

## Pediatric Nutrition Guidelines for Primary Health Care Providers

When a child presents with several red flags, it is recommended to refer the caregiver to a registered dietitian (RD) for a nutritional assessment.

Age	Developmental Milestones and Feeding Skills	Guidelines	Red Flags
Birth to 6 months	<ul style="list-style-type: none"> <li>▪ Sucks well on nipple <sup>1</sup></li> <li>▪ Finishes each feeding within 45 minutes by 4 months <sup>1</sup></li> <li>▪ Signs of hunger in newborns are increased alertness or activity, mouthing or rooting. Crying is a late indicator of hunger <sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>▪ Exclusive breastfeeding is recommended for the first 6 months for healthy term infants <sup>3,4</sup></li> <li>▪ Encourage parents to feed whenever baby show signs of hunger <sup>2</sup></li> <li>▪ Encourage parents to hold their baby during feedings and make eye contact <sup>5</sup></li> <li>▪ Breastfed or partially breastfed infants drinking less than 1 L (32 oz) formula should receive a daily vitamin D supplement of 400 IU (10 µg) <sup>3,6</sup></li> <li>▪ Dark-skinned infants and infants whose mothers enter pregnancy and lactation with low vitamin D status are particularly at risk for developing vitamin D deficiency rickets, <sup>6</sup> therefore it is important to promote the recommendation for adequate vitamin D to these parents</li> <li>▪ If an infant is not breastfed or is partially breastfed, cow's milk-based iron-fortified infant formulas are the most acceptable alternative <sup>3,7</sup></li> <li>▪ Hypoallergenic formula should be given if allergy to milk-based formula is suspected <sup>8</sup></li> <li>▪ Soy-based formula should be given to infants who cannot take dairy-based products for health, cultural, religious or personal reasons, such as vegan lifestyle or galactosemia <sup>3</sup></li> <li>▪ Research has shown that there is no link between iron-fortified infant formula and constipation <sup>8,9</sup></li> <li>▪ Breastfed infants tend to become leaner than formula-fed infants after 3-4 months This should be anticipated when assessing growth to avoid unnecessary supplementation with formula or early introduction of solids <sup>7,11</sup></li> <li>▪ Fruit juice, water or any beverages other than breastmilk or formula should not be given <sup>3,4,7</sup></li> <li>▪ To prevent infant botulism, honey should not be given under 1 year <sup>3</sup></li> <li>▪ For the prevention of allergy, the avoidance of solid food for a least 4 months and preferably 6 months is recommended <sup>10</sup></li> </ul>	<ul style="list-style-type: none"> <li>▪ Serial growth measurements have unexpectedly crossed 2 or more centiles downwards (failure to thrive) <sup>11</sup></li> <li>▪ Newborn not being fed whenever they show signs of hunger <sup>2</sup></li> <li>▪ Healthy, full term breastfed infant:               <ul style="list-style-type: none"> <li>– Loses more than 7% of birth weight</li> <li>– Does not regain birth weight by 10 days</li> <li>– Does not have at least 3 bowel movements each day after day 1</li> <li>– Does not have at least 6 wet diapers each day by day 4 with urine that is clear or pale yellow <sup>12</sup></li> </ul> </li> <li>▪ During the first 4 months, infant not being fed frequently <sup>3</sup></li> <li>▪ Exclusively breastfed infant is not receiving a vitamin D supplement, particularly those at risk <sup>3,6</sup></li> <li>▪ Infant formula is not iron-fortified <sup>3</sup></li> <li>▪ Liquids (including water) or solids other than breastmilk or iron-fortified formula are given before 4 months (6 months is recommended) <sup>3,10</sup></li> <li>▪ Infant is fed using a propped bottle <sup>3,6</sup></li> <li>▪ Infant cereal is given in a bottle <sup>3,7</sup></li> <li>▪ Private well water used for infant feeding is not being regularly tested <sup>3</sup></li> <li>▪ For the first 4 months, water for infant formula is not brought to a rolling boil for 2 minutes <sup>3</sup></li> <li>▪ Infant formula is not being mixed correctly (i.e., correct dilution) <sup>7</sup></li> </ul>

