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The FINUT Healthy Lifestyles Guide: Beyond the Food Pyramid[1–3]

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ABSTRACT

The WHO has proposed that health be promoted and protected through the development of an environment that enables sustainable actions at individual, community, national, and global levels. Indeed, food-based dietary guidelines, i.e., food pyramids, have been developed in numerous countries to disseminate nutritional information to the general population. However, wider recommendations are needed, with information on an active healthy lifestyle, not just healthy eating. The objective of the present work is to propose a three-dimensional pyramid as a new strategy for promoting adequate nutrition and active healthy lifestyles in a sustainable way. Indeed, the Iberoamerican Nutrition Foundation (FINUT) pyramid of healthy lifestyles has been designed as a tetrahedron, with its 3 lateral faces corresponding to the facets of food and nutrition, physical activity and rest, and education and hygiene. Each lateral face is divided into 2 triangles. These faces show the following: *1*) food-based guidelines and healthy eating habits as related to a sustainable environment; *2*) recommendations for rest and physical activity and educational, social, and cultural issues; and *3*) selected hygiene and educational guidelines that, in conjunction with the other 2 faces, would contribute to better health for people in a sustainable planet. The new FINUT pyramid is addressed to the general population of all ages and should serve as a guide for living a healthy lifestyle within a defined social and cultural context. It includes an environmental and sustainability dimension providing measures that should contribute to the prevention of noncommunicable chronic diseases. *Adv. Nutr. 5: 358S–367S, 2014.*

Introduction

In recent years, the definition of health has been under debate (1). The most commonly quoted definition of health was published by the WHO in the 1940s: "a complete state of physical, mental and social well-being, and not merely the absence of disease or infirmity" (2). At the end of the 20th century, Saracci (3) included the consideration of human rights, basic and universal, in the definition of health. In the present century, Bircher (4) related the term "health" to age, culture, and personal responsibility. Others consider the social, emotional, and spiritual wellness of the whole community in addition to the wellness of the individual (5).

In the Global Strategy on Diet, Physical Activity, and Health (6), the WHO has proposed developing an environment that enables sustainable actions at the individual, community, national, and global levels to promote and protect health and to reduce disease and death rates related to unhealthy diet and physical inactivity. Within this context, the FAO has established links between agriculture, health, and the environment and food industries in the document "Sustainable Diets and Biodiversity" (7). This document includes the concept of sustainable diets and their contribution to nutrition security and a healthy life for present and future generations. In addition, it proposes the double pyramid of healthy food for people and sustainable food for the planet and promotes the Mediterranean diet as a sustainable food model, which preserves both agriculture and health. Moreover, it also promotes the idea that biodiversity and traditional food systems can ensure food security in developing countries.

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In addition to the WHO Global Recommendations on Physical activity and Health (8) and the position statement of the American College of Sports Medicine about fitness in healthy adults (9), the United Nations Educational, Scientific, and Cultural Organization (UNESCO) has emphasized sustainable active living as a way to better integrate sustainable development with physical education and sport (sustainable active living) and how they are related to a healthy society (10).

Since 1992, when the International Conference on Nutrition established the need for the development of food-based dietary guidelines as a new strategy to disseminate nutritional information to the general population, many countries have developed their own food guidelines. These guides promote sustainable foods and diversification of the diet through the production and consumption of foods that are rich in micronutrients (11–14). Several pictorial representations, mainly in the form of food pyramids, have been developed in a number of countries; the first one was proposed by the Food and Nutrition Board of the National Academy of Sciences (12,13). The European Food Information Council has reviewed the European food guidelines; most of these guidelines include recommendations on food consumption using a "triangle," usually referred as to "food pyramid," although others adopted other forms, such as circles mimicking a dish or truly three-dimensional figures (14). On the basis of the USDA Report of the Dietary Guidelines Advisory Committee on the *Dietary Guidelines for Americans 2010* (15), the MyPlate pictorial was created; later, the Healthy Eating Plate was designed by nutrition experts at the Harvard School of Public Health and editors at Harvard Health Publications to address deficiencies in the USDA's MyPlate (16).

