

عنوان مقاله:

Space Medicine: Why Do Recently Published Papers about Telomere Length Alterations Increase our Uncertainty
?Rather than Reduce it

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خلاصه مقاله:

There is a growing interest in examining alterations in telomere length as a reliable biomarker of general health, as well as a marker for predicting later morbidity and mortality. Substantial evidence shows that telomere length is associated with aging; telomere shortening acts as a "counting mechanism" that drives replicative senescence by limiting the mitotic potential of normal (but not malignant) cells. In this Correspondence, we attempt to answer the question of why recently published papers about telomere length alterations increase our uncertainty rather than reduce it. This discussion includes three major research areas regarding telomere length: environmental stressors, aging, and life span. Our review suggests that activation of telomerase activity due to stressors in space might be a double-edged sword with both favorable and unfavorable consequences. The selection of an effect's consequence must clearly elucidate the experimental conditions as well as associated stressors. In this Correspondence, we attempt to answer the question of why recently published papers about telomere length alterations increase our uncertainty rather than reduce it. The selection of an effect's consequence must clearly elucidate the experimental conditions as well as associated stressors. Both positive and negative consequences must be clearly addressed in order to bolster the conclusions, as well as identify future research directions.

کلمات کلیدی:

Telomere, Aging, Lifespan, Stressors, Environment, Adaptive response, Radiation, Space

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