



## Relax and Live Longer

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Human life expectancy almost doubled in recent centuries as a result of better nutrition, health management (hygienics, medicine) and living standards, as well as reduced child mortality. This trend is particularly noticeable in the Western world despite a huge increase in environmental hazards (e.g., toxic spills and destruction of food-chains (ref. 1); obliteration of photosynthetic organisms important for primary production of macromolecules (ref. 2); global warming (green-house and ice melting effects (ref. 3); detrimental sugar and fatty acids consumption (ref. 4); as well as devastating military clashes (e.g., World Wars I and II; the Korea and Vietnam wars; obliteration of African and American native populations). The impressive improvement in life expectancy despite the elevated hazards suggests that human life span could be extended even further should negative factors like mental stress, exaggerated anxiety, and overloaded daily burden and concerns be controlled parallel to developed medical means for elimination of various pandemics, cancerous illnesses, and heart and cardiovascular sicknesses (ref. 5).

Notably, worrying, fear and stress are natural alarming mechanisms developed in animals as signals of the need to take measures for self-protection or to overcome pressures and bothering issues. However, excessive worrying (e.g., chronic) and stress may affect our nervous system and the balance of alarm-hormones such as cortisol and adrenaline. Consequently, our health may deteriorate leading to depression and anxiety accompanied by complications, such as increased suffer from headaches, weight gain, hindrances with our digestive system and sleep, elevated blood pressure and heart diseases, as well as muscle tension and pain, but also difficulties with memory, ability to focus, disturbed emotions and unwarranted concerns and fears, all negative effects that may affect, even shorten, our life. Consequently, people are aware of the need to calm down and relax while navigating between two opposing necessities: on the one hand, be competitive and highly productive, which may increase the pressure (e.g., Japan or South Korea working habits reaching extremes that have been shown to even increase the death toll of young people), while on the other hand, seek some rest (e.g., 'belly-back' vacations), as well as physical and mental relaxations (e.g., family hours; trips; listening to beloved music or dealing with arts). Not amazing is the fact that the life span of those, who lived under constant tension and high stress (e.g., thinkers, inventors, politicians, artists) was usually limited. In contrast, a few world personalities, particularly those who retained daily relaxing routines, became famous due to their cognitive capabilities or exceptional longevity. For example, the daily habits of Immanuel Kant\*, one of the greatest philosophers of modern times, who kept a strict daily schedule with relaxing hours of walking in a park, which may have helped

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\* Immanuel Kant kept a rigorous daily routine of a few hours work, and afternoon relaxing walks in a park that stimulated his mind and refreshed his insights. At the rest of his day he was involved in social engagements (e.g., playing cards and billiard and friendly conversations).

him to stay cognitively sharp and productive till age 80. Or, Henry Kissinger<sup>†</sup>, the Foreign Minister of the US, who passed away at age of 100 despite a seemingly unhealthy lifestyle, while keeping a relaxed character as also reflected on his calm tone and manners during political discussions and conflicts. Similar was most likely the healthy genetic background of Queen Elizabeth<sup>‡</sup>, who passed away at the age of 96 despite oppressive governmental commitments and family disputes, probably by retaining daily physical and emotionally relaxing habits, in addition to her putative healthy background. Totally different was the lifestyle of the comedian George Burns<sup>§</sup>, who passed away at the age of 100, despite a busy schedule and non-stop smoking habits. His longevity could have been based on ‘good genes’ keeping him healthy with self-convincing mechanisms of physical and mental relaxations. Furthermore, the US former president Jimmy Carter<sup>\*\*</sup>, passed away at age 100 despite years of suffering from Melanoma probably due to the relaxed handling of his time. He routinely exercised, was constantly busy in humanitarian issues, and was probably mentally supported by his 77-year marriage, all keeping him healthy with a strong sense of faith and ambition.

Since our health and life span depend greatly on multiple factors, among which balanced hormonal secretion and reasonable cognition, our fitness requires in addition to stimulation of the sympathetic system upon alert by the alarm hormones, an entailing activation of the parasympathetic system that lowers the levels of these hormones that reduce the elevated heart rate, blood pressure, and worries. Thus, the necessary relaxation does not depend only on physical exercising, but requires also techniques of mental strengthening and calmness. The importance of relaxation techniques is emphasized in special published tips by famous world clinics, such as Cleveland and Mayo in the United States, suggesting ways to manage stress problems. For example, keeping a healthy diet, exercise regularly, sleep reasonable hours, practice deep breathing, yoga, and meditation in addition to spending time on hobbies, reading, listening to music, watching shows and movies, volunteering in the community, as well as organize the daily tasks and foster social relations and a humoristic approach toward the family and friends. An additional important suggestion is of course to reduce drinking alcohol and excessive tobacco and food consumption, as well as staying away from using narcotics as a way to relax. Finally, in case of loss of control, one should better seek professional support.

Scrutiny of these suggestions implies that religious faith may also contribute to calmness (‘everything in his hands’), which may explain why Christian Bishops, Muslim Sheikhs, and Jewish Rabis, convinced with their purpose in the community, may live longer than average. Another way to prolong life is by following Eastern techniques (e.g., in Hinduism, Buddhism) to achieve calmness (even Nirvana). All such approaches may raise positive feelings accompanied by mind relaxation that may not just prolong life, but enable a more peaceful run through.

<sup>†</sup> Henry Kissinger, the US Foreign Minister, was a busy politician, involved in attempts to solve various world conflicts, but still retained his calmness by regular participation in social meetings and events, as well as keeping interest in soccer.

<sup>‡</sup> Queen Elizabeth had a daily relaxation routine of spending time on horse riding and outward walks with a pet as well as quiet simple habits that sharpened her cognition and supported her good health, emotional stability, and relaxed mood.

<sup>§</sup> George Burns was famous for his involvement in various activities at old age, while always smoking a cigar. His personality was probably self-relaxing despite his highly busy life style.

<sup>\*\*</sup> Jimmy Carter combined a physically healthy lifestyle (jogging, swimming, biking, woodworking) with tremendous mental activity of socializing, volunteering, and teaching.

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