (2.44) | 7.00 (1.15) | 6.57 (1.62) | 6.14 (1.57) | 7.29 (1.25) |
| IQR | 2.00 | 1.50 | 2.50 | 1.50 | 2.50 | 2.50 | 1.00 |
| min - max | 6.00 - 8.00 | 3.00 - 8.00 | 2.00 - 8.00 | 5.00 - 8.00 | 4.00 - 8.00 | 4.00 - 8.00 | 5.00 - 8.00 |
| 2-04 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 6 | 7 | 7 |
| Mean (sd) | 5.86 (1.21) | 3.29 (1.11) | 4.43 (1.51) | 2.29 (0.49) | 2.17 (0.41) | 6.29 (1.11) | 6.29 (1.11) |
| IQR | 2.00 | 1.50 | 2.00 | 0.50 | 0.00 | 1.00 | 1.50 |
| min - max | 4.00 - 7.00 | 2.00 - 5.00 | 2.00 - 6.00 | 2.00 - 3.00 | 2.00 - 3.00 | 4.00 - 7.00 | 5.00 - 8.00 |
| 2-05 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 7.88 (1.36) | 8.71 (0.49) | 5.14 (1.77) | 6.71 (0.49) | 5.14 (0.38) | 4.86 (0.69) | 5.29 (0.95) |
| IQR | 1.25 | 0.50 | 2.00 | 0.50 | 0.00 | 0.50 | 0.50 |
| min - max | 5.00 - 9.00 | 8.00 - 9.00 | 3.00 - 8.00 | 6.00 - 7.00 | 5.00 - 6.00 | 4.00 - 6.00 | 4.00 - 7.00 |
| 2-06 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 7.25 (0.71) | 6.71 (0.49) | 5.86 (0.38) | 5.71 (0.76) | 5.43 (0.79) | 5.57 (0.79) | 7.71 (0.76) |
| IQR | 0.00 | 0.50 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| min - max | 7.00 - 9.00 | 6.00 - 7.00 | 5.00 - 6.00 | 5.00 - 7.00 | 4.00 - 6.00 | 5.00 - 7.00 | 7.00 - 9.00 |
| 2-07 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 6 | 5 | 7 |
| Mean (sd) | 6.12 (1.25) | 4.43 (0.79) | 5.14 (0.38) | 4.71 (0.49) | 5.83 (0.98) | 5.20 (0.45) | 4.86 (0.38) |
| IQR | 1.25 | 1.00 | 0.00 | 0.50 | 1.75 | 0.00 | 0.00 |
| min - max | 4.00 - 8.00 | 3.00 - 5.00 | 5.00 - 6.00 | 4.00 - 5.00 | 5.00 - 7.00 | 5.00 - 6.00 | 4.00 - 5.00 |
| 3-002 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 6.00 (0.00) | 5.14 (0.90) | 7.00 (1.15) | 5.43 (0.98) | 6.00 (0.82) | 4.86 (1.35) | 6.14 (1.07) |
| IQR | 0.00 | 1.50 | 1.50 | 1.00 | 1.00 | 2.00 | 2.00 |
| min - max | 6.00 - 6.00 | 4.00 - 6.00 | 5.00 - 8.00 | 4.00 - 7.00 | 5.00 - 7.00 | 3.00 - 6.00 | 5.00 - 7.00 |
| 3-004 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 8.00 (1.00) | 6.29 (0.95) | 7.29 (0.95) | 6.00 (0.82) | 4.86 (1.07) | 5.57 (0.79) | 6.43 (0.53) |
| IQR | 0.50 | 0.50 | 0.50 | 1.00 | 1.00 | 1.00 | 1.00 |
| min - max | 6.00 - 9.00 | 5.00 - 8.00 | 6.00 - 9.00 | 5.00 - 7.00 | 3.00 - 6.00 | 5.00 - 7.00 | 6.00 - 7.00 |
| 3-008 |  |  |  |  |  |  |  |
| n | 7 | 6 | 7 | 7 | 6 | 7 | 7 |
| Mean (sd) | 5.43 (0.79) | 5.00 (1.67) | 5.14 (1.35) | 3.86 (1.21) | 5.83 (0.98) | 5.71 (0.76) | 3.43 (0.53) |
| IQR | 1.00 | 0.75 | 1.50 | 1.50 | 1.75 | 1.00 | 1.00 |
| min - max | 4.00 - 6.00 | 2.00 - 7.00 | 3.00 - 7.00 | 3.00 - 6.00 | 5.00 - 7.00 | 5.00 - 7.00 | 3.00 - 4.00 |
| 3-009 |  |  |  |  |  |  |  |
| n | 8 | 7 | 6 | 7 | 8 | 6 | 6 |
| Mean (sd) | 3.75 (1.49) | 5.29 (0.95) | 5.17 (2.04) | 3.14 (0.69) | 3.12 (1.13) | 3.17 (0.98) | 3.17 (0.75) |
| IQR | 1.50 | 0.50 | 1.75 | 0.50 | 2.00 | 0.00 | 0.75 |
| min - max | 1.00 - 5.00 | 4.00 - 7.00 | 2.00 - 8.00 | 2.00 - 4.00 | 2.00 - 5.00 | 2.00 - 5.00 | 2.00 - 4.00 |

### Hypothesis test

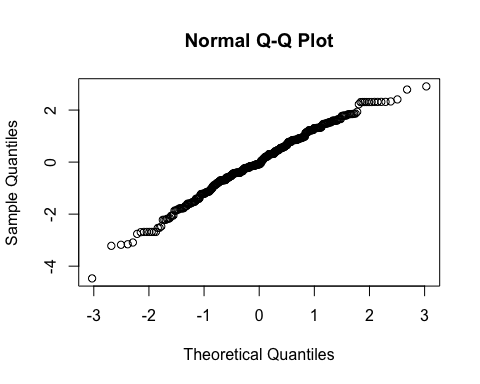
Strongest pain in leg

| Subject ID | Difference Pair 1 | Difference Pair 2 | Difference Pair 3 | Overall difference |
| --- | --- | --- | --- | --- |
| 2-01 | -3.143 | 3.714 | 3.429 | 1.333 |
| 2-03 | -0.262 | 0.429 | -1.143 | -0.325 |
| 2-04 | -1.143 | 0.119 | 0.000 | -0.341 |
| 2-05 | 3.571 | 1.571 | -0.429 | 1.571 |
| 2-06 | 0.857 | 0.286 | -2.143 | -0.333 |
| 2-07 | -0.714 | -1.119 | 0.343 | -0.497 |
| 3-002 | -1.857 | -0.571 | -1.286 | -1.238 |
| 3-004 | -1.000 | 1.143 | -0.857 | -0.238 |
| 3-008 | -0.143 | -1.976 | 2.286 | 0.056 |
| 3-009 | 0.119 | 0.018 | 0.000 | 0.046 |

Values are Burst stimulation - Sham.

P-value of the null hypothesis test: 0.99.

### Treatment effect estimates

QQ-plot 

By subject

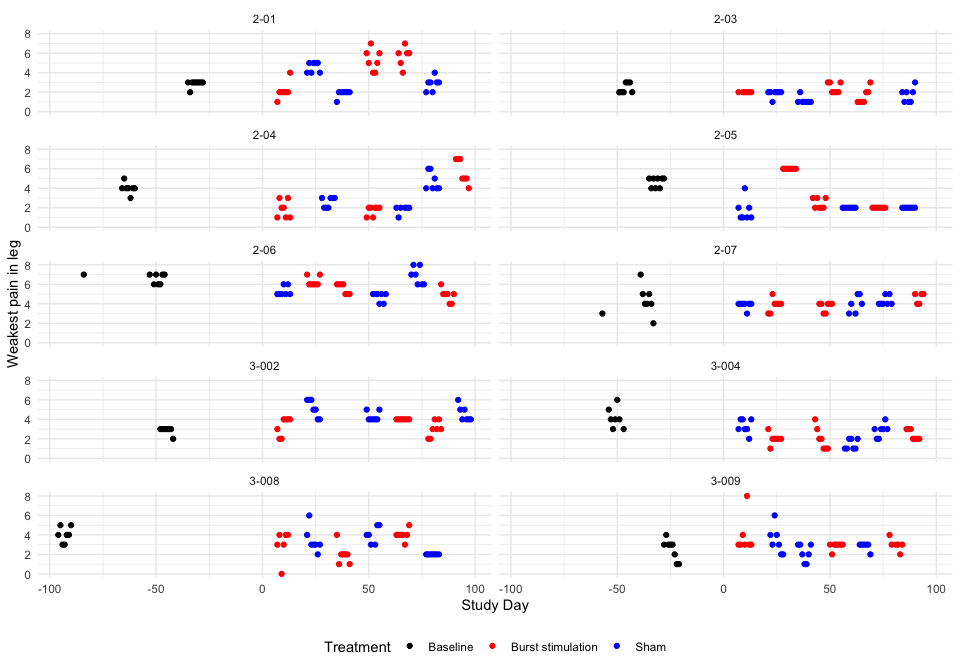
| Subject ID | Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- | --- |
| 2-01 | 0.993 | 0.266 | 0.000 | 0.472 | 1.515 |
| 2-03 | -0.252 | 0.266 | 0.343 | -0.774 | 0.269 |
| 2-04 | -0.287 | 0.266 | 0.281 | -0.809 | 0.235 |
| 2-05 | 1.228 | 0.266 | 0.000 | 0.707 | 1.750 |
| 2-06 | -0.260 | 0.266 | 0.328 | -0.782 | 0.261 |
| 2-07 | -0.400 | 0.266 | 0.133 | -0.921 | 0.122 |
| 3-002 | -0.968 | 0.266 | 0.000 | -1.489 | -0.446 |
| 3-004 | -0.186 | 0.266 | 0.485 | -0.708 | 0.336 |
| 3-008 | 0.092 | 0.266 | 0.729 | -0.430 | 0.614 |
| 3-009 | 0.044 | 0.266 | 0.868 | -0.478 | 0.566 |

Overall

| Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- |
| 0.002 | 0.266 | 0.995 | -0.52 | 0.523 |

## Secondary outcome: Lowest pain intensity in lower extremity (NRS)

### Plot



### Descriptive table

| Weakest pain in leg | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Full analysis set | | | | | | | |
|  | Baseline | Pair 1 | | Pair 2 | | Pair 3 | |
|  | Baseline | Burst stimulation | Sham | Burst stimulation | Sham | Burst stimulation | Sham |
| 2-01 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 7 | 6 | 7 |
| Mean (sd) | 2.88 (0.35) | 2.14 (0.90) | 4.57 (0.53) | 5.29 (1.11) | 1.86 (0.38) | 5.67 (1.03) | 2.86 (0.69) |
| IQR | 0.00 | 0.00 | 1.00 | 1.50 | 0.00 | 0.75 | 0.50 |
| min - max | 2.00 - 3.00 | 1.00 - 4.00 | 4.00 - 5.00 | 4.00 - 7.00 | 1.00 - 2.00 | 4.00 - 7.00 | 2.00 - 4.00 |
| 2-03 |  |  |  |  |  |  |  |
| n | 8 | 6 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 2.38 (0.52) | 2.00 (0.00) | 1.86 (0.38) | 2.43 (0.53) | 1.14 (0.38) | 1.57 (0.79) | 1.71 (0.76) |
| IQR | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 | 1.00 |
| min - max | 2.00 - 3.00 | 2.00 - 2.00 | 1.00 - 2.00 | 2.00 - 3.00 | 1.00 - 2.00 | 1.00 - 3.00 | 1.00 - 3.00 |
| 2-04 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 6 | 7 | 7 |
| Mean (sd) | 4.00 (0.58) | 1.86 (0.90) | 2.57 (0.53) | 1.71 (0.49) | 1.83 (0.41) | 5.71 (1.25) | 4.71 (0.95) |
| IQR | 0.00 | 1.50 | 1.00 | 0.50 | 0.00 | 2.00 | 1.50 |
| min - max | 3.00 - 5.00 | 1.00 - 3.00 | 2.00 - 3.00 | 1.00 - 2.00 | 1.00 - 2.00 | 4.00 - 7.00 | 4.00 - 6.00 |
| 2-05 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 4.62 (0.52) | 6.00 (0.00) | 1.71 (1.11) | 2.43 (0.53) | 2.00 (0.00) | 2.00 (0.00) | 2.00 (0.00) |
| IQR | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 |
| min - max | 4.00 - 5.00 | 6.00 - 6.00 | 1.00 - 4.00 | 2.00 - 3.00 | 2.00 - 2.00 | 2.00 - 2.00 | 2.00 - 2.00 |
| 2-06 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 6.62 (0.52) | 6.29 (0.49) | 5.29 (0.49) | 5.57 (0.53) | 4.71 (0.49) | 4.86 (0.69) | 6.86 (0.90) |
| IQR | 1.00 | 0.50 | 0.50 | 1.00 | 0.50 | 0.50 | 1.50 |
| min - max | 6.00 - 7.00 | 6.00 - 7.00 | 5.00 - 6.00 | 5.00 - 6.00 | 4.00 - 5.00 | 4.00 - 6.00 | 6.00 - 8.00 |
| 2-07 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 6 | 5 | 7 |
| Mean (sd) | 4.25 (1.49) | 3.86 (0.69) | 3.86 (0.38) | 3.71 (0.49) | 4.00 (0.89) | 4.60 (0.55) | 4.29 (0.49) |
| IQR | 1.25 | 0.50 | 0.00 | 0.50 | 1.50 | 1.00 | 0.50 |
| min - max | 2.00 - 7.00 | 3.00 - 5.00 | 3.00 - 4.00 | 3.00 - 4.00 | 3.00 - 5.00 | 4.00 - 5.00 | 4.00 - 5.00 |
| 3-002 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 2.86 (0.38) | 3.29 (0.95) | 5.14 (0.90) | 4.00 (0.00) | 4.29 (0.49) | 3.00 (0.82) | 4.57 (0.79) |
| IQR | 0.00 | 1.50 | 1.50 | 0.00 | 0.50 | 1.00 | 1.00 |
| min - max | 2.00 - 3.00 | 2.00 - 4.00 | 4.00 - 6.00 | 4.00 - 4.00 | 4.00 - 5.00 | 2.00 - 4.00 | 4.00 - 6.00 |
| 3-004 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 4.14 (1.07) | 2.00 (0.58) | 3.29 (0.76) | 2.00 (1.15) | 1.43 (0.53) | 2.43 (0.53) | 2.86 (0.69) |
| IQR | 1.00 | 0.00 | 1.00 | 1.50 | 1.00 | 1.00 | 0.50 |
| min - max | 3.00 - 6.00 | 1.00 - 3.00 | 2.00 - 4.00 | 1.00 - 4.00 | 1.00 - 2.00 | 2.00 - 3.00 | 2.00 - 4.00 |
| 3-008 |  |  |  |  |  |  |  |
| n | 7 | 6 | 7 | 7 | 6 | 7 | 7 |
| Mean (sd) | 4.00 (0.82) | 3.00 (1.55) | 3.43 (1.27) | 2.00 (1.00) | 4.00 (0.89) | 4.00 (0.58) | 2.00 (0.00) |
| IQR | 1.00 | 1.00 | 0.50 | 0.50 | 1.50 | 0.00 | 0.00 |
| min - max | 3.00 - 5.00 | 0.00 - 4.00 | 2.00 - 6.00 | 1.00 - 4.00 | 3.00 - 5.00 | 3.00 - 5.00 | 2.00 - 2.00 |
| 3-009 |  |  |  |  |  |  |  |
| n | 8 | 7 | 6 | 7 | 8 | 6 | 6 |
| Mean (sd) | 2.50 (1.07) | 3.86 (1.86) | 3.67 (1.37) | 2.86 (0.38) | 2.12 (0.83) | 3.00 (0.63) | 2.83 (0.41) |
| IQR | 1.25 | 0.50 | 1.00 | 0.00 | 1.25 | 0.00 | 0.00 |
| min - max | 1.00 - 4.00 | 3.00 - 8.00 | 2.00 - 6.00 | 2.00 - 3.00 | 1.00 - 3.00 | 2.00 - 4.00 | 2.00 - 3.00 |

### Hypothesis test

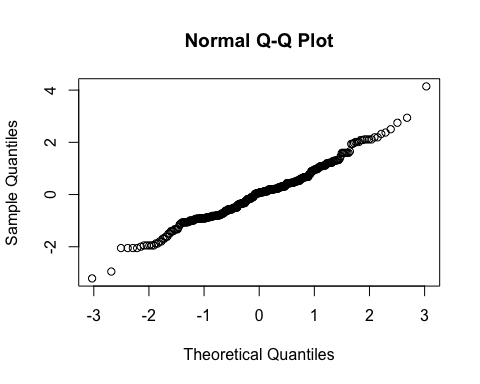
Weakest pain in leg

| Subject ID | Difference Pair 1 | Difference Pair 2 | Difference Pair 3 | Overall difference |
| --- | --- | --- | --- | --- |
| 2-01 | -2.429 | 3.429 | 2.810 | 1.270 |
| 2-03 | 0.143 | 1.286 | -0.143 | 0.429 |
| 2-04 | -0.714 | -0.119 | 1.000 | 0.056 |
| 2-05 | 4.286 | 0.429 | 0.000 | 1.572 |
| 2-06 | 1.000 | 0.857 | -2.000 | -0.048 |
| 2-07 | 0.000 | -0.286 | 0.314 | 0.009 |
| 3-002 | -1.857 | -0.286 | -1.571 | -1.238 |
| 3-004 | -1.286 | 0.571 | -0.429 | -0.381 |
| 3-008 | -0.429 | -2.000 | 2.000 | -0.143 |
| 3-009 | 0.190 | 0.732 | 0.167 | 0.363 |

Values are Burst stimulation - Sham.

