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DIFFERENCES IN HUMAN SERUM COPPER AND ZINC LEVELS IN HEALTHY AND PATIENT POPULATIONS

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ABSTRACT

This report is designed to re-examine the use of our presently accepted normal laboratory levels for human serum zinc and copper and to suggest a technique, previously unreported in the literature, to more precisely understand the relationship of serum zinc and copper in health and disease. Data from a patient population of 95 and a healthy population of 115 who met certain criteria are compared.

INTRODUCTION

A score or more published reports deal with the normal range for serum zinc and copper.

TABLE I

REPORTED "NORMAL" SERUM ZINC VALUES

| reference | sample size | serum zinc mean & S.D. (mcg/dl) | description of sample                               |
|-----------|-------------|---------------------------------|---|
| 4         | 40          | 120±19                          | 8 "normal" females and 32 "normal" males            |
| 5,6       | 64          | 91±17                           | 32 males and 32 females "in apparently good health" |
| 7         | 200         | 120±22                          | "apparently healthy volunteers"                     |
| 8         | 82          | 92±2                            | "normal subjects"                                   |
| 11        | 23          | 90±10                           | "23 individuals"                                    |
| 12        | 12          | 100±16                          | 8 "normal" males and 4 "normal" females             |
| 13        | 69          | 91±10                           | "normal" female blood donors (20-45 years)          |
|           | 26          | 90±10                           | "normal" female blood donors (66-94 years)          |
| 14        | 6           | 84±2                            | 3 male, 3 female "healthy volunteers"               |
| 15        | 25          | 102±14                          | 14 "normal" males and 11 "normal" females           |

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