

CHAPTER 3

THE IMPACT OF CLIMATE CHANGE ON THE DIGESTIVE SYSTEM

Mehmet Önder EKMEN¹

INTRODUCTION

Climate change is a significant global phenomenon that profoundly impacts environmental and ecological systems. These changes not only affect the natural environment but also have far-reaching implications for human health. The effects of climate change on the digestive system emerge through various mechanisms, including disruptions in the food chain, pathogen dissemination, environmental toxins, and allergens (1, 2). This article discusses the current situation regarding the impact of climate change on the digestive system and explores potential future projections.

MECHANISMS OF CLIMATE CHANGE AFFECTING THE DIGESTIVE SYSTEM

1. Food Security and the Food Chain

Climate change directly influences agriculture and livestock production. Rising temperatures, changing precipitation patterns, and extreme weather events can negatively impact food production, jeopardizing food security and leading to disruptions in the food chain. Inadequate food intake and declining nutritional quality can adversely affect digestive health. For instance, droughts and floods can reduce agricultural productivity, leading to a decrease in food sources (1).

2. Pathogen Dissemination

Increased temperatures and humidity can facilitate the spread of pathogens. Bacterial and viral pathogens, in particular, can cause digestive system infections. The spread of bacteria

¹ Dr., Ankara Atatürk Sanatorium Education and Training Hospital, Department of Gastroenterology, onderekmen21@hotmail.com, ORCID iD: 0000-0002-2034-6469

Future Projections and Insights

While predicting the future impacts of climate change is challenging, certain scenarios can be outlined based on current trends. For instance, changes in agricultural techniques and adaptation strategies can lead to positive effects on food security and digestive health. Effective policies and public health interventions are essential for ensuring food security, managing thermal stress, and preventing the spread of infectious diseases. Additionally, investments in sustainable and climate-friendly agricultural practices are crucial (11).

Conclusion

Climate change poses various adverse effects on the digestive system. Factors such as food security, pathogen dissemination, environmental toxins, and allergens threaten digestive health. To minimize these effects, strategies to combat climate change should be coupled with strengthening health systems to adapt to these changes. Effective policies and public health interventions are vital for ensuring food security, managing thermal stress, and preventing the spread of infectious diseases. Furthermore, raising community awareness and promoting sustainable agricultural practices are essential for tackling these challenges (12).

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