

# Improvement in Quality of Life in a Patient with Depression Undergoing Chiropractic Care Using Torque Release Technique: A Case Study

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## ABSTRACT

**Objective:** To report on a female patient who presented for chiropractic care with depression.

**Clinical Features:** 49 year old female who presented with a history of depression, asthma, high stress, mood and gastrointestinal changes.

**Intervention and Outcome:** Over a period of 7 months, a specific, conservative chiropractic adjustment regimen for the correction of vertebral subluxation was administered to the patient. The care plan was altered in accordance to outcome measures and over this time period the patient exhibited a considerable decrease in presenting symptomology alongside a substantial increase in self rated quality of life. Self-rated health/wellness (SRHW) surveys were taken prior to care and at subsequent progress visits assessing four domains of health

(Physical state, Emotional/Mental state, Stress and Life Enjoyment) as well as Overall Quality of Life. Static and Thermal EMG were performed using the Chiropractic Leadership Alliance (CLA) Insight™ surface EMG and thermal scanning technology. Improvements were noted in SRHW and surface EMG and thermal scanning over the 7 months of care.

**Conclusions:** While under chiropractic care subjective and objective improvements in physical, mental and social well-being were documented in a patient with a history of depression, asthma, high stress, mood and gastrointestinal changes

**Keywords:** *Chiropractic, subluxation, depression, quality of life, Stress, Torque Release Technique (TRT), Insight™ surface EMG and thermal scanning*

## Introduction

Mood disorders affect approximately 1 in 7 New Zealanders within their lifetime with 1 in 5 experiencing some kind of serious mood disorder by the age of 25 with females reporting a higher incidence of depression than males.<sup>1</sup> The most common types of mood disorders include Major Depression, Dysthymia and Bipolar Disorder. Some of the more common symptoms of these disorders are loss of interest or pleasure in hobbies and activities, decreased energy (fatigue), feelings of worthlessness, anxious or “empty” mood, difficulty concentrating, insomnia, thoughts of death and or suicide.<sup>1</sup>

The common pathway of depression involves biochemical changes in the brain. This is believed to be due to the roles of serotonin, GABA, dopamine and opioid peptides which when

imbalanced or deficient can cause mood disorders.<sup>2</sup> There is also evidence suggesting a correlation between cervical trauma and the onset of social disorders although there is still debate about the true cause of social and mood disorders.<sup>3</sup>

Chiropractic care aims to optimize health and wellbeing through removing interference from the nerve system. Chiropractic follows the notion that the correction of any interference in the nerve system is an essential component of personal enhancement and health maintenance. This professional objective is achieved through the correction of vertebral subluxations.<sup>4</sup> The Association of Chiropractic Colleges defines subluxation as follows: “A subluxation is a complex of functional and/or structural and/or pathological

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articular changes that compromise neural integrity and may influence organ system function and general health.”<sup>4</sup> Thus, reduction of vertebral subluxation is thought to promote overall health by contributing to the proper function of the body’s inherent adaptive abilities, many of which appear linked to neurological function.<sup>5</sup>

## Case Report

A 49-year-old caucasian female presented for chiropractic care at a private practice in Auckland, New Zealand in January 2006. Initial examination revealed a history of depression, asthma, high stress, mood and gastrointestinal changes (flatulence) and a generalised loss of lust for life. It was also noted that she had been prescribed Aropax by her General Practitioner 14 months prior for her depression. Over a period of seven months from the date of presentation a specific conservative chiropractic adjustment regimen for the correction of vertebral subluxations was delivered to the patient.

This consisted of a series of adjustments using the Torque Release Technique (TRT), developed by Jay Holder, D.C. TRT uses various indicators of vertebral subluxations and also prioritizes their correction into a system called *Non/Linear Testing Priorities*. The main focus of TRT is detecting areas of subluxation at locations of dural attachment being the upper and lower cervical spine (C1, C2 and C5), sacrum, coccyx and the pelvis. The use of an adjusting device called an Integrator is used for the correction of vertebral subluxations. It features a pre-cocking, pressure sensitive tip with an automatic release mechanism that includes a torque and recoil component.<sup>6</sup>

The care plan was altered in accordance to outcome measures. Self-rated health/wellness (SRHW) surveys were taken prior to care and at subsequent progress visits assessing four domains of health (Physical state, Emotional/Mental state, Stress and Life Enjoyment) as well as Overall Quality of Life.<sup>7</sup> Over this time period the patient exhibited a substantial increase in quality of life ratings alongside a considerable decrease in presenting symptomology.