Despite the nutritional recommendations and food guidelines, the pandemic of noncommunicable chronic diseases (NCCDs)[8] continues in both developed and developing countries (17). Therefore, wider recommendations are needed, with information on an active healthy lifestyle, not just on food. Thus, the recently revised Mediterranean pyramid includes some lifestyle recommendations, such as regular physical activity, eating with others, cooking at home, etc. (18–20). However, these recommendations do not appear to be enough to help the citizens worldwide reach an optimum health status. In addition to appropriate food guidelines, global health recommendations should promote physical activity and exercise, personal and food hygiene, education and other aspects associated with a sustainable environment, and human rights.

The Iberoamerican Nutrition Foundation (FINUT) is a nonprofit organization; its trustees are the International Union of Nutritional Sciences (IUNS), the Spanish Society of Nutrition (SEÑ), and the Latin American Federation of Nutrition Societies (SLAN). In consideration of all of the previously mentioned factors, FINUT has developed a new three-dimensional pyramid of food and active healthy lifestyles in a sustainable environment. The goal is to decrease the burden of NCCDs around the world and particularly in Latin America, where the double burden of malnutrition and obesity coexists with chronic diseases. The FINUT proposed this new pyramid at the recent 21st International Congress of Nutrition held in Granada, Spain.

Methods

The pyramid was developed from 2011 to 2013 as the central message of the exhibition "Nutrition, Source of Life," which was open to the public at Parque de las Ciencias de Granada, Spain, on the occasion of the celebration of the IUNS 20th International Congress of Nutrition in September 2013.

To develop the FINUT pyramid concept, in addition to the information obtained through specific PubMed searches as described below, 3 different focus groups were organized in conjunction with a communication company (Ogilvy Action, Madrid, Spain) with the participation of people of different ages and socioeconomic status. A mixed scientific committee formed by members of the Parque de las Ciencias de Granada, 2 community members from secondary schools, and 3 full professors from the University of Granada, Spain (A.G., M.D.R.-L., and E.M.d.V.) were involved in the evaluation of focus group results.

At the request of the FINUT, the authors of the present article conducted a literature search and review on the food guidelines and healthy lifestyles. Reviewers, working independently, were to select, quality assess, and extract relevant data where appropriate and possible. Studies were restricted to those with human participants only and included prospective studies. We conducted the literature search by using the PubMed databases for articles cited through September 2013. Searches were conducted by using Medical Subject Headings (MeSH) combined with keyword searches to capture all indexed studies. Bibliographic searches were also conducted to ensure inclusion of all relevant studies. Initially, we performed a prospective and qualitative review by using combinations of the following selected MeSH terms, among others: "diet/standards," "environment," "environmental health," "exercise," "feeding behavior," "food … habits," "food guidelines," "guidelines as topic," "food pyramid," "practice guidelines as topic," "physical fitness," "public health," "sanitation," "social conditions," and "social environment." Later, we performed a systematic review, and the search strategy retrieved 899 primary articles. The abstracts were reviewed and studies were included if they were related to food guidelines and recommendations for healthy lifestyles. Full-text copies of the articles meeting those criteria were then screened for their suitability for inclusion, and those meeting the inclusion criteria were manually cross-referenced. A total of 198 articles met the initial search criteria.

