of relatively high serum creatinine levels generally held within the physiologic range, declined; the number of levels in the area of approximately 1.0 mg/dL (the supposed ideal in terms of renal clearance) remained unchanged.

It would appear, within the limits of this study, that this therapeutic regimen is not nephrotoxic. As a matter of fact, this treatment procedure may possibly improve kidney function.

SUMMARY

We have reason to believe, from experiments performed in our private practice, that the combination of EDTA and supportive MTMS may contribute to primary prevention. These findings are based on changes in serum cholesterol, HDL, the ratio of serum cholesterol to HDL, and, finally, from a study of serum creatinine.

* * *

Detailed information on the chelating therapy program is available from the authors. Write to them at the McDonagh Medical Center, Inc, 2800-A Kendallwood Parkway, Gladstone, MO 64119. □

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ORIGINAL RESEARCH

THE "HEALTH" OF THE PAROLEE: CLINICAL CONSIDERATIONS

E. W. McDonagh, D.O.[1], Rudolph, C J., Ph.D., D.O.
and E. Cheraskin, M.D., D.M.D.

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Abstract

This is the first attempt to quantify the "health" of the parolee. Within the limits of this measuring instrument, the general notion is that the parolee is not healthy. In the limited comparisons possible in New York, the parolee is sicker both physically and mentally than the average New York hospital patient. Clearly, it is hoped that this report will catalyze more interest in pursuing the "health" of the parolee. Reports to follow will examine the diets, biochemical and hair templates of this same group. (Int J Biosocial Res., 5(1):34-39, 1983.)

INTRODUCTION

Michael Lesser, M.D., in the introduction to *Diet, Crime and Delinquency* makes the very *cogent* statement, "He (the criminal) is bad because he feels bad." Several score investigators, most conspicuously Schauss[2] and Reed[3] have looked to blood sugar, toxic elements like lead, food additives, food allergies, alcoholism, possibly (mal)illumination and color as causes or at least contributors to asocial behavior. What has not been addressed, as far as we can ascertain, is *how* "bad" and *in what way* does the offender "feel."

It is the purpose of this report, the first in a series, to examine in a reasonably quantitative system the "health" of the parolee utilizing a time-tested health instrument, the Cornell Medical Index Health Questionnaire (abbreviated CMI)[4,5].

REVIEW OF THE LITERATURE

The need for readily obtainable accurate clinical data from patients and other experimental human subjects is universally appreciated. Also generally recognized is the absence of a single totally satisfactory interrogatory tool. For, the simple fact of the matter is that all of the existing instruments and practices, from structured questionnaires to casual interviews, possess serious strengths and woeful weaknesses.

The thirty-five year old Cornell Medical Index Health Questionnaire (CMI) was originally created[4,5] to satisfy the need for a device to collect a large body of relevant medical and psychiatric information with a modicum of physician-time output. Over the three or so last decades, it has been more time-tested than any other history-taking technique. The instrument has been utilized to study emotional problems in and out of hospitals[5,6], outpatient admitting departments [8], the relationship of patients' complaints to age, sex, race and education[9], in the military[10,11], and in industry[12]. What is particularly noteworthy and relevant here is that the CMI (or for that matter any other similar measuring stick) has not been utilized to study the "health" of prisoners and/or parolees.

Correspondence address:
2800 Kendallwood Parkway, Suite A
Gladstone, MO 64119 U.S.A.

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METHOD OF INVESTIGATION

By utilizing the questionnaire according to the instructions set forth by initiators[4], it is possible to derive *three* major groups of clinical information as well as a score of subset data. First, the entire form may be scrutinized to ascertain the *total* number of affirmative replies. Parenthetic mention should be made that a *significant* "health" problem should be suspected when more than twenty-five questions are answered in the affirmative. The importance of this particular marker will become evident later in this report. Also parenthetically, more than two or three affirmative answers on the last page suggest a psychologic disturbance. This point will also receive enlargement later in this report.

An examination of the Cornell Medical Index Health Questionnaire reveals that it contains 195 questions arranged in sections (from A to R). For example, Section A deals with questions relating to the eyes and ears; Section B to the respiratory system; Sections M-R to mood and feeling patterns. Hence, secondly, it is possible to identify clinical problems in terms of site and/or system. Thirdly, and lastly, some of the questions are so phrased as to identify specific clinical problems (e.g. hay fever, high blood pressure, hemorrhoids).

Thirty-five parolees participated in this study, including 27 males (mean age 33.9) and 8 females (30.9 years mean). At the initial visit, all subjects were asked to complete the Cornell Medical Health Questionnaire. Additionally, all participants also completed dietary questionnaires, hair analysis, and a biochemical battery of tests.

Table 1

Age and Sex Distribution

Age Groups	Male Group	Female Group	Total Group
20-29	10 (37.0%)	6 (75.0%)	16 (45.7%)
30-39	10 (37.0%)	1 (12.5%)	11 (31.4%)
40-49	7 (26.0%)	0 (0.0%)	7 (20.0%)
50-59	0 (0.0%)	1 (12.5%)	1 (2.9%)
totals	27 (100.0%)	8 (100.0%)	35 (100.0%)
mean & S.D.	33.9 ± 8.1	30.9 ± 7.9	33.2 ± 8.0
minimum	24	26	24
maximum	49	50	50
range	25	24	26

RESULTS

Table 2. is an overall summary of the affirmative responses on the entire CMI. Three points warrants special mention. First, the average parolee reported 38.5 complaints. Mention was made that 25 or more positive replies suggests "significant" disease. Hence, on the average, this group must be viewed as being in very poor "health." Secondly, it is also quite evident that the range of responses is quite great; from a low of 9 to a high 95. Thus, some of the group must be in extreme poor "health." Finally, about four out of five show 25 + positive findings suggesting that the majority are in poor "health."

