

A Review of Current Research and Future Directions on Foodborne Illness and Food Safety: Understanding the Risks and Mitigation Strategies

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Abstract : This paper is to provides a comprehensive review of current research works on foodborne illness and food safety, including the risks associated with foodborne illnesses, the latest research on food safety, and the mitigation strategies used to prevent and control foodborne illnesses. Foodborne illness is a major public health concern that affects millions of people every year. As foodborne illnesses have grown more common and dangerous in recent years, it is vital that we research and build upon methods to ensure food remains safe throughout consumption. Additionally, this paper will discuss future directions for food safety research, including emerging technologies, changes in regulations and standards, and collaborative efforts to improve food safety. The first section of the paper provides an overview of the risks of foodborne illness, including a definition of foodborne illness, the causes of foodborne illness, the types of foodborne illnesses, and high-risk foods for foodborne illness, Health Consequences of Foodborne Illness. The second section of the paper focuses on current research on food safety, including the role of regulatory agencies in food safety, food safety standards and guidelines, emerging food safety concerns, and advances in food safety technology. The third section of the paper explores mitigation strategies for foodborne illness, including preventative measures, hazard analysis and critical control points (HACCP), good manufacturing practices (GMPs), and training and education. Finally, this paper examines future directions for food safety research, including hurdle technologies and their impact on food safety, changes in food safety regulations and standards, collaborative efforts to improve food safety, and research gaps and areas for further exploration. In general, this work provides a comprehensive review of current research and future directions in food safety and understanding the risks associated with foodborne illness. The implications of the assessment for food safety and public health are discussed, as well as recommended for research scholars.

Keywords : food safety, foodborne illness, technologies, mitigation

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