P-value of the null hypothesis test: 0.51.

### Treatment effect estimates

QQ-plot 

By subject

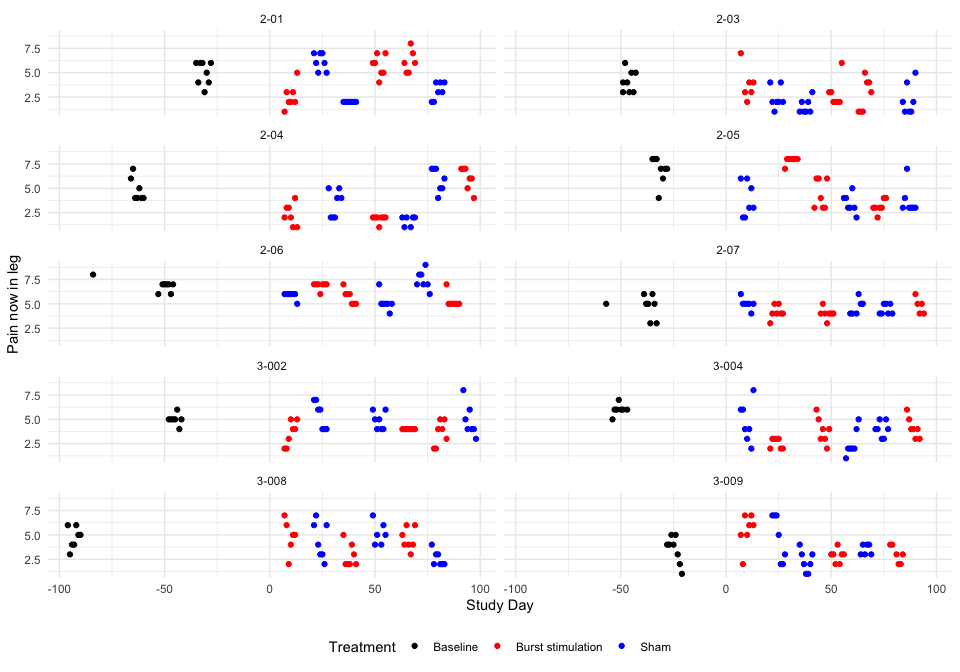
| Subject ID | Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- | --- |
| 2-01 | 1.061 | 0.251 | 0.000 | 0.569 | 1.553 |
| 2-03 | 0.398 | 0.251 | 0.113 | -0.094 | 0.891 |
| 2-04 | 0.075 | 0.251 | 0.764 | -0.417 | 0.568 |
| 2-05 | 1.355 | 0.251 | 0.000 | 0.863 | 1.847 |
| 2-06 | -0.010 | 0.251 | 0.969 | -0.502 | 0.482 |
| 2-07 | 0.030 | 0.251 | 0.904 | -0.462 | 0.522 |
| 3-002 | -1.013 | 0.251 | 0.000 | -1.505 | -0.521 |
| 3-004 | -0.291 | 0.251 | 0.247 | -0.783 | 0.201 |
| 3-008 | -0.038 | 0.251 | 0.880 | -0.530 | 0.454 |
| 3-009 | 0.359 | 0.251 | 0.153 | -0.133 | 0.851 |

Overall

| Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- |
| 0.192 | 0.251 | 0.445 | -0.3 | 0.684 |

## Secondary outcome: Current pain intensity in lower extremity (NRS)

### Plot



### Descriptive table

| Pain now in leg | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Full analysis set | | | | | | | |
|  | Baseline | Pair 1 | | Pair 2 | | Pair 3 | |
|  | Baseline | Burst stimulation | Sham | Burst stimulation | Sham | Burst stimulation | Sham |
| 2-01 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 7 | 6 | 7 |
| Mean (sd) | 5.00 (1.20) | 2.57 (1.27) | 6.14 (0.90) | 5.71 (1.11) | 2.00 (0.00) | 6.17 (1.17) | 3.14 (0.90) |
| IQR | 2.00 | 1.00 | 1.50 | 1.50 | 0.00 | 1.50 | 1.50 |
| min - max | 3.00 - 6.00 | 1.00 - 5.00 | 5.00 - 7.00 | 4.00 - 7.00 | 2.00 - 2.00 | 5.00 - 8.00 | 2.00 - 4.00 |
| 2-03 |  |  |  |  |  |  |  |
| n | 8 | 6 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 4.12 (1.13) | 3.83 (1.72) | 2.43 (1.13) | 2.86 (1.46) | 1.57 (0.79) | 2.71 (1.70) | 2.29 (1.60) |
| IQR | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 3.00 | 2.00 |
| min - max | 3.00 - 6.00 | 2.00 - 7.00 | 1.00 - 4.00 | 2.00 - 6.00 | 1.00 - 3.00 | 1.00 - 5.00 | 1.00 - 5.00 |
| 2-04 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 6 | 7 | 7 |
| Mean (sd) | 4.86 (1.21) | 2.29 (1.11) | 3.43 (1.40) | 1.86 (0.38) | 1.67 (0.52) | 6.00 (1.15) | 5.86 (1.21) |
| IQR | 1.50 | 1.50 | 2.50 | 0.00 | 0.75 | 1.50 | 2.00 |
| min - max | 4.00 - 7.00 | 1.00 - 4.00 | 2.00 - 5.00 | 1.00 - 2.00 | 1.00 - 2.00 | 4.00 - 7.00 | 4.00 - 7.00 |
| 2-05 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 6.88 (1.36) | 7.86 (0.38) | 3.86 (1.77) | 4.43 (1.51) | 3.43 (0.98) | 3.14 (0.69) | 3.71 (1.50) |
| IQR | 1.25 | 0.00 | 3.00 | 3.00 | 1.00 | 0.50 | 0.50 |
| min - max | 4.00 - 8.00 | 7.00 - 8.00 | 2.00 - 6.00 | 3.00 - 6.00 | 2.00 - 5.00 | 2.00 - 4.00 | 3.00 - 7.00 |
| 2-06 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 6.88 (0.64) | 6.86 (0.38) | 5.86 (0.38) | 5.71 (0.76) | 5.14 (0.90) | 5.29 (0.76) | 7.43 (0.98) |
| IQR | 0.25 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 |
| min - max | 6.00 - 8.00 | 6.00 - 7.00 | 5.00 - 6.00 | 5.00 - 7.00 | 4.00 - 7.00 | 5.00 - 7.00 | 6.00 - 9.00 |
| 2-07 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 6 | 5 | 7 |
| Mean (sd) | 4.75 (1.16) | 4.14 (0.69) | 5.00 (0.58) | 4.00 (0.58) | 4.67 (0.82) | 4.80 (0.84) | 4.43 (0.53) |
| IQR | 0.75 | 0.50 | 0.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| min - max | 3.00 - 6.00 | 3.00 - 5.00 | 4.00 - 6.00 | 3.00 - 5.00 | 4.00 - 6.00 | 4.00 - 6.00 | 4.00 - 5.00 |
| 3-002 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 5.00 (0.58) | 3.57 (1.27) | 5.43 (1.40) | 4.00 (0.00) | 4.86 (0.90) | 3.57 (1.27) | 4.86 (1.68) |
| IQR | 0.00 | 2.00 | 2.50 | 0.00 | 1.50 | 2.00 | 1.50 |
| min - max | 4.00 - 6.00 | 2.00 - 5.00 | 4.00 - 7.00 | 4.00 - 4.00 | 4.00 - 6.00 | 2.00 - 5.00 | 3.00 - 8.00 |
| 3-004 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 6.00 (0.58) | 2.57 (0.53) | 4.71 (2.06) | 3.86 (1.35) | 2.57 (1.40) | 4.14 (1.07) | 4.00 (0.82) |
| IQR | 0.00 | 1.00 | 2.50 | 1.50 | 1.00 | 1.00 | 1.00 |
| min - max | 5.00 - 7.00 | 2.00 - 3.00 | 2.00 - 8.00 | 2.00 - 6.00 | 1.00 - 5.00 | 3.00 - 6.00 | 3.00 - 5.00 |
| 3-008 |  |  |  |  |  |  |  |
| n | 7 | 6 | 7 | 7 | 6 | 7 | 7 |
| Mean (sd) | 4.71 (1.11) | 4.83 (1.72) | 4.43 (1.90) | 2.86 (1.21) | 5.17 (1.17) | 4.57 (1.13) | 2.57 (0.79) |
| IQR | 1.50 | 1.50 | 3.00 | 1.50 | 1.50 | 1.50 | 1.00 |
| min - max | 3.00 - 6.00 | 2.00 - 7.00 | 2.00 - 7.00 | 2.00 - 5.00 | 4.00 - 7.00 | 3.00 - 6.00 | 2.00 - 4.00 |
| 3-009 |  |  |  |  |  |  |  |
| n | 8 | 7 | 6 | 7 | 8 | 6 | 6 |
| Mean (sd) | 3.50 (1.41) | 5.43 (1.72) | 5.00 (2.45) | 2.86 (0.69) | 2.38 (1.06) | 3.00 (0.89) | 3.50 (0.55) |
| IQR | 1.50 | 1.50 | 4.25 | 0.50 | 1.25 | 1.50 | 1.00 |
| min - max | 1.00 - 5.00 | 2.00 - 7.00 | 2.00 - 7.00 | 2.00 - 4.00 | 1.00 - 4.00 | 2.00 - 4.00 | 3.00 - 4.00 |

### Hypothesis test

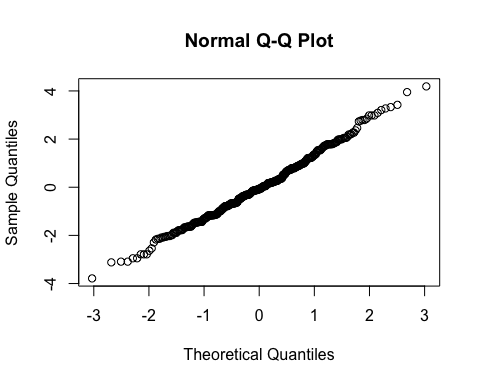
Pain now in leg

| Subject ID | Difference Pair 1 | Difference Pair 2 | Difference Pair 3 | Overall difference |
| --- | --- | --- | --- | --- |
| 2-01 | -3.571 | 3.714 | 3.024 | 1.056 |
| 2-03 | 1.405 | 1.286 | 0.429 | 1.040 |
| 2-04 | -1.143 | 0.190 | 0.143 | -0.270 |
| 2-05 | 4.000 | 1.000 | -0.571 | 1.476 |
| 2-06 | 1.000 | 0.571 | -2.143 | -0.191 |
| 2-07 | -0.857 | -0.667 | 0.371 | -0.384 |
| 3-002 | -1.857 | -0.857 | -1.286 | -1.333 |
| 3-004 | -2.143 | 1.286 | 0.143 | -0.238 |
| 3-008 | 0.405 | -2.310 | 2.000 | 0.032 |
| 3-009 | 0.429 | 0.482 | -0.500 | 0.137 |

Values are Burst stimulation - Sham.

P-value of the null hypothesis test: 0.68.

### Treatment effect estimates

QQ-plot 

By subject

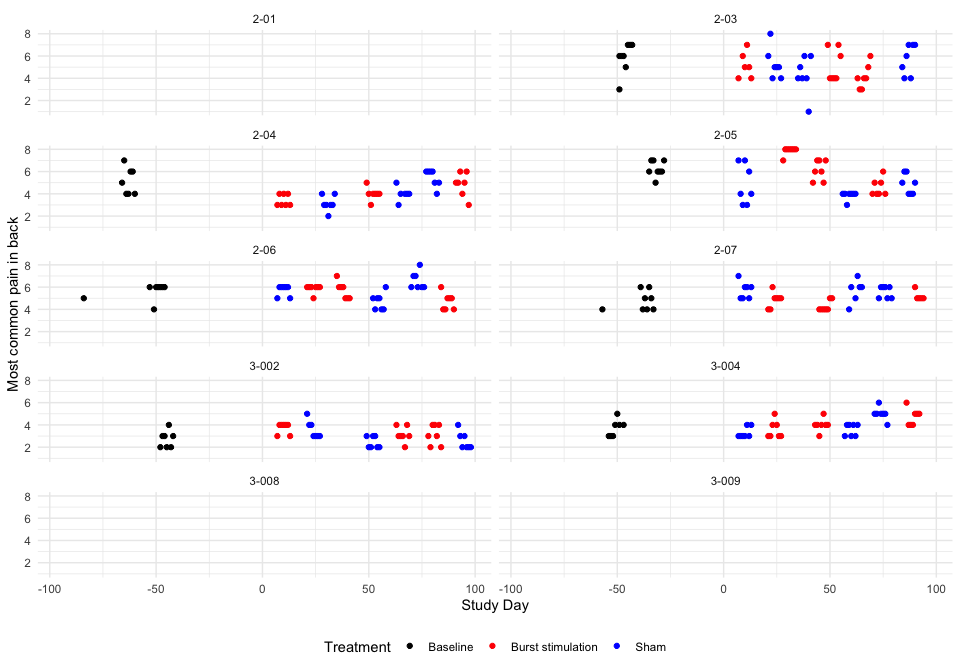
| Subject ID | Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- | --- |
| 2-01 | 0.769 | 0.265 | 0.004 | 0.250 | 1.287 |
| 2-03 | 0.792 | 0.265 | 0.003 | 0.273 | 1.311 |
| 2-04 | -0.181 | 0.265 | 0.494 | -0.700 | 0.338 |
| 2-05 | 1.123 | 0.265 | 0.000 | 0.604 | 1.642 |
| 2-06 | -0.106 | 0.265 | 0.689 | -0.625 | 0.413 |
| 2-07 | -0.265 | 0.265 | 0.317 | -0.784 | 0.254 |
| 3-002 | -0.949 | 0.265 | 0.000 | -1.468 | -0.430 |
| 3-004 | -0.141 | 0.265 | 0.594 | -0.660 | 0.378 |
| 3-008 | 0.099 | 0.265 | 0.708 | -0.420 | 0.618 |
| 3-009 | 0.170 | 0.265 | 0.521 | -0.349 | 0.689 |