Table 2

Distribution of Total CMI Scores

CMI groups	Number of Percentage of Subjects
0-9	1 (2.9%)
10-20	2 (5.7%)
20-24	4 (11.4%)
25 +	28 (80.0%)
totals	35 (100.0%)
mean & S.D.	38.5 ± 18.0
minimum	9
maximum	95
range	86

The questionnaire is so structured that the A-L sections may be regarded as evidence of "organic or physical" illness; the M-R portion represents "mental or emotion" illness. There are no known norms for "physical" illness. Hence, all that one can say (Table 3) is that the range is considerable (from a low of 8 to a high of 61).

Table 3

A-L distribution

CMI groups	Number and Percentage
0-9	1 (2.9%)
10-19	6 (17.1%)
20-29	13 (37.1%)
30-39	7 (20.0%)
40-49	5 (14.3%)
50-59	2 (5.7%)
60-69	1 (2.9%)
total	35 (100.0%)
means & S.D.	30.1 ± 12.2
minimum	8
maximum	61
range	53

Also, on the average, the neam number of findings is 30.1. On the other hand, it is easier to compare the M-R chart (Table 4). On the average, there are 8.4 findings. Secondly, the range is considerable (from 0 to 34). It should be remembered that, earlier, it was pointed out that more than 2 or 3 positive responses spells serious mental problems. An examination of Table 4. shows that approximately two out of three qualify as serious mental cases.

Table 4

M-R distribution

CMI groups	Number and Percentage
0	3 (6.8%)
1	3 (6.8%)
2	2 (6.8%)
3	5 (14.3%)
4	3 (8.7%)
5 +	19 (56.6%)
total	35 (100%)
means & S.D.	8.4 ± 7.9
minimum	0
maximum	34
range	34

Table 5

Distribution of Clinical Findings by Systems

Systems	Average Number of Findings
respiratory system	4.5
gastrointestinal system	4.1
nervous system	3.5
cardiovascular system	2.9
eyes and ears	2.1
skin	1.7
musculoskeletal system	1.5
urinary system	1.3
genetal system	1.0
teeth	0.9

An attempt was made to summarize the problems by systems and by sites (Table 5). It is interesting that respiratory symptoms and signs ranked first with 4.5; next gastrointestinal with 4.1.

Finally, Table 6. summarizes specific problems in the group in decreasing order beginning with 40 per cent of the group admitting to overweight and to having suffered a major injury down to 3 per cent having had or having tuberculosis, scarlet fever, malaria, diabetes mellitus, goiter and varicose veins.

Table 6

Personal Present and Past History

Problem	Percentage of Subjects
overweight	40
major injury	40
major operation	34
hay fever	31
hemorrhoids	23
hypertension	23
venereal disease	20
kidney & bladder disease	17
mental hospitalization	17
heart disease	14
liver/gall bladder disease	14
stomach ulcers	9
rheumatic fever	9
anesmia	9
asthma	6
paralysis	6
underweight	6
nervous breakdown	6
tuberculosis	3
scarlet fever	3
malaria	3
diabetes mellitus	3
goiter	3
varicose veins	3

DISCUSSION

All of the information provided here is new in the sense that as far as we can determine, it has never been developed. However, most of the data, for that very reason, cannot be compared to other groups. However, the proportion of subjects providing specific numbers of "yes" responses on the CMI has been analyzed for five samples of men, specifically in 152 New York hospital employees (considered as the "normal" group), 282 New York City ostensibly healthy people, 2107 New York City routine hospital patients, 183 New York hospital neurotic patients, and 371 Veterans Administration psychiatric patients. Table 7. summarizes these five groups (3) and allows a comparison with the 27 male parolees in our group. At the critical scoring level of 30, our group of parolees are worse than the New York neurotic group and not quite as bad as the Veterans Administration psychiatric group.

Table 8. is a similar analysis of women and a comparison with the 8 female parolees. At the 30 suggested critical scoring level, the parolee group is sicker than any of the other studied.

Finally, it is interesting to note that other similar investigations of offenders support the evidence that the "health" of persons involved in the criminal justice system is very poor[19].

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Table 7

Proportion of Subjects Giving the Specified Number of "yes" Responses on the CMI, for Six Samples of Men

no. of "yes" responses	152 NY hosp. employee "normals"	282 NY City ostensibly healthy	2,107 NY hospital patients	183 NY hosp. neurotic patients	371 V.A. psychiatric patients	27 parolees
10 or more	28%	67%	71%	89%	97%	96%
20 or more	05%	37%	42%	68%	90%	93%
30 or more*	03%	10%	23%	52%	76%	56%
40 or more	01%	05%	13%	34%	59%	37%
50 or more*	01%	02%	08%	26%	45%	11%
60 or more	01%	01%	03%	16%	30%	11%
70 or more	00%	00%	02%	08%	20%	0%

*suggested critical scoring levels.

Table 8

Proportion of Subjects Giving the Specified Number of "yes" Responses on the CMI, for Five Samples of Women

no. of "yes" responses	307 NY hosp. employee "normals"	328 NY City ostensibly healthy	3,014 NY hospital patients	343 NY hosp. neurotic patients	8 parolees
10 or more	43%	79%	84%	99%	100%
20 or more	13%	51%	62%	83%	100%
30 or more*	05%	30%	44%	65%	75%
40 or more	02%	16%	30%	49%	50%
50 or more*	01%	09%	18%	34%	38%
60 or more	00%	05%	10%	21%	25%
70 or more	00%	02%	05%	12%	25%

*suggested critical scoring levels.

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