

# The Effect of EDTA Chelation Therapy With Multivitamin/Trace Mineral Supplementation Upon Reported Fatigue

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## Introduction

According to the most recent national governmental survey, fatigue is one of, if not, the single most common presenting complaint in medical practice. Specifically, approximately fifteen million persons reported for medical assistance with a primary complaint of tiredness<sup>1</sup>. What is even more noteworthy are the uncounted even more staggering numbers of patients with exhaustion as a secondary, tertiary or even unrecognized problem.

This is the story of 139 routinely studied patients with various and diverse chronic disorders, though principally cardiovascular, who (1) sought medical attention, (2) were not especially aware of tiredness as central to their presenting syndrome, and (3) in whom it was possible to quantify their initial fatigue findings and change in tiredness following EDTA chelation therapy plus multivitamin/trace mineral supplementation.

## Review of the Literature

The Cornell Medical Index Health Questionnaire (abbreviated CMI), developed over 35 years ago was originally *created*<sup>2,3</sup> to satisfy the need for a device to collect a large body of relevant medical and psychiatric information with a modicum of physician-time expenditure. Over these decades, this form has

been more time-tested than any other history-taking technique. Section I contains 7 questions relating to fatigue.

## Method of Investigation

One hundred and thirty-nine private practice patients (aged  $63.0 \pm 10.3$  years) including 83 males ( $62.6 \pm 10.6$  years) and 56 females ( $63.5 \pm 9.7$  years) participated in this study (Table 1). At the initial visit, all patients completed the Cornell Medical Index Health Questionnaire. After a series of (on the average 26) 3 gram EDTA chelation infusions plus supportive multivitamin/trace mineral supplementation extending a mean of 61.4 days, all participants once again completed the CMI. By this method, it was possible to quantify the initial fatigability scores and the changes following EDTA chelation therapy (Table 2).

## Results

From Table 1 it is evident that the sample embraces a broad age spectrum ranging from the youngest at 34 years to the oldest at 82. It is also clear (Table 2) that the tiredness complaints range from zero to 6 initially.

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**Table 1**  
**Age and Sex Distribution**

<b>Age Groups</b>	<b>Male Group</b>	<b>Female Group</b>	<b>Total Group</b>
30-39	1 ( 1.7%)	0 ( 0.0%)	1 ( 0.7%)
40-49	9 (14.4%)	6 (10.7%)	15 (10.8%)
50-59	19 (30.2%)	14 (25.0%)	33 (23.8%)
60-69	28 (44.4%)	20 (35.7%)	48 (34.5%)
70-79	24 (38.1%)	14 (25.0%)	38 (27.3%)
80-89	2 ( 3.2%)	2 ( 3.6%)	4 ( 2.9%)
Total	83(100.0%)	56(100.0%)	139 (100.0%)
Mean & S.D.	62.6±10.6	63.5+9.7	63.0±10.3
t		0.4821	
P		>0.5000	
Minimum	34	43	34
Maximum	82	82	82
Range	48	39	48

Table 2 also shows that, during this approximately two month period, those with no exhaustion findings rose from 31.7% to 56.1%, an increase of about 25%. It is further evident from Table 2 and underscored in Table 3 that the mean exhaustion score decreased from 1.77 to 1.12, specifically a decline of 37%. One will note that 44 of the

subjects (Table 2) did not initially report fatigability. Clearly, therefore, no improvement could be possible in this subset. Hence, the change in fatigability was recalculated for the 95 individuals who reported one or more complaints initially (Table 3). In this symptomatic group, the mean declined from 2.59 to 1.58, an improvement of 39%.

**Table 2**  
**Distribution of Fatigability Scores**

<b>Fatigability Scores</b>	<b>Initial Scores</b>	<b>Final Scores</b>
0	44 (31.7%)	78 (56.1%)
1	25 (18.0%)	15 (10.8%)
2	24 (17.3%)	19 (13.6%)
3	23 (16.5%)	13 ( 9.4%)
4	13 ( 9.4%)	9 ( 6.5%)
5	8 ( 5.7%)	3 ( 2.2%)
6	2 ( 1.4%)	2 ( 1.4%)
Totals	139(100.0%)	139(100.0%)
Mean&S.D.	1.77+1.64	1.12±1.54

Table 3

Summary of Findings

Sample size (total sample)	139
Initial findings	1.77±1.64
Final findings	1.12± 1.53
Percentage change	-37
Significance of the differences of the means	t =5.3052 P <0.001*
Sample size (symptomatic group)	95
Initial findings	2.59±1.35
Final findings	1.58±1.65
Percentage change	-39
Significance of the differences of the means	t =6.1771 P <0.001*

\*Statistically significant difference of the means

**Discussion**

As far as we can ascertain, there has been little if any serious effort to quantitate the clinical presence and course of this very common complaint. There has been absolutely no information about the fatigability syndrome in subjects before and after EDTA chelation therapy. Within the limits of this simple experiment, and we hope that this will encourage others to look at this problem with more sophisticated instrumentation, the evidence suggests a statistically significant reduction of exhaustion in addition to whatever was the primary reason for seeking medical assistance.

It is, of course, possible (though highly improbable) that these exciting salutary benefits are accidental or psychologic since a control group could not be included. It should be underlined that this experiment was conducted in a private practice environment with very ill patients. A placebo subset would have been morally wrong and clinically dangerous. Additionally, it is important to mention that, because of the leaching effect of EDTA chelation, it is imperative that there be a multivitamin/trace mineral supplementation program. This then raises the obvious question as to the relative contributions of the EDTA

versus the vitamins/ minerals. This report, for the reasons given earlier, does not address itself to this question. Nonetheless, it is fascinating to report for the first time the changes observed in this very ill private practice group under the cited conditions.

**Summary**

Increasing attention is being given to the biochemical and physiologic parameters and their alterations with EDTA chelation therapy. This is the first attempt to raise and hopefully answer the question regarding the effect of this form of therapy upon America's number one clinical complaint.

**References**

1. United States Department of Health and Human Services. Parents' reasons for visiting physicians: National ambulatory medical care survey, United States, 1977-1978. 1981. DHHS Publication No. (PHS) 82-1717.
2. BRODMAN, K., ERDMANN, A.J., JR., and WOLFF, H.G. Manual: Cornell Medical Index Health Questionnaire. 1949. New York, Cornell University Medical Center.
3. BRODMAN, K., ERDMANN, A.J., JR., LORGE, I. and WOLFF, H.G. The Cornell Medical Index: An Adjunct to Medical Interview. J. A.M. A. 140:#6, 530-534, 11 June 1949.