Overall

| Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- |
| 0.132 | 0.265 | 0.619 | -0.387 | 0.65 |

## Secondary outcome: Usual pain intensity in the back (NRS)

### Plot



### Descriptive table

| Most common pain in back | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Full analysis set | | | | | | | |
|  | Baseline | Pair 1 | | Pair 2 | | Pair 3 | |
|  | Baseline | Burst stimulation | Sham | Burst stimulation | Sham | Burst stimulation | Sham |
| 2-01 |  |  |  |  |  |  |  |
| n | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mean (sd) | NA | NA | NA | NA | NA | NA | NA |
| IQR | NA | NA | NA | NA | NA | NA | NA |
| min - max | Inf - -Inf | Inf - -Inf | Inf - -Inf | Inf - -Inf | Inf - -Inf | Inf - -Inf | Inf - -Inf |
| 2-03 |  |  |  |  |  |  |  |
| n | 8 | 6 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 5.88 (1.36) | 5.17 (1.17) | 5.29 (1.38) | 5.14 (1.46) | 4.29 (1.70) | 4.14 (1.07) | 5.71 (1.38) |
| IQR | 1.25 | 1.50 | 1.00 | 2.50 | 1.50 | 1.00 | 2.50 |
| min - max | 3.00 - 7.00 | 4.00 - 7.00 | 4.00 - 8.00 | 4.00 - 7.00 | 1.00 - 6.00 | 3.00 - 6.00 | 4.00 - 7.00 |
| 2-04 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 6 | 7 | 7 |
| Mean (sd) | 5.14 (1.21) | 3.43 (0.53) | 3.14 (0.69) | 4.00 (0.58) | 4.00 (0.63) | 4.86 (1.07) | 5.43 (0.79) |
| IQR | 2.00 | 1.00 | 0.50 | 0.00 | 0.00 | 1.00 | 1.00 |
| min - max | 4.00 - 7.00 | 3.00 - 4.00 | 2.00 - 4.00 | 3.00 - 5.00 | 3.00 - 5.00 | 3.00 - 6.00 | 4.00 - 6.00 |
| 2-05 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 6.25 (0.71) | 7.86 (0.38) | 4.86 (1.77) | 6.14 (0.90) | 3.86 (0.38) | 4.57 (0.79) | 4.86 (0.90) |
| IQR | 1.00 | 0.00 | 3.00 | 1.50 | 0.00 | 1.00 | 1.50 |
| min - max | 5.00 - 7.00 | 7.00 - 8.00 | 3.00 - 7.00 | 5.00 - 7.00 | 3.00 - 4.00 | 4.00 - 6.00 | 4.00 - 6.00 |
| 2-06 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 5.62 (0.74) | 5.86 (0.38) | 5.71 (0.49) | 5.71 (0.76) | 4.71 (0.76) | 4.71 (0.76) | 6.57 (0.79) |
| IQR | 0.25 | 0.00 | 0.50 | 1.00 | 1.00 | 1.00 | 1.00 |
| min - max | 4.00 - 6.00 | 5.00 - 6.00 | 5.00 - 6.00 | 5.00 - 7.00 | 4.00 - 6.00 | 4.00 - 6.00 | 6.00 - 8.00 |
| 2-07 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 6 | 5 | 7 |
| Mean (sd) | 4.75 (0.89) | 4.86 (0.69) | 5.71 (0.76) | 4.29 (0.49) | 5.67 (1.03) | 5.20 (0.45) | 5.57 (0.53) |
| IQR | 1.25 | 0.50 | 1.00 | 0.50 | 0.75 | 0.00 | 1.00 |
| min - max | 4.00 - 6.00 | 4.00 - 6.00 | 5.00 - 7.00 | 4.00 - 5.00 | 4.00 - 7.00 | 5.00 - 6.00 | 5.00 - 6.00 |
| 3-002 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 2.71 (0.76) | 3.71 (0.49) | 3.57 (0.79) | 3.14 (0.69) | 2.43 (0.53) | 3.14 (0.90) | 2.57 (0.79) |
| IQR | 1.00 | 0.50 | 1.00 | 0.50 | 1.00 | 1.50 | 1.00 |
| min - max | 2.00 - 4.00 | 3.00 - 4.00 | 3.00 - 5.00 | 2.00 - 4.00 | 2.00 - 3.00 | 2.00 - 4.00 | 2.00 - 4.00 |
| 3-004 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 3.71 (0.76) | 3.57 (0.79) | 3.29 (0.49) | 4.00 (0.58) | 3.57 (0.53) | 4.71 (0.76) | 5.00 (0.58) |
| IQR | 1.00 | 1.00 | 0.50 | 0.00 | 1.00 | 1.00 | 0.00 |
| min - max | 3.00 - 5.00 | 3.00 - 5.00 | 3.00 - 4.00 | 3.00 - 5.00 | 3.00 - 4.00 | 4.00 - 6.00 | 4.00 - 6.00 |
| 3-008 |  |  |  |  |  |  |  |
| n | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mean (sd) | NA | NA | NA | NA | NA | NA | NA |
| IQR | NA | NA | NA | NA | NA | NA | NA |
| min - max | Inf - -Inf | Inf - -Inf | Inf - -Inf | Inf - -Inf | Inf - -Inf | Inf - -Inf | Inf - -Inf |
| 3-009 |  |  |  |  |  |  |  |
| n | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mean (sd) | NA | NA | NA | NA | NA | NA | NA |
| IQR | NA | NA | NA | NA | NA | NA | NA |
| min - max | Inf - -Inf | Inf - -Inf | Inf - -Inf | Inf - -Inf | Inf - -Inf | Inf - -Inf | Inf - -Inf |

### Hypothesis test

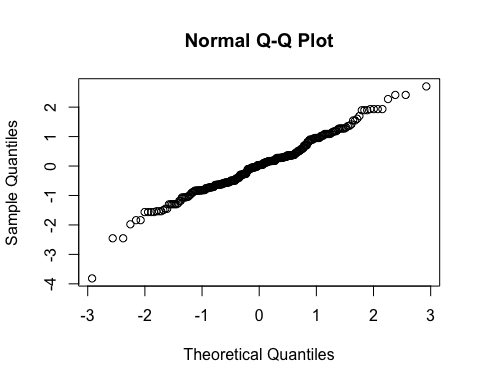
Most common pain in back

| Subject ID | Difference Pair 1 | Difference Pair 2 | Difference Pair 3 | Overall difference |
| --- | --- | --- | --- | --- |
| 2-01 | NaN | NaN | NaN | NaN |
| 2-03 | -0.119 | 0.857 | -1.571 | -0.278 |
| 2-04 | 0.286 | 0.000 | -0.571 | -0.095 |
| 2-05 | 3.000 | 2.286 | -0.286 | 1.667 |
| 2-06 | 0.143 | 1.000 | -1.857 | -0.238 |
| 2-07 | -0.857 | -1.381 | -0.371 | -0.870 |
| 3-002 | 0.143 | 0.714 | 0.571 | 0.476 |
| 3-004 | 0.286 | 0.429 | -0.286 | 0.143 |
| 3-008 | NaN | NaN | NaN | NaN |
| 3-009 | NaN | NaN | NaN | NaN |

Values are Burst stimulation - Sham.

P-value of the null hypothesis test: 0.65.

### Treatment effect estimates

QQ-plot 

By subject

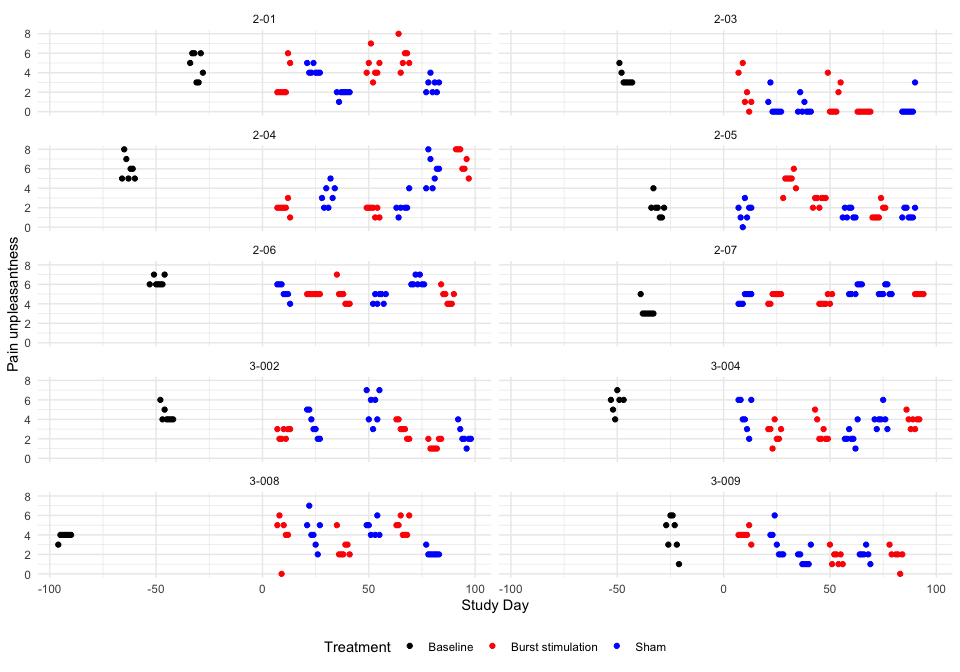
| Subject ID | Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- | --- |
| 2-03 | -0.230 | 0.303 | 0.449 | -0.824 | 0.365 |
| 2-04 | -0.069 | 0.303 | 0.821 | -0.663 | 0.526 |
| 2-05 | 1.459 | 0.303 | 0.000 | 0.865 | 2.054 |
| 2-06 | -0.191 | 0.303 | 0.529 | -0.786 | 0.404 |
| 2-07 | -0.743 | 0.303 | 0.014 | -1.337 | -0.148 |
| 3-002 | 0.428 | 0.303 | 0.159 | -0.167 | 1.022 |
| 3-004 | 0.139 | 0.303 | 0.647 | -0.456 | 0.734 |

Overall

| Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- |
| 0.124 | 0.303 | 0.682 | -0.471 | 0.719 |

## Secondary outcome: Pain unpleasantness (NRS)

### Plot



### Descriptive table

| Pain unpleasantness | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Full analysis set | | | | | | | |
|  | Baseline | Pair 1 | | Pair 2 | | Pair 3 | |
|  | Baseline | Burst stimulation | Sham | Burst stimulation | Sham | Burst stimulation | Sham |
| 2-01 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 7 | 6 | 7 |
| Mean (sd) | 4.71 (1.38) | 3.00 (1.73) | 4.29 (0.49) | 4.57 (1.27) | 1.86 (0.38) | 5.67 (1.37) | 2.71 (0.76) |
| IQR | 2.50 | 1.50 | 0.50 | 1.00 | 0.00 | 1.00 | 1.00 |
| min - max | 3.00 - 6.00 | 2.00 - 6.00 | 4.00 - 5.00 | 3.00 - 7.00 | 1.00 - 2.00 | 4.00 - 8.00 | 2.00 - 4.00 |
| 2-03 |  |  |  |  |  |  |  |
| n | 7 | 6 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 3.43 (0.79) | 2.17 (1.94) | 0.57 (1.13) | 1.29 (1.70) | 0.43 (0.79) | 0.00 (0.00) | 0.43 (1.13) |
| IQR | 0.50 | 2.50 | 0.50 | 2.50 | 0.50 | 0.00 | 0.00 |
| min - max | 3.00 - 5.00 | 0.00 - 5.00 | 0.00 - 3.00 | 0.00 - 4.00 | 0.00 - 2.00 | 0.00 - 0.00 | 0.00 - 3.00 |
| 2-04 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 6 | 7 | 7 |
| Mean (sd) | 6.00 (1.15) | 2.00 (0.58) | 3.29 (1.11) | 1.71 (0.49) | 2.17 (0.98) | 6.86 (1.21) | 5.71 (1.50) |
| IQR | 1.50 | 0.00 | 1.50 | 0.50 | 0.00 | 2.00 | 2.00 |
| min - max | 5.00 - 8.00 | 1.00 - 3.00 | 2.00 - 5.00 | 1.00 - 2.00 | 1.00 - 4.00 | 5.00 - 8.00 | 4.00 - 8.00 |
| 2-05 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 2.00 (1.00) | 4.71 (0.95) | 1.57 (0.98) | 2.71 (0.49) | 1.43 (0.53) | 1.57 (0.79) | 1.43 (0.53) |
| IQR | 0.50 | 0.50 | 1.00 | 0.50 | 1.00 | 1.00 | 1.00 |
| min - max | 1.00 - 4.00 | 3.00 - 6.00 | 0.00 - 3.00 | 2.00 - 3.00 | 1.00 - 2.00 | 1.00 - 3.00 | 1.00 - 2.00 |
| 2-06 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 6.29 (0.49) | 5.00 (0.00) | 5.29 (0.76) | 4.86 (1.07) | 4.57 (0.53) | 4.71 (0.76) | 6.29 (0.49) |
| IQR | 0.50 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.50 |
| min - max | 6.00 - 7.00 | 5.00 - 5.00 | 4.00 - 6.00 | 4.00 - 7.00 | 4.00 - 5.00 | 4.00 - 6.00 | 6.00 - 7.00 |
| 2-07 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 6 | 5 | 7 |
| Mean (sd) | 3.29 (0.76) | 4.71 (0.49) | 4.57 (0.53) | 4.29 (0.49) | 5.50 (0.55) | 5.00 (0.00) | 5.29 (0.49) |
| IQR | 0.00 | 0.50 | 1.00 | 0.50 | 1.00 | 0.00 | 0.50 |
| min - max | 3.00 - 5.00 | 4.00 - 5.00 | 4.00 - 5.00 | 4.00 - 5.00 | 5.00 - 6.00 | 5.00 - 5.00 | 5.00 - 6.00 |
| 3-002 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 4.43 (0.79) | 2.57 (0.53) | 3.43 (1.27) | 3.00 (0.82) | 5.29 (1.60) | 1.43 (0.53) | 2.29 (0.95) |
| IQR | 0.50 | 1.00 | 2.00 | 1.00 | 2.50 | 1.00 | 0.50 |
| min - max | 4.00 - 6.00 | 2.00 - 3.00 | 2.00 - 5.00 | 2.00 - 4.00 | 3.00 - 7.00 | 1.00 - 2.00 | 1.00 - 4.00 |
| 3-004 |  |  |  |  |  |  |  |
| n | 6 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 5.67 (1.03) | 2.57 (0.98) | 4.43 (1.62) | 2.86 (1.21) | 2.29 (0.95) | 3.86 (0.69) | 4.00 (1.00) |
| IQR | 0.75 | 1.00 | 2.50 | 1.50 | 0.50 | 0.50 | 0.50 |
| min - max | 4.00 - 7.00 | 1.00 - 4.00 | 2.00 - 6.00 | 2.00 - 5.00 | 1.00 - 4.00 | 3.00 - 5.00 | 3.00 - 6.00 |
| 3-008 |  |  |  |  |  |  |  |
| n | 7 | 6 | 7 | 7 | 6 | 7 | 7 |
| Mean (sd) | 3.86 (0.38) | 4.00 (2.10) | 4.29 (1.60) | 2.71 (1.11) | 4.67 (0.82) | 4.86 (0.90) | 2.14 (0.38) |
| IQR | 0.00 | 1.00 | 1.50 | 1.00 | 1.00 | 1.50 | 0.00 |
| min - max | 3.00 - 4.00 | 0.00 - 6.00 | 2.00 - 7.00 | 2.00 - 5.00 | 4.00 - 6.00 | 4.00 - 6.00 | 2.00 - 3.00 |
| 3-009 |  |  |  |  |  |  |  |
| n | 7 | 7 | 6 | 7 | 8 | 6 | 6 |
| Mean (sd) | 4.14 (1.86) | 4.00 (0.58) | 3.50 (1.52) | 1.71 (0.76) | 1.62 (0.74) | 1.83 (0.98) | 2.00 (0.63) |
| IQR | 2.50 | 0.00 | 1.75 | 1.00 | 1.00 | 0.00 | 0.00 |
| min - max | 1.00 - 6.00 | 3.00 - 5.00 | 2.00 - 6.00 | 1.00 - 3.00 | 1.00 - 3.00 | 0.00 - 3.00 | 1.00 - 3.00 |

### Hypothesis test

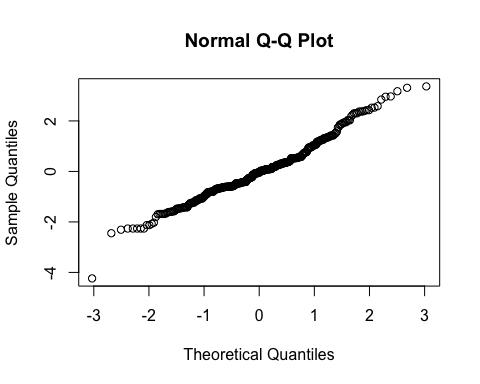
Pain unpleasantness

| Subject ID | Difference Pair 1 | Difference Pair 2 | Difference Pair 3 | Overall difference |
| --- | --- | --- | --- | --- |
| 2-01 | -1.286 | 2.714 | 2.952 | 1.460 |
| 2-03 | 1.595 | 0.857 | -0.429 | 0.674 |
| 2-04 | -1.286 | -0.452 | 1.143 | -0.198 |
| 2-05 | 3.143 | 1.286 | 0.143 | 1.524 |
| 2-06 | -0.286 | 0.286 | -1.571 | -0.524 |
| 2-07 | 0.143 | -1.214 | -0.286 | -0.452 |
| 3-002 | -0.857 | -2.286 | -0.857 | -1.333 |
| 3-004 | -1.857 | 0.571 | -0.143 | -0.476 |
| 3-008 | -0.286 | -1.952 | 2.714 | 0.159 |
| 3-009 | 0.500 | 0.089 | -0.167 | 0.141 |

Values are Burst stimulation - Sham.