The survey instrument used has been specifically developed by Blanks et al. to analyze wellness. Aptly named “Survey of Self-Rated Health, Wellness and Quality of Life” (HWQL) the questionnaire aims to record health, wellness and quality of life levels by having the subject self-rate (fill out personally) fifty-five items within five domains.<sup>7</sup> Self assessment using the “HWQL Survey” was used at the initial consultation prior to commencing the chiropractic care to gain a baseline of the patient’s perceptions and again at intervals thereafter as indicated for the duration of the study (7 months).

Spinal thermal and surface electromyography (sEMG) scans were completed at the initial consultation. These initial sEMG and thermography scans revealed areas of asymmetrical motor and autonomic function respectively throughout the entire spine. See figure 1. The scans were performed using the Chiropractic Leadership Alliance (CLA) Insight™ 7000 sEMG and thermal scanning technology.

The intervals for progress exams (periodical re-examination) were set specifically for the patient in relation to presentation and were taken at week 4 and 11 within the care plan. The frequency of care was reassessed at each progress exam with an initial frequency of 3 visits per week for the first 8 weeks. At the 4 week progress exam the plan was altered to twice a week for 14 weeks with a subsequent progress scheduled for 14 weeks.

Comparable thermal and sEMG scans were taken at progress exams 1 and 2 following the onset of care. Increased balance and symmetry were noted on the 1<sup>st</sup> progress in both motor and autonomic function. This further improved on the 2<sup>nd</sup> progress scans. Figures 2 and 3.

Table 1 shows the calculated results as recorded from the initial examination and two subsequent progress exams as well as their correlating percentage improvements. Figure 4, 5 and 6 further illustrate these improvements. It can be seen that at initial progress examination there were positive changes (from 9-28% improvement) in all aspects of the survey calculated except for the section in regards to the ability to handle stress which presented a negative result. It was stated by the patient that after 6 weeks of care she had stopped taking the anti-depressants. This may correlate to the improvements seen in subsequent progress exams. According to the patient: “After 6 weeks I have been able to come off the anti-depressants already.”

At progress exam two, the results varied from that of progress one ranging from 0-46% improvement. Most significant improvement was seen in Physical Score with 46% and the most significant percentile change was in the Quality of Life Score.

Overall there was an increase on average of 23.2% with the most change noted on Wellness Scores (44%) and least with Quality of Life Score (8%).

Figure 6 and Table 2 illustrate the change over time between categories within the survey. This clearly displays that each area of the survey improved yet at very differing values and times within care.

## Discussion

The purpose of this case study was to document the changes that occurred while under chiropractic care and the positive affect on the patient’s quality of life in relation to a patient’s self-rated health perceptions as measured by the Health, Wellness and Quality of Life survey.

All domains of the completed survey have showed notable increases in ratings between initial and follow-up with the most significant being the physical domain.

As this study is of the patient’s perception of their health, all answers are relevant to the way they interpret the question. The patient may have adapted her answers according to expected benefit, social willingness and their current mood. It was suggested that the patient be completely honest when filling in the survey.

Increasingly, health care providers are being encouraged to adopt an evidence-based approach to delivering the services they provide.<sup>8</sup> The approach of wellness oriented outcome assessments are not yet widely adopted in the area of health care where it would be most applicable, i.e., non-medical practices that have as their primary clinical goal the enhancement of over-all health. This is perhaps due to the disease-specific orientation found in most recently developed surveys.

Historically there is not adequate scientific evidence into the effects of the vertebral subluxation in relation to its ability to interfere with well-being. More recent studies however describe the correction of vertebral subluxation as having an impact on the improvement of general health, brain function, quality of life and well being.<sup>7,9,10</sup>

Blanks et al described the profound effects chiropractic has had on patients well being in the self-reported retrospective study of 2818 people. After 3 years of chiropractic care patients found their quality of life was maintained and did not plateau.<sup>7</sup>

Although depression is associated with biochemical changes it is impossible to say whether improvements in quality of life observed in this case are related to changes in biochemistry caused by antidepressant use or due to the correction of vertebral subluxations or another mechanism altogether. It is fair to say that by providing care to this patient the interaction with the chiropractor may also have been a positive influence.

