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## **Foreword**

This first issue of the online version is dedicated to the Colloquium with international participation "Anthropology and nutritional status", organized and hosted by the "Francisc I. Rainer" Institute of Anthropology, on October 12, 2011, Bucharest, Romania.

The present volume contains the abstracts of the papers presented during the colloquium.

### **Moderators:**

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Monica Petrescu

**Feeding behavior and nutritional status in the children and adolescents from Bucharest**Cristiana Glavce<sup>1</sup>, Françoise Rovillé-Sausse<sup>2</sup>

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**Objective:** The objective of this research was to define the influence of the nutritional transition on the feeding behavior and nutritional status of the children and adolescents from Bucharest.

**Material and methods:** This work is based on an application of a questionnaire, and a daily dietary inquiry during one week. The data were gathered in 2005 using a representative sample (cluster sampling) comprising 1189 subjects, 313 children and adolescents from Bucharest and their parents. An exploratory factor analysis was performed using principal component analysis, with Varimax rotation of the major alimentary categories that composes the diet, in order to evaluate the impact of the nutritional transition on children and adolescents' food consumption model. Using food composition tables, the nutritional intake was calculated for each student and then the average intake was compared to the recommended nutritional intake.

**Results and conclusion:** The study results demonstrate that in 2005, the nutritional transition had already an impact on the model of food consumption and the nutritional status of children and adolescents. As Romania is still at an early stage of the nutritional transition, our study results can help to design intervention strategies aiming to promote better nutrition and prevent non-communicable diseases.

**Keywords:** nutritional status, children, adolescents.

**Are the nutritional recommendations followed?**

Françoise Rovillé-Sausse

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**Objective:** France was the first European country to set up a program to combat obesity in 2001. Two major anthropometrical and food consumption studies carried out almost 10 years apart make it possible to measure the impact of the nutritional recommendations on food behavior and the prevalence of obesity. Our aim is to discuss the effectiveness and legitimacy of such a program and its development in Romania.

**Material and methods:** 2624 adults of all socioeconomic categories from all the regions of France had filled in a 7-day diary for assessment of daily food intake, a questionnaire of physical activity level, and reported their height and weight.

**Results:** In less than 10 years, the consumption of sugars and derivatives, dairy products, alcoholic beverages, and meat has decreased. Consumption of cereals, fish, and vegetables remained stable. That of fruit and ice has increased significantly. The total energy input is stable. However, the relative contribution of macronutrients to energy intake has changed. Less than half of the adult population reports being physically active. Half of the adult population has a BMI of 25kg/m<sup>2</sup> or more.

**Conclusion:** Two main points are not solved: 1.) understanding how people perceive a healthy diet for a healthy body, 2.) the current economic situation in Europe does not favor the best choices.

**Keywords:** nutritional recommendations, obesity, adult population.

**Human alimentation – between necessity and science**

Prof. PhD. Constanța Brumar

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**Objectives:** In this paper, I emphasized the fact that food is one of the main connections between human beings and the environment. Also, I emphasized that at the present time the great diversity of available foods, their complex chemical makeup, the changing conditions under which professional and extra-professional activities take place, and the potential illness hazard posed by foods have led to revisions of concepts regarding human alimentation, stressing its scientific nature and emphasizing its importance as a disease prevention factor.

**Results:** In the context of contemporary economy, I showed that the most pressing necessity of humans nowadays is to maintain a permanent balance between the necessities of the human body and the quantities of nourishing compounds ingested as food. I mentioned that scientific research programs aim to create an optimal balance between the various ingredients of foods, in relation to the requirements of modern nutrition, permanently adapting technologies to the requisites thereof, carrying out rigorous quality control and assessing the hygienic/sanitary characteristics of products. I pointed out that as regards food industry it is noted the concern to achieve an optimum balance between different components of food intake in relation to the requirements of modern nutrition.