P-value of the null hypothesis test: 0.72.

### Treatment effect estimates

QQ-plot 

By subject

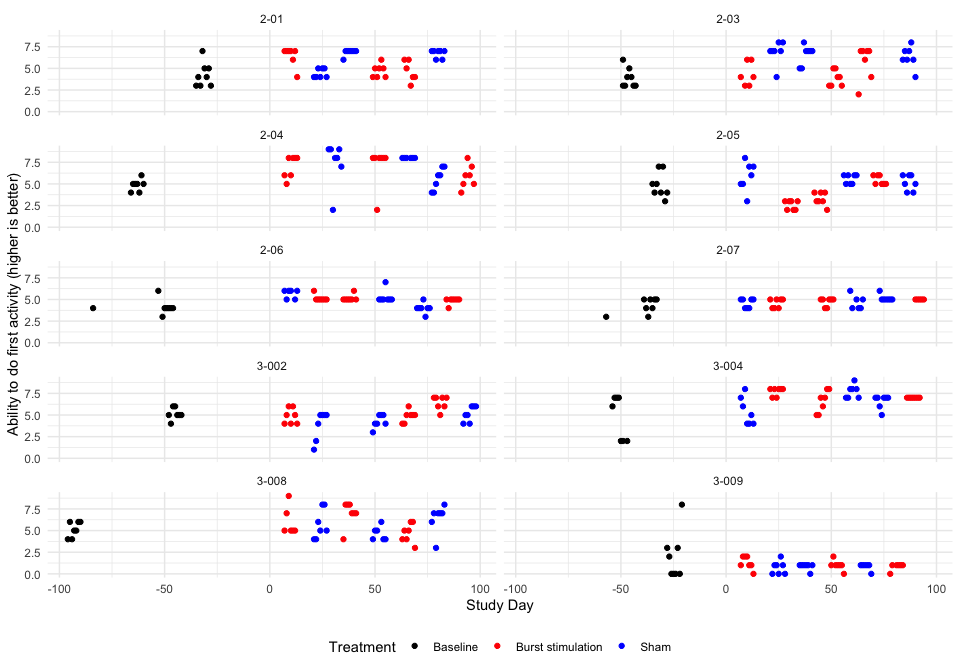
| Subject ID | Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- | --- |
| 2-01 | 1.212 | 0.285 | 0.000 | 0.654 | 1.770 |
| 2-03 | 0.565 | 0.285 | 0.047 | 0.007 | 1.122 |
| 2-04 | -0.151 | 0.285 | 0.595 | -0.709 | 0.407 |
| 2-05 | 1.305 | 0.285 | 0.000 | 0.748 | 1.863 |
| 2-06 | -0.428 | 0.285 | 0.132 | -0.986 | 0.130 |
| 2-07 | -0.354 | 0.285 | 0.214 | -0.911 | 0.204 |
| 3-002 | -1.113 | 0.285 | 0.000 | -1.671 | -0.556 |
| 3-004 | -0.388 | 0.285 | 0.173 | -0.945 | 0.170 |
| 3-008 | 0.207 | 0.285 | 0.466 | -0.350 | 0.765 |
| 3-009 | 0.144 | 0.285 | 0.613 | -0.414 | 0.702 |

Overall

| Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- |
| 0.099 | 0.285 | 0.727 | -0.458 | 0.657 |

## Secondary outcome: Ability to do first activity (NRS)

### Plot



### Descriptive table

| Ability to do first activity (higher is better) | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Full analysis set | | | | | | | |
|  | Baseline | Pair 1 | | Pair 2 | | Pair 3 | |
|  | Baseline | Burst stimulation | Sham | Burst stimulation | Sham | Burst stimulation | Sham |
| 2-01 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 7 | 6 | 7 |
| Mean (sd) | 4.25 (1.39) | 6.43 (1.13) | 4.43 (0.53) | 4.71 (0.76) | 6.86 (0.38) | 4.67 (1.21) | 6.71 (0.49) |
| IQR | 2.00 | 0.50 | 1.00 | 1.00 | 0.00 | 1.75 | 0.50 |
| min - max | 3.00 - 7.00 | 4.00 - 7.00 | 4.00 - 5.00 | 4.00 - 6.00 | 6.00 - 7.00 | 3.00 - 6.00 | 6.00 - 7.00 |
| 2-03 |  |  |  |  |  |  |  |
| n | 8 | 6 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 3.88 (1.13) | 4.33 (1.37) | 6.86 (1.35) | 3.86 (0.90) | 6.57 (1.13) | 5.71 (1.98) | 6.29 (1.25) |
| IQR | 1.25 | 2.25 | 0.50 | 1.50 | 1.00 | 2.00 | 1.00 |
| min - max | 3.00 - 6.00 | 3.00 - 6.00 | 4.00 - 8.00 | 3.00 - 5.00 | 5.00 - 8.00 | 2.00 - 7.00 | 4.00 - 8.00 |
| 2-04 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 6 | 7 | 7 |
| Mean (sd) | 4.86 (0.69) | 7.00 (1.29) | 7.43 (2.51) | 7.14 (2.27) | 8.00 (0.00) | 5.86 (1.35) | 5.57 (1.27) |
| IQR | 0.50 | 2.00 | 1.50 | 0.00 | 0.00 | 1.50 | 2.00 |
| min - max | 4.00 - 6.00 | 5.00 - 8.00 | 2.00 - 9.00 | 2.00 - 8.00 | 8.00 - 8.00 | 4.00 - 8.00 | 4.00 - 7.00 |
| 2-05 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 4.88 (1.46) | 2.57 (0.53) | 5.86 (1.68) | 3.29 (0.76) | 5.57 (0.53) | 5.43 (0.53) | 5.14 (0.90) |
| IQR | 1.50 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.50 |
| min - max | 3.00 - 7.00 | 2.00 - 3.00 | 3.00 - 8.00 | 2.00 - 4.00 | 5.00 - 6.00 | 5.00 - 6.00 | 4.00 - 6.00 |
| 2-06 |  |  |  |  |  |  |  |
| n | 8 | 7 | 6 | 7 | 7 | 7 | 7 |
| Mean (sd) | 4.12 (0.83) | 5.14 (0.38) | 5.67 (0.52) | 5.14 (0.38) | 5.29 (0.76) | 4.86 (0.38) | 4.00 (0.58) |
| IQR | 0.00 | 0.00 | 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| min - max | 3.00 - 6.00 | 5.00 - 6.00 | 5.00 - 6.00 | 5.00 - 6.00 | 5.00 - 7.00 | 4.00 - 5.00 | 3.00 - 5.00 |
| 2-07 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 6 | 5 | 7 |
| Mean (sd) | 4.25 (0.89) | 4.57 (0.53) | 4.57 (0.53) | 4.71 (0.49) | 4.67 (0.82) | 5.00 (0.00) | 5.14 (0.38) |
| IQR | 1.25 | 1.00 | 1.00 | 0.50 | 1.00 | 0.00 | 0.00 |
| min - max | 3.00 - 5.00 | 4.00 - 5.00 | 4.00 - 5.00 | 4.00 - 5.00 | 4.00 - 6.00 | 5.00 - 5.00 | 5.00 - 6.00 |
| 3-002 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 5.14 (0.69) | 4.86 (0.90) | 3.86 (1.68) | 4.86 (0.69) | 4.29 (0.76) | 6.43 (0.79) | 5.14 (0.90) |
| IQR | 0.50 | 1.50 | 2.00 | 0.50 | 1.00 | 1.00 | 1.50 |
| min - max | 4.00 - 6.00 | 4.00 - 6.00 | 1.00 - 5.00 | 4.00 - 6.00 | 3.00 - 5.00 | 5.00 - 7.00 | 4.00 - 6.00 |
| 3-004 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 4.71 (2.56) | 7.71 (0.49) | 5.43 (1.62) | 6.57 (1.27) | 7.71 (0.76) | 7.00 (0.00) | 6.57 (0.79) |
| IQR | 5.00 | 0.50 | 2.50 | 2.00 | 1.00 | 0.00 | 0.50 |
| min - max | 2.00 - 7.00 | 7.00 - 8.00 | 4.00 - 8.00 | 5.00 - 8.00 | 7.00 - 9.00 | 7.00 - 7.00 | 5.00 - 7.00 |
| 3-008 |  |  |  |  |  |  |  |
| n | 7 | 6 | 7 | 7 | 6 | 7 | 7 |
| Mean (sd) | 5.14 (0.90) | 6.00 (1.67) | 5.71 (1.70) | 7.00 (1.41) | 4.67 (0.82) | 4.71 (1.11) | 6.43 (1.62) |
| IQR | 1.50 | 1.50 | 2.50 | 1.00 | 1.00 | 1.50 | 0.50 |
| min - max | 4.00 - 6.00 | 5.00 - 9.00 | 4.00 - 8.00 | 4.00 - 8.00 | 4.00 - 6.00 | 3.00 - 6.00 | 3.00 - 8.00 |
| 3-009 |  |  |  |  |  |  |  |
| n | 8 | 7 | 6 | 7 | 8 | 6 | 6 |
| Mean (sd) | 2.00 (2.78) | 1.29 (0.76) | 0.83 (0.75) | 1.00 (0.58) | 0.75 (0.46) | 0.83 (0.41) | 0.83 (0.41) |
| IQR | 3.00 | 1.00 | 0.75 | 0.00 | 0.25 | 0.00 | 0.00 |
| min - max | 0.00 - 8.00 | 0.00 - 2.00 | 0.00 - 2.00 | 0.00 - 2.00 | 0.00 - 1.00 | 0.00 - 1.00 | 0.00 - 1.00 |

### Hypothesis test

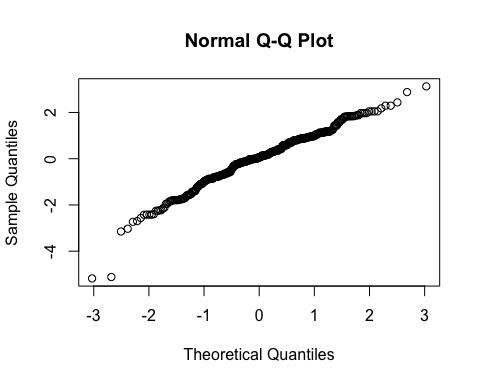
Ability to do first activity (higher is better)

| Subject ID | Difference Pair 1 | Difference Pair 2 | Difference Pair 3 | Overall difference |
| --- | --- | --- | --- | --- |
| 2-01 | 2.000 | -2.143 | -2.048 | -0.730 |
| 2-03 | -2.524 | -2.714 | -0.571 | -1.936 |
| 2-04 | -0.429 | -0.857 | 0.286 | -0.333 |
| 2-05 | -3.286 | -2.286 | 0.286 | -1.762 |
| 2-06 | -0.524 | -0.143 | 0.857 | 0.063 |
| 2-07 | 0.000 | 0.048 | -0.143 | -0.032 |
| 3-002 | 1.000 | 0.571 | 1.286 | 0.952 |
| 3-004 | 2.286 | -1.143 | 0.429 | 0.524 |
| 3-008 | 0.286 | 2.333 | -1.714 | 0.302 |
| 3-009 | 0.452 | 0.250 | 0.000 | 0.234 |

Values are Burst stimulation - Sham.

P-value of the null hypothesis test: 0.31.

### Treatment effect estimates

QQ-plot 

By subject

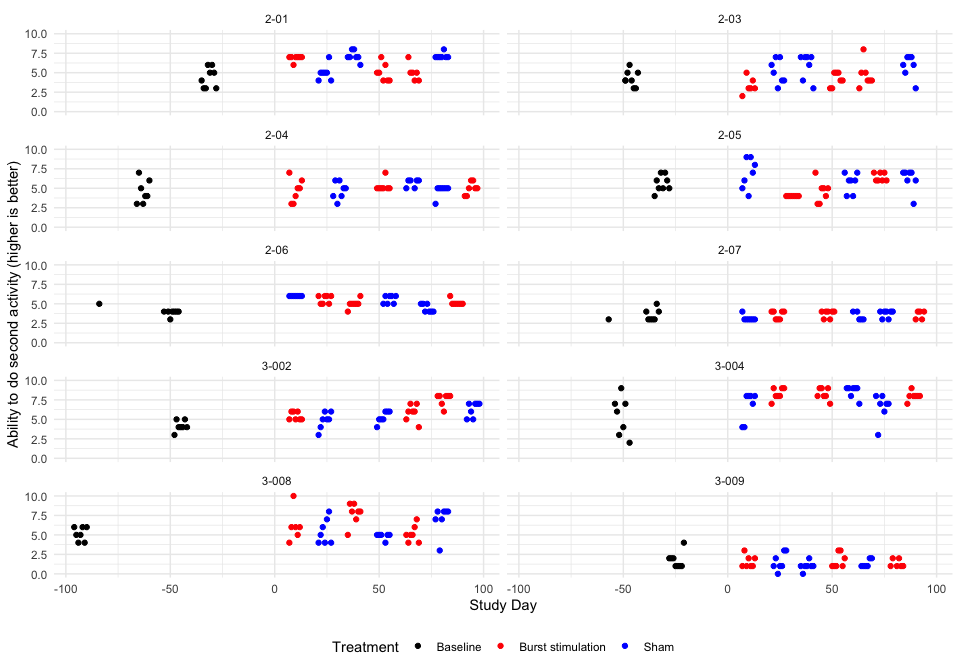
| Subject ID | Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- | --- |
| 2-01 | -0.631 | 0.298 | 0.034 | -1.216 | -0.046 |
| 2-03 | -1.669 | 0.298 | 0.000 | -2.254 | -1.084 |
| 2-04 | -0.300 | 0.298 | 0.315 | -0.885 | 0.285 |
| 2-05 | -1.538 | 0.298 | 0.000 | -2.123 | -0.953 |
| 2-06 | 0.033 | 0.298 | 0.913 | -0.552 | 0.618 |
| 2-07 | -0.077 | 0.298 | 0.796 | -0.662 | 0.508 |
| 3-002 | 0.769 | 0.298 | 0.010 | 0.185 | 1.354 |
| 3-004 | 0.405 | 0.298 | 0.175 | -0.180 | 0.990 |
| 3-008 | 0.166 | 0.298 | 0.579 | -0.419 | 0.751 |
| 3-009 | 0.165 | 0.298 | 0.580 | -0.420 | 0.750 |

