Global Aspects of Food Nutrition

In order to describe the complexity of diet and nutrition measurements, it is useful to compare with the collected information about other, also important health behavior that affects the risk of some of the same chronic diseases. Regarding smoking habits, it is necessary to find out just a few more information: how long is a person smoking and how many cigarettes he smokes every day, while eating patterns and diets need to take individual differences in exposure to food components, countless variations in the amount and type of food that makes up somebody's food which vary from day to day and over the years, the complexity of the chemical composition of food and the interaction of food components, the influence of other habits, etc. Measurement of nutrient intake is most often used as an intermediary indicator of nutritional status. A complete nutrition assessment provides a combination of: nutrition information, anthropometry, biochemical data, and clinical data. Dietary methods measure the type and amount of consumed food, i.e. the input of nutrients and other food components, where the most commonly used tables with the chemical composition of the food convert the consumption information into the amount of food component. The accuracy of the data collected at the individual or group level is influenced by the characteristics and suitability of the selected dietary method, the complexity of human behavior, daily variation in food intake, the quality and scope of data in tables with the chemical composition of the food and their compliance with the composition of the consumed food, etc. Despite dietary deficiencies methods that are valuable for the development of dietary science and are used in chronic illness therapy, in working with professional athletes or recreationalists, in regulating body mass, in assessing or planning nutrition during pregnancy or lactation, in developing and evaluating public health programs etc. There are different ways of measuring food intake and there is no single dietary method that would be considered a gold standard and would be suitable for all scientific, professional and clinical applications. Each diet method has its advantages and disadvantages, and to avoid making a wrong conclusion on the relationship between nutrition and health, it is most important to harmonize the choice of dietary method with hypothesis, design research and the characteristics of the examinee. The time and money involved and the burden of respondents need to be adjusted to the data they want to get. For example, if you are investigating the link between iron intake and coffee consumption with cardiovascular disease, it is necessary to find out more about the sources of chemic and non-chemic iron or the way of coffee preparation, as they are possible risk factors hem hydric or non-filtered coffee containing cafestol. On the other hand, if only salt consumption is needed, it is not necessary for the respondent to demand to recall or record the time and circumstances of the meal. The ultimate reason for measuring food intake is improving health. Food and nutrition data allow to explore the relationship between diet and health, point to population groups with a risk of too little or too high intake of food and nutrition and used to create nutrition policies.

Dietary methods are divided into two main categories: those that require the recording of the diet in the present and the ones related to the past intake of food. They can then be divided into

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those who look at the daily intake (diet diary and 24-hour remembrance) or the usual or average diary (diet history and consumption frequency questionnaire), i.e. those based on meals (diet diary and 24-hour remembrance) or in the food list (consumption frequency questionnaire). It is further possible to divide the obtained data that may relate to absolute or relative input. It has recently been considered that it is impossible to measure one's diet and that the nutrition within a culture is too homogenous to establish a connection with health. Today, the concept of diet and health is unquestioned, largely due to the development of dietary methods. It is important to take into account that dietary methods improperly measure food intake and critically interpret the results of dietary and health related research, but dietary methods currently used do not have adequate substitution and additional research is needed to define new ways of measuring nutrition or new statistical methods that would the combination of the results of several different diet methods gave a more accurate estimate of the usual intake. More and more, biomarkers have been increasingly used, but they are not without mistakes and are not a substitute but a supplement to dietary methods: biomarkers help interpret data on dieting, and dietary methods show the influence of biomarker intake.

The food tables and collection databases are information about the composition of food and beverages. They represent an important source of information on the nutrient content and other nutrient information, and are therefore essential for working in nutrition, public health, nutrition policy, epidemiological research, new product development and labeling of nutritional products. Many European countries have their own national tables which mainly comprise domestic producers and products that residents often consume. It is known that, for example, breed, age, and animal breeding mode also affect the total amount of fat, as well as fatty acid composition and cholesterol content. Depending on varieties, seasonal conditions, growth and storage conditions, the composition / ratio of nutrients in foodstuffs of plant origin may be different. The content of a single macronutrient in varieties of the same species (species) may differ by up to ten times, and even more pronounced, there may be differences in micronutrient composition. The great supply of food and food products in modern times, which is also global, has prompted the creation of a regional and international network of workgroups for the development and replenishment of food information databases. Exchange data between network members reduces the cost of updating the tables while simultaneously quickly tracking the needs of a table user who needs the latest and detailed information about the food composition in their work. Food tablets are usually written in the form of books, and for many years they have been their only form. At the end of the 19th century, the first tablets in the tablets were published in Germany, which we use today. The first food tables were based solely on analytical data. Along with the growing array and variety of foods of these nutrients and other nutrients that could be identified, analysis of all components became uneconomic for table makers. Some of the available data, such as vitamin content, are taken from scientific publications. Modern nutrition tables are based primarily on data obtained from chemical analysis of food samples, while other data is derived from baseline data calculations and

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"borrowing" data from other sources such as other country databases, scientific publications, and producer data. The tables include average values and ranges, that is, the minimum and maximum value of the food component content. Computer Era has favored databases, which in electronic form can capture a large amount of data and at the same time allow easy access to data and manage them. The database is the basis of information not only about the composition of food and beverages but also about the origin of these foods, the method of sampling, analytical methods, sources of other data, material for packaging etc. The electronic databases allow for a quicker view and editing of content as well as faster exchange of information between countries, but must be mutually comparable and compatible. In order to achieve this, the construction of the database is based on international recommendations and European standards for food preparation and the development of databases and tables. Instead of verbal descriptions of food, which are usually too long, and their meanings in translation into another language are easily lost or changed, labeling is fed into databases using indexing. Most European food indices are used by the LanguaLTM system, which provides a systematic description of the food and its classification.

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