



Programming the Immune System: The Education Role of Diet and Microbiota in Early Life

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Message from the Guest Editor

Dear Colleagues,

From early life, diet has a significant role in educating the immune system. The first 1000 days of life have been proposed as a window of opportunity to aid in the maturation of a baby's microbiota and, therefore, immunity. However, early microbial exposition and passive immune transfer begin in the gestation period. It is critical to determine the immune system–diet–microbiota relationship during all these periods, and even before conception. Thus, the pre-gestation, gestation, lactation and early infancy periods will all have a role in this process.

The present topic aims to summarize the available evidence concerning the shaping effect of diet and microbiota during these periods, with a particular focus on the role of placenta transmission of immunomodulatory components, early microbiota exposure, breast milk passive transfer of bioactive compounds, maternal nutrition during these periods, and specific dietary strategies, as a tool to modulate immunity during this early critical window of opportunity, as well as mechanisms involved that can also promote health outcomes later in life.





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