Overall

| Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- |
| -0.27 | 0.298 | 0.366 | -0.855 | 0.315 |

## Secondary outcome: Ability to do second activity (NRS)

### Plot



### Descriptive table

| Ability to do second activity (higher is better) | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Full analysis set | | | | | | | |
|  | Baseline | Pair 1 | | Pair 2 | | Pair 3 | |
|  | Baseline | Burst stimulation | Sham | Burst stimulation | Sham | Burst stimulation | Sham |
| 2-01 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 7 | 6 | 7 |
| Mean (sd) | 4.38 (1.30) | 6.86 (0.38) | 5.00 (1.00) | 5.00 (1.15) | 7.14 (0.69) | 5.00 (1.10) | 7.14 (0.38) |
| IQR | 2.25 | 0.00 | 0.50 | 1.50 | 0.50 | 0.75 | 0.00 |
| min - max | 3.00 - 6.00 | 6.00 - 7.00 | 4.00 - 7.00 | 4.00 - 7.00 | 6.00 - 8.00 | 4.00 - 7.00 | 7.00 - 8.00 |
| 2-03 |  |  |  |  |  |  |  |
| n | 8 | 6 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 4.25 (1.04) | 3.33 (1.03) | 5.14 (1.57) | 4.14 (0.90) | 5.86 (1.68) | 4.71 (1.60) | 5.86 (1.46) |
| IQR | 1.25 | 0.75 | 2.50 | 1.50 | 2.00 | 1.00 | 1.50 |
| min - max | 3.00 - 6.00 | 2.00 - 5.00 | 3.00 - 7.00 | 3.00 - 5.00 | 3.00 - 7.00 | 3.00 - 8.00 | 3.00 - 7.00 |
| 2-04 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 6 | 7 | 7 |
| Mean (sd) | 4.57 (1.51) | 4.71 (1.50) | 4.71 (1.11) | 5.29 (0.76) | 5.67 (0.52) | 5.00 (0.82) | 4.71 (0.76) |
| IQR | 2.00 | 2.00 | 1.50 | 0.00 | 0.75 | 1.00 | 0.00 |
| min - max | 3.00 - 7.00 | 3.00 - 7.00 | 3.00 - 6.00 | 5.00 - 7.00 | 5.00 - 6.00 | 4.00 - 6.00 | 3.00 - 5.00 |
| 2-05 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 5.62 (1.06) | 4.00 (0.00) | 6.86 (1.95) | 4.57 (1.40) | 5.71 (1.25) | 6.43 (0.53) | 6.14 (1.46) |
| IQR | 1.25 | 0.00 | 3.00 | 1.50 | 1.50 | 1.00 | 1.00 |
| min - max | 4.00 - 7.00 | 4.00 - 4.00 | 4.00 - 9.00 | 3.00 - 7.00 | 4.00 - 7.00 | 6.00 - 7.00 | 3.00 - 7.00 |
| 2-06 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 4.00 (0.53) | 5.57 (0.53) | 6.00 (0.00) | 5.00 (0.58) | 5.57 (0.53) | 5.14 (0.38) | 4.43 (0.53) |
| IQR | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| min - max | 3.00 - 5.00 | 5.00 - 6.00 | 6.00 - 6.00 | 4.00 - 6.00 | 5.00 - 6.00 | 5.00 - 6.00 | 4.00 - 5.00 |
| 2-07 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 5 | 5 | 7 |
| Mean (sd) | 3.50 (0.76) | 3.57 (0.53) | 3.14 (0.38) | 3.71 (0.49) | 3.40 (0.55) | 3.60 (0.55) | 3.71 (0.49) |
| IQR | 1.00 | 1.00 | 0.00 | 0.50 | 1.00 | 1.00 | 0.50 |
| min - max | 3.00 - 5.00 | 3.00 - 4.00 | 3.00 - 4.00 | 3.00 - 4.00 | 3.00 - 4.00 | 3.00 - 4.00 | 3.00 - 4.00 |
| 3-002 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 4.14 (0.69) | 5.43 (0.53) | 4.86 (1.07) | 5.86 (1.07) | 5.29 (0.76) | 7.57 (0.79) | 6.29 (0.95) |
| IQR | 0.50 | 1.00 | 1.00 | 1.00 | 1.00 | 0.50 | 1.50 |
| min - max | 3.00 - 5.00 | 5.00 - 6.00 | 3.00 - 6.00 | 4.00 - 7.00 | 4.00 - 6.00 | 6.00 - 8.00 | 5.00 - 7.00 |
| 3-004 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 5.43 (2.51) | 8.29 (0.76) | 6.71 (1.89) | 8.29 (0.76) | 8.57 (0.79) | 8.00 (0.58) | 6.57 (1.72) |
| IQR | 3.50 | 1.00 | 2.50 | 1.00 | 0.50 | 0.00 | 1.00 |
| min - max | 2.00 - 9.00 | 7.00 - 9.00 | 4.00 - 8.00 | 7.00 - 9.00 | 7.00 - 9.00 | 7.00 - 9.00 | 3.00 - 8.00 |
| 3-008 |  |  |  |  |  |  |  |
| n | 7 | 6 | 7 | 7 | 6 | 7 | 7 |
| Mean (sd) | 5.14 (0.90) | 6.17 (2.04) | 5.43 (1.62) | 7.71 (1.38) | 4.83 (0.41) | 5.14 (1.07) | 7.00 (1.83) |
| IQR | 1.50 | 0.75 | 2.50 | 1.00 | 0.00 | 1.00 | 1.00 |
| min - max | 4.00 - 6.00 | 4.00 - 10.00 | 4.00 - 8.00 | 5.00 - 9.00 | 4.00 - 5.00 | 4.00 - 7.00 | 3.00 - 8.00 |
| 3-009 |  |  |  |  |  |  |  |
| n | 8 | 7 | 6 | 7 | 8 | 6 | 6 |
| Mean (sd) | 1.75 (1.04) | 1.57 (0.79) | 1.33 (1.03) | 1.71 (0.95) | 1.25 (0.89) | 1.33 (0.52) | 1.33 (0.52) |
| IQR | 1.00 | 1.00 | 0.75 | 1.50 | 0.25 | 0.75 | 0.75 |
| min - max | 1.00 - 4.00 | 1.00 - 3.00 | 0.00 - 3.00 | 1.00 - 3.00 | 0.00 - 3.00 | 1.00 - 2.00 | 1.00 - 2.00 |

### Hypothesis test

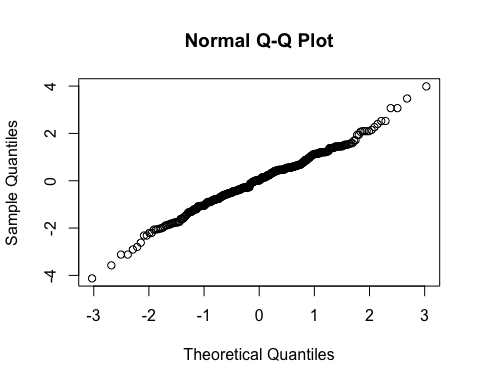
Ability to do second activity (higher is better)

| Subject ID | Difference Pair 1 | Difference Pair 2 | Difference Pair 3 | Overall difference |
| --- | --- | --- | --- | --- |
| 2-01 | 1.857 | -2.143 | -2.143 | -0.810 |
| 2-03 | -1.810 | -1.714 | -1.143 | -1.556 |
| 2-04 | 0.000 | -0.381 | 0.286 | -0.032 |
| 2-05 | -2.857 | -1.143 | 0.286 | -1.238 |
| 2-06 | -0.429 | -0.571 | 0.714 | -0.095 |
| 2-07 | 0.429 | 0.314 | -0.114 | 0.210 |
| 3-002 | 0.571 | 0.571 | 1.286 | 0.809 |
| 3-004 | 1.571 | -0.286 | 1.429 | 0.905 |
| 3-008 | 0.738 | 2.881 | -1.857 | 0.587 |
| 3-009 | 0.238 | 0.464 | 0.000 | 0.234 |

Values are Burst stimulation - Sham.

P-value of the null hypothesis test: 0.69.

### Treatment effect estimates

QQ-plot 

By subject

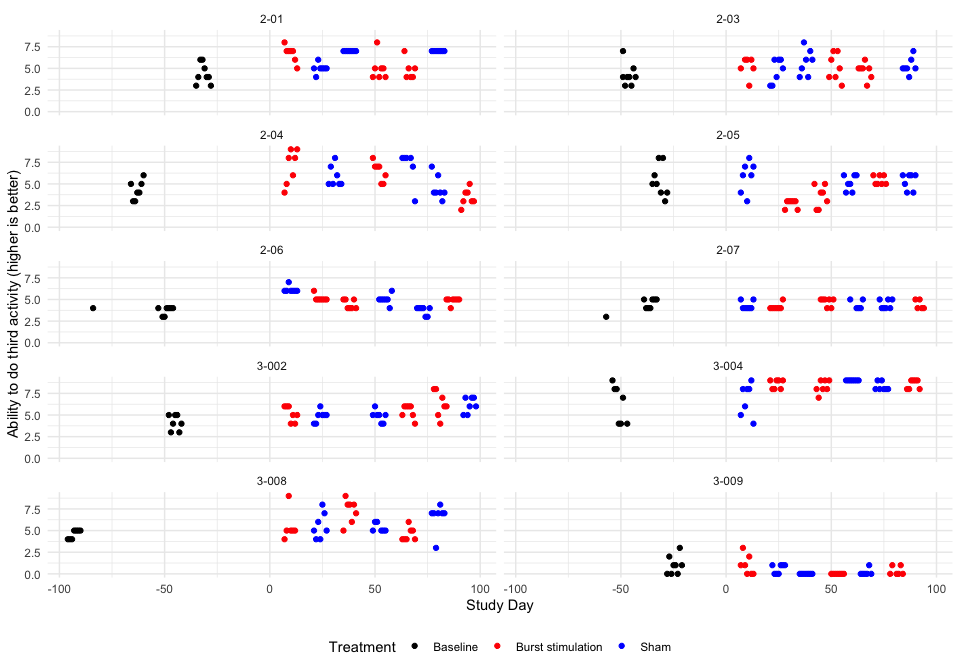
| Subject ID | Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- | --- |
| 2-01 | -0.649 | 0.265 | 0.014 | -1.169 | -0.130 |
| 2-03 | -1.275 | 0.265 | 0.000 | -1.795 | -0.756 |
| 2-04 | -0.030 | 0.265 | 0.911 | -0.549 | 0.490 |
| 2-05 | -1.033 | 0.265 | 0.000 | -1.552 | -0.513 |
| 2-06 | -0.095 | 0.265 | 0.719 | -0.615 | 0.424 |
| 2-07 | 0.157 | 0.265 | 0.553 | -0.362 | 0.677 |
| 3-002 | 0.647 | 0.265 | 0.015 | 0.127 | 1.166 |
| 3-004 | 0.725 | 0.265 | 0.006 | 0.205 | 1.244 |
| 3-008 | 0.410 | 0.265 | 0.121 | -0.109 | 0.930 |
| 3-009 | 0.191 | 0.265 | 0.472 | -0.329 | 0.710 |

Overall

| Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- |
| -0.097 | 0.265 | 0.713 | -0.617 | 0.422 |

## Secondary outcome: Ability to do third activity (NRS)

### Plot



### Descriptive table

| Ability to do third activity (higher is better) | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Full analysis set | | | | | | | |
|  | Baseline | Pair 1 | | Pair 2 | | Pair 3 | |
|  | Baseline | Burst stimulation | Sham | Burst stimulation | Sham | Burst stimulation | Sham |
| 2-01 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 7 | 6 | 7 |
| Mean (sd) | 4.38 (1.19) | 6.71 (0.95) | 5.00 (0.58) | 5.00 (1.41) | 7.00 (0.00) | 4.83 (1.17) | 7.00 (0.00) |
| IQR | 1.50 | 0.50 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 |
| min - max | 3.00 - 6.00 | 5.00 - 8.00 | 4.00 - 6.00 | 4.00 - 8.00 | 7.00 - 7.00 | 4.00 - 7.00 | 7.00 - 7.00 |
| 2-03 |  |  |  |  |  |  |  |
| n | 8 | 6 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 4.25 (1.28) | 5.17 (1.17) | 4.71 (1.38) | 5.14 (1.57) | 5.71 (1.50) | 4.71 (0.95) | 5.29 (0.95) |
| IQR | 0.50 | 1.00 | 2.50 | 2.50 | 2.00 | 0.50 | 0.50 |
| min - max | 3.00 - 7.00 | 3.00 - 6.00 | 3.00 - 6.00 | 3.00 - 7.00 | 4.00 - 8.00 | 3.00 - 6.00 | 4.00 - 7.00 |
| 2-04 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 6 | 7 | 7 |
| Mean (sd) | 4.29 (1.11) | 7.00 (2.00) | 5.86 (1.21) | 6.43 (1.13) | 7.00 (2.00) | 3.43 (0.98) | 4.57 (1.40) |
| IQR | 1.50 | 3.00 | 1.50 | 1.50 | 0.75 | 1.00 | 1.00 |
| min - max | 3.00 - 6.00 | 4.00 - 9.00 | 5.00 - 8.00 | 5.00 - 8.00 | 3.00 - 8.00 | 2.00 - 5.00 | 3.00 - 7.00 |
| 2-05 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 5.38 (1.85) | 2.71 (0.49) | 5.86 (1.77) | 3.57 (1.27) | 5.14 (0.90) | 5.43 (0.53) | 5.29 (0.95) |
| IQR | 2.50 | 0.50 | 2.00 | 2.00 | 1.50 | 1.00 | 1.50 |
| min - max | 3.00 - 8.00 | 2.00 - 3.00 | 3.00 - 8.00 | 2.00 - 5.00 | 4.00 - 6.00 | 5.00 - 6.00 | 4.00 - 6.00 |
| 2-06 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 3.75 (0.46) | 5.14 (0.38) | 6.14 (0.38) | 4.43 (0.53) | 5.00 (0.58) | 4.86 (0.38) | 3.71 (0.49) |
| IQR | 0.25 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.50 |
| min - max | 3.00 - 4.00 | 5.00 - 6.00 | 6.00 - 7.00 | 4.00 - 5.00 | 4.00 - 6.00 | 4.00 - 5.00 | 3.00 - 4.00 |
| 2-07 |  |  |  |  |  |  |  |
| n | 8 | 7 | 7 | 7 | 5 | 5 | 7 |
| Mean (sd) | 4.38 (0.74) | 4.14 (0.38) | 4.29 (0.49) | 4.71 (0.49) | 4.40 (0.55) | 4.40 (0.55) | 4.43 (0.53) |
| IQR | 1.00 | 0.00 | 0.50 | 0.50 | 1.00 | 1.00 | 1.00 |
| min - max | 3.00 - 5.00 | 4.00 - 5.00 | 4.00 - 5.00 | 4.00 - 5.00 | 4.00 - 5.00 | 4.00 - 5.00 | 4.00 - 5.00 |
| 3-002 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 4.14 (0.90) | 5.14 (0.90) | 4.86 (0.69) | 5.43 (0.79) | 4.86 (0.69) | 6.29 (1.50) | 6.14 (0.90) |
| IQR | 1.50 | 1.50 | 0.50 | 1.00 | 0.50 | 2.00 | 1.50 |
| min - max | 3.00 - 5.00 | 4.00 - 6.00 | 4.00 - 6.00 | 4.00 - 6.00 | 4.00 - 6.00 | 4.00 - 8.00 | 5.00 - 7.00 |
| 3-004 |  |  |  |  |  |  |  |
| n | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean (sd) | 6.29 (2.21) | 8.57 (0.53) | 6.86 (1.86) | 8.29 (0.76) | 9.00 (0.00) | 8.57 (0.53) | 8.29 (0.49) |
| IQR | 4.00 | 1.00 | 2.50 | 1.00 | 0.00 | 1.00 | 0.50 |
| min - max | 4.00 - 9.00 | 8.00 - 9.00 | 4.00 - 9.00 | 7.00 - 9.00 | 9.00 - 9.00 | 8.00 - 9.00 | 8.00 - 9.00 |
| 3-008 |  |  |  |  |  |  |  |
| n | 7 | 6 | 7 | 7 | 6 | 7 | 7 |
| Mean (sd) | 4.57 (0.53) | 5.50 (1.76) | 5.57 (1.51) | 7.29 (1.38) | 5.33 (0.52) | 4.57 (0.79) | 6.57 (1.62) |
| IQR | 1.00 | 0.00 | 2.00 | 1.50 | 0.75 | 1.00 | 0.00 |
| min - max | 4.00 - 5.00 | 4.00 - 9.00 | 4.00 - 8.00 | 5.00 - 9.00 | 5.00 - 6.00 | 4.00 - 6.00 | 3.00 - 8.00 |
| 3-009 |  |  |  |  |  |  |  |
| n | 8 | 7 | 6 | 7 | 8 | 6 | 6 |
| Mean (sd) | 1.00 (1.07) | 1.00 (1.15) | 0.50 (0.55) | 0.00 (0.00) | 0.12 (0.35) | 0.33 (0.52) | 0.17 (0.41) |
| IQR | 1.25 | 1.50 | 1.00 | 0.00 | 0.00 | 0.75 | 0.00 |
| min - max | 0.00 - 3.00 | 0.00 - 3.00 | 0.00 - 1.00 | 0.00 - 0.00 | 0.00 - 1.00 | 0.00 - 1.00 | 0.00 - 1.00 |

