
Assessment of Accumulation of Heavy Metals in Human Body by QMR Analyzer

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ABSTRACT

The present study was conducted in Rudrapur city, Uttarakhand. Two groups of subjects aged (20-35 years) and (40-55years) were selected for study. A survey dietary Performa was prepared to collect information related to their dietary habits. Assessment was done by Quantum Resonance Magnetic Analyzer to detect heavy metals (lead, mercury, cadmium, chromium, Arsenic and thallium) in the subjects. The value is compared with standard value. It is a Hi tech diagnostic scanner which targets health problems which targets health problems at the cellular level in minutes. It was concluded from the study that most of the subjects were vegetarian and consumed fresh home made food. Few of them do regular exercise. The assessment of heavy metal includes the accumulation of lead, thallium and cadmium was found in subjects. It may be due to the use of pesticides, insecticides in crop field and pollutants in environment, it may also be the cause of accumulation of heavy metals in the body. Drinking of excess water, regular exercise, breathing in healthy green environment may overcome the problem

Key Words: *Quantum Resonance Magnetic Analyzer , Dietary habits and Diagnostic scanner*

INTRODUCTION

The term “Heavy metals” refers to any metallic element that density and is toxic or poisonous even at low incantation ‘Heavy metals’ is a general collective term, which applies to the group of metals and metalloids with atomic density greater than 4 g/cm³ or 5 times or more greater than water. Heavy metals can be emitted into the environment by both natural and anthropogenic courses. The major of emission are the anthropogenic sources specifically mining operations. Heavy metal pollution of surface and underground water source results in considerable soil pollution and pollution increases when mined ores are dumped on the ground surface for manual dressing surface dumping exposes the metals to air and rain . When agricultural soils are polluted, the metals are taken up by plants and consequently accumulate in their tissues. Animals that graze on such contaminated plants and drink from polluted waters, as well as marine lives that breed in heavy metal pollution waters also accumulate such metals in their tissues and milk. Humans are in turn exposed to heavy metals by consuming contaminated plants and animals. Industrial products that are used in homes and which have been produced with heavy metals are sources of human exposure to such heavy metals. Heavy metal exposure occurs significantly by occupational exposure.

MATERIALS AND METHOD:

The present study was conducted in Rudrapur city, Uttarakhand. Two groups of subjects aged (20-35 years) and (40-55years) were selected for study. A survey Performa was prepared to collect information related to their dietary habits. Assessment was done by Quantum Resonance Magnetic Analyzer to detect heavy metals (lead, mercury, cadmium, chromium, Arsenic and thallium) in the subjects. The value is compared with standard value. The biochemical assessment of was done by QMRA. It is a Hi tech diagnostic scanner which targets health problems which targets health problems at the cellular level in minutes the electromagnetic wave signals emitted by the human body represent the specific state of the human body, and the emailed electromagnetic wave signals are different under the body’s different conditions, such as health, sub- health, disease, etc it we can determine these specific electromagnetic wave signals, we can determine the status of the body’s health and life.

The Quantum magnetic Resonance analyzer (QMRA) replaces the need for ultrasonic, nuclear magnetic resonance or radiography for various health related conditions and quickly helps the practitioner target the course and make beneficial recommendations helpful to their clients and patients. QMRA was connected to the computer the sensor was placed on fist of the subject, health data will be collected within minutes from various body system. The advanced electronic system collects the weak magnetic field of human cells for scientific analysis and compares each organ with the referenced database, there by analyzing and determining a person's health Status and main problems and putting forward standard predation recommendations the analysis is non-invasive.



Plate: The Quantum Magnetic Resonance Analyzer (QMRA)

The study was conducted in session of April to May 2016. Two groups 15 subjects of 25-35 years and 15 subjects of 40-55 years were selected from Rudrapur city to know their health status and accumulation of heavy metal in their body.

Results and Discussion:

Assessment of nutritional status was done by knowing their dietary habits, the questionnaire include question regarding consumption of drinking water and food by the subjects. Table 1

Table 1: Percentage of subjects according to Diet Consumed.

S. No.	Item and practices	% of Subject (20-35 year)	% of subject (40.55 year)
1.	Drinking water		
i.	Acqua	92.4	79.2
i.	Hand pump	6.6	19.8
i.	Tube well	NIL	NIL
2.	Type of diet		
i.	Vegetarian	59.4	72.6
i.	Non- Vegetatarian	39.6	27.4
3.	Food Consumed		
i.	Fast food	03	02
i.	Fruits and vegetables	100	100
i.	Milk		
a.	Fresh	75	90
b.	Processed/ Packed	25	10
4.	Alcohol	19.8	19.2
5.	Drug intake incase of disease	02	05
6.	Smoking	05	10
7.	Regular exercise and yoga	06	15

Assessment of heavy metal in the subject was done by The Quantum Magnetic Resonance Analyzer (QMRA). Six heavy metal was detected (Lead, Mercury, Cadmium, Chromium, Arsenic and Thallium).The subject were divided in to two group (20-35year)and (40-55 year) the report was shown in Table 2 .

Table 2: Result of the heavy metals accumulation in % of the subjects

S.N.	Heavy metals	Normal Range	Age group 20-35 year (Normal)	Age group 40-55 year (Norma)	Age group 20-35 year (Variation in range)	Age group 40-55 year (Variation in range)
1.	Lead	0.052-0.643	13%	13%	87% 1.240-1.580	87% 0.969-1.543
2.	Mercury	0.013-0.336	46.2%	33%	53.8 % 0.375-0.912	67% 0.423-0.980
3.	Cadmium	0.527-1.523	19.8%	33%	80.2% 1.594-1.938	67% 1.673-2.116
4.	Chromium	0.176-1.183	33%	39.6%	67% 1.540-1.7	60.4% 1.288-1.8
5.	Arsenic	0.153-0.621	39%	33%	61% 1.319-1.830	67% 1.065-1.371
6.	Thallium	0.182-0.542	19.8%	39%	80.2% 06.13-1.911	61% 0.684-1.704

Sample (Heavy Metal) Analysis Report Card

Name - _____ Sex- _____ Age- _____
 Figure- _____ Testing time- _____

Actual Testing Result

Testing Items	Normal Range	Actual measurement value	
Lead	0.052-0.643	1.545	
Mercury	0.013-0.336	1.173	
Cadmium	0.527-1.523	2.104	
Chromium	0.176-1.183	1.465	
Arsenic	0.153-0.621	0.387	
Thallium	0.182-0.542	0.704	

Reference standards : Normal Mildly Moderately Severely Abnormal



Conclusion

It was concluded from the study that most of the subjects were vegetarian and consumed fresh home made food. Few of them do regular exercise. The assessment of heavy metal include the accumulation of lead, thallium and cadmium was found in subjects. It may be due to the use of pesticides, insecticides in field crops and pollutants in environment may also be the cause of accumulation of heavy metals in the body. Drinking of excess water, regular exercise, breathing in healthy green environment may overcome the problem. Metal Toxicity leads to various disorders and can also result in excessive damage duet oxidative stress induced by

free radicals formation. Various public health measure have been under taken to control ,prevent and treat metal toxicity occurring at various levels.

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