**Conclusions:** We also pointed out that the food services, performed as a stand-alone activity or in conjunction with tourism services have many social implications and responsibilities while fulfilling the need for food, correlating the subjective satisfaction with nutrients requirements, and especially ensuring the safeness to all marketed products, whether they are their own products or transferred from other sectors. The gradual evolution of food services is a consequence of specific factors associated with contemporary life: increased urbanization and population mobility, changes in the structure of consumption habits, more spare time.

**Keywords:** nutrition, human, environment.

**The influence of food on chronic degenerative diseases**

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**Objectives:** The aim of this article is to identify the nutritional factors determining the onset and evolution of the chronic degenerative diseases.

**Materials and methods:** The transverse study was conducted during one year, included 35 patients (50-70 years old; 12 male, 23 female) with rheumatic diseases. It was investigated and a control group consisting of 35 subjects without rheumatic diseases. The results were processed using statistical methods.

**Results:** 36,82% of patients with rheumatic diseases frequently consumed meat, 28,03% dairy products and eggs, 21,11% vegetables and fruits and 14,04% fish. 27,23% of subjects without rheumatic diseases frequently consumed meat, 26,46% dairy products and eggs, 27,14% vegetables and fruits and 19,17% fish.

**Conclusion:** A higher percentage of patients with rheumatic diseases consume more frequently meat, dairy products and eggs and less fruit, vegetables, and fish than those without rheumatic diseases, a statistically significant difference ( $p < 0.05$ ) being between the two groups.

**Keywords:** nutritional factors, chronic degenerative diseases.

### Endocrine diseases and feeding disorders

Monica Livia Gheorghiu

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**Introduction:** Appetite regulation is a complex mechanism integrated within the hypothalamus, where there is a balance between appetite-stimulating peptides (i.e., neuropeptide Y, melanin-concentrating hormone) and satiety-stimulating peptides (melanocortins, cocaine and amphetamine-related transcript (CART). These are influenced by neural input and a variety of blood circulating hormones: intestinal (i.e., ghrelin, glucagon-like peptide GLP-1, peptide YY, cholecystokinin), insulin, leptin, thyroid and adrenal hormones, endocannabinoids et al.

**Objective:** to review the influence of the major endocrine diseases on food behavior.

**Results:** Hyperthyroidism induces an appetite increase, usually associated with weight loss - except in aged people, who may have anorexia and, frequently, cardiac disorders. Hypothyroidism is associated with appetite reduction and a moderate weight gain, mainly by tissular retention of mucopolysaccharides and fluids. Hypercortisolism is associated with increased appetite and facial-truncal obesity. Chronic adrenal failure produces anorexia with fatigue, vomiting and weight loss. Catecholamine excess (i.e., in a pheochromocytoma) produces weight loss, although the appetite may be increased. Uncontrolled diabetes mellitus is associated with hyperphagia, sometimes with weight loss; insulinomas – insulin-secreting pancreatic tumors-produce repeated hypoglycemia with hunger and weight gain. Hypothalamic lesions (tumors, surgical lesions) may produce either hyperphagia with obesity, or anorexia with weight loss, sometimes extremely severe. The appetite disorders are usually reversible after the treatment of the underlying endocrine disease (except in the hypothalamic disorders, which are difficult to treat); however, obesity may be only partially reversible.

**Conclusion:** Major endocrine diseases are frequently associated with feeding disorders, therefore an endocrine evaluation is recommended in patients with appetite or weight alterations.

**Keywords:** endocrine disease, food behavior, appetite, weight.

### Anthropometrical studies on the effect of the diet containing yogurt in the treatment of obesity

Sv. Handjiev, T. Handjieva-Darlenska

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**Introduction:** Anthropometrical measurements are essential in the prevention and treatment of overweight and obesity.

**Objective:** The aim of the study was the assessment of the effect of the regimen based on skimmed yogurt upon the anthropometrical indices in obese patients.

**Materials and method:** the subjects of this study were 85 obese adults (63 women and 22 men) with the following mean values: age – 45.5 years, body mass index – 36; fat mass – 40.7%, correlation between height and the hips – 0.90, sagittal diameter – 27 cm, visceral mass – 14.1. Each day, the patients consumed 290 grams skimmed fermented yogurt with lactobacillus bulgaricus instead of streptococcus thermophilus and bifidus (4.3% protein, 0.5% fats and 3.9% carbohydrates).