Age	Developmental Milestones and Feeding Skills	Guidelines	Red Flags
6-9 months	<ul style="list-style-type: none"> <li>▪ At 6 months, babies are physiologically and developmentally ready for ready for solid foods<sup>3</sup></li> <li>• Sits independently for a short time<sup>13</sup></li> <li>▪ Drinks from a cup held by an adult<sup>7</sup></li> <li>▪ Eats soft food from a spoon or adult's fingers<sup>1</sup></li> <li>▪ Uses both hands to hold a bottle<sup>13</sup></li> <li>▪ Prefers parents to feed<sup>13</sup></li> <li>▪ Plays with spoon<sup>7</sup></li> <li>▪ Initial refusal of new flavours and textures is not uncommon. It may take 3-10 offerings before an infant accepts a new food<sup>7</sup></li> <li>▪ Finger-feeding can be introduced<sup>13</sup></li> <li>▪ By 9 months, picks up small items using thumb and first finger (e.g., oat ring cereal)<sup>1</sup></li> <li>▪ Some infants have a more sensitive gag reflex and may not tolerate anything but pureed foods at first<sup>8</sup></li> </ul>	<ul style="list-style-type: none"> <li>▪ Continued breastfeeding is recommended<sup>3,4</sup></li> <li>▪ If infant is not breastfed or is partially breastfed, cow's milk-based iron-fortified infant formulas are the most acceptable alternative until 9-12 months<sup>3,7</sup></li> <li>▪ For infants unable to take cow's milk products, give commercial soy formula until 2 years<sup>3</sup></li> <li>▪ At 6 months, introduce iron-containing foods, such as iron-fortified cereals<sup>3,4</sup> (see "Dietary sources of iron" below). Introduce vegetables and fruit next. At about 9 months, introduce whole cow's milk and milk products<sup>3,14</sup></li> <li>▪ Introduce one new food at a time with an interval of 2-7 days before introducing another to allow infant to acquire a taste for a new food and make it easier to identify the cause of an allergic reaction<sup>7,14</sup></li> <li>▪ Start with small serving sizes (1-3 tsp)<sup>7</sup></li> <li>▪ Complementary foods should initially be provided 2-3 times a day<sup>14</sup></li> <li>▪ Infants will indicate hunger or satiety. Forced feeding may promote negative associations with eating<sup>7</sup></li> <li>▪ Mealtime environment should be free of distractions such as television and activities<sup>17</sup></li> <li>▪ Gradually offer food with more texture, progressing from purée to mashed and then to soft finger foods of about ¼ inch pieces<sup>8,14</sup></li> <li>▪ Offer some breastmilk or formula in a cup. Use a cup regularly with meals by 8 months<sup>8</sup></li> <li>▪ Wait until 1 year to introduce egg white to minimize the risk of allergic reactions<sup>3</sup></li> <li>▪ Honey should not be given under 1 year<sup>3</sup></li> <li>▪ Coffee, tea, cola and hot chocolate should not be given<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>▪ Serial growth measurements have unexpectedly crossed 2 or more centiles downwards<sup>11</sup></li> <li>▪ Breastfed or partially breastfed infant drinking less than 32 oz (1 L) formula not receiving a vitamin D supplement, particularly those at risk<sup>3,6</sup></li> <li>▪ Infant formula is not being mixed correctly (i.e., correct dilution)<sup>7</sup></li> <li>▪ Cow's milk is given instead of