## Conclusion

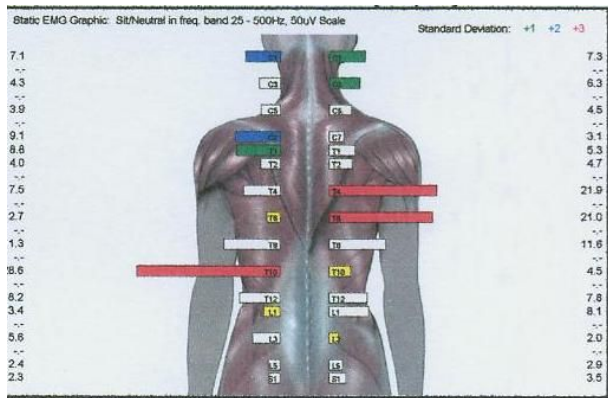
This report outlines the history and symptomology of a 49 year old woman suffering from a history of depression, asthma, high stress, mood and gastrointestinal changes. The 7 months of chiropractic care and the women's physical, social and mental response to the correction of vertebral subluxations were discussed. This report supports previous literature regarding chiropractic care and its positive effect on physical, mental and social well-being.

## References

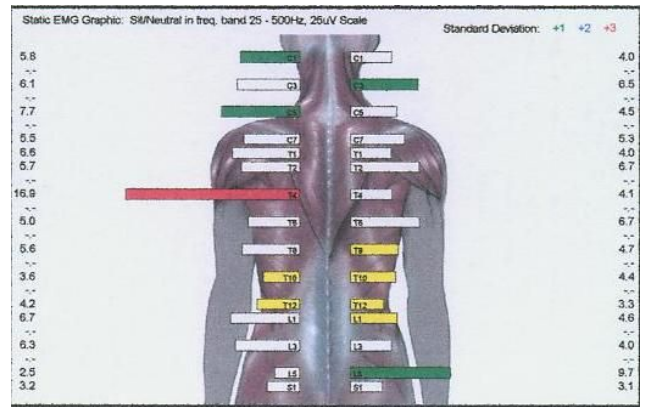
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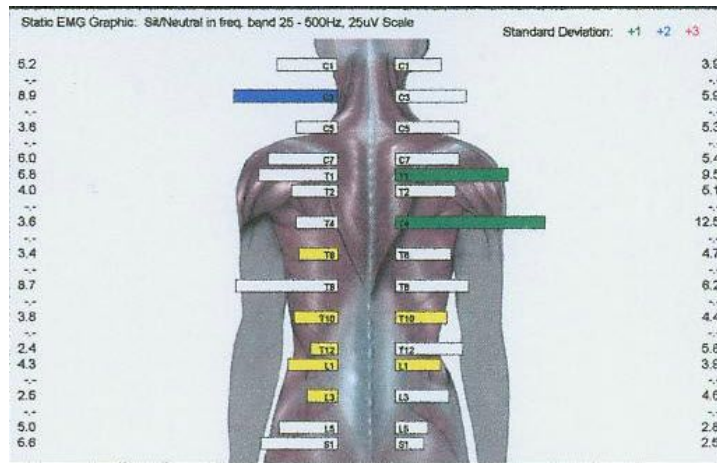
## Initial SEMG Scan



