ISOTOPES HELP DESIGN BETTER NUTRITION PROGRAMMES

Good nutrition is essential for good health. To ensure proper nutrition, energy-dense fat, protein and carbohydrates need to be accompanied by vitamins and minerals. Malnutrition is the result of too much food or too little food and a lack of variety in the kinds of food eaten. More than 30% of young children suffer from some form of malnutrition with devastating consequences for health, learning, future earning potential, economic development, resilience and security. Undernutrition in early life, when accompanied by excessive weight gain later in childhood, increases the risk of chronic diseases in adulthood. Obesity has reached epidemic proportions globally, with at least 2.8 million adults dying each year from diseases related to overweight or obesity such as cardiovascular diseases, diabetes and some forms of cancer.

Stable isotope techniques play an important role in the development and monitoring of interventions against malnutrition. Compared to other conventional techniques, these methods, which do not involve radiation, offer much more sensitive and specific measurements. They can be used to establish the ratio of lean tissue to fat in body composition; to estimate the number of calories spent each day; to determine whether breastfed babies are exclusively breastfed according to the recommendations issued by the World Health Organization (WHO); to assess a person's vitamin A reserves; and to establish how well iron and zinc are utilized from local foods and diets. This provides Member States with information to help them design or improve their national health and nutrition programmes.

The IAEA works with Member States through national and regional technical cooperation projects, and coordinated research projects to develop and monitor sustainable interventions aimed at managing malnutrition.

Malnutrition has risen to the top of the global health agenda because of its long-term consequences. Together with other United Nations organization and agencies, the IAEA is part of the Scaling Up Nutrition (SUN) Movement, which was launched by the United Nations General Assembly in September 2010. The Movement is founded on the principle that all people have the right to food and good nutrition, and aims at significantly reducing malnutrition in participating countries. IAEA experts have so far supported 16 SUN participating countries in building their capacity to use isotope techniques to better manage and improve nutrition among their populations.

The epidemic proportions of the rise in chronic diseases around the world have resulted in the development of WHO's Global Action Plan for the Prevention and Control of Noncommunicable Diseases. The IAEA participates in the newly formed United Nations Interagency Task Force on the Prevention and Control of NCDs, which will coordinate the activities of the United Nations organizations in the implementation of the Action Plan that includes targets related to the prevention of obesity and increased physical activity.

The IAEA is also a member of the International Malnutrition Task Force, which is an inter-agency advisory and advocacy group on the management of acute malnutrition involving collaboration between WHO, the United Nations Children Fund (UNICEF), the IAEA, the International Paediatric Association and the International Union of Nutritional Science.

In May 2014, the IAEA will host an International Symposium on Understanding Moderate Malnutrition in Children for Effective Interventions. Moderate malnutrition is associated with more nutrition-related deaths than severe malnutrition, because it affects a greater number of children. The four-day event will review, among other topics, the current level of knowledge, knowledge gaps, and the further research that is needed in this area. It will bring together public health nutritionists, health professionals, health and nutrition policymakers, and partners like the SUN Movement, WHO, the World Food Programme and UNICEF.

I hope that the Symposium will help to strengthen cooperation between experts and policymakers, and to create opportunities for further research and application of various approaches to help alleviate malnutrition and contribute to better health for everyone.

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