The following equations for specific searches were used to find and evaluate relevant literature related to food pyramid and healthy lifestyles: "Diet Pyramid"; ("food habits" OR "diet") AND ("environment" OR "conservation of natural resources" OR "agriculture") AND ("guidelines as topic" OR "practice guidelines as topic"); "diet/standards" AND ("guidelines as topic" OR "practice guidelines as topic"); "Eating" AND "Pyramid"; ("exercise") AND ("environment") AND ("guidelines as topic" OR "practice guidelines as topic"); "exercise" OR "Motor activity" OR "physical fitness" AND "Pyramid"; ("feeding behavior" OR "nutrition policy" OR "food habits") AND ("environment" OR "conservation of natural resources" OR "agriculture") AND ("guidelines as topic"); "Food Pyramid"; ("hygiene" OR "sanitation") AND ("environment" OR "conservation of natural resources" OR "agriculture") AND ("guidelines as topic"); "hygiene" AND "Pyramid"; ("motor activity") AND ("environment") AND ("guidelines as topic" OR "practice guidelines as topic"); and ("physical activity" OR "physical fitness") AND ("environment") AND ("guidelines as topic" OR "practice guidelines as topic") . In addition, review bibliographies of books and review articles, and references from retrieved articles were explored.

On the basis of the title of publication and the abstract identified from the trial search, irrelevant citations were discarded by the reviewers (A.G., M.D.R.-L., and E.M.d.V.). If there was any possibility that the article could be relevant, the full-text article was retrieved for further assessment. Two reviewers (A.G. and E.M.d.V.) independently decided which trials met the inclusion criteria. Any disagreement was resolved by discussion between the reviewers, with

[8] Abbreviations used: FINUT, Iberoamerican Nutrition Foundation; IUNS, International Union of Nutritional Sciences; NCCD, noncommunicable chronic disease.

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referral to a third reviewer (M.D.R.-L.) to adjudicate any persisting differences.

On the basis of that review, we developed a new three-dimensional lifestyle pyramid (The FINUT pyramid) addressed to the general population, which included selected recommendations on the following 3 main facets of active healthy lifestyles: *1*) food and nutrition, *2*) physical exercise and rest, and *3*) education and hygiene. Each of these facets occupies one-half of the 3 lateral faces of a tetrahedron. The other half of each face is paired with a number of practices and recommendations to increase environmental sustainability and to improve the local educational, social, and cultural surroundings. Hence, each lateral face of the tetrahedron is divided into 2 triangles. The right halves are structured recommendations as follows: *1*) food consumption, arranged in ascending order on the basis of relative intake frequency; *2*) adequate patterns of rest, physical activity, and exercise, also arranged by recommended frequency, with less frequent activities at the summit; and *3*) appropriate measures and patterns of education and hygiene. The present FINUT pyramid of active healthy lifestyles has been designed as a simple and intuitive tool so that it does not need any additional information to be easily interpreted. The base of the FINUT pyramid makes the claim for healthy lifestyles in a sustainable planet. Citations for all of the claims included in a pyramid graphic are not feasible in this supplement article. However, to trace the scientific basis of the various claims for the FINUT pyramid, we have identified the major documents we considered in building up the evidence base of our pictorial (6–8,15,17,20–24).

Results

Figures 1–3 depict the 3 facets corresponding to food and nutrition, physical activity and rest, and education and hygiene that constitute the FINUT pyramid. **Figure 4** corresponds to the base of the pyramid, which makes the claim for healthy lifestyles for people within the context of a sustainable planet.

Food and nutrition

On this face of the tetrahedron, we show food-based guidelines and healthy eating habits as related to a sustainable environment (Fig. 1) (6,15,20–22).

Right half of triangle. In this triangle, guidelines for a varied, balanced, healthy diet, including daily, weekly, and occasional consumption of foods, are provided. The recommended frequency for intakes of the most important groups of foods is illustrated in ascending order from the most to the least frequent. These recommendations are in agreement with those recently proposed in the Mediterranean diet pyramid (18–20). Water and liquid foods are located at the base,

FIGURE 1 Food and nutrition face of the Iberoamerican Nutrition Foundation (FINUT) pyramid of healthy lifestyles. The images of the FINUT pyramid were previously registered as a trademark by the FINUT.

