Dr Georges MOUTON MD

Functional Medicine

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Title

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APOE IN ALZHEIMER'S PREVENTION: PRECISION MEDICINE APPROACH

Clinical Application of APOE in Alzheimer's Prevention: A Precision Medicine Approach.

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Abstract

Population-attributable risk models estimate that up to one-third of Alzheimer's disease (AD) cases may be preventable through risk factor modification. The field of AD prevention has largely focused on addressing these factors through universal risk reduction strategies for the general population. However, targeting these strategies in a clinical precision medicine fashion, including the use of genetic risk factors, allows for potentially greater impact on AD risk reduction. Apolipoprotein E (APOE), and specifically the APOE ε4 variant, is one of the most well-established genetic influencers on late-onset AD risk. In this review, we evaluate the impact of APOE ε4 carrier status on AD prevention interventions, including lifestyle, nutrigenomic, pharmacogenomic, AD comorbidities, and other biological and behavioral considerations. Using a clinical precision medicine strategy that incorporates APOE ε4 carrier status may provide a highly targeted and distinct approach to AD prevention with greater potential for success.

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