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## ORIGINAL ARTICLE

# Introduction of soft drinks and processed juice in the diet of infants attending public day care centers

Giovana Longo-Silva<sup>a</sup>, Maysa Helena de Aguiar Toloni<sup>b</sup>,  
Risya Cristina Egito de Menezes<sup>a</sup>, Leiko Asakura<sup>a</sup>, Maria Alice Araújo Oliveira<sup>a</sup>,  
José Augusto de Aguiar Carrazedo Taddei<sup>c</sup>

<sup>a</sup> Universidade Federal de Alagoas (UFAL), Maceió, AL, Brazil

<sup>b</sup> Universidade Federal de Lavras (UFLA), Lavras, MG, Brazil

<sup>c</sup> Universidade Federal de São Paulo (UNIFESP), São Paulo, SP, Brazil

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### KEYWORDS

Industrialized foods;  
Food habits;  
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### Abstract

**Objective:** Identifying at what age infants enrolled in public day care centers are introduced to soft drinks and industrialized juice, as well as comparing the nutritional composition of these goods with natural fruit juice.

**Methods:** A cross-sectional study with the mothers of 636 children (aged 0 to 36 months) from nurseries of day care centers, who were asked questions about the age of feeding introduction. This study evaluated the proximate composition of soft drinks and artificial juice, comparing them with those of natural fruit juice regarding energy, sugar, fiber, vitamin C, and sodium values. The chemical composition of fruit juice was obtained by consulting the Table of Food Composition and, for industrialized drinks, the average nutritional information on the labels of the five most consumed product brands.

**Results:** The artificial drinks were consumed before the first year of life by more than half of the children studied, however, approximately 10% consumed them before the age of 6 months. With regard to the comparison among the drinks, artificial fruit juice beverages and soft drinks proved to contain from nine to 13 times higher amounts of sodium, and 15 times less vitamin C than natural juices.

**Conclusions:** The introduction of soft drinks and industrialized juice in the diet of infants was inopportune and premature. When compared to natural fruit juice, these have inferior nutritional composition, which suggests the urgent need for measures based on

\*Corresponding author.

E-mail: giovana\_longo@yahoo.com.br (G. Longo-Silva).

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**PALAVRAS-CHAVE**

Alimentos industrializados; Hábitos alimentares; Consumo de alimentos; Creches; Lactente

strategies for food and nutrition education in order to promote awareness and the maintenance of healthy eating habits.

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## Introdução de refrigerantes e sucos industrializados na dieta de lactentes que frequentam creches públicas

### Resumo

**Objetivo:** Identificar a idade de introdução do refrigerante e de sucos industrializados na dieta de lactentes matriculados em berçários de creches públicas e comparar as composições nutricionais dessas bebidas com as do suco de fruta natural.

**Métodos:** Estudo transversal com 636 crianças (de zero a 36 meses) de berçários de creches, cujas mães foram entrevistadas sobre idade de introdução dos alimentos. Avaliaram-se as composições centesimais do refrigerante e sucos industrializados, comparando-as com as do suco de laranja natural para valor energético, açúcar, fibra, vitamina C e sódio. A composição centesimal do suco de laranja foi obtida por meio de consulta à Tabela de Composição de Alimentos e, para as bebidas industrializadas, utilizaram-se as médias das informações nutricionais contidas nos rótulos de cinco marcas mais consumidas dos produtos.

**Resultados:** O refrigerante e suco industrializado foram consumidos antes do primeiro ano de vida por mais da metade das crianças estudadas, sendo que cerca de 10% o consumiram antes dos seis meses. Quando comparadas à composição do suco de laranja natural, bebidas forneceram quantidades de 9 a 13 vezes superiores de sódio e 15 vezes inferiores de vitamina C.

**Conclusões:** A introdução de refrigerantes e sucos industrializados na dieta dos lactentes foi inoportuna e precoce. Comparados ao suco de fruta natural, tais bebidas possuem composição nutricional inferior, sugerindo a necessidade de medidas fundamentadas em estratégias de educação alimentar e nutricional como forma de promover a formação e manutenção de hábitos alimentares saudáveis.

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## Introduction

Healthy eating habits started in childhood not only bring immediate health benefits, but also influence future practice and preferences, and are associated with health protection in adulthood.<sup>1</sup> In this context, exclusive breastfeeding during the first six months of life is recommended as a public health measure, and, after that period, the introduction of complementary foods, with continuation of breastfeeding until 2 years of age or older, as well as discouraging the offer of processed foods in the first years of life.<sup>2</sup>

In spite of the indisputable benefits of the practical application of such recommendations, several studies have shown that contemporary society tends towards inadequate dietary patterns, with an impact on the early introduction of processed and ultraprocessed foods in childhood diet.<sup>3-6</sup> This fact is a direct consequence of women entering the labor market, together with the lack of time for food preparation and the confidence given to products advertised by the media, and associated by the latter specifically to children.<sup>7</sup>

Especially regarding liquid foods, there has been an increase in the consumption of artificial beverages such as soft drinks

and processed juices. Moodie et al<sup>7</sup> assessed trends in the acquisition of soft drinks in low- and middle-income countries, including Brazil, and high-income countries, showing an emphatic annual growth of *per capita* volume consumed between the years 1997 and 2009, with an increase of 5.2% in low- and middle-income countries and 2.4% in high-income countries, demonstrating that it is a global problem that does not depend on the socioeconomic and cultural setting.

It is noteworthy that, in addition to the immediate damages caused by the consumption of such beverages, such as impaired intake of breast milk and other healthy foods and the nutritional adequacy of micronutrients, their presence in the habitual diet can have an impact, in the medium- and long-term, on the increase in overweight, obesity, and associated chronic diseases,<sup>8</sup> as verified by Boynton et al<sup>9</sup> in 548 children in Massachusetts, whose body mass index (BMI) and prevalence of obesity increased for each additional serving of beverages containing added sugar.

Given the above, the present study aimed to identify the age of introduction of soft drinks and industrialized juices in the diet of infants enrolled in public daycare centers and nurseries, and to compare the nutritional compositions of these drinks with natural fruit juice.

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