

# Eating Occasion Frequency for Infants and Young Children Differs from that of Older Children and Adults: Data from the 2016 Feeding Infants and Toddlers Study (FITS)

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## Background

- For adults and children ≥ 4 years of age, the FDA considers a typical dietary pattern to be four eating occasions per day (three meals, one snack).
- This informs criteria for select nutrition related claims where daily recommended amounts of nutrients of food components are divided by eating occasions per day to determine a significant amount.
- Different dietary patterns, eating occasions, and recommendations for infants and young children would impact criteria for younger age groups.

## Objective

- Evaluate the number of eating occasions per day for infants & young children <4y.

## Methods

- FITS\* is a large national cross-sectional dietary survey of children <4y (n=3235).
- Food and beverage intake was assessed using 24-hour dietary recalls for infants and children ages 6-11.9, 12-23.9 and 24-47.9 months old.
- Percent consuming by eating occasion (i.e., infant feedings (breastmilk and/or formula), meals, and snacks) as well as number of eating occasions per day (mean ± standard error) were calculated.

## Further Information

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## Results

- Approximately half of the daily energy for infants 6-11.9 months is from infant feeding occasions (breastmilk and/or formula), 3.57 times per day.
- In addition, infants were fed 4.37 times (comprised of two meals and two snack occasions).

Eating Occasions of 6-11.9 m	% consuming	Mean ± SE
<b>Total Meals per day<sup>1</sup></b>	88.2%	<b>2.23 ± 0.04</b>
Breakfast	71.0%	0.71 ± 0.02
Lunch	71.2%	0.73 ± 0.02
Dinner	75.9%	0.78 ± 0.02
<b>Infant Feeding<sup>2</sup></b>	84.0%	<b>3.57 ± 0.11</b>
<b>Non-meal eating occasions per day<sup>3</sup></b>	82.8%	<b>2.14 ± 0.09</b>
Morning	44.1%	0.68 ± 0.05
Afternoon	60.5%	0.83 ± 0.04
Evening	45.1%	0.57 ± 0.03
<b>Total eating occasions per day</b>		<b>7.93 ± 0.10</b>

- By 12 months, virtually all young children had an established pattern of three meals plus three snack occasions.
- Young children 12-23.9 months old had 6.65 eating occasions/day (three meals, three snack occasions) comparable to children 24-47.9 months (6.15 eating occasions/day: three meals, three snack occasions).

Eating Occasions	12-23.9 m % consuming	12-23.9 m Mean ± SE	24-47.9 m % consuming	24-47.9 m Mean ± SE
<b>Total Meals per day<sup>1</sup></b>	99.8%	<b>2.94 ± 0.02</b>	3.0%	<b>3.00 ± 0.02</b>
Breakfast	98.3%	1.01 ± 0.01	1.0%	1.01 ± 0.01
Lunch	94.2%	0.95 ± 0.01	1.0%	0.98 ± 0.01
Dinner	96.9%	0.98 ± 0.01	1.0%	1.01 ± 0.01
<b>Infant Feeding<sup>2</sup></b>	14.4%	<b>0.44 ± 0.04</b>	0.1%	<b>0.08 ± 0.02</b>
<b>Non-meal eating occasions per day</b>	97.1%	<b>3.27 ± 0.06</b>	3.1%	<b>3.07 ± 0.07</b>
Morning	72.8%	1.04 ± 0.03	0.9%	0.92 ± 0.04
Afternoon	83.8%	1.18 ± 0.03	1.2%	1.16 ± 0.03
Evening	72.7%	0.98 ± 0.03	0.9%	0.94 ± 0.04
<b>Total eating occasions per day</b>		<b>6.65 ± 0.07</b>		<b>6.15 ± 0.08</b>

<sup>1</sup>Meals include breakfast, lunch, and dinner

<sup>2</sup>Includes all breast feeding or infant formula feeding occasions, regardless of the respondent's assignment as a meal or non-meal

<sup>3</sup> Includes foods and beverages other than breast milk or infant formula

## Conclusions

- FITS shows that infants and young children have more frequent daily meal and snack occasions than older children and adults.
- These findings are consistent with NHANES\*\*, showing 5.3 eating occasions per day in 1-4-year-olds.
- Age-specific dietary patterns for infants and young children should be considered when developing age-appropriate requirements for nutrition related claims, such as "healthy."

## References

- \*Anater AS, et al. The Feeding Infants and Toddlers Study (FITS) 2016: Study Design and Methods. J Nutr. 2018 Sep 1;148(9S):1516S-1524S.
- \*\*Barrera CM, et al. Number of Eating Occasions and Source of Foods and Drinks Among Young Children in the United States: NHANES, 2009-2014. Nutrients. 2019; 11:897.

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