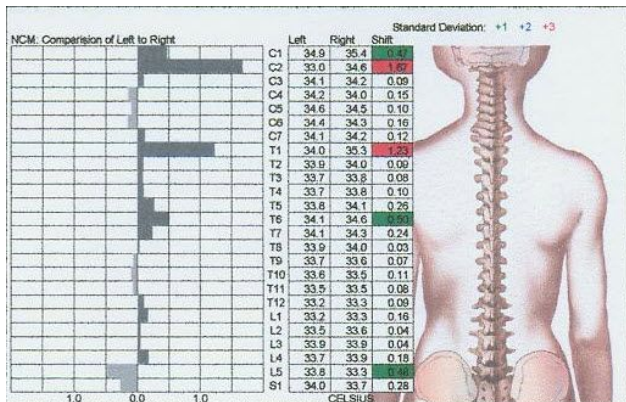
## 2<sup>nd</sup> SEMG Scan



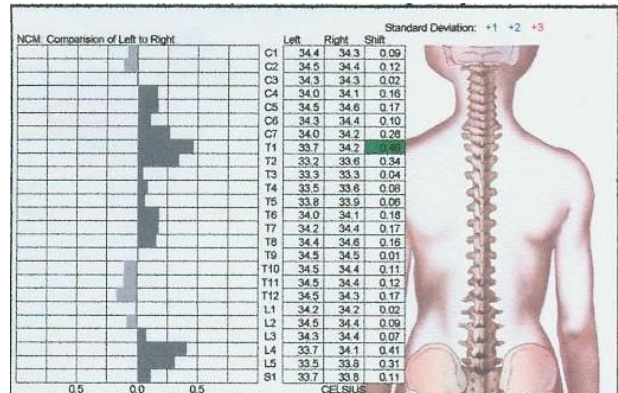
## Final SEMG Scan



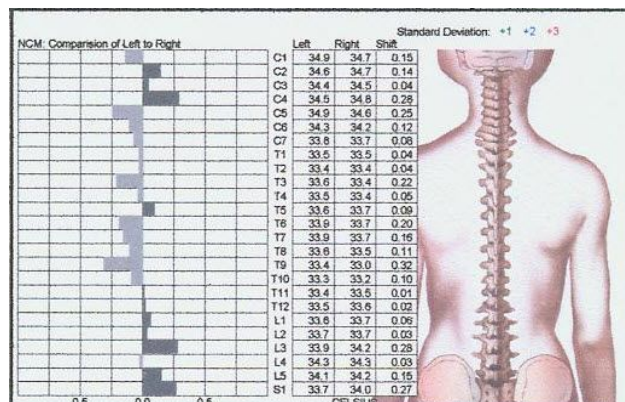
## Initial Thermal Scan



## 2<sup>nd</sup> Thermal Scan



## Final Thermal Scan



**Table 1**

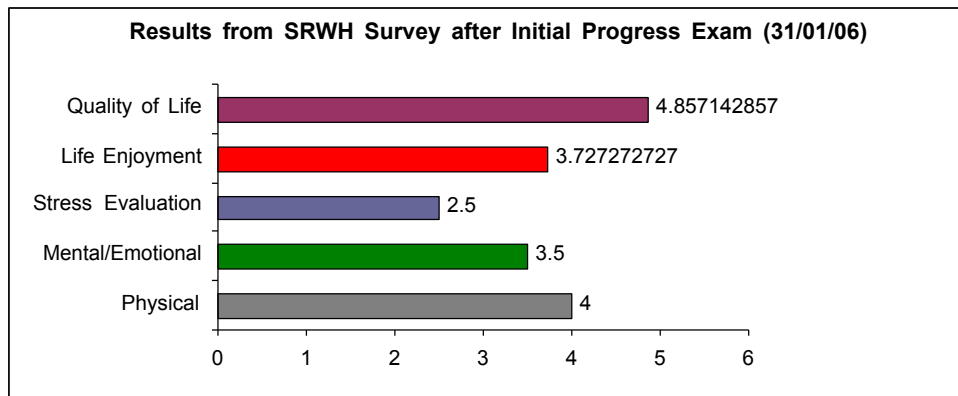
	Initial	Progress 1			Progress 2			Overall Improvement
	Score	Score	Difference	Improvement	Score	Difference	Improvement	
Combined wellness	0.48	0.56	0.08	14%	0.74	0.18	24%	35%
1. Physical state	0.25	0.35	0.10	28%	0.65	0.30	46%	61%
2. Mental/Emotional state	0.38	0.55	0.17	30%	0.75	0.20	26%	49%
3. Stress Evaluation	0.63	0.60	-0.03	-	0.78	0.18	23%	19%
4. Life Enjoyment	0.68	0.75	0.07	9%	0.77	0.02	3%	12%
Overall quality of life	0.64	0.83	0.19	23%	0.83	0	0	23%