breastmilk or infant formula<sup>3</sup></li> <li>▪ Iron-containing foods have not been introduced by 7 months<sup>3,15</sup></li> <li>▪ Infant is not eating willingly or parents imply that they force-feed<sup>7</sup></li> <li>▪ Infant is drinking more than 4 oz (125 mL) of fruit juice per day<sup>14,16</sup></li> <li>▪ Fruit drinks, pop, coffee, tea, cola, hot chocolate, soy beverage, other vegetarian beverages, herbal tea or herbal products, egg white or honey is given<sup>3</sup></li> <li>▪ Infant cereal is given in a bottle<sup>3,7</sup></li> <li>▪ Infant is fed using a propped bottle<sup>3,7</sup></li> </ul>
9-12 months	<ul style="list-style-type: none"> <li>▪ Begins to take an active independent role in feeding<sup>8</sup></li> <li>▪ Assists with spoon; some become independent<sup>13</sup></li> <li>▪ Refining pincer grasp<sup>13</sup></li> <li>▪ Can hold cup and suck or sip contents, but may spill<sup>8,7,13</sup></li> <li>▪ More willing to accept lumpy textures, especially when self-feeding<sup>8</sup></li> <li>▪ Initial refusal of new flavours and textures is common. It may take up to</li> </ul>	<ul style="list-style-type: none"> <li>▪ Continued breastfeeding is recommended<sup>3,4</sup></li> <li>▪ Breastfed babies should receive a daily vitamin D supplement until the infant's diet includes at least 400 IU (10 µg)/day from other dietary sources (see "Dietary sources of vitamin D" below) or until 1 year<sup>3,6</sup></li> <li>▪ Between 9-11 months, increase the number of times infants are fed complementary foods to 3-4 times a day<sup>14</sup></li> <li>▪ Parents/caregivers should encourage self-feeding by offering more textured finger/table foods<sup>7,14</sup></li> <li>▪ Include baby at the table for family mealtimes<sup>17</sup></li> <li>▪ Mealtime environment should be free of distractions like television and activities<sup>17</sup></li> </ul>	<ul style="list-style-type: none"> <li>▪ Serial growth measurements have unexpectedly crossed 2 or more centiles downwards<sup>11</sup></li> <li>▪ Breastfed or partially breastfed infant drinking less than 1 L (32 oz) formula not receiving a vitamin D supplement, particularly those at risk<sup>3,6</sup></li> <li>▪ At 10 months, consistently refuses lumpy or textured foods<sup>15</sup></li> <li>▪ Infant is not supervised during feeding<sup>3</sup></li> <li>▪ Drinks juice in a bottle or a transportable covered cup that allows the baby to consume juice easily</li> </ul>

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	<ul style="list-style-type: none"> <li>10 offerings before infant accepts a new food<sup>8</sup></li> <li>▪ Licks food from lower lip<sup>7</sup></li> </ul>	<ul style="list-style-type: none"> <li>▪ Whole (3.25%) cow's milk can complement or replace breastmilk or replace formula between 9-12 months.<sup>3,14</sup> 1% or 2% milk is not recommended until age two.<sup>3</sup> Skim milk is inappropriate before age two<sup>3</sup></li> <li>▪ Limit deli and luncheon meats such as hot dogs, bacon and smoked meat<sup>18</sup></li> <li>▪ Fruit juice offers no nutritional benefits over whole fruit<sup>16</sup></li> <li>▪ Offer a cup with breastmilk, formula, cow's milk, 100% juice or water during meals so that a natural transition from bottle to cup will take place<sup>8,7</sup></li> </ul>	<ul style="list-style-type: none"> <li>throughout the day<sup>16</sup></li> <li>▪ Fruit drinks, pop, coffee, tea, cola, hot chocolate, soy beverage, other vegetarian beverages, herbal tea or herbal products, egg white or honey is given<sup>3</sup></li> </ul>
