

## Impact of heavy metals on Medicinal Plants

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### Abstract

Contamination of soils, water and air with toxic heavy metals by various human activities is a crucial environmental problem in both developing and developed countries. Heavy metals could be introduced into medicinal plant products through contaminated environment (soil, water and air resources) and/or poor production practices. There has been increased use of herbal drugs in recent years. Because of increasing demand and wider use, it is essential that the quality of plant-based drugs should be assured prior to use. Plants exposed to heavy metal stress show changes in production of secondary metabolites. High levels of heavy metal contamination in medicinal or other plants may suppress secondary metabolite production. Alternatively, the presence of heavy metals in medicinal plants may stimulate production of bioactive compounds in many plant species. In this review first discusses the sources, concentration, and distribution of heavy metals in medicinal plants. This paper is conducted to provide a general idea about heavy metals as major common contaminants of the herbal medicine plants, which impose serious health risks to human health. As usual, further research is needed to clarify the mechanism by which heavy metals induce responses that result in enhanced secondary metabolite production.

**Key words:** Heavy metals, Medicinal plants, secondary metabolites, Health