Italian Dietary Supplement Label Database

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The Dietary Supplement Label Database in Italy is developed to gather data to analyse information on dietary supplements. It is one of first works where the FoodEx2 classification system has been adopted and the related food coding procedure could representa useful tool/guide for other compilers and users.

Italian Dietary Supplement Label Database | Dietary supplements | Food description | Food classification | FoodEx2

1. Introduction

The sector of food supplements is certainly varied and growing: a wider and wider selection of new products is launched on the market every year. This is reflected in new reorganization of drug companies, in new marketing strategies, and in the adoption of new production technologies with resulting changes in the dietary supplements regulation. The growth of this sector is encouraged by growing interest of consumers in improving their health and physical and mental wellbeing, often to compensate for an incorrect lifestyle. Dietary supplements are considered in epidemiological studies and in the analysis of food consumption patterns.

2. Data

In this context, information on composition reported on the product labels of selected dietary supplements has been collected and updated for the development of a Dietary Supplement Label Database for Italy, according to products' availability on the Italian market and also including items from both the third Italian National Food Consumption Survey, INRAN-SCAI 2005-06 database and the ongoing Italian national dietary survey IV SCAI. The design and construction of a food database requires above all identifying foods through an adequate food nomenclature and a precise description. The FoodEx2 system has been used for the classification and description of dietary supplements in the aforementioned database.

FoodEx2 [1][2][3][4] is a standardized food classification and description system developed by EFSA to better describe characteristics of foods and dietary supplements in exposure assessment studies; this system, nowadays at revised version 2, consists of flexible combinations of classifications and descriptions based on a hierarchical

system for different food safety-related domains (i.e., food consumption, chemical contaminants, pesticide residues, zoonoses and food composition).

A total of 558 products have been entered into the database at present, with the aim of providing an adequate representation of the major classes of food supplements; particular attention has been given to supplements/formulations based on medical herbs and plant extracts, one of the classes currently emerging [5]. For each item, a code was assigned following the food classification and description system FoodEx2, revision 2, to allow standardization and harmonization of the data among different countries and to guarantee interoperability between different databases. The base terms reported for describing the 558 products are distributed in the subgroups as follows: 73 Mixed supplements/formulations [A03TC], 28 Vitamin only supplements [A03SL], 27 Mineral only supplements [A03SM], 49 Combination of Vitamin and mineral only supplements [A03SN], 6 Bee-produced formulations [A03SQ], 7 Fiber supplements [A03SR], 283 Herbal formulations and plant extracts [A03SS], 14 Algae-based formulations (e.g., spirulina, chlorella) [A03ST], 8 Probiotic or prebiotic formulations [A0F3Y], 15 Formulations containing special fatty acids (e.g., Omega-3, essential fatty acids) [A03SX], 10 Protein and amino acids supplements [A03SY], 2 Coenzyme Q10 formulations [A03SZ], 1 Enzyme-based formulations [A03TA], 4 Yeast-based formulations [A03TB], 10 Other common supplements [A03SV], 3 Protein and protein components for sports people [A03SA], 6 Micronutrients supplement for sports people [A03SB], 7 Carnitine or creatine-based supplement for sports people [A03SC], 2 Nutritionally complete formulae [A03SE], 3 Imitation yoghurt, non-soy [A03TZ]. Moreover, various suggestions on how the number of FoodEx2 system descriptors could be expanded were noted during the compilation of the database and the coding procedure.

3. Conclusion

The main feature of a database dedicated to food supplements is its intrinsic dynamism linked to the frequent changes in the formulation of food supplements, with the consequent need to monitor the market and update the database regularly, both by inserting new formulations and expanding the number of descriptors. A precise and available description of the dietary supplements through coding is essential to recognize the type, the main ingredients, and the target consumers by users from different countries.

This database can be useful in different contexts, such as, for example, in clinical trials, dietary plans and pharmacological programs, but also to expand the food composition databases for the purpose of daily nutrient intake estimations.

References

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