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Counter Available Ayurvedic Drugs

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INTRODUCTION: Ayurveda has been practiced in India since 500 years and is very popular among Indians. Aim was to look for potential heavy metals in ayurvedic formulations of a reputed company.

METHODOLOGY: 43 OTC available ayurvedic drug samples were collected. Details noted were name, number and type of ingredients on mentioned on the label/package insert of the drugs especially heavy metals. Out of them 42 drugs were analysed using Agilent7700ICP-MS. 10 microgram of drug was added to 2ml conc. Nitric acid, 0.5ml of H₂O₂ and 10ppm of gold solution. This was subjected to microwave digestion and 10ml of metal free water was added to make up to 10ml.

RESULTS: of the 43 drugs major therapeutic indications listed were rejuvenation tonics (7), aphrodisiacs (7), Anti-inflammatory mainly for arthritis (5), Digestives (4) for liver dysfunction/anti diabetics/ antipyretics/ menstrual disorders/ immune modulators(3each). 13/43 had a single ingredient, 2/43 had 2 ingredients and rest all (28/43) had 3 or more with a range between 4-30. 100% of them had to be taken twice or thrice daily doses (1/2 tab). Only 12/43 had heavy metals listed on the label. 5/12 had single metal, 3/12 had 2 metals, 4/12 had 3 metals listed. Gold , silver, zinc and mica were listed on 2 each, where as lead and mercury were listed in 3 each. On analysis only 2/42 were detected to have lead, 6/42 had arsenic but as many as 25/42 had mercury detected. In addition, Zinc, iron and copper were detected in almost all. None of these had any cadmium.

CONCLUSIONS: Potential for heavy metal toxicity of ayurvedic drugs is significant but not all the labels/package inserts have these agents listed on them. In our study mercury has emerged as a major cause of concern.