

# The Efficacy and Frequency of a Combination Myofascial Treatment for Long Standing Symptoms Post Concussion

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## Design

- Observational study
- Low frequency group** (62 subjects)
- High frequency group** (39 subjects; > 4 treatments/week for first 1-3 weeks)

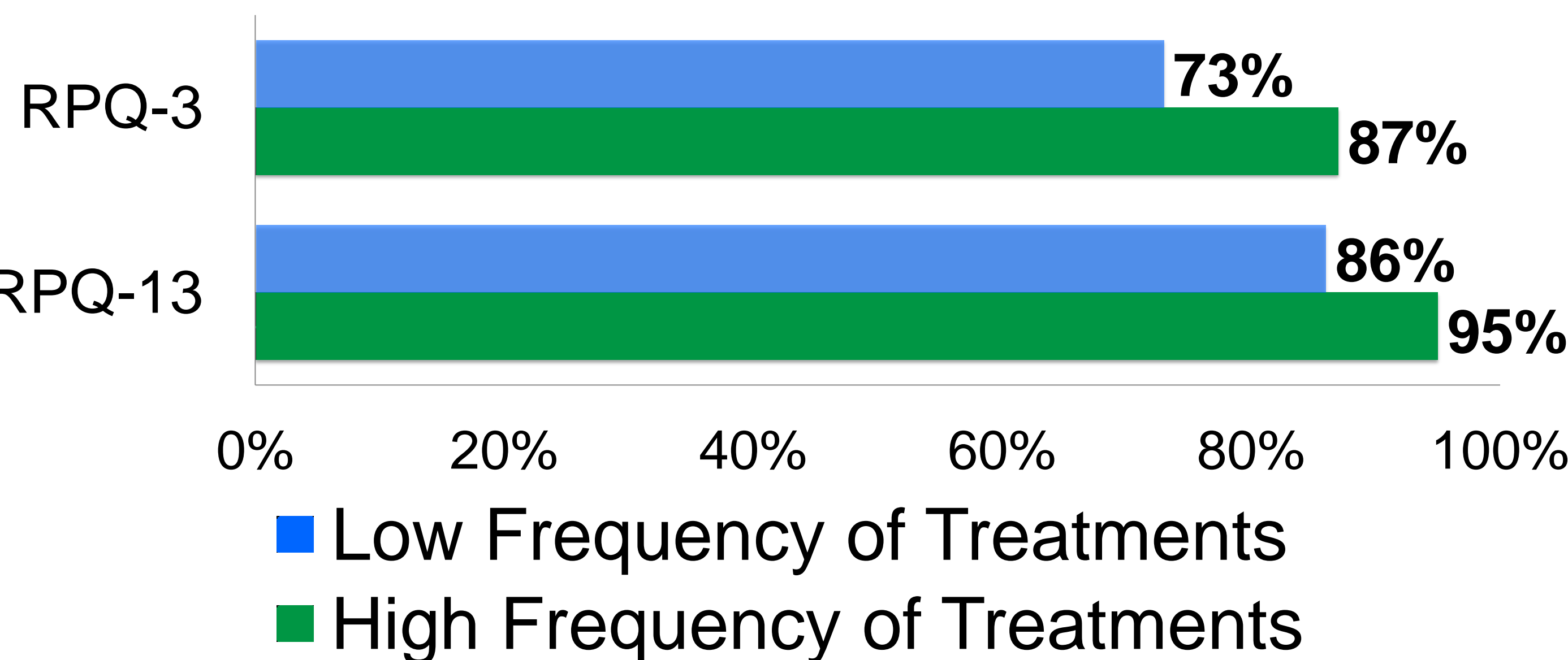
## Participants

- N= 101 subjects
- No subjects withdrew from the study due to adverse effects
- Subjects were experiencing symptoms for **12 weeks or longer post concussion**

## Interventions

- MyoWorx® TM20 electrotherapy applied with heat for 30 minutes
  - 12-15 minutes of myofascial release
- Stretching and strengthening exercises
  - All above focussed on paraspinal muscles of the neck and upper back

Positive Responders to Treatment



## Clinical Summary

RPQ-3 Symptoms	Patients with Symptom	Positive Responders	Average Improvement	P value *Significant
Headaches	97	77%	58%	*0.001e-09
Dizziness	75	75%	79%	*0.009e-06
Nausea / Vomiting	43	77%	92%	*0.002e-03
RPQ-13 Symptoms				
Noise Sensitivity	71	75%	74%	*0.004e-05
Sleep Disturbance	69	58%	75%	*0.007e-02
Fatigue	82	72%	63%	*0.002e-05
Irritable	65	80%	73%	*0.005e-05
Feeling Depressed	64	75%	76%	*0.002e-06
Frustrated / Impatient	76	80%	71%	*0.001e-07
Forgetful	76	79%	78%	*0.006e-08
Poor Concentration	84	79%	67%	*0.003e-08
Take Longer to Think	84	71%	70%	*0.001e-08
Blurred Vision	36	69%	92%	*0.001
Light Sensitivity	68	68%	75%	*0.006e-05
Double Vision	15	87%	90%	*0.004
Restlessness	59	71%	83%	0.117

## Outcome Measures/Analysis

- Rivermead Post Concussion Symptoms Questionnaire (RPQ)
- Modified Scoring System From Eyres 2005 where both RPQ-3 and RPQ-13 scores were >0 at intake
- Separate linear mixed models of up to 4 follow-ups
- Wilcoxin-signed rank test for individual symptoms

## Results

- Treatment was effective** on both RPQ-3 (p<0.0001) and RPQ-13 (p<0.0001) scores
- High frequency group demonstrated an accelerated rate of recovery** on both RPQ-3 (p=0.0031) and RPQ-13 (p=0.0033)
- High frequency group data was based upon an **ave. 27 days versus 72 days** for Low frequency group
- Patients demonstrated improvement in all symptoms** (Restlessness not statistically significant)

## Conclusion

- Unlike any other intervention**, this treatment provides **enhanced recovery** of chronic post concussion symptoms **simultaneously for all 4 domains suggesting concussion** (*cognitive, somatic, affective and sleep disturbances*)
- High frequency of intervention provides an **accelerated rate of recovery**