

Book Review

The Wheel of Health: The Source of Long Life and Health among the Hunza, by Wrench G.T. (2006), New York, Dover Publications INC., pp 144, \$7.95.

The mechanisms to achieve the highest standard of health has long been discussed since ancient period and the most focused issue of population and public health literature in the last few decades. According to the World Health Organization (WHO) report on Global Health Estimates in 2015, more than half of the deaths are the outcome of faulty, unhygienic, and inappropriate food habits, environment and inactivity. Morbidity and mortality due to unhealthy food and dietary practices, environment, and inactivity are increasing all over the world. Global health policy focus on medical care and technological advancement stimulate the issue of maintaining good health with curative measures through diagnosis rather than prevention of diseases by building proper immunity and conducive environment. Worldwide, there is an increasing trend in terms of life expectancy with the simultaneous growing trend for the prevalence of chronic diseases leading to lower healthy years of life. The utmost concern for global initiatives such as Sustainable Development Goals (SDGs) is seeking sustainable preventive mechanisms to maintain a longer life rather than depending more on expensive curative care. We shall at least learn more about how to be healthy ourselves and how to bring healthy children into the world by studying communities having long and healthy life spans. In this context, we would like to bring readers attention to the work of Dr. Robert McCarrison (was a Northern Ireland physician and nutritionist in the Indian Medical Service), who searched for the secret of the Hunzas' fitness and health in the 1930s. In the quest to know the secret of fitness and longevity of Hunza tribe, Dr. G.T. Wrench, English Physician found the work of Dr. Robert McCarrison, Director of Nutrition and Research in India during 1928 to 1935, who had been studied Hunza people for so many years. By compiling the work of Dr. Robert McCarrison into a book, Dr. Wrench rightly highlights the sustainable ways to build and maintain proper health by illustrating the real-life example of Hunza Tribe of Gilgit, Baltistan. With the case of Hunza's lifestyle, Dr. Wrench addresses the critical hurdles in ensuring a prolonged healthy life, in particular, it advances the question: why disease and why not health? Further, the author raises the most relevant issue of recent days, why scientific investigations are more oriented towards curing diseases rather than preventing it by proper health. If diseases are something inevitable, then how this tribal population situated in extremely isolated terrain between Hindu-Kush in west and Karakoram in the east, far away from the so-called progressive and advanced world but achieved extra-ordinarily healthy longevity of on an average 120 years.

The book is organized in 11 chapters, and each of this has a wealth of knowledge which 21st Century societies can learn on the question of how to be healthy and live longer. The first chapter of the book outlines how the remoteness and environment help in preserving health, although remoteness is not the only element to maintain good health. Here the peculiarity among Hunza people unfolds. Their agility, endurance, and industrious nature make them unique to achieve and maintain proper health throughout their life. On the one hand, their unique location provides safeguard from the highly commercialized world of preserved sophisticated foods along with their courage to be cheerful to survive healthy and hard work shape this isolation into an advantage to protect them from negative impacts of industrialization and globalization, which

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makes them superior and different from their neighboring tribes as well as from the rest of the world.

The second and third chapters summarize the reason behind to be exceptionally hard-working and being cheerful. How do they stay healthy throughout their life? What are their secrets to maintain health uniquely? Here, the author distinctly explained how the pattern of food consumption leads to certain people's efficiency and certain people's deficiency in overall health outcome and in averting diseases. How the people of Hunza are preventing disease with diet explains how the knowledge of diet is more essential than the knowledge of bacteria. Besides, the author illustrates that cleanliness and exercise are other essential elements along with proper diet intake, but only cleanliness and physical activity apart from the diet is not sufficient to maintain health.

The fourth and fifth chapters' foster that if proper diet intake is necessary to maintain health then from when proper diet intake should start? from the time of conception or after birth. Here, the author examines that, conceiving at the right environment shall be the right start where a healthy mother is a first and foremost prerequisite for the good start, and it continues till breastfeeding. Here, the author demonstrated that, among the Hunza tribe, breastfeeding of the child till the age of three years is the traditional custom which has no substitution. The women of Hunza should avoid pregnancy for minimum three years after giving birth to the living child to feed the child up to three years without any interruption. Women not maintaining the proper diet and depriving the child from uninterrupted breastfeeding of the first three years of the living child denotes as the unjust and socially indecent activity. Therefore, the health of the entire race depends on the health of women. Properly maintaining health is the only reason because of which Hunza women can give birth to the child even at the age of 60 years. Hunza strongly believes that the health of the child depends on the mother's effort to maintain her health through proper dietary practices.

Besides, the author also elaborately highlighted that the concern for the health of the Hunza population is not only taken care up to the initial ages of the newborn but the entire life span by maintaining a proper diet for every individual irrespective of their age. While the author discusses on the diet of the Hunza, he illustrated that there is no drastic difference in the ingredients of diet used by Hunza and westerners, but there is a vast difference lies in the method of cultivation and process of intake. The author demonstrated the point by giving evidence like the process of grinding flour to prepare wholemeal bread, the process of pasteurization of milk and the process of cooking vegetables to eat by retaining all essential nutrients intact in the product. These are the unsophisticated natural processes to prepare food to reach the nutrition need of the individual and prioritize biological values which are physiologically economical over the money-making values and aesthetic sense of the population. Moreover, the author also highlighted the point that in recent days, large-scale production to meet the massive need of the population is one of the major reasons to overlook the nutritional requirement of the individual by modifying the process of cultivation and production of food. With the increasing trend of commercialization which ultimately leads to the removal of essential ingredients from the food during the process of its production. The wholeness in terms of maintaining health and intake of proper diet is not new for the tribe Hunza rather it exists historically, and they preserved their culture of being healthy over the period of time.