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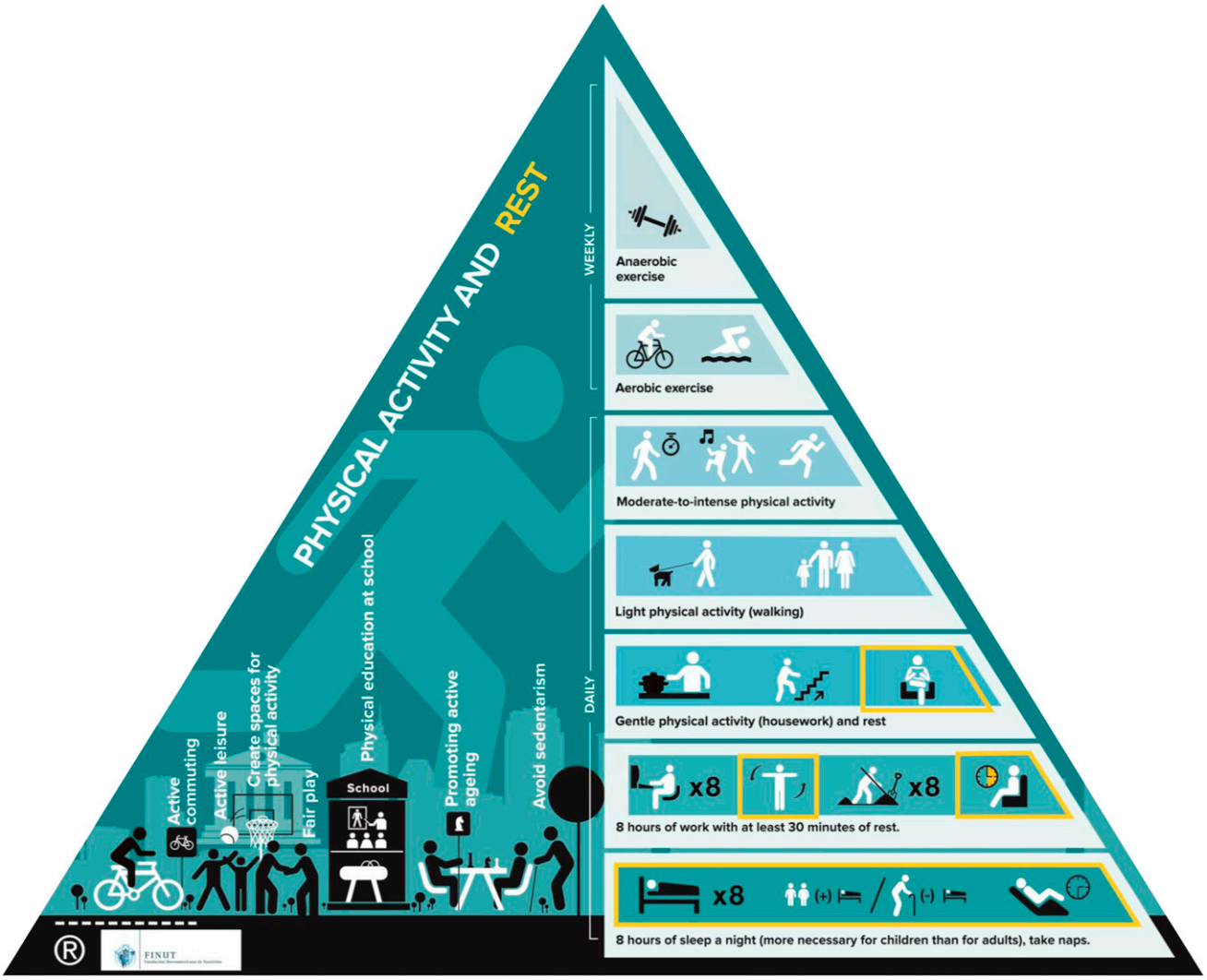

FIGURE 2 Physical activity and rest face of the Iberoamerican Nutrition Foundation (FINUT) pyramid of healthy lifestyles. The images of the FINUT pyramid were previously registered as a trademark by the FINUT.

promoting body hydration; 1.5–2 L/d of water is recommended. Water from different sources, namely tap or spring water, together with the water in infusions, teas, soups, fruit juices, and other low-sugar drinks, is represented.

