

Higher dietary intake of live microbes is inversely associated with accelerated biological aging - PubMed

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ABSTRACT

Abstract Objective : It remains unclear whether dietary live microbe intake is associated with biological aging. Therefore, the present study aimed to investigate the associations between dietary live microbe intake and biological aging. **Methods :** Our study included 7719 participants aged 20 years and older from the 2007-2010 cycles of the National Health and Nutrition Examination Survey (NHANES). Participants were categorized into groups using two distinct methods. The first method grouped participants based on the live microbial level of the consumed foods, dividing them into three dietary live microbe intake groups: low, medium, and high. The second method classified participants according to the quantity of live microbe-containing foods they consumed (referred to as MedHi), with three groups: G1 (no MedHi intake), G2 (MedHi intake below the median), and G3 (MedHi intake above the median). Biological age was evaluated using the Klemmera-Doubal method biological age (KDM-BA) and phenotypic age (PA). KDM-BA acceleration and PA acceleration was determined if participants' KDM-BA or PA exceeded their chronological age, respectively. Multivariable logistic regression models were conducted to explore the associations of dietary live microbe intake groups and dietary MedHi intake groups with the acceleration of KDM-BA and PA. **Results :** Compared with participants in the low dietary live microbe intake group, those in the high dietary live microbe intake group had a 20% (95% CI: 2% to 35%) reduced risk of KDM-BA acceleration and a 25% (95% CI: 4% to 42%) reduced risk of PA acceleration. Similarly, participants in the G3 group with higher dietary MedHi intake had a 24% (95% CI: 10% to 35%) lower risk of KDM-BA acceleration and a 29% (95% CI: 17% to 39%) lower risk of PA acceleration compared with those in the G1 group. The stratified analyses showed that the associations of dietary MedHi intake with accelerated KDM-BA and PA were not influenced by age, gender, race, smoking, alcohol consumption, physical activity, race, and history of hypertension, diabetes, and cardiovascular disease. **Conclusion :** Higher dietary intake of live microbes was inversely associated with accelerated biological aging. A diet rich in live microbes may help slow down the aging process.

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