**Results:** At the end of a two-month regimen, a beneficial influence was observed on all the anthropometrical parameters.

**Conclusions:** The skimmed yogurt based diet has a favorable effect on the anthropometrical parameters and reduces the cardiovascular risk in obese people.

**Keywords:** skimmed yogurt based diet, obesity, anthropometrical parameters.

### **Body image and food behavior among adolescents from Bucharest**

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**Objective:** Adolescence is a challenging period during which physical and psychological changes are affecting the person's body image, self-esteem and exposes them to risk behaviors. This study examined the impact body image on food behavior among adolescents from Bucharest.

**Material and methods:** The participants were 634 adolescents (322 girls and 312 boys) aged 11-18 years, which, for the statistical analysis, were grouped according to the three stages of adolescence defined by WHO. As part of the survey, body image perception was determined in terms of body shape representations using Stunkard Figure Rating Scale. A body image discrepancy score was calculated from the difference between z-standardized values of body image perception and body mass index. The food behavior was evaluated in relation to the Mediterranean diet using the KIDMED index. A logistic regression analysis was performed afterward.

**Results and conclusion:** The gender difference observed in the effect of perceived body size discrepancies on food behavior could be explained by different maturation ages and socio-cultural expectations for males and females and could be part of the broader effort to prevent the risk behaviors in adolescence.

**Keywords:** adolescents, body image, food behavior.

### **High blood pressure, sleep apnea syndrome and waist-hip ratio**

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**Objective:** Sleeping apnea syndrome (SAS) is known to be an important cause of secondary systemic arterial high blood pressure (HBP). Also, abdominal obesity, a component of the metabolic syndrome, is also associated with HBP. We followed the association between HBP, the severity of SAS and abdominal obesity within patients diagnosed with SAS in our clinic.

**Materials and method:** The retrospective analysis of a group of 175 patients that addressed our clinic with the suspicion of SAS, patients with anthropometrical measurements already performed. We followed: existence and severity of SAS (ventilatory polygraphy, AHI), association or not with HBP, as well as waist-hip ratio (WHR) as a marker of abdominal obesity/metabolic syndrome, being defined by a  $WHR > 0.9$ .

**Results:** From the total of 175 patients, 173 had SAS. Among those, 111 (64.16%) had severe SAS ( $AHI > 30/h$ ), 34 (19.65%) had moderate SAS ( $15 < AHI < 30$ ) and 28 (16.19%) had mild SAS ( $5 < AHI < 15$ ).  $WHR > 0.9$  was found in 108 (97.3%) of the patients with severe SAS, 29 (85.3%) of the patients with moderate SAS, and 20 (71.4%) of the patients with mild SAS. HBP was present in 64 (57.6%) of the patients with severe SAS, 23 (67.6%) of the patients with moderate SAS, and 14(50%) of the patients with mild SAS.

**Conclusions:** HBP was present in 58.4% of the patients with SAS, most of them part of the group with moderate and severe SAS. Abdominal obesity (android) was present in 90.7% of the patients with SAS, mostly in patients with moderate and severe SAS. The severity of SAS and abdominal obesity are risk factors for HBP.

**Keywords:** SAS, HBP, abdominal obesity.

### Diet for Being Slim and Healthy

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**Introduction:** The desire to be slim, active and healthy has always been a human ideal. Currently, more than ever, due to major changes that took place in the nourishment habits and lifestyle, this ideal is challenged by the obesity epidemic that has spread throughout the developed countries and by the multiplication of human pathologies.

**Objective:** To conceive an easy to access material for people of all ages and professions, which establishes the landmarks of a healthy diet – an algorithm that can either be followed or adapted to work and life conditions of each individual, without putting additional stress on our daily lives.

**Material and method:** Patients who have been addressing our practice since the 90th for nutritional counseling and/or homeopathy, roughly around 300 persons. Counseling has been made for at least 3 years, the homeopathic treatment being followed for 3,5 years, for each patient.