12-18 months	<ul style="list-style-type: none"> <li>▪ Picks up and eats finger foods<sup>1</sup></li> <li>▪ Grasps spoon with whole hand<sup>13</sup></li> <li>▪ Holds cup with 2 hands<sup>13</sup></li> <li>▪ Holds and tips bottle<sup>13</sup></li> <li>▪ Compared with the first year of life, a decreased or sporadic appetite is common<sup>7</sup></li> <li>▪ Unfamiliar foods are often rejected the first time<sup>7</sup></li> </ul>	<ul style="list-style-type: none"> <li>▪ Whole (3.25%) cow's milk can complement or replace breastmilk or replace formula.<sup>3</sup> 1% or 2% milk is not recommended until age two.<sup>3</sup> Skim milk is inappropriate before age two<sup>3</sup></li> <li>▪ If soy formula is given to babies who cannot take dairy-based products, continue until 2 years.<sup>3</sup> Soy beverage, rice milk or other vegetarian beverages are not recommended under 2 years due to low fat content<sup>3</sup></li> <li>▪ At 12 months, babies should have a daily intake of 5 µg (200 IU) of vitamin D<sup>3</sup> which they can get with 2 cups (500 mL) of milk (see "Dietary sources of vitamin D" below). A supplement may need to be recommended<sup>3,6</sup></li> <li>▪ Drinking too much milk can lead to iron deficiency. Babies 12 months or older should drink 16-24 oz (500-750 mL) milk /day<sup>19</sup></li> <li>▪ Parents should encourage child to feed themselves at the beginning of a meal when they are hungry, but help if they tire later in the meal<sup>3</sup></li> <li>▪ The child should be included at family mealtimes<sup>17</sup></li> <li>▪ Continue to provide 3-4 meals a day. Additional nutritious snacks may be offered 1-2 times a day<sup>14</sup></li> <li>▪ By 12 months, babies should be eating a variety of foods from each of the four food groups of Canada's Food Guide<sup>3,7</sup></li> <li>▪ If a child is eating according to the Food Guide, is growing well and is healthy, vitamin/mineral supplements are rarely necessary. The nutrient of greatest concern during this period is iron<sup>20</sup></li> <li>▪ The development of healthy eating skills is a shared responsibility: parents and caregivers should provide a selection of nutritious, age-appropriate foods, and decide when and where food is eaten; babies and children should</li> </ul>	<ul style="list-style-type: none"> <li>▪ Serial growth measurements have unexpectedly crossed 2 or more centiles downwards<sup>11</sup></li> <li>▪ Breastfed child not receiving a vitamin D supplement<sup>3,6</sup></li> <li>▪ Skim milk is regularly given<sup>3</sup></li> <li>▪ Drinking liquids primarily from a baby bottle<sup>15</sup></li> <li>▪ Not eating a variety of table foods<sup>3</sup></li> <li>▪ Consistently refuses lumpy or textured foods<sup>15</sup></li> <li>▪ At 15 months, does not finger/self feed<sup>3,15,17</sup></li> <li>▪ Parents not recognizing and responding to the child's verbal and non-verbal hunger cues<sup>3</sup></li> <li>▪ Child is not supervised during feeding<sup>3,17</sup></li> <li>▪ Excessive fluid consumption, e.g., milk (more than 24 oz a day<sup>19</sup>), juice (more than 4-6 oz a day<sup>16</sup>), pop and fruit drinks<sup>3,7</sup></li> </ul>

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		<p>decide how much they want to eat. Pressuring a child to eat may lead to overeating or the development of aversions to certain foods<sup>3,7,17</sup></p> <ul style="list-style-type: none"> <li>▪ Fruit juice offers no nutritional benefits over whole fruit<sup>16</sup></li> <li>▪ Excessive fruit juice consumption may be associated with diarrhea, flatulence, abdominal distension, tooth decay and poor weight gain<sup>8,17</sup></li> <li>▪ Fruit drinks and pop are not recommended as they displace nutrient-dense foods and beverages. Encourage parents to offer water<sup>17</sup></li> </ul>	