On the next step, cereals and their main derivatives (bread, pasta, etc.) are shown. This contributes to a significant portion of the energy provided by the diet along with potatoes, which are frequently used in side dishes in the Mediterranean diet (18–20). From 4 to 6 portions daily of those foods (1 portion = 60–68 g of pasta or rice or 40–60 g of bread), with at least one-half of these from whole-grain cereals, are recommended.

Fruits, vegetables, and related products occupy the next level. This is a diverse food group, including plant roots, bulbs, stems, leaves, flowers, and fruits, which are rich in dietary fiber and micronutrients, as well as bioactive compounds (18–20). At least 5 portions (1 portion = 150–200 g), with a minimum of 2 fresh portions, are recommended.

The fourth level contains milk (i.e., low-fat milk) and dairy products, particularly fermented milks and cheese, which provide protein of a very high quality, as well as calcium and other minerals and vitamins (15,20); the recommended intake for this type of food is 2–3 portions daily (1 portion = 200–250 mL of milk, 200–250 g of yogurt, or 80 g of fresh cheese).

At the next level, virgin olive oil, a major food in the Mediterranean diet (18–20), as well as other healthy unsaturated oils, namely rapeseed or colza, including canola, sunflower, and soybean oils, are considered as the dietary fat of preference not only as part of salad dressing but also for food cooking and frying (15). This group includes olives, which are also rich in bioactive compounds and fiber. Daily consumption of 3 to 5 portions (1 portion = 10 mL) is recommended.

On the sixth level, the consumption of 2–3 portions daily of protein-rich foods of animal origin (range: 60–150 g), including poultry and other white meats, eggs and fish, as well as plant-based protein-rich foods, namely legumes and nuts, is recommended (15,18–20). These foods, which provide not only protein but also many micronutrients and a

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FIGURE 3 Education and hygiene face of the Iberoamerican Nutrition Foundation (FINUT) pyramid of healthy lifestyles. The images of the FINUT pyramid were previously registered as a trademark by the FINUT.

number of PUFAs (22), should be consumed by alternating them in main dishes during the week. Up to 4 portions of poultry and white meats (1 portion = 100–125 g), 4 eggs (1 portion = 60–80 g), 2–3 fish portions (1 portion = 125–150 g), and 2 servings of legumes (1 serving = 60–80 g) per week are recommended. In addition, 2 portions (1 portion = 20–30 g) of nuts should be consumed. At the vertex of the triangle, red meats, high-fat products, sweets, and other sugar-enriched products are grouped in the "consume occasionally" bracket (15,16,25–30).

Wine in moderation plays a role in most Mediterranean countries, and it is widely accepted that ~1 glass/d of red wine (150–200 mL) might be beneficial mainly due to its relatively high amounts of polyphenols (20). However, the consumption of wine by North African and Asiatic Mediterranean countries is almost negligible. Because the FINUT pyramid constitutes a global healthy lifestyle guide and is intended not only for adults but also for teenagers we did not include the consumption of wine, even in moderation.

Even though salt has been used for years in the Mediterranean basin for food preservation, namely fish, the Mediterranean diet is intrinsically a relatively low-salt diet (20). In addition to the relative high consumption of fruits and vegetables, the wide use of spices and herbs in the preparation of meals provides a way to reduce the daily intake of salt.

