Why probiotics yogurt is beneficial to HIV/AIDS patients?

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Abstract

AIDS patients often display symptom of diarrhea, an indication of hydrogen bonding mediated by viral proteins with amino acids capable of secondary chemical bonding. With hydrogen bonding to protons, local strong acids such as HCl could build up, giving rise to proton stress which may damage cells or trigger tumorigenesis. Weak organic acids counteract strong acids and attenuate proton stress. The integration of antiviral medicine with probiotics could yield favorable outcomes to AIDS patients and meanwhile reduce cancer incidences.

Keywords

AIDS; probiotics; yogurt; hydrogen bonding; tumorigenesis

Beneficial gut microbiota in HIV patients can be restored via the use of probiotics.¹ AIDS patients often display symptom of diarrhea²⁻⁵, an indication of hydrogen bonding mediated by viral proteins with amino acids capable of secondary chemical bonding. With hydrogen bonding to protons, local strong acids such as HCl could build up, giving rise to proton stress which may damage cells or trigger tumorigenesis.⁶⁻¹⁵ For instance, the humid southern coastal China and Southeast Asia are high in nasopharyngeal carcinoma incidences, whereas the non-humid and non-coastal Yunnan Province in south China is low in nasopharyngeal cancer prevalence.⁶⁻⁷ Weak organic acids counteract strong acids and attenuate proton stress. Consumption of yogurt has demonstrated numerous benefits to AIDS patients.¹ Probiotic yogurt intake is correlated with an increase of CD₄ cell count in individuals with HIV/AIDS.² Calcium supplement can neutralize strong acids and reduce cancer risks¹⁶⁻¹⁷, which could improve patients' conditions. Plant-based diet is rich in weak organic acids and elicits health-protecting effects.¹⁸⁻¹⁹ The reduced intake of salt is desirable as the overconsumption of NaCl may enhance the local formation of mutagenic HCl.⁶ Red meat is characterized by the presence of myoglobin which harbors 19-21% positively charged basic amino acids which attract Cl⁻.^{6,20} Therefore the overconsumption of red meat and processed meat is a concern to people with HIV/AIDS. The integration of antiviral medicine with probiotics could yield favorable outcomes to AIDS patients and meanwhile reduce cancer incidences. Furthermore, the effects of supplement with probiotics rich in weak organic acids can be investigated to find out whether or not the attenuation of proton stress confers a positive effect on the efficacy of vaccination.

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