### Hypothesis test

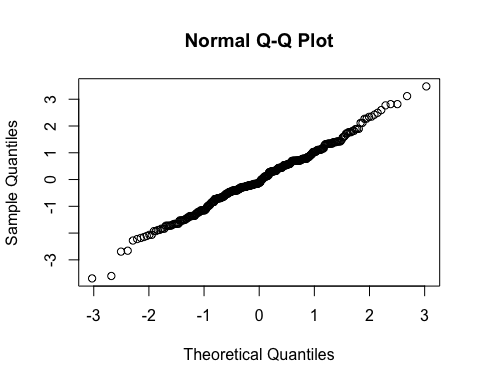
Ability to do third activity (higher is better)

| Subject ID | Difference Pair 1 | Difference Pair 2 | Difference Pair 3 | Overall difference |
| --- | --- | --- | --- | --- |
| 2-01 | 1.714 | -2.000 | -2.167 | -0.818 |
| 2-03 | 0.452 | -0.571 | -0.571 | -0.230 |
| 2-04 | 1.143 | -0.571 | -1.143 | -0.190 |
| 2-05 | -3.143 | -1.571 | 0.143 | -1.524 |
| 2-06 | -1.000 | -0.571 | 1.143 | -0.143 |
| 2-07 | -0.143 | 0.314 | -0.029 | 0.047 |
| 3-002 | 0.286 | 0.571 | 0.143 | 0.333 |
| 3-004 | 1.714 | -0.714 | 0.286 | 0.429 |
| 3-008 | -0.071 | 1.952 | -2.000 | -0.040 |
| 3-009 | 0.500 | -0.125 | 0.167 | 0.181 |

Values are Burst stimulation - Sham.

P-value of the null hypothesis test: 0.38.

### Treatment effect estimates

QQ-plot 

By subject

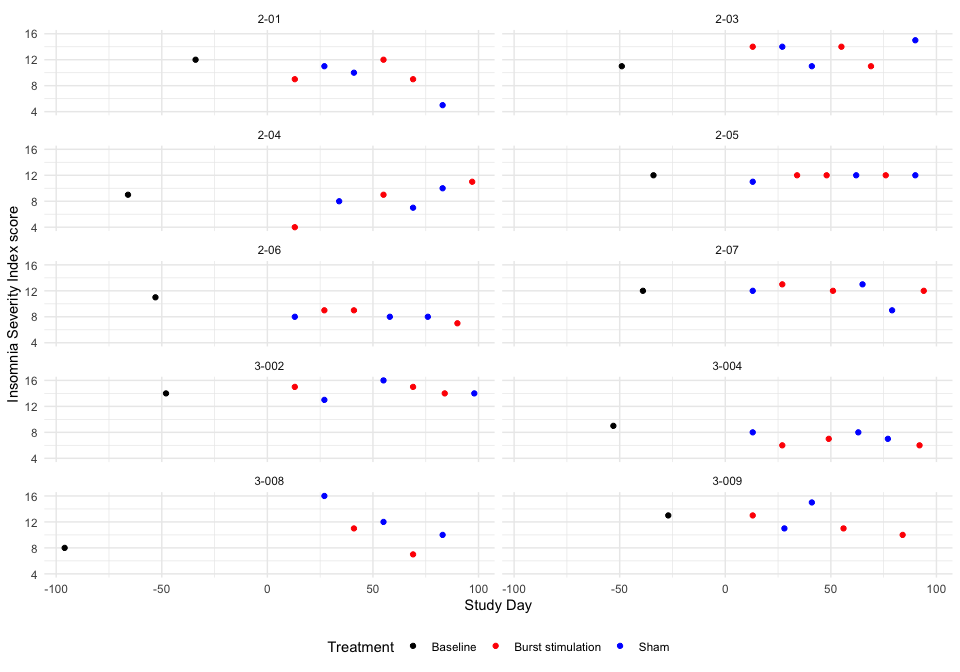
| Subject ID | Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- | --- |
| 2-01 | -0.570 | 0.184 | 0.002 | -0.930 | -0.210 |
| 2-03 | -0.229 | 0.184 | 0.212 | -0.589 | 0.131 |
| 2-04 | -0.182 | 0.184 | 0.322 | -0.542 | 0.178 |
| 2-05 | -1.046 | 0.184 | 0.000 | -1.406 | -0.687 |
| 2-06 | -0.163 | 0.184 | 0.374 | -0.523 | 0.197 |
| 2-07 | -0.057 | 0.184 | 0.757 | -0.417 | 0.303 |
| 3-002 | 0.141 | 0.184 | 0.442 | -0.219 | 0.501 |
| 3-004 | 0.202 | 0.184 | 0.271 | -0.158 | 0.562 |
| 3-008 | -0.128 | 0.184 | 0.486 | -0.488 | 0.232 |
| 3-009 | 0.035 | 0.184 | 0.850 | -0.325 | 0.395 |

Overall

| Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- |
| -0.202 | 0.184 | 0.272 | -0.562 | 0.158 |

## Secondary endpoint: Insomnia Severity Index questionnaire total score

### Plot

 ### Descriptive table

| Insomnia Severity Index score | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Full analysis set | | | | | | | |
|  | Baseline | Pair 1 | | Pair 2 | | Pair 3 | |
|  | Baseline | Burst stimulation | Sham | Burst stimulation | Sham | Burst stimulation | Sham |
| 2-01 |  |  |  |  |  |  |  |
|  | 12 | 9 | 11 | 12 | 10 | 9 | 5 |
| 2-03 |  |  |  |  |  |  |  |
|  | 11 | 14 | 14 | 14 | 11 | 11 | 15 |
| 2-04 |  |  |  |  |  |  |  |
|  | 9 | 4 | 8 | 9 | 7 | 11 | 10 |
| 2-05 |  |  |  |  |  |  |  |
|  | 12 | 12 | 11 | 12 | 12 | 12 | 12 |
| 2-06 |  |  |  |  |  |  |  |
|  | 11 | 9 | 8 | 9 | 8 | 7 | 8 |
| 2-07 |  |  |  |  |  |  |  |
|  | 12 | 13 | 12 | 12 | 13 | 12 | 9 |
| 3-002 |  |  |  |  |  |  |  |
|  | 14 | 15 | 13 | 15 | 16 | 14 | 14 |
| 3-004 |  |  |  |  |  |  |  |
|  | 9 | 6 | 8 | 7 | 8 | 6 | 7 |
| 3-008 |  |  |  |  |  |  |  |
|  | 8 | NA | 16 | 11 | 12 | 7 | 10 |
| 3-009 |  |  |  |  |  |  |  |
|  | 13 | 13 | NA | 11 | 13 | 10 | NA |

### Hypothesis test

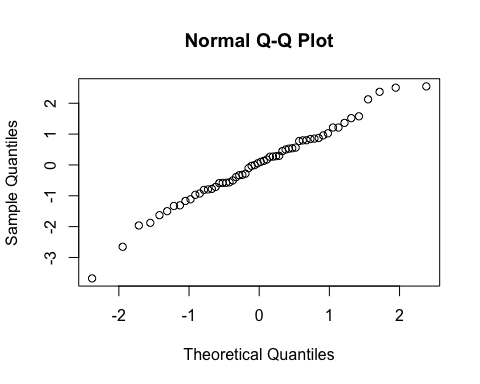
Insomnia Severity Index score

| Subject ID | Difference Pair 1 | Difference Pair 2 | Difference Pair 3 | Overall difference |
| --- | --- | --- | --- | --- |
| 2-01 | -2 | 2 | 4 | 1.333 |
| 2-03 | 0 | 3 | -4 | -0.333 |
| 2-04 | -4 | 2 | 1 | -0.333 |
| 2-05 | 1 | 0 | 0 | 0.333 |
| 2-06 | 1 | 1 | -1 | 0.333 |
| 2-07 | 1 | -1 | 3 | 1.000 |
| 3-002 | 2 | -1 | 0 | 0.333 |
| 3-004 | -2 | -1 | -1 | -1.333 |
| 3-008 | NaN | -1 | -3 | -2.000 |
| 3-009 | NaN | -2 | NaN | -2.000 |

Values are Burst stimulation - Sham.

P-value of the null hypothesis test: 0.85.

### Treatment effect estimates

QQ-plot 

By subject

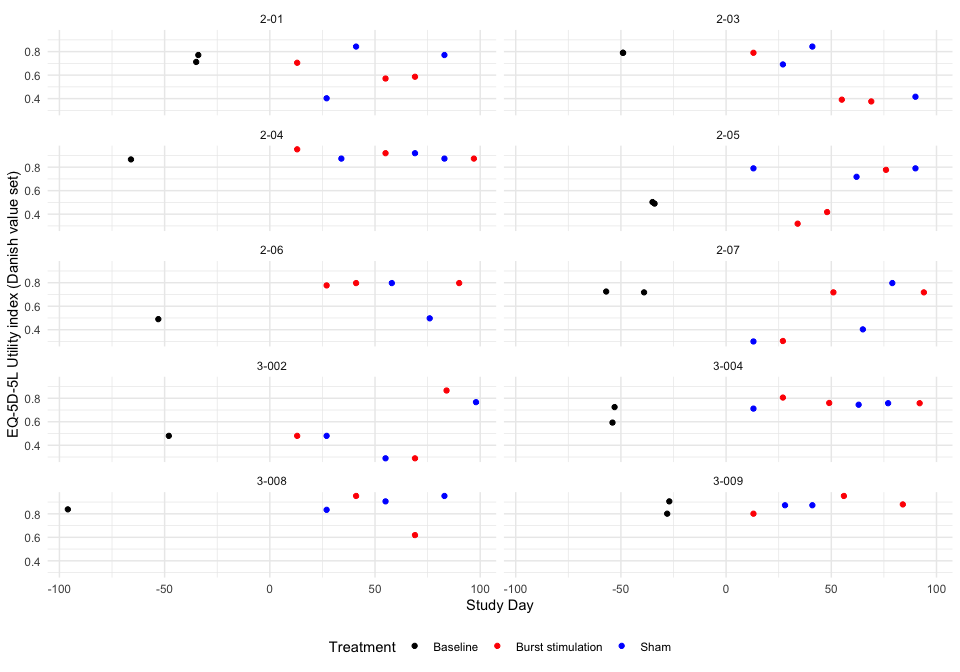
| Subject ID | Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- | --- |
| 2-01 | 1.076 | 1.064 | 0.312 | -1.010 | 3.162 |
| 2-03 | -0.327 | 1.064 | 0.759 | -2.413 | 1.759 |
| 2-04 | -0.327 | 1.064 | 0.759 | -2.413 | 1.759 |
| 2-05 | 0.234 | 1.064 | 0.826 | -1.851 | 2.320 |
| 2-06 | 0.234 | 1.064 | 0.826 | -1.851 | 2.320 |
| 2-07 | 0.796 | 1.064 | 0.455 | -1.290 | 2.881 |
| 3-002 | 0.234 | 1.064 | 0.826 | -1.851 | 2.320 |
| 3-004 | -1.168 | 1.064 | 0.272 | -3.254 | 0.918 |
| 3-008 | -2.617 | 1.064 | 0.014 | -4.703 | -0.531 |
| 3-009 | -1.051 | 1.064 | 0.324 | -3.137 | 1.035 |

Overall

| Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- |
| -0.238 | 1.064 | 0.823 | -2.324 | 1.848 |

## Secondary endpoint: EQ-5D-5L Utility Index

### Plot

 ### Descriptive table

| EQ-5D-5L Utility index (Danish value set) | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Full analysis set | | | | | | | |
|  | Baseline | Pair 1 | | Pair 2 | | Pair 3 | |
|  | Baseline | Burst stimulation | Sham | Burst stimulation | Sham | Burst stimulation | Sham |
| 2-01 |  |  |  |  |  |  |  |
|  | 0.7415 | 0.705 | 0.403 | 0.571 | 0.843 | 0.586 | 0.771 |
| 2-03 |  |  |  |  |  |  |  |
|  | 0.79 | 0.79 | 0.691 | 0.391 | 0.843 | 0.376 | 0.416 |
| 2-04 |  |  |  |  |  |  |  |
|  | 0.866 | 0.952 | 0.873 | 0.919 | 0.919 | 0.873 | 0.873 |
| 2-05 |  |  |  |  |  |  |  |
|  | 0.4965 | 0.319 | 0.79 | 0.418 | 0.718 | 0.777 | 0.79 |
| 2-06 |  |  |  |  |  |  |  |
|  | 0.49 | 0.777 | NA | 0.797 | 0.797 | 0.797 | 0.497 |
| 2-07 |  |  |  |  |  |  |  |
|  | 0.7215 | 0.304 | 0.3 | 0.718 | 0.403 | 0.718 | 0.797 |
| 3-002 |  |  |  |  |  |  |  |
|  | 0.48 | 0.48 | 0.48 | 0.289 | 0.289 | 0.866 | 0.767 |
| 3-004 |  |  |  |  |  |  |  |
|  | 0.659 | 0.806 | 0.712 | 0.76 | 0.745 | 0.758 | 0.758 |
| 3-008 |  |  |  |  |  |  |  |
|  | 0.838 | NA | 0.834 | 0.952 | 0.906 | 0.619 | 0.952 |
| 3-009 |  |  |  |  |  |  |  |
|  | 0.8535 | 0.801 | NA | 0.952 | 0.873 | 0.88 | NA |

### Hypothesis test

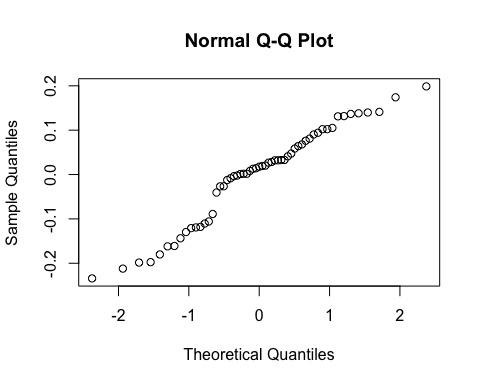
EQ-5D-5L Utility index (Danish value set)

| Subject ID | Difference Pair 1 | Difference Pair 2 | Difference Pair 3 | Overall difference |
| --- | --- | --- | --- | --- |
| 2-01 | 0.302 | -0.272 | -0.185 | -0.052 |
| 2-03 | 0.099 | -0.452 | -0.040 | -0.131 |
| 2-04 | 0.079 | 0.000 | 0.000 | 0.026 |
| 2-05 | -0.471 | -0.300 | -0.013 | -0.261 |
| 2-06 | NaN | 0.000 | 0.300 | 0.150 |
| 2-07 | 0.004 | 0.315 | -0.079 | 0.080 |
| 3-002 | 0.000 | 0.000 | 0.099 | 0.033 |
| 3-004 | 0.094 | 0.015 | 0.000 | 0.036 |
| 3-008 | NaN | 0.046 | -0.333 | -0.144 |
| 3-009 | NaN | 0.079 | NaN | 0.079 |

Values are Burst stimulation - Sham.

