

# SUMMER INTERNSHIP REPORT

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## Physical Properties

Atomic No.- 80

Wt.- 200 g

MP: -38.8 °C

BP: 356.7 °C

## Present in the environment as :-

Metallic Mercury(Hg<sup>0</sup>)

Inorganic Mercury (IHg) &

Methyl-Mercury (MeHg)

## Mercury

## Sources of Mercury Exposure

Fish Consumption

Rice Consumption

Amalgam Fillings

Air &Cosmetics

## Health Effects:-

Deteriorates Nervous System

Impairs hearing, speech & vision

Causes involuntary muscles movements

Damage to Kidneys & Gastrointestinal tract

# What I did ?

## ▶ Introduction

In order to investigate anthropometric effects of mercury (Hg) exposure, we examined the status of human prenatal exposure to Hg species, i.e. total mercury (THg) in Hyderabad, interior of south India, Nellore & coastal areas of Kerala, , as well as their potential effects on fetal and infant growth.

## ▶ Sampling

The sampling for this study has been done in Hyderabad, interior of south India, Nellore & coastal areas of Kerala, and analyzing their associations with fetal and infant anthropometric effects of prenatal Hg exposure by determining the levels of prenatal exposure to Hg species. Hair samples were cut as close as possible to scalp, and samples up to 4–5 cm from the root were collected. A self-administered questionnaire was filled out by all women concerning consumption of fish and rice, dental care, smoking, alcohol consumption, some other information on pregnancy, and parental socio-demographic and lifestyle characteristics.

## ▶ Analytical Methods

Total Mercury (THg) in hair was measured using a DMA-80 . The limit of detection for THg was 0.01 µg/g in hair.

## ▶ Statistical Analysis

- ▶ Mean of each variable was calculated and linear regression was performed using SPSS.

## ▶ Observation

Characteristics	Hyderabad	Kerala
	Mean ± SD	Mean ± SD
Age(in Years)	34.7 ± 5.2	26.3 ± 4.3
Gestational Age(in Weeks)	23 ± 2.9	29.2 ± 10.2
BMI	23.7 ± 3.8	24.1 ± 4.2
Fish Consumption (Gms.)	95.4 ± 92.7	108.9 ± 33.5
Rice Consumption(Gms.)	179.8 ± 36.8	124.5 ± 29.5
Hg (µg/kg)	358.54	378.16

## ▶ Inference

- ▶ Age and GA has significant effect on Mercury level.

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