Healthy Eating Under Age 2

By

Susan Pac
A Collaboration between ADA and Gerber in response to the growing epidemic of childhood obesity and based on science and education to:

- Educate consumers
- Teach parents
- Shape industry
- Close Nutrition Gaps
Early food preferences and habits can track into later childhood and adulthood.

Children’s food preferences do not change significantly between ages 2-3 and age 8 (Skinner, 2002)

Many of children’s food preferences are formed as early as age 2-3 years

The strongest predictors of fruit and vegetable intake in adults is whether they like the taste, being in the habit since childhood, number of servings they thought they should consume (Krebs-Smith)
Children fed a variety of foods in the first 2 years will likely accept more new foods later.

Development of flavor preferences begins very early in life (Mennella)

- Breastfed infants consumed more infant cereal when mixed with their mother’s milk than with water or formula.
- Infants fed a variety of foods are more likely to accept a novel food.

It can take up to 10 exposures for infants to accept a new food (Birch).
Start Healthy Initiatives 2003-2004

Feeding Infants and Toddlers Study

ADA Annual Meeting, October, 2003
Supplement to ADA Journal, January, 2004

Scientific Symposium: “From Pregnancy to Preschool A National Conference on Preventing Childhood Obesity”

December 8, 2003, Washington, DC

Feeding Guidelines for Infants and Toddlers

Journal of the American Dietetic Association, March, 2004

Children Under Two Need 5 A Day
Feeding Infants and Toddlers Study
A Gerber Initiative
Feeding Infants and Toddlers Study (FITS)  
Acknowledgement of Authors

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Supplement to the Journal of the American Dietetic Assoc.  
January 2004
Gerber Feeding Infants and Toddlers Study

**What is FITS?**

Dietary intake survey of 3,000 infants and toddlers
- Random, nationally representative sample

Snapshot of what American infants and toddlers are eating
Eating patterns and nutrient intake

**Why FITS?**

Response to the growing epidemic of childhood obesity
Fill the gap in information about early eating habits
Educate health care professionals and parents
Sample Size

Dietary recalls completed for 3,022 infants and toddlers

<table>
<thead>
<tr>
<th>Months of Age</th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 to 6</td>
<td>862</td>
</tr>
<tr>
<td>7 to 8</td>
<td>483</td>
</tr>
<tr>
<td>9 to 11</td>
<td>679</td>
</tr>
<tr>
<td>12 to 14</td>
<td>374</td>
</tr>
<tr>
<td>15 to 18</td>
<td>308</td>
</tr>
<tr>
<td>19 to 24</td>
<td>316</td>
</tr>
</tbody>
</table>

FITS, 2002
Breastfeeding rates are below public health recommendations

<table>
<thead>
<tr>
<th></th>
<th>Recommendation Healthy People 2010</th>
<th>FITS 2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early post-partum</td>
<td>75%</td>
<td>76%</td>
</tr>
<tr>
<td>At 6 months</td>
<td>50%</td>
<td>30%</td>
</tr>
<tr>
<td>At 12 months</td>
<td>25%</td>
<td>16%</td>
</tr>
</tbody>
</table>

FITS, 2002
Some Recommendations Are Not Being Met

29% of infants consumed solid foods before the recommended age range of 4-6 months

17% of infants consumed juices before 6 months

20% of infants consumed cow’s milk before 12 months; some consumed reduced fat milk

FITS, 2002
Two Nutrients of Some Concern: Iron and Fiber

Iron
7.5% of Infants 7-11 Months Have Inadequate Iron Intakes

Fiber
Toddler intakes 8 grams vs. recommendation of 19 grams

- Virtually no toddlers meet the recommendation
## Energy Intakes Exceed Estimated Requirements

<table>
<thead>
<tr>
<th>Age</th>
<th>EER</th>
<th>Mean Intake</th>
<th>Median Intake</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 to 6 Months</td>
<td>629</td>
<td>693</td>
<td>670</td>
</tr>
<tr>
<td>7 to 11 Months</td>
<td>739</td>
<td>905</td>
<td>884</td>
</tr>
<tr>
<td>1 to 2 Years</td>
<td>950</td>
<td>1,244</td>
<td>1,220</td>
</tr>
</tbody>
</table>

FITS, 2002
Fruits and Vegetables
Substantial numbers of infants and toddlers did not eat any!