Left half of triangle. In this portion of the triangle, we tried to emphasize good food habits and behaviors favoring environmental sustainability and healthy living (7,23). The first pictogram, related to the familiar environment, states the importance of breastfeeding to sustain healthy growth and development (6). Other social messages include eating with others, particularly with family (i.e., conviviality), as well as cooking at home, which in turn leads to varied and slow eating with relatively small portions (20)

With the label "sustainable agriculture," we incorporate a new focus on food production linked to the environment and more socially centered on the ecologic sustainability of the production systems (7). Related to this, avoidance

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FIGURE 4 Base of the Iberoamerican Nutrition Foundation (FINUT) pyramid, which makes a claim for healthy lifestyles for people in a sustainable planet. The images of the FINUT pyramid were previously registered as a trademark by the FINUT.

of pesticides for pest control is recommended to maintain the soil quality and healthy agrosystems. Finally, we emphasize the need to maintain biodiversity as a world heritage for present and future generations (7,23).

Agricultural policies are needed to support greater availability. In addition, food distribution policies to facilitate the acquisition of fruits and vegetables at lower prices by consumers should be considered (24,31,32). Indeed, fair pay and eating of local and seasonal products and sustainable agriculture and livestock are recommended (Fig. 1, *left side*).

Physical activity and rest

On this face of the tetrahedron, we illustrate healthy lifestyles related to rest and physical activity (Fig. 2) (8–10).

Right half of triangle. On this half of the triangle, we include the recommendations for rest and physical activity, the latter arranged by their importance in frequency, duration, and intensity in daily life. On the base of the triangle, we include the recommendation for sleeping at least 8 h/d, although this period should be higher in children and lower with advancing age. A brief daily resting period after lunch is also recommended (e.g., a "siesta").

On the second level, 8 h of professional or daily labor activities with a brief resting period of at least 30 min are included. Small intervals for stretching are highly recommended for those activities associated with postural stress, such as working for hours in front of a computer (see yellow boxes in Fig. 2).

In the third level, relatively light activities (cooking, housekeeping, and quietly walking) are considered. Some daily time for leisure is also recommended (lectures, watching television, cinema, etc.).

The fourth level is devoted to mild physical activity, such as walking, and in the next level, moderate to intense physical activity is recommended, such as rhythmic walking (6 km/h), dancing, jogging, and other active play. The last 2 levels, close to the vertex of the triangle, are dedicated to practicing sports, with aerobic sports in the lower level and anaerobic sports in the upper level. All types of activities (light, mild, and moderate-intense) should be carried out on a daily basis, whereas sports should be played on a weekly basis.

Physical activity should be performed during free time or during time outside the home, at work, and at home, within the context of daily familiar and community activities. Recommendations related to frequency, duration, and intensity are at least 150 min/wk (ideally, 300 min/wk) of aerobic moderate physical activity and approximately half of this value for intense aerobic activities. The former should be split into 30-min periods of moderate exercise 5 times/wk. In addition, muscle-strengthening exercises are recommended at least 2 times/wk.

Left half of triangle. The left half of the triangle includes all aspects of physical activity and rest related to the environment and sustainability, as well as educational, social, and cultural issues (8–10). Thus, to avoid sedentary behavior,

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active leisure and transportation, physical activity at school, and the promotion of active aging populations are recommended. Similarly, social aspects related to physical activity, such as sportsmanship, and environmental aspects, such as adaptation and adequate design of outdoor spaces in towns for the practice of physical activity and sports, are envisioned.

Education and hygiene

On this face of the tetrahedron, we include the hygiene and educational habits that should contribute to healthy lifestyles (Fig. 3) (6,15,17).

Right half of triangle. On this face, we show the most important aspects related to education and hygiene that, in conjunction with the other 2 faces, contribute to better health. Body hygiene is critical to preventing microbial contamination and avoiding infectious diseases. Similarly, keeping a home clean and well ventilated results in a suitable environment for domestic tasks, including cooking, playing, and resting, while preventing parasitic infections. An appropriate room design will also decrease the incidence of domestic accidents.

