Are the chemicals in cooked food toxic to one’s body?

Introduction

The common statement that certain chemicals in cooked foods are harmful has been debated frequently in recent years. First, one of the main reasons this topic becomes relevant is because it questions a daily routine in the world’s population. People from Southeast Asia to the Northwestern United States all would agree that cooking is not only a necessity but is enjoyable and seen as entertainment. The entertainment of cooking can be found on television as well as in person with multiple out of the home dining options located all around the world. If cooked food is harmful it would not only disrupt the family life in homes, but it would also affect the cash flow brought in by the food driven businesses. I honestly believe that many researchers have linked harmful chemicals to cooked food, but because of the amount of money out of the house dining provides the economy I really doubt the issue being exposed anymore. For instance, if out of house dining is linked to harmful chemicals wouldn’t that also see a decline in the travel and tourism of the population as a whole? Secondly, the issue is important because if toxic chemicals from cooked food are indeed found harmful to one’s body, for the future one must question what to do in order to reduce the harmful risks cooked food causes or even how one should go about looking for other ways to obtain nutrients and energy. Anahad Connor, writer for the *New York Times*, confirmed that in the last couple of years the Department of Health and Human Services began to add multiple agents to its list of carcinogens due to the connection of grilling meat and people diagnosed with cancer (3).

Objective/Question

The main objective that needs to be addressed is simply what are the chemicals present in cooked foods and how are they harmful. I think that the main objective can be proven by finding the answer to three simple questions

* First, are there toxic chemicals being produced, if so what are the toxic chemicals being produced?
* Second, does the way one cooks the food items and the choice of food effect the number of chemicals produced?
* Third, how do these toxic chemicals harm the body and do they promote certain diseases or medical conditions?

Results

According to the sources used, it can be seen that there are a multitude of chemicals produced when food is cooked. The chemicals produced range from carbohydrates to proteins and can be found in a wide variety of food groups. Some of the main toxic chemicals being produced are Polycyclic Aromatic Hydrocarbons as well as Heterocyclic Amines (1). Both of these chemicals are dangerous carcinogens and have been linked to multiple types of cancer. Heterocyclic Amines have been found in several types of meat when high temperatures break down the amino creatine in the proteins (2). Polycyclic Aromatic Hydrocarbons have been found in many well known places such as grills and outdoor fireplaces. Maillard Molecules are other toxic chemicals that are combinations of several reactions between proteins and carbohydrates that have been seen to promote negative effects on the human body. These maillard molecules relate to cooked food because they become susceptible of being produced when food is cooked at a certain temperature(4).

The way the food is prepared and cooked has an effect on the toxic chemicals present in cooked food. The peer and popular literature both support a correlation between the burning and browning in food to be heavily concentrated with multiple Heterocyclic Amines. Cooking the food at higher temperatures increases the risk for food to become burnt which would then increase the probability for the cooked food to have more toxic chemicals than food that was not cooked. The cooking of food at high temperatures will then produce Polycyclic Aromatic Hydrocarbons that are produced from the fumes from a grill or stove (2). The literature also supports that there are a multitude of food items that have Heterocyclic Amines such as cooked meat as well as fish and vegetables. Cooked meat contains creatine+ tyrosine + glucose, while cooked vegetables contain cancerous amines + nitrites +sugars, all of which are potentially harmful Heterocyclic Amines (5).

These chemicals produced when food is cooked are all carcinogens and promote the growth of cancer in one’s body. According to the sources, the toxic chemicals can produce a wide array of cancer but there has been seen a correlation between these toxic chemicals and colon cancer as well as liver cancer and pancreatic cancer. Not only can they cause cancer but that have also been seen to act like neurotransmitters and disrupt many biological processes (5). The effects of acting as a neurotransmitter for the body has seen to cause an increase in blood pressure, amnesia, increase in aggressive behavior and a loss of appetite (5). Another thing the toxic chemicals achieve in the human body is an increase in brain disease (5). The Heterocyclic Amines enter the brain through the dopamine transport system in order to destroy brain receptors. This process causes an increase in being diagnosed with several diseases such as Alzheimer’s, Parkinson’s, as well as schizophrenia (5).

Discussion

According to my results and the research that I found, I think that the toxic chemicals found in cooked food are indeed harmful to the human body. Heterocyclic Amines and Polycyclic Aromatic Hydrocarbons are found in the burnt and blackened parts of food and if eaten it will indeed increase the risks of having cancer or some of other medical condition that will decline one’s physical and mental health. The fumes produced by cooking the food would also increase the toxic chemicals in the general area of the cooking environment (2). The implications of these fumes are in increase in possible lung cancer from the Hydrocarbons produced as well as just overall hurting your body and putting other loved ones at risk for health decline. I think that the best way to lower the risks of these toxic chemicals is to rearrange one’s eating habits. First, one should simply eat smaller portions of cooked food and avoid eating the blackened and burnt parts of the food. The main alternative to use is for a person to simply not eating cooked foods. Even though there have been definite health problems found in eating raw foods, a lot of scientists and nutritionists think that it would be better for people to mix up their diets and decrease the amount of cooked food consumed. Sadly though, with the evidence of cooked food causing cancer pretty obvious to the society, most people will still not listen to advice from the research and continue to eat the way they do regardless of the risks. I believe one of the main reasons for this is because people simply do not like change. The people of this world are content with what they eat and do not want to change it or believe it regardless of the dangerous problems cooked food entails.

Works Cited Page

Peer Review Literature

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