Percent of children not consuming any fruit or vegetable in a day

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Fruits</th>
<th>Vegetables</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-8 mos</td>
<td>24</td>
<td>33</td>
</tr>
<tr>
<td>9-11 mos</td>
<td>24</td>
<td>27</td>
</tr>
<tr>
<td>12-14 mos</td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td>15-18 mos</td>
<td>28</td>
<td>21</td>
</tr>
<tr>
<td>19-24 mos</td>
<td>33</td>
<td>18</td>
</tr>
</tbody>
</table>

FITS, 2002
Vegetables: Consumption of deep yellow vegetables declines as children transition onto table foods

FITS, 2002
Vegetables: Dark-green and deep-yellow vegetables were not widely consumed

Percent of infants/toddlers consuming at least once per day

Age in months

- Dark green
- Deep yellow
- Starchy
- Fried potatoes
- Other potatoes
- All others

FITS, 2002
Vegetables: By 15-18 months, fried potatoes were the most commonly consumed vegetable.

Percent of infants/toddlers consuming at least once per day

<table>
<thead>
<tr>
<th>Age in months</th>
<th>Cooked green beans</th>
<th>Fried potatoes</th>
<th>Cooked carrots</th>
<th>Mashed potatoes</th>
<th>Cooked peas</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-14</td>
<td>18</td>
<td>13</td>
<td>10</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>15-18</td>
<td>17</td>
<td>20</td>
<td>6</td>
<td>12</td>
<td>14</td>
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<tr>
<td>19-24</td>
<td>17</td>
<td>26</td>
<td>7</td>
<td>8</td>
<td>11</td>
</tr>
</tbody>
</table>

FITS, 2002
High Calorie, Low Nutrient Foods Enter Children’s Diets Early

Percent of Children Consuming

- Candy
- Pizza
- Soft Drinks, Sweet Bevs
- French fries
- Bacon, hot dogs, sausage

FITS, 2002
Summary of Key Findings from FITS

Generally children are meeting their requirements for vitamins and minerals

Infants and toddlers are consuming more calories than they need

On a given day 25% of children are not consuming fruits and 25% are not consuming any vegetables

Inappropriate foods are entering the diets of children at very early ages

By age 15 months French Fries are the most often consumed “vegetable”

FITs, 2002
The Challenge: Teach Healthy Eating Habits Early

Food choices of infants and toddlers transition rapidly

By 24 months patterns look startlingly similar to some of the "problematic" American dietary patterns
Children Under Two Need 5 A Day

Initiative in collaboration with Produce for Better Health Foundation/5 A Day Program to start the healthy habit of eating fruits and vegetables early in life.

Messages to dietitians, pediatricians and consumers:

- Instill healthy habits early
- Introduce a wide variety of fruits and vegetables early when preferences are being formed.
- Repeated exposure is important to help children learn to accept new foods. – try, try again!
- Build to 5 servings a day for older baby (2 ½ jars)
Children Under Two Need

Five A Day

Older babies and toddlers who routinely experience fruits and vegetables in a wide variety of flavors, colors, shapes, and textures are establishing a foundation for lifelong healthy eating habits.

Children indeed learn what they live. Therefore, parents need to be sure that the entire family—not just their infants—follows the 5 A Day eating pattern.

Many dietary recommendations mean for adults—reduce fat intake, increase fiber intake—are contrary to recommendations for infants. Infants need a concentrated source of calories (e.g., fat that efficiently fuels the rapid growth of infancy). With the exception of training some constipation, a high-fiber, low-calorie diet is not recommended during the first two years of life.

One dietary recommendation, however, has universal application across the age spectrum—the National Cancer Institute’s (NCI) 5 A Day for Better Health campaign.

The NCI 5 A Day Program approaches Americans with a simple, positive message: Eat 5 or more servings of fruits and vegetables a day for better health. With slight modifications, applying this nutritional principle right from the start can help older infants and young children establish healthy eating patterns that provide nutritional benefits today, as well as long-term health benefits later in life.

Why 5 A Day from the Start?

The goal of infant nutrition during the first two years of life is to provide developmentally appropriate, nutritious meals experiences, so that an infant can:

a) Achieve normal growth and development.

b) Learn to accept and enjoy a variety of nutritious foods, and

c) Make a smooth transition from dependence to independence eating.

This goal is best met by slowly building from an all-milk diet during early infancy to one that includes a variety of nutritious foods with varying flavors and textures.

As infant growth slows during the second year of life, the use of single-dense foods diminishes and complex carbohydrate increases. The addition of fruits and vegetables helps bring...
Pediatric Basics: Educating the Pediatrician and the Consumer
Advertising Directly to the Consumer:
5 = 2 ½ is an easy, actionable consumer message
Start Healthy
Stay Healthy