Reversal of aflatoxin induced liver damage by turmeric and curcumin.

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The effect of certain food additives on aflatoxin production by Aspergillus parasiticus has been studied in vitro. Extracts of turmeric (Curcuma longa), garlic (Allium sativum) and asafoetida (Ferula asafoetida) inhibited the aflatoxin production considerably (more than 90%) at concentrations of 5-10 mg/ml. Similar results were also seen using butylated hydroxytoluene, butylated hydroxyanisole and ellagic acid at concentration 0.1 mM. Curcumin, the antioxidant principle from Curcuma longa did not have any effect on aflatoxin production. Turmeric and curcumin were also found to reverse the aflatoxin induced liver damage produced by feeding aflatoxin B1 (AFB1) (5 micrograms/day per 14 days) to ducklings. Fatty changes, necrosis and biliary hyperplasia produced by AFB1 were considerably reversed by these food additives.