P-value of the null hypothesis test: 0.5.

### Treatment effect estimates

QQ-plot 

By subject

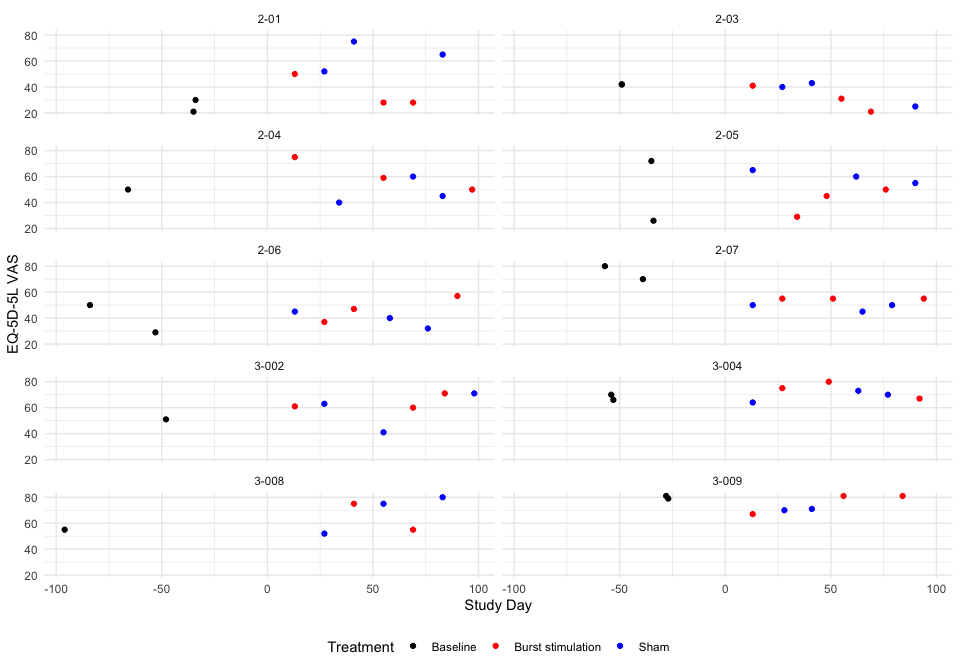
| Subject ID | Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- | --- |
| 2-01 | -0.028 | 0.04 | 0.483 | -0.107 | 0.050 |
| 2-03 | -0.041 | 0.04 | 0.304 | -0.120 | 0.037 |
| 2-04 | -0.015 | 0.04 | 0.704 | -0.094 | 0.063 |
| 2-05 | -0.063 | 0.04 | 0.117 | -0.141 | 0.016 |
| 2-06 | 0.000 | 0.04 | 0.996 | -0.078 | 0.079 |
| 2-07 | -0.006 | 0.04 | 0.874 | -0.085 | 0.072 |
| 3-002 | -0.014 | 0.04 | 0.725 | -0.093 | 0.064 |
| 3-004 | -0.014 | 0.04 | 0.735 | -0.092 | 0.065 |
| 3-008 | -0.040 | 0.04 | 0.320 | -0.118 | 0.039 |
| 3-009 | -0.013 | 0.04 | 0.737 | -0.092 | 0.065 |

Overall

| Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- |
| -0.024 | 0.04 | 0.554 | -0.102 | 0.055 |

## Secondary endpoint: EQ-5D-5L self-rated health (VAS)

### Plot

 ### Descriptive table

| EQ-5D-5L VAS | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Full analysis set | | | | | | | |
|  | Baseline | Pair 1 | | Pair 2 | | Pair 3 | |
|  | Baseline | Burst stimulation | Sham | Burst stimulation | Sham | Burst stimulation | Sham |
| 2-01 |  |  |  |  |  |  |  |
|  | 25.5 | 50 | 52 | 28 | 75 | 28 | 65 |
| 2-03 |  |  |  |  |  |  |  |
|  | 42 | 41 | 40 | 31 | 43 | 21 | 25 |
| 2-04 |  |  |  |  |  |  |  |
|  | 50 | 75 | 40 | 59 | 60 | 50 | 45 |
| 2-05 |  |  |  |  |  |  |  |
|  | 49 | 29 | 65 | 45 | 60 | 50 | 55 |
| 2-06 |  |  |  |  |  |  |  |
|  | 39.5 | 37 | 45 | 47 | 40 | 57 | 32 |
| 2-07 |  |  |  |  |  |  |  |
|  | 75 | 55 | 50 | 55 | 45 | 55 | 50 |
| 3-002 |  |  |  |  |  |  |  |
|  | 51 | 61 | 63 | 60 | 41 | 71 | 71 |
| 3-004 |  |  |  |  |  |  |  |
|  | 68 | 75 | 64 | 80 | 73 | 67 | 70 |
| 3-008 |  |  |  |  |  |  |  |
|  | 55 | NA | 52 | 75 | 75 | 55 | 80 |
| 3-009 |  |  |  |  |  |  |  |
|  | 80 | 67 | NA | 81 | 70.5 | 81 | NA |

### Hypothesis test

EQ-5D-5L VAS

| Subject ID | Difference Pair 1 | Difference Pair 2 | Difference Pair 3 | Overall difference |
| --- | --- | --- | --- | --- |
| 2-01 | -2 | -47.0 | -37 | -28.667 |
| 2-03 | 1 | -12.0 | -4 | -5.000 |
| 2-04 | 35 | -1.0 | 5 | 13.000 |
| 2-05 | -36 | -15.0 | -5 | -18.667 |
| 2-06 | -8 | 7.0 | 25 | 8.000 |
| 2-07 | 5 | 10.0 | 5 | 6.667 |
| 3-002 | -2 | 19.0 | 0 | 5.667 |
| 3-004 | 11 | 7.0 | -3 | 5.000 |
| 3-008 | NaN | 0.0 | -25 | -12.500 |
| 3-009 | NaN | 10.5 | NaN | 10.500 |

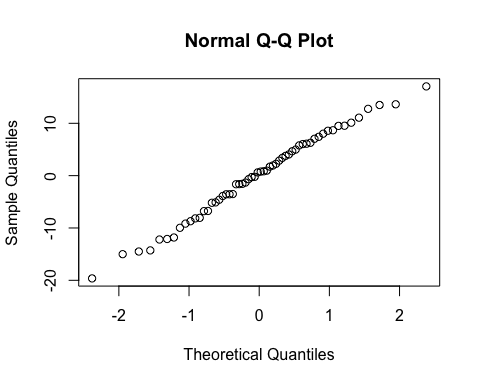
Values are Burst stimulation - Sham.

P-value of the null hypothesis test: 0.55.

### Treatment effect estimates

QQ-plot

## boundary (singular) fit: see help('isSingular')



By subject

| Subject ID | Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- | --- |
| 2-01 | -18.866 | 4.288 | 0.000 | -27.271 | -10.461 |
| 2-03 | -3.617 | 4.288 | 0.399 | -12.022 | 4.788 |
| 2-04 | 7.980 | 4.288 | 0.063 | -0.425 | 16.385 |
| 2-05 | -12.423 | 4.288 | 0.004 | -20.828 | -4.018 |
| 2-06 | 4.759 | 4.288 | 0.267 | -3.646 | 13.164 |
| 2-07 | 3.900 | 4.288 | 0.363 | -4.505 | 12.305 |
| 3-002 | 3.255 | 4.288 | 0.448 | -5.150 | 11.660 |
| 3-004 | 2.826 | 4.288 | 0.510 | -5.579 | 11.231 |
| 3-008 | -3.435 | 4.288 | 0.423 | -11.840 | 4.970 |
| 3-009 | 4.498 | 4.288 | 0.294 | -3.907 | 12.903 |

Overall

| Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- |
| -1.169 | 4.288 | 0.785 | -9.574 | 7.236 |

## Secondary endpoint: Patient Global Impression of Change

### Descriptive table

| Patient Global Impression of Change | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| Full analysis set | | | | | | |
|  | Baseline - Burst stimulation | Baseline - Sham | Burst stimulation - Burst stimulation | Burst stimulation - Sham | Sham - Burst stimulation | Sham - Sham |
| Veldig mye bedre | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |
| Mye bedre | 2 (40.00%) | 1 (25.00%) | 4 (57.14%) | 5 (31.25%) | 5 (29.41%) | 1 (11.11%) |
| Minimalt bedre | 1 (20.00%) | 1 (25.00%) | 0 (0.00%) | 2 (12.50%) | 2 (11.76%) | 1 (11.11%) |
| Ingen endring | 2 (40.00%) | 0 (0.00%) | 2 (28.57%) | 2 (12.50%) | 4 (23.53%) | 3 (33.33%) |
| Minimalt verre | 0 (0.00%) | 1 (25.00%) | 0 (0.00%) | 3 (18.75%) | 0 (0.00%) | 1 (11.11%) |
| Mye verre | 0 (0.00%) | 1 (25.00%) | 1 (14.29%) | 3 (18.75%) | 6 (35.29%) | 3 (33.33%) |
| Veldig mye verre | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 1 (6.25%) | 0 (0.00%) | 0 (0.00%) |

### Hypothesis test and treatment effect estimates

|  | Mean | SD |
| --- | --- | --- |
| Burst stimulation - Sham | 4 | 1.751190 |
| Sham - Burst stimulation | 4 | 1.695582 |

| contrast | estimate | std.error | p.value | conf.low | conf.high |
| --- | --- | --- | --- | --- | --- |
| Sham - Burst stimulation - Burst stimulation - Sham | 0 | 0.6 | 1 | -1.176 | 1.176 |

## Secondary outcome: Patient blinding question

### Descriptive table by participant

| Patient blinding question | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| Full analysis set | | | | | | |
|  | Pair 1 | | Pair 2 | | Pair 3 | |
|  | Burst stimulation | Sham | Burst stimulation | Sham | Burst stimulation | Sham |
| 2-01 |  |  |  |  |  |  |
| Slått på | 1 (11.11%) | 0 (0.00%) | 0 (0.00%) | 1 (9.09%) | 0 (0.00%) | 1 (11.11%) |
| Slått av | 0 (0.00%) | 1 (11.11%) | 1 (10.00%) | 0 (0.00%) | 1 (10.00%) | 0 (0.00%) |
| Vet ikke | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |
| 2-03 |  |  |  |  |  |  |
| Slått på | 0 (0.00%) | 1 (11.11%) | 0 (0.00%) | 1 (9.09%) | 1 (10.00%) | 0 (0.00%) |
| Slått av | 1 (11.11%) | 0 (0.00%) | 1 (10.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |
| Vet ikke | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 1 (11.11%) |
| 2-04 |  |  |  |  |  |  |
| Slått på | 1 (11.11%) | 0 (0.00%) | 1 (10.00%) | 1 (9.09%) | 0 (0.00%) | 0 (0.00%) |
| Slått av | 0 (0.00%) | 1 (11.11%) | 0 (0.00%) | 0 (0.00%) | 1 (10.00%) | 1 (11.11%) |
| Vet ikke | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |
| 2-05 |  |  |  |  |  |  |
| Slått på | 0 (0.00%) | 1 (11.11%) | 0 (0.00%) | 1 (9.09%) | 1 (10.00%) | 1 (11.11%) |
| Slått av | 1 (11.11%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |
| Vet ikke | 0 (0.00%) | 0 (0.00%) | 1 (10.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |
| 2-06 |  |  |  |  |  |  |
| Slått på | 0 (0.00%) | 1 (11.11%) | 1 (10.00%) | 1 (9.09%) | 1 (10.00%) | 0 (0.00%) |
| Slått av | 1 (11.11%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 1 (11.11%) |
| Vet ikke | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |
| 2-07 |  |  |  |  |  |  |
| Slått på | 1 (11.11%) | 0 (0.00%) | 1 (10.00%) | 0 (0.00%) | 0 (0.00%) | 1 (11.11%) |
| Slått av | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |
| Vet ikke | 0 (0.00%) | 1 (11.11%) | 0 (0.00%) | 1 (9.09%) | 1 (10.00%) | 0 (0.00%) |
| 3-002 |  |  |  |  |  |  |
| Slått på | 1 (11.11%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 1 (10.00%) | 0 (0.00%) |
| Slått av | 0 (0.00%) | 1 (11.11%) | 1 (10.00%) | 1 (9.09%) | 0 (0.00%) | 0 (0.00%) |
| Vet ikke | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 1 (11.11%) |
| 3-004 |  |  |  |  |  |  |
| Slått på | 1 (11.11%) | 0 (0.00%) | 1 (10.00%) | 1 (9.09%) | 0 (0.00%) | 0 (0.00%) |
| Slått av | 0 (0.00%) | 1 (11.11%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 1 (11.11%) |
| Vet ikke | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 1 (10.00%) | 0 (0.00%) |
| 3-008 |  |  |  |  |  |  |
| Slått på | 0 (0.00%) | 0 (0.00%) | 1 (10.00%) | 0 (0.00%) | 0 (0.00%) | 1 (11.11%) |
| Slått av | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 1 (9.09%) | 1 (10.00%) | 0 (0.00%) |
| Vet ikke | 0 (0.00%) | 1 (11.11%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) |
| 3-009 |  |  |  |  |  |  |
| Slått på | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 1 (9.09%) | 0 (0.00%) | 0 (0.00%) |
| Slått av | 1 (11.11%) | 0 (0.00%) | 1 (10.00%) | 1 (9.09%) | 0 (0.00%) | 0 (0.00%) |
| Vet ikke | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 0 (0.00%) | 1 (10.00%) | 0 (0.00%) |

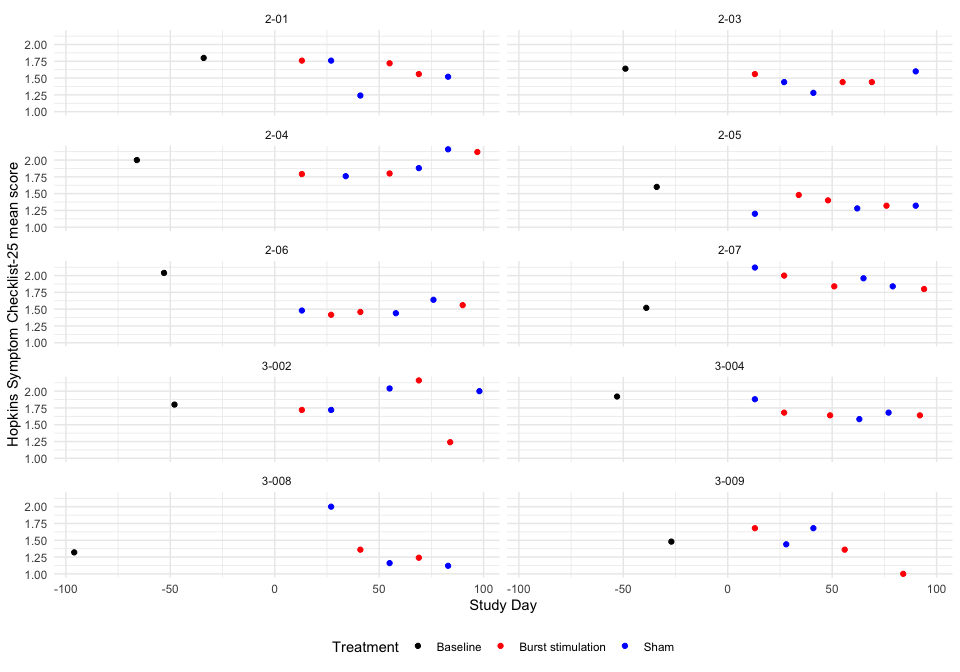
| Patient Blinding Quesiton | | |
| --- | --- | --- |
| Full analysis set | | |
|  | Burst stimulation | Sham |
| Slått på | 14 (48.28%) | 14 (48.28%) |
| Slått av | 11 (37.93%) | 10 (34.48%) |
| Vet ikke | 4 (13.79%) | 5 (17.24%) |

P-value of the null hypothesis chi-squared test: 0.92.

