

## Dietary carcinogenic risk of Heterocyclic amines: A review

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### ABSTRACT

Heterocyclic amines are a group of chemical compounds, many of which can be formed during cooking. HCAs have been associated with an increased risk of a number of common cancers, such as cancers of the breast, colorectum, and prostate in many epidemiological studies. They are mostly found in well cooked meat that show a brown or black crust. A non-protein amino acid found in muscle tissue (creatine) which is present in meat are heated together at high temperature (125-300° C) or cooked for long periods to form the HCAs. The formation of HCAs varies by meat type, cooking method, and “doneness” level (rare, medium, or well done). Meats cooked at high temperatures, especially above 300° C (as in grilling or pan frying), or that are cooked for a long time tend to form more HCAs. HCAs are some of most potent mutagens and have been clearly shown to induce tumors in experimental animal models. This review evaluate and summarize the HCAs are the potent mutagens and may increase the risk of human cancer.