Healthy Ageing; the Natural Consequences of Good Nutrition: A Conference Report

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Abstract Many countries are witnessing a marked increase in longevity and with this increased lifespan the desire for healthy ageing, many however, suffer from the opposite including mental and physical deterioration, lost productivity and quality of life, and increased medical costs. While adequate nutrition is fundamental to good health, it remains unclear what impact various dietary interventions may have on prolonging good quality of life. Studies which span age, geography and income all suggest that access to quality foods, host immunity and response to inflammation/infections, impaired senses (i.e., sight, taste, smell) or mobility are all factors which can limit intake or increase the body's need for specific micronutrients. New clinical studies of healthy ageing are needed and quantitative biomarkers are an essential component, particularly tools which can measure improvements in physiological integrity throughout life, thought to be a primary contributor to a long and productive life (a healthy "lifespan"). A framework for progress has recently been proposed in a WHO Report which takes a broad, person-centered focus on healthy ageing, emphasizing the need to better understand an individual's intrinsic capacity, their functional abilities at various life stages, and the impact by mental, and physical health, and the environments they inhabit.

Key Words: Ageing; Biomarkers; Centenarians; Functional Ability; Geroprotectors; Immunosenescence; Intrinsic Capacity; Lifespan; Micronutrients; Minerals; Nutrition; Quality of Life; Vitamins

Conclusion

The annual CRN-International Scientific Symposium and subsequent conference report is continuing to explore and refine scientific content related to optimal nutrition and a healthy lifespan. It is apparent that they are related, most likely with the former affecting maximal length and achieving a lessening of the "…decline or loss of adaptation with increasing age…" Although the nine subject-matter experts provided their insights and in some cases, laboratory-derived data points applicable to healthy ageing, it is also evident that the surface has been barely scratched and that many additional definitions, end-points, markers of ageing can be proposed, and that there are likely many well-conceived possible lifestyle options that can be modified to achieve improved health and optimize the lifespan. One theme that resonates through this entire report is that ageing is NOT a disease. The phrase "successful aging" does not do justice to the inclusive opportunity that drive an individual to achieve their optimal lifespan. Quality is equally important to the quantity of life years deemed appropriate for each individual, given both controllable and uncontrollable impacting parameters. Most of the presenters either called out terms like functional ability and intrinsic capacity, or in their oral and written contributions drew tangential points to the health-related attributes that enable a lifespan value option affected by the underlying physiological and psychosocial factors, health and lifestyle-related behaviors and the presence/absence of disease and rapidly-developing decrements. Finally, the mental picture of a life course can be intuitively described with adjustments in internal (genetics) and external (environment) elements over the lifespan affecting the slope and trajectory of a life, a progress towards death that is overlaid by debilitating life stages associated with perceptions of unhealthy and unforgiving "old age".