**Results:** Percentage of success depended on each individual’s own structure and determination.

**Conclusion:** Anyone can easily lose weight if determined to have a healthy life. Being successful requires time, trust and patience.

**Keywords:** diet, health, life.

### Longevity and nutritional status in a rural highland zone

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**Objective:** The research is part of a larger anthropological study regarding the health, biology and social life in the senescent age, carried out between years 1994-2000 in some villages situated in the Bran-Rucăr Pass, at an altitude of 400-1300 m.

**Material and method:** The sample consists of 109 subjects (52 males and 57 females) aged between 80-101 years old. The methodology comprises the questionnaire regarding current and past life data (health, alimentation, work, rest, family relationships etc.) and anthropometrical data (mainly the body mass measurements).

**Results:** The nutritional behavior, which consists in a lactate prevalent diet, the average values of height-weight indices and the good and satisfactory physical status outline a normal nutritional status.

**Conclusion:** This specific feature, in closely correlations with the health status and the lifestyle in the specific environmental altitude context and genetic conditioning as well, is helpful for longevity.

**Keywords:** nutritional status, health status, lifestyle, longevity.

### The variety of explanations in nutritional anthropology

Richard David-Rus

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Anthropological studies of nutrition focus especially on food and nutrition within a cultural and also cross-cultural context, studying humans and human culture across space and evolutionary time. Subfields of the anthropological approach to food include cultural, linguistic, biological, and archaeological anthropology. Though many studies in these fields are descriptive, I shall try to reveal some major explanatory patterns that drive the investigation. I shall argue for the fact that the anthropological approach, besides its strictly disciplinary contribution, should be seen as an interdisciplinary attempt to understand nutritional behavior by integrating different perspectives. A special attention will be laid on the anthropological role in the study of nutritional patterns with risk for health.

**Keywords:** explanation, nutritional anthropology.

### The Association between Weight Perception and BMI among High School Students

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**Objective:** The goal of this study was to evaluate peer-related influences on appearance, body dissatisfaction, eating disturbance and self-esteem in a group of adolescents (girls and boys).

**Material and method:** We examine the level of weight preoccupation at adolescents in order to detect early eating disorders symptoms in three important high schools from Bucharest. A sample of students (N=250), aged 15-16 years completed a questionnaire about body weight perception, weight-related concerns and behaviors and self-reported weight. These adolescents were than weight and had their height measured using a standard protocol to calculate BMI.

**Results:** Using BMI calculated from measured height and weight, 4.8% of students were classified as underweight, 75.6% of students were normal weight and 19.6% were overweight or obese. Among this same sample of students, however, 20.4% perceived themselves as underweight (they attempt weight gain), 33.6% perceived themselves as about the right weight and 46% perceived themselves as overweight (they attempt weight loss).

**Conclusions:** Because the self-perception of weight is a key determinant of adolescent nutritional habits and weight management, many students who are underweight or at risk for underweight but who do not perceive themselves as such are in danger to engage in unhealthy weight control practice.

**Keywords:** body weight, eating disorders, adolescents.

### Anatomical and anthropological aspects regarding adaptation of the jaw to the type of food

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**Objectives:** The study aims to highlight the differences in shape and size of the mandibles with different historical ages belonging to individuals who lived in Romania. Morphological and

morphometric variability of the mandibles are largely due to mastication forces; their influence varies depending on the type of diet.

**Material and methods:** Using an electronic caliper, we measured the body dimensions and mandibular rami of subjects belonging to the collections of the “Fr. I. Rainer” Institute of Anthropology, Romanian Academy and Department of Anatomy, Faculty of Medicine, “Carol Davila” University of Medicine and Pharmacy, Bucharest.

**Results:** The dimensions of the ramus mandibulae, both anteroposterior and vertical, decrease in mandibles of the current period compared to those of past centuries. Instead, body size did not show statistically significant differences.

**Conclusions:** Differences in the morphology of the mandible within and between different population groups from different historical periods are most likely due to adaptations to the masticatory apparatus requirements.

**Keywords:** variability, size, mandibles, diet.

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