Food hygiene and the appropriate handling of foods, particularly cooking using safe and sustainable foods and noncontaminated tools as well as refrigerating and freezing raw foods and meals, allow people to maintain and preserve the maximum quality of foods, leading to improved food safety and disease prevention (15). Similarly, personal contribution to reducing enviromental pollution is important to avoiding cross-contamination. In addition, the global protection of children and the commitment to facilitate their education and to augment their social interaction appear to be critical in the acquisition of lifestyle habits that will result in maintaining health. Moreover, road safety and preventing work accidents are key to minimizing deaths worldwide. In addition, providing adequate access to safe drinking water is a key social commitment in the maintenance of health.

Left half of triangle. The left side of the triangle emphasizes how we should contribute to the sustainability of the environment, particularly by the responsible use and consumption of water and energy, including using sustainable means of transport, as well as maintaining a clean atmosphere by keeping the emissions of residues to a minimum and facilitating the collection and recycling of wastes (7,23).

Discussion

Currently, health cannot be considered only the absence of disease or the presence of "positive health" as it was established by the WHO's 1948 definition (32). In the 20th century, the WHO suggested that health conditions and contextual factors in the form of personal and environmental variables interact to influence two distinct components of health: *1*) body functions and structures; and *2*) activities and participation (33). Because an individual's functioning and disability occur within specific contexts, the International Classification of Functioning, Disability and Health also included a list of environmental factors (33).

Considering those aspects of health related to healthy lifestyles in a sustainable environment (6–8,15,17,20–24,34,35), the FINUT has designed a novel three-dimensional pyramid, as a tetrahedron, that is addressed to the general population of all ages to serve as a guide to healthy lifestyles within a defined social and cultural context and with an environmental and sustainability dimension.

This guide is novel in that it reaches far beyond the current recommendations proposed in the current published and available guides of healthy lifestyles. Most current guides deal exclusively with food habits and physical activity, along with some recommendations related to alcohol abuse and tobacco consumption (12–14,18–20,36–45).

A three-dimensional, truncated, and staggered healthy lifestyle pyramid exclusively addressed to children and adolescents has also been developed (46). On this pyramid, 2 faces are formulated around achieving daily food intake (face 1) and daily activities (face 2). The third face is an adaptation of the traditional food guide pyramid, adapted to children's energy, nutritional, and hydration needs; and the fourth face addresses both daily and life-long habits. However, this pyramid does not include any aspect related to interactions between the environment and food habits, physical activity, and education and hygiene.

The most recent Mediterranean pyramid is a food guide represented as a triangle. Its recommendations include basic information on active living. It mentions social aspects related to conviviality and cultural and environmental aspects, such as home and traditional cooking using local and seasonal products and agricultural sustainability (18–20). However, the guide does not consider any specific recommendations for physical activity and rest or other aspects related to health, namely educational and hygiene aspects, and their interaction with the environment.

One of the most important differences in the present FINUT healthy lifestyles pyramid is that in each of the 3 faces related to health, we devote 1 area to aspects related to frequency of consumption of different foods (Fig. 1), patterns of physical activity and rest (Fig. 2), and individual and community commitments and behaviors related to hygiene in a larger sense (Fig. 3). We devote another area to social, cultural, and environmental aspects as they relate to sustainable development within each of the 3 pyramid faces (Figs. 1–3).

On the face dedicated to food and nutrition, we have used the Mediterranean diet pattern with minimal differences, which has been repeatedly reported both in epidemiologic and intervention studies to have a role in the prevention of NCCDs with high mortality and morbidity, namely cardiovascular disease, cancer, diabetes, and depression (47–51). A number of authoritative reviews provided evidence that consumption of red meat, due to its high content of saturated fat, should be limited (25–30). Hence, in this context we adopted a similar recommendation to that of the Harvard School of Public Health's Healthy Eating Plate and pyramid for Americans (16).

