Pediatric Issues in Times of Pandemia: From Infection to Nutritional Strategies

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In December 2019, an outbreak of a new transmitted disease (COVID-19) was identified in Wuhan, China, caused by a new coronavirus (SARS-CoV-2), spreading quickly around the world and causing a pandemic that touched the lives of everyone, from pediatric to geriatric age [1–4]. In face of the pandemic, we decided to dedicate this issue of *Annals of Nutrition and Metabolism* to “Pediatric Issues in Times of Pandemia: From Infection to Nutritional Strategies”. As immunity and nutrition have always been interrelated, we start this issue with a review on the relationship between long-chain polyunsaturated fatty acids (LCPUFA) and respiratory infections. This review is followed by the challenges of breastfeeding and tackling protein-calorie malnutrition during the pandemic as two out of many nutritional challenges brought by this crisis.

The first paper in this issue deals with a specific group of nutrients, LCPUFAs, as an example for the relationship between nutrition, immunity, and infection [5]. Over many decades, the role of LCPUFAs has attracted the interest of the medical and research community, of the media and of policymakers. However, the role of LCPUFAs in preventing and attenuating the course of respiratory viral infections has received limited attention. In their review, the authors explore randomized controlled trials performed in both pediatric and adult subjects, evaluating the protective effect of LCPUFA

supplementation against respiratory tract infections. The authors reiterate the importance of LCPUFAs and LCPUFA metabolites in acute and chronic inflammation and point out the need to study the role of LCPUFAs in COVID-19, as well as the difficulty in reaching conclusions in nutrition intervention studies due to low quality of evidence and lack of studies evaluating these interventions as a primary outcome.

In the second paper, the authors provide a valuable review on breastfeeding during the COVID-19 pandemic [6]. This is a comprehensive review, highlighting many aspects of breastfeeding, challenges involved as well as remaining controversies. As the COVID-19 pandemic contributed to breastfeeding cessation and insecurity, the review emphasizes the need to employ strategies to support breastfeeding during the pandemic and to maintain it while employing strict hygiene measures. Interestingly, the review regards the newborn baby and his/her mother as a vulnerable population targeted by this world crisis and reiterates the need to maintain what we know about breastfeeding, namely that it is the gold standard for infant feeding and the recommended way to exclusively feed the infant in the first 6 months of life (ESPGHAN), and the difficulties in doing it in a rapidly changing world.

Following the review on the optimal way to feed infants also in times of a pandemic, and observing the huge societal

challenge of malnutrition during a pandemic, we elected to close this issue with a review that summarizes the effects of the COVID-19 pandemic on malnutrition [7]. The world was not coping well with malnutrition long before COVID-19, and the pandemic met a world with a large number of malnourished adults and children. In the year 2020, globally, among children under the age of 5 years, about 45 million were estimated to be wasted, 149 million were stunted, and 38.9 million were estimated to be overweight or obese [8]. The authors provide an overview of causes for the increase in malnutrition burden and its societal and economic consequences and highlight national initiatives aimed at supporting disadvantaged groups, providing suggested action items to improving nutritional outcomes in these populations.

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We hope that our readers will find these reviews educating and, hopefully, they will stimulate further research to improve the health of children worldwide during and after the pandemic.

Conflict of Interest Statement

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