P-value of the null hypothesis Fisher test: 1.

## Secondary endpoint: Hopkins Symptom Checklist-25 mean score

### Plot

 ### Descriptive table

| Hopkins Symptom Checklist-25 mean score | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Full analysis set | | | | | | | |
|  | Baseline | Pair 1 | | Pair 2 | | Pair 3 | |
|  | Baseline | Burst stimulation | Sham | Burst stimulation | Sham | Burst stimulation | Sham |
| 2-01 |  |  |  |  |  |  |  |
|  | 1.8 | 1.76 | 1.76 | 1.72 | 1.24 | 1.56 | 1.52 |
| 2-03 |  |  |  |  |  |  |  |
|  | 1.64 | 1.56 | 1.44 | 1.44 | 1.28 | 1.44 | 1.6 |
| 2-04 |  |  |  |  |  |  |  |
|  | 2 | 1.79166666666667 | 1.76 | 1.8 | 1.88 | 2.12 | 2.16 |
| 2-05 |  |  |  |  |  |  |  |
|  | 1.6 | 1.48 | 1.2 | 1.4 | 1.28 | 1.32 | 1.32 |
| 2-06 |  |  |  |  |  |  |  |
|  | 2.04 | 1.41666666666667 | 1.48 | 1.45833333333333 | 1.44 | 1.56 | 1.64 |
| 2-07 |  |  |  |  |  |  |  |
|  | 1.52 | 2 | 2.12 | 1.84 | 1.96 | 1.8 | 1.84 |
| 3-002 |  |  |  |  |  |  |  |
|  | 1.8 | 1.72 | 1.72 | 2.16 | 2.04 | 1.24 | 2 |
| 3-004 |  |  |  |  |  |  |  |
|  | 1.92 | 1.68 | 1.88 | 1.64 | 1.58333333333333 | 1.64 | 1.68 |
| 3-008 |  |  |  |  |  |  |  |
|  | 1.32 | NA | 2 | 1.36 | 1.16 | 1.24 | 1.12 |
| 3-009 |  |  |  |  |  |  |  |
|  | 1.48 | 1.68 | NA | 1.36 | 1.56 | 1 | NA |

### Hypothesis test

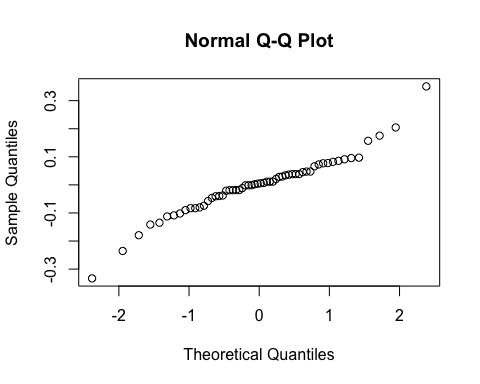
Hopkins Symptom Checklist-25 mean score

| Subject ID | Difference Pair 1 | Difference Pair 2 | Difference Pair 3 | Overall difference |
| --- | --- | --- | --- | --- |
| 2-01 | 0.000 | 0.480 | 0.04 | 0.173 |
| 2-03 | 0.120 | 0.160 | -0.16 | 0.040 |
| 2-04 | 0.032 | -0.080 | -0.04 | -0.029 |
| 2-05 | 0.280 | 0.120 | 0.00 | 0.133 |
| 2-06 | -0.063 | 0.018 | -0.08 | -0.042 |
| 2-07 | -0.120 | -0.120 | -0.04 | -0.093 |
| 3-002 | 0.000 | 0.120 | -0.76 | -0.213 |
| 3-004 | -0.200 | 0.057 | -0.04 | -0.061 |
| 3-008 | NaN | 0.200 | 0.12 | 0.160 |
| 3-009 | NaN | -0.200 | NaN | -0.200 |

Values are Burst stimulation - Sham.

P-value of the null hypothesis test: 0.89.

### Treatment effect estimates

QQ-plot 

By subject

| Subject ID | Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- | --- |
| 2-01 | 0.040 | 0.047 | 0.389 | -0.051 | 0.131 |
| 2-03 | 0.000 | 0.047 | 1.000 | -0.091 | 0.091 |
| 2-04 | -0.021 | 0.047 | 0.654 | -0.112 | 0.070 |
| 2-05 | 0.028 | 0.047 | 0.547 | -0.063 | 0.119 |
| 2-06 | -0.025 | 0.047 | 0.598 | -0.116 | 0.067 |
| 2-07 | -0.040 | 0.047 | 0.390 | -0.131 | 0.051 |
| 3-002 | -0.076 | 0.047 | 0.102 | -0.167 | 0.015 |
| 3-004 | -0.030 | 0.047 | 0.514 | -0.122 | 0.061 |
| 3-008 | 0.013 | 0.047 | 0.778 | -0.078 | 0.104 |
| 3-009 | -0.061 | 0.047 | 0.190 | -0.152 | 0.030 |

Overall

| Estimate | Std. Err. | p-value | Lower CL | Upper CL |
| --- | --- | --- | --- | --- |
| -0.017 | 0.047 | 0.716 | -0.108 | 0.074 |

## Carry over effect

First fit the model:

## Linear mixed model fit by REML ['lmerMod']  
## Formula:   
## painleg3 ~ rantrt + pair + prevtrt + prevtrt:rantrt + (1 | subjectid) +   
## (1 | subjectid:pair) + (1 | subjectid:rantrt)  
## Data: data  
##   
## REML criterion at convergence: 1348.5  
##   
## Scaled residuals:   
## Min 1Q Median 3Q Max   
## -4.0107 -0.5453 0.0113 0.5606 3.0808   
##   
## Random effects:  
## Groups Name Variance Std.Dev.  
## subjectid:pair (Intercept) 1.0688 1.0338   
## subjectid:rantrt (Intercept) 0.4313 0.6567   
## subjectid (Intercept) 0.2864 0.5352   
## Residual 1.2233 1.1060   
## Number of obs: 410, groups:   
## subjectid:pair, 30; subjectid:rantrt, 20; subjectid, 10  
##   
## Fixed effects:  
## Estimate Std. Error t value  
## (Intercept) 5.28768 0.51556 10.256  
## rantrtSham -0.51871 0.37404 -1.387  
## pairPair 2 -0.94253 0.48520 -1.943  
## pairPair 3 -0.39562 0.48368 -0.818  
## prevtrtSham -1.04025 0.31126 -3.342  
## rantrtSham:prevtrtSham 0.06486 0.28669 0.226  
##   
## Correlation of Fixed Effects:  
## (Intr) rntrtS parPr2 parPr3 prvtrS  
## rantrtSham -0.513   
## pairPair 2 -0.531 0.063   
## pairPair 3 -0.515 0.046 0.506   
## prevtrtSham -0.532 0.485 0.127 0.095   
## rntrtShm:pS 0.316 -0.490 -0.078 -0.057 -0.593

Then plot the expected outcome by current and previous treatment:

Outcome by tretment and previous treatment

| prevtrt | rantrt | estimate | std.error | statistic | p.value | conf.low | conf.high |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sham | Sham | 3.354 | 0.373 | 8.989 | 0 | 2.623 | 4.086 |
| Burst stimulation | Sham | 4.330 | 0.354 | 12.227 | 0 | 3.636 | 5.024 |
| Sham | Burst stimulation | 3.806 | 0.345 | 11.045 | 0 | 3.131 | 4.482 |
| Burst stimulation | Burst stimulation | 4.846 | 0.412 | 11.749 | 0 | 4.038 | 5.655 |

Then compute the treatment effect estimate by previous treatment:

| contrast | prevtrt | estimate | std.error | p.value | conf.low | conf.high |
| --- | --- | --- | --- | --- | --- | --- |
| mean(Sham) - mean(Burst stimulation) | Sham | -0.452 | 0.342 | 0.187 | -1.122 | 0.219 |
| mean(Sham) - mean(Burst stimulation) | Burst stimulation | -0.517 | 0.374 | 0.167 | -1.250 | 0.217 |

Finally see if there is a difference:

| estimate | std.error | p.value | conf.low | conf.high |
| --- | --- | --- | --- | --- |
| 0.065 | 0.287 | 0.821 | -0.497 | 0.627 |

# Safety Analysis

| Site name | Subject Id | Date of informed consent | Gender | Alder | Date of first randomisation |  | Full Analysis Set? | Dato for oppstått komplikasjon | Beskrivelse av komplikasjon | Annet |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| OUS | 2-01 | 2021-02-18 | Female | 66 | 2021-03-25 | TRUE | TRUE | 2021-04-22 | Tråkket over 14.5, ankelbrudd høyre (Weber A), behandles konservativt, ikke brukt analgetika, oppfattes ikke relatert til ryggmargsstimulering. | Oppfattes ikke studierelatert |
| Akademiska | 3-003 | 2022-05-10 | Female | 56 | 2022-07-04 | TRUE | FALSE | 2022-07-04 | Ved Kontroll 1 ser man att elektroden har migrerat 2 hela segment kranielt, så att den nu ligger med spetsen/pol 1 vid kraniella delen av Th7. Ingen elektrod över Th9/10, således exklusion. | Elektrod-migration. |
| Akademiska | 3-004 | 2022-05-11 | Male | 55 | 2022-07-04 | TRUE | TRUE | 2022-07-19 | COVID konstaterad 19/7. Lindriga symtom i 3 dagar. | Lindrig COVID 19-21/7. |

# Suppementary Materials

| x |
| --- |
| Arel-Bundock V (2023). *marginaleffects: Predictions, Comparisons, Slopes, Marginal Means, and Hypothesis Tests*. R package version 0.12.0, <https://CRAN.R-project.org/package=marginaleffects>. |
| Bache S, Wickham H (2022). *magrittr: A Forward-Pipe Operator for R*. R package version 2.0.3, <https://CRAN.R-project.org/package=magrittr>. |
| Bates D, Mächler M, Bolker B, Walker S (2015). “Fitting Linear Mixed-Effects Models Using lme4.” *Journal of Statistical Software*, *67*(1), 1-48. <doi:10.18637/jss.v067.i01> <https://doi.org/10.18637/jss.v067.i01>. |
| Bates D, Maechler M, Jagan M (2023). *Matrix: Sparse and Dense Matrix Classes and Methods*. R package version 1.5-4.1, <https://CRAN.R-project.org/package=Matrix>. |
| Becker G, Waddell A (2023). *formatters: ASCII Formatting for Values and Tables*. R package version 0.5.0, <https://CRAN.R-project.org/package=formatters>. |
| Becker G, Waddell A (2023). *rtables: Reporting Tables*. R package version 0.6.1, <https://CRAN.R-project.org/package=rtables>. |
| Gohel D, Skintzos P (2023). *flextable: Functions for Tabular Reporting*. R package version 0.9.2, <https://CRAN.R-project.org/package=flextable>. |
| Grolemund G, Wickham H (2011). “Dates and Times Made Easy with lubridate.” *Journal of Statistical Software*, *40*(3), 1-25. <https://www.jstatsoft.org/v40/i03/>. |
| Henry L, Wickham H (2023). *rlang: Functions for Base Types and Core R and ‘Tidyverse’ Features*. R package version 1.1.1, <https://CRAN.R-project.org/package=rlang>. |
| Hester J, Bryan J (2022). *glue: Interpreted String Literals*. R package version 1.6.2, <https://CRAN.R-project.org/package=glue>. |
| Larmarange J (2023). *labelled: Manipulating Labelled Data*. R package version 2.11.0, <https://CRAN.R-project.org/package=labelled>. |
| Müller K, Wickham H (2023). *tibble: Simple Data Frames*. R package version 3.2.1, <https://CRAN.R-project.org/package=tibble>. |
| R Core Team (2023). *R: A Language and Environment for Statistical Computing*. R Foundation for Statistical Computing, Vienna, Austria. <https://www.R-project.org/>. |
| Ram K, Wickham H (2018). *wesanderson: A Wes Anderson Palette Generator*. R package version 0.3.6, <https://CRAN.R-project.org/package=wesanderson>. |
| Wickham H (2016). *ggplot2: Elegant Graphics for Data Analysis*. Springer-Verlag New York. ISBN 978-3-319-24277-4, <https://ggplot2.tidyverse.org>. |
| Wickham H (2022). *stringr: Simple, Consistent Wrappers for Common String Operations*. R package version 1.5.0, <https://CRAN.R-project.org/package=stringr>. |
| Wickham H (2023). *forcats: Tools for Working with Categorical Variables (Factors)*. R package version 1.0.0, <https://CRAN.R-project.org/package=forcats>. |
| Wickham H, Averick M, Bryan J, Chang W, McGowan LD, François R, Grolemund G, Hayes A, Henry L, Hester J, Kuhn M, Pedersen TL, Miller E, Bache SM, Müller K, Ooms J, Robinson D, Seidel DP, Spinu V, Takahashi K, Vaughan D, Wilke C, Woo K, Yutani H (2019). “Welcome to the tidyverse.” *Journal of Open Source Software*, *4*(43), 1686. <doi:10.21105/joss.01686> <https://doi.org/10.21105/joss.01686>. |
| Wickham H, François R, Henry L, Müller K, Vaughan D (2023). *dplyr: A Grammar of Data Manipulation*. R package version 1.1.2, <https://CRAN.R-project.org/package=dplyr>. |
| Wickham H, Henry L (2023). *purrr: Functional Programming Tools*. R package version 1.0.1, <https://CRAN.R-project.org/package=purrr>. |
| Wickham H, Hester J, Bryan J (2023). *readr: Read Rectangular Text Data*. R package version 2.1.4, <https://CRAN.R-project.org/package=readr>. |
| Wickham H, Vaughan D, Girlich M (2023). *tidyr: Tidy Messy Data*. R package version 1.3.0, <https://CRAN.R-project.org/package=tidyr>. |
| Xie Y (2023). *knitr: A General-Purpose Package for Dynamic Report Generation in R*. R package version 1.42, <https://yihui.org/knitr/>. Xie Y (2015). *Dynamic Documents with R and knitr*, 2nd edition. Chapman and Hall/CRC, Boca Raton, Florida. ISBN 978-1498716963, <https://yihui.org/knitr/>. Xie Y (2014). “knitr: A Comprehensive Tool for Reproducible Research in R.” In Stodden V, Leisch F, Peng RD (eds.), *Implementing Reproducible Computational Research*. Chapman and Hall/CRC. ISBN 978-1466561595. |