18-24 months	<ul style="list-style-type: none"> <li>▪ Chews broad range of food<sup>13</sup></li> <li>▪ Self-feeding predominates<sup>13</sup></li> <li>▪ Displays curiosity and desire to be independent<sup>7</sup></li> <li>▪ Decreased or sporadic appetite is common<sup>7</sup></li> <li>▪ Food neophobia (fear of the new) increases through early childhood and then declines.<sup>21</sup> Unfamiliar foods are often rejected the first time<sup>7</sup></li> <li>▪ Food likes and dislikes become prominent<sup>7</sup></li> <li>▪ Tend to go on food jags (refusal of all but 4 or 5 favourite foods over an extended period)<sup>17</sup></li> <li>▪ In non-controlling, non-coercive conditions, healthy children have the ability to self-regulate the amount of food and energy consumed<sup>22</sup></li> </ul>	<ul style="list-style-type: none"> <li>▪ Small, nutritious, frequent and energy-dense feedings are important to meet nutrient and energy needs<sup>3</sup></li> <li>▪ Avoid foods with the potential to cause choking (see “Choking and aspiration” below)<sup>3,7,17</sup></li> <li>▪ Limit deli and luncheon meats such as hot dogs, bacon and smoked meat<sup>18</sup></li> <li>▪ Parents should role model healthy eating and introduce age-appropriate table manners<sup>8</sup></li> <li>▪ Let the child assume responsibility for how much to eat. Forcing a child to clean their plate may lead to overeating or the development of aversions to certain foods<sup>7,17</sup></li> <li>▪ 15-20 minutes is an appropriate length of time to stay at the table<sup>17</sup></li> <li>▪ If a child is eating according to the Food Guide, is growing well and is healthy, vitamin/mineral supplements are rarely necessary. The nutrient of greatest concern during this period is iron<sup>20</sup></li> <li>▪ Limit fluids such as juice and milk between meals<sup>7</sup></li> <li>▪ Fruit drinks and pop are not recommended as they displace nutrient-dense foods and beverages. Encourage parents to offer water<sup>17</sup></li> </ul>	<ul style="list-style-type: none"> <li>▪ Serial growth measurements have unexpectedly crossed 2 or more centiles downwards<sup>11</sup></li> <li>▪ Not eating a variety of table foods<sup>3</sup></li> <li>▪ Skim milk is given regularly<sup>3</sup></li> <li>▪ Soy beverage, rice milk, other vegetarian beverages or herbal teas are given<sup>3</sup></li> <li>▪ Child is not supervised when eating<sup>3,17</sup></li> <li>▪ Child does not finger/self feed<sup>3,15,17</sup></li> <li>▪ Drinking liquids primarily from a baby bottle<sup>15</sup></li> <li>▪ Parents pressure or reward child to eat<sup>17</sup></li> <li>▪ Child “grazes” on food all day<sup>17</sup></li> <li>▪ Excessive fluid consumption, e.g., milk (more than 24 oz a day<sup>19</sup>), juice (more than 4-6 oz a day<sup>16</sup>), pop and fruit drinks<sup>3,7</sup></li> </ul>

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2-3 years	<ul style="list-style-type: none"> <li>▪ By 2 years, eats most foods without coughing and choking <sup>1</sup></li> <li>▪ By 2 years, eats with a utensil with little spilling <sup>1</sup></li> <li>▪ By 30 months, lifts and drinks from a cup and replaces it on the table <sup>1</sup></li> <li>▪ May be resistant to new foods <sup>17</sup></li> <li>▪ Food preferences increase with frequency of exposure. It may take 5-15 exposures to a new food before a child learns to like it <sup>21,23</sup></li> <li>▪ It is normal for children to lose interest in mealtimes. When hungry, they will focus on eating. When satisfied, their attention turns elsewhere <sup>7,18</sup></li> </ul>	<ul style="list-style-type: