A Critical Evaluation of Drug Interactions With Echinacea Spp

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Abstract

Accurate information concerning drug-herb interactions is vital for both healthcare providers and patients. Unfortunately, many of the reviews on drug-herb interactions contain overstated or inaccurate information. To provide accurate information on drug-herb interactions healthcare providers must account for product verification, dosage, medicinal plant species, and plant part used. This critical review assessed the occurrence of drug interactions with one of the top selling botanical remedies, echinacea including Echinacea angustifolia, E. pallida, and E. purpurea. Only eight papers containing primary data relating to drug interactions were identified. Herbal remedies made from E. purpurea appear to have a low potential to generate cytochrome P450 (CYP 450) drug-herb interactions including CYP 450 1A2 (CYP1A2) and CYP 450 3A4 (CYP3A4). Currently there are no verifiable reports of drug-herb interactions with any echinacea product. However, further pharmacokinetic testing is necessary before conclusive statements can be made about echinacea drug-herb interactions. Given our findings, the estimated risk of taking echinacea products (1 in 100,000), the number of echinacea doses consumed yearly (> 10 million), the number of adverse events (< 100) and that the majority of use is short term, E. purpurea products (roots and/or aerial parts) do not appear to be a risk to consumers.