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For the food and nutrition face, we emphasized the importance of breastfeeding not only to support adequate growth and development of infants but also to prevent NCCDs later in life. In fact, current scientific evidence related to early programming suggests that exclusive breastfeeding during the first months of life contributes to the prevention of obesity and associated chronic diseases (52). Many countries have included the promotion of breastfeeding in their nutritional goals because of its preventative aspects. In some of these countries, the average duration of breastfeeding has decreased to <2 mo in recent decades, which is much shorter than the WHO and UNICEF recommendations to maintain exclusive breastfeeding for at least the first 6 mo of life (52).

Similar to the Mediterranean diet pyramid, we recommend the consumption of seasonal and local products. Local food systems should not be designed to completely isolate themselves from trade but rather aim to adapt local food production and markets to suit the environmental and health priorities of a community (24). Eating locally contributes to the utilization and preservation of species and varieties, which has a clear impact on biodiversity (7), decreases CO_2 emissions, and improves the price of basic foods, promoting a fair market. Current research indicates that local food systems may offer social, environmental, and health benefits, although the links between use of local food systems and better eating habits and reductions in chronic diseases need to be more clearly established (7,24,31,32). We also recommend regulating food production, monitoring food quality and safety, and responding to nutritional and safety issues that arise through sustainable agriculture and the protection of biodiversity, as emphasized by the present FINUT pyramid (7,15).

With regard to the physical activity and rest face, our goal was to illustrate a daily or weekly routine, providing easy recommendations in terms of the frequency, duration, intensity, type, and total amount of physical activity needed to prevent NCCDs (8–10,34). Similarly, we emphasize how important it is to promote an appropriate environment for physical activity in all ages, especially at schools and for the elderly, creating spaces, particularly in urban areas, for exercising and sports. It is well known that physical inactivity is the fourth risk factor for mortality in the world. It considerably influences the prevalence of NCCDs and the health of the general population, and international recommendations on physical activity have been developed to prevent NCCDs (6). In addition, inadequate sleep and rest are associated with obesity and other chronic diseases (53). Hence, the FINUT pyramid can serve as a useful tool to promote physical activity and good resting habits, contributing to the prevention of NCCDs.

Body hygiene and food safety are essential factors in maintaining good health. Major sources of food poisoning in heavily populated and industrialized countries include pathogenic microorganisms, toxic agents, parasites and other organisms entering the food supply, and chemical contamination, including additives and contamination of the food supply by toxic industrial waste (54,55). Moreover, climate change can affect global food production with uncertain consequences for human health, particularly in developed countries (56). Similarly, adequate water supply and sanitation are critical for the prevention of many diseases. In fact, vast numbers of people are without improved sanitation (57), and too much wastewater still remains untreated (58). The FINUT pyramid emphasizes personal commitment to maintaining good personal hygiene habits and safely producing food while maintaining a clean home and environment. It also emphasizes a personal contribution to environmental hygiene and a social commitment to protecting children and providing safe sources of water. We recommend promoting the responsible use and consumption of water while keeping emissions of residues to a minimum and strengthening existing structures and policies to facilitate the collection and recycling of waste, as described in the current FINUT pyramid.

In conclusion, the FINUT healthy lifestyles pyramid, which is based on the 3 facets of food and nutrition, physical activity and rest, and education and hygiene, and their interactions with environmental sustainability, is a novel approach that provides healthy lifestyle guidelines in a holistic framework for populations of all ages. It provides individuals with the information needed to recognize and put into practice individual and social behaviors that promote better individual and community health and the health of future generations.

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A.G. had primary responsibility for the FINUT Pyramid design, development, final content and contributed to the systematic review of the literature. M.D.R. and E.M.V. were involved in the design, data interpretation, and manuscript preparation; and M.F.-G. was in charge of the pictorials. All authors read and approved the final manuscript.

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