

Preface

This Special Issue of the Human Ecology is devoted to the studies of *Human Body Composition*. The role of body composition is being increasingly appreciated because of the fact that numerous systemic diseases have a linkage with the deposition of excess fat. The distribution of body fat especially in the abdomen is referred to as a potent risk for disease. The gynoid and android fat distributions are also important risk predictors. Body Mass Index ($\text{Weight} - \text{kg} / \text{Height}^2 - \text{meters}$) has widely been used by almost every country on the recommendations of World Health Organization to designate underweight, overweight and obesity. In case of athletes and the old people, the BMI may not reflect the real situation but in most of the other sections of the populations, this seems to be a good mass screening device. Traditionally, the methods employing anthropometry, densitometry, roentgenogrammetry and hydrometry were used for the assessments of human body composition. The most convenient model of human body composition was to fractionate the body mass into fat mass and the fat free mass. Numerous different types of methods were evolved to study the body composition from the two compartment model and hundreds of studies are available on different populations. Since the body tissues have different densities therefore there has been a practice to assess fat mass, skeletal mass, muscle mass, etc. New techniques have been added to fine tune the existing methods and to update them. Studies involving CAT scanning, ultrasound, magnetic resonance imaging, bioelectrical impedance, photon absorptiometry have also been used but most of these are very costly procedures.

India is on a fast track of development and is trying to catch up with the best of the world in technology, innovation, ideas and information technology. As a result of this, its populace is witnessing a major change in the lifestyle and food habits. These transitions would be taking their toll in terms of the health of its people. Indian social diversity is very large from the slum dwellers bereft of any amenities to the ultra rich managing every thing under the sun. This diverse social spectrum is responsible for acute under nutrition on one hand and overweight and obesity on the other hand. Studies on Body Composition can provide vital information on the fractionation of body mass and are very crucial to understanding the dynamics of health and disease. This field of research is likely to

find its utility in the Indian scenario in the near future.

In order to get first hand information of the global scenario on human body composition, distinguished scientists working in this field were invited to contribute their works. The editors of this special issue put on record their pleasant sense of gratitude to all the contributors who have taken special pains to prepare papers for this issue by taking time out of their very busy academic and professional schedules. We profusely thank Professor Barry Bogin and Nada Beydoun of United States; S. Chen and A. Vieira of Canada; Tim Olds, Grant Tomkinson, Amanda Pilgrim and Jim Dollman of Australia; O. G. Eiben (Late), G. A. Tóth, Éva B. Bodzsár and Annamária Zsákai of Hungary; Charles Susanne of Belgium; J. C. van Wieringen of The Netherlands; Klaus-Peter Herm of Germany; Elena Godina, Irena Khomyakova, Arsen Purundzhan and Ludmila Zadorozhnaya of Russia; Esther Rebato, Itziar Salces and Aline Jelenkovic of Spain; Maria Kaczmarek of Poland; Sharda Sidhu, Prabhjot, Dolly Monisha, A.K. Bhalla, Madhuri Mourya and Payal Kang Singh of India who have very gladly accepted our invitation to contribute.

The papers presented in this issue explore numerous themes including the role of sitting height ratio to BMI and fatness; how physical activity changes body composition; familial resemblance in fatness and fat distribution; body composition, somatotype and growth types during childhood; secular trends in the adiposity and skinfold thicknesses of young people in developed countries; sexual dimorphism in BMI and dietary intake of thiamin; body composition during puberty; temporal trends of overweight among 9-11 year-old Australians; BMI in Hungarian youth during 20th century and blood pressure in relation to body composition.

The issues and findings reported in this special issue are likely to stimulate the young minds and the scientific community alike. We hope this issue would be received warmly by every body who has interest in human body composition.

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