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In the sixth and seventh chapters, the author analyse if proper diet is the key to a long healthy life, then how one should define the term proper diet? The region-based case study has been done by the author to understand what type of diet can be said as 'proper'? The author found that proper diet is something, which contains all the necessary elements of the human body in a balanced way. The optimum intake of food and the wholeness in diet preserve wholeness of health and prevent diseases from attacking.

The eighth chapter summarizes all the probable causes of diseases, which is very important to know the causes of the diseases to prevent it before the advent. To achieve wholeness in the diet as well as in health, quality along with the quantity of food is essential. Environment, food intake, and heredity are the most crucial factors as an aggregate to maintain health and to avoid diseases or to prevent it. In ninth to eleventh chapters, the author explains, in this age of rapid progress in terms of economic growth and technological advancement, it is not new that these three key factors are inevitable in maintaining health but unable to achieve it yet. Sophistication and preservation, along with the process of cultivation, are the critical factors which maintain the quality and quantity of food. While, the process of cultivation not only includes the types of crops to be grown but also the preparation of the land to cultivate crops, the nature of the manure used, the process to prepare manure which will not affect the nutrient contents of soil as well as the crops produced, maintain soil and retaining soil nutrients by protecting it from erosion and infertility. Also, uniqueness in the method of irrigation from natural sources and staircase terraced farming in the mountain valley results into an interestingly healthy life with disease-free higher life expectancy.

G.T. Wrench also elaborates the systematic experiments on albino rats by Dr. McCarrison, which help us to understand how proper diet helps to prevent or would prevent diseases. In the first case, rats were kept in a healthy environmental condition and fed on the diet of Sikh, Pathan, and Hunza as they have the most excellent physique, and the result is obvious. Those rats were fed by the Hunza diet were absolutely free from any diseases, and there is no sign of infantile death. In case of the second experiment, large number of diseases occurred as the outcome of practicing the diet of poorest people of Bengal and Madras, which makes it clearer to understand how food intake helps to free themselves from any diseases as well as most importantly mothers became diseased and inflammation of the womb and ovaries had been noticed. Another experiment makes it more comprehensive when the rats were fed on the diet of poor people of England. The outcome reveals that the dietary intake impacts not only on physical health but mental health as well.

To what extent did the author justify its objectives? Though the real-life example of the Hunza tribe manifests a remarkable instance of maintaining health through balanced dietary practices, the experimental work has occurred under a controlled laboratory environment. These experiments are done in a competent and thorough way to understand the impact of variation in food intake on health, but to some extent, the environmental and other factors to maintain health cannot be controlled under laboratory setup. There is a particular limitation in this industrialized world that are the availability of clean air to breathe properly to maintain health primarily, and the emerging trend of practicing fad diet, sustainability in terms of health lost its way to achieve disease-free maximum life expectancy.

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Nevertheless, the concerned area of this book is to maintain health sustainably by analyzing the lifestyle and food habits of the Hunza tribe. This can open a new insight to maintain health, which is not an issue for a single generation but a practice which will determine the health of the following generations. In precise, the effective way of perpetuating healthy life is derived primarily from the mother where maternal health is the fundamental determinant to accomplish the maximum health of a newborn. Along with, traditional agricultural practices and lifestyle of the Hunza tribe make them able to provide the hygienic source of environment and food to sustain health for a longer duration. Perhaps, there is a major dilemma in this age of rapid progress is that, though economic growth and technological advancement help us to achieve new heights and to make life easy to sustain but not allowing sustaining healthy life expectancy. The purpose of the framework of this study is a remarkably foresighted analysis which the entire globe is questioning today in the more serious note to make the world liveable for the future generations.

While, developed countries spreading inadequate dietary intake by enforcing people to consume fancy, sophisticated, preserved and high-calorie fast food, popularly termed it as junk food, developing countries are facing the problem of both inadequate dietary intake and genetic undernutrition in a poor and unhygienic environment. The author reconstructs the concept of the disease-free healthy world achieved through the drug-free sustainable way by strengthening the immune system. He indicates to re-examine the fact of conserving and building traditional balanced dietary practices instead of adapting modern food habits for preventing diseases before their onset. While the study admirably explores and portray the unique conventional way of life of Hunza tribe locating far away from the age of advancement, but for long they are more advanced than this globalized world in terms of health and life expectancy. Here, the study concludes, the techniques of food production are playing a critical role to build and maintain health. The Hunza tribe evolved and conserved an effective approach towards achieving comprehensive health free from diseases. People who studied Hunza in the recent period claimed that the tribe has been affecting now by infiltration of bad lifestyles and food items, although, they are still one of the healthiest people in the world.

By studying the wings of birds in flight, we have made our machines to carry us through the air. By studying one of the healthiest people in the world, we might so improve our methods of maintaining good health as to become healthy people ourselves. Therefore, we recommend this book for every population and public health scientists and policymakers.

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