**Table 2**

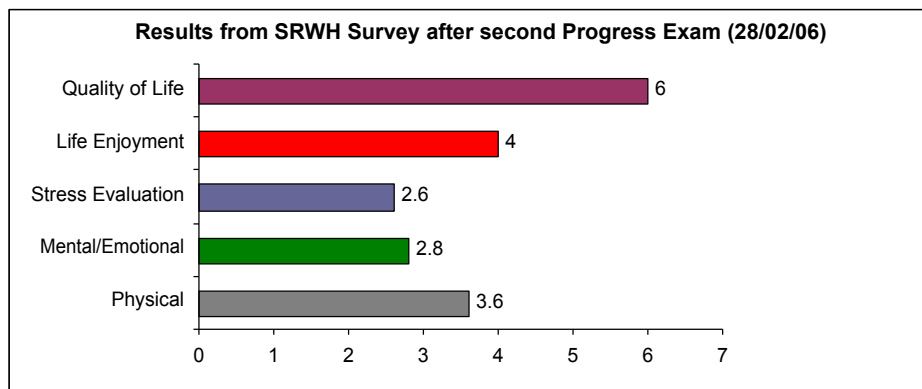
Date	Physical (P)										Mental/Emotional (M/E)										Stress Evaluation (S)									
	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10
31.01.2006	5	5	5	2	5	2	5	4	4	3	4	2	3	4	5	5	2		5	4	1	1	4	3	4	3	3	3	2	1
28.03.2006	5	4	5	2	4	2	5	4	3	2	4	2	2	1	3	4	2	2	5	3	2	1	4	3	4	3	2	3	2	2
10.05.2006	4	3	3	1	2	2	4	3	1	1	3	1	2	3	1	3	1	1	4	1	2	1	2	2	3	3	3	1	1	1

	Life Enjoyment (LE)											Overall Quality of Life (QoL)													
	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8	9	10	11	12	13	14
31.01.2006	3	3	4	4	5	5	5	2	5	2	3		7	5	3	5	3	6		4	5	7	7	7	7
28.03.2006	4	3	4	4	5	5	5	3	4	4	3	7	7	6	4	6	3	6	6	5	6	7	7	7	7
10.05.2006	4	4	4	4	5	5	5	3	5	3	3	7	7	6	4	5	3	7	7	4	6	7	7	7	7

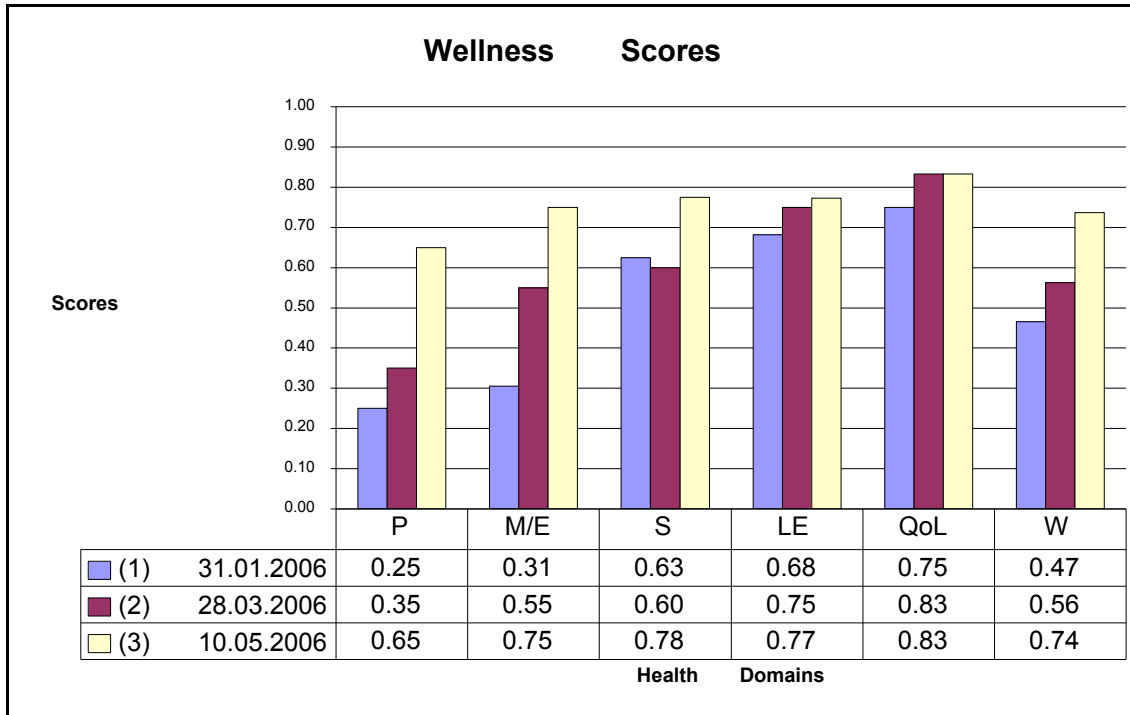
**Figure 4**



**Figure 5**



**Figure 6**



**Key:**

- P - Physical Score
- M/E - Mental / Emotional Score
- S - Ability to Handle Stress
- LE - Life Enjoyment Score
- QoL - Quality of Life Score
- W - Combined Wellness Score