none"> <li>▪ Children aged 2 and older can get the nutrients and calories they need for healthy growth and development by following Canada's Food Guide <sup>18</sup></li> <li>▪ Canada's Food Guide recommends that children aged 2-3 eat 2 cups (500 mL) of vegetables and fruit each day <sup>18</sup> (see "Pesticides on vegetables and fruit" below for ways to minimize pesticide residues)</li> <li>▪ Offer 2 cups (500 mL) of milk or fortified soy beverage a day to help meet the vitamin D requirement <sup>18</sup></li> <li>▪ Offer a variety of nutritious foods, including some choices that contain fat such as milk and peanut butter <sup>18</sup></li> <li>▪ Serve small, nutritious meals and snacks and allow the child to ask for seconds <sup>8,18</sup></li> <li>▪ Structure and routine for eating is important for young children. Grazing between meals and snacks should be limited <sup>17</sup></li> <li>▪ The amount of food eaten will vary day to day depending on the child's appetite, activity level and whether they are experiencing a growth spurt, or if they are excited or overly tired <sup>18</sup></li> <li>▪ Let the child assume responsibility for how much to eat. Forcing a child to clean their plate may lead to overeating or the development of aversions to certain foods <sup>7,17,18</sup></li> <li>▪ Encourage parents to be patient. If an unfamiliar food is rejected the first time, it can be offered again later <sup>18</sup></li> <li>▪ Food should not be used as a reward <sup>7,17,22</sup></li> <li>▪ Encourage parents to sit down and eat with the child, provide a pleasant setting and leave the TV off during meal times <sup>8,18</sup></li> <li>▪ A multivitamin is rarely needed for a healthy child who is growing well and following Canada's Food Guide <sup>18</sup></li> <li>▪ Fruit drinks and pop are not recommended as they displace nutrient-dense foods and beverages. Encourage parents to offer water <sup>17</sup></li> </ul>	<ul style="list-style-type: none"> <li>▪ Serial growth measurements have unexpectedly crossed 2 or more centiles downwards <sup>11</sup></li> <li>▪ BMI-for-age <math>\geq</math> 95<sup>th</sup> centile <sup>11</sup></li> <li>▪ Drinking liquids primarily from a baby bottle <sup>15,17</sup></li> <li>▪ Excessive fluid consumption, e.g., milk (more than 24 oz a day <sup>19</sup>), juice (more than 4-6 oz a day <sup>16</sup>), pop and fruit drinks <sup>3,7</sup></li> <li>▪ Child does not self feed <sup>3,15,17</sup></li> <li>▪ Parent not allowing the child to decide how much to eat <sup>7,17,18</sup></li> <li>▪ Parents are using a highly restrictive approach to feeding <sup>17</sup></li> <li>▪ "Grazes" on food or beverages throughout the day <sup>17</sup></li> <li>▪ More than 2 hours of TV watching a day <sup>24</sup></li> </ul>
3-6 years	<ul style="list-style-type: none"> <li>▪ By age 4, looks for adult approval <sup>1</sup></li> <li>▪ Food preferences increase with frequency of exposure. It may take 5-15 exposures to a new food before a child learns to like it <sup>21,23</sup></li> <li>▪ It is normal for children to lose</li> </ul>	<ul style="list-style-type: none"> <li>▪ Serve small, nutritious meals and snacks and allow the child to ask for seconds <sup>8,18</sup></li> <li>▪ The amount of food eaten will vary day to day depending on the child's appetite, activity level and whether they are experiencing a growth spurt or if they are excited or overly tired <sup>18</sup></li> </ul>	<ul style="list-style-type: none"> <li>▪ Serial growth measurements have unexpectedly crossed 2 or more centiles <sup>11</sup></li> <li>▪ BMI-for-age <math>\geq</math> 95<sup>th</sup> centile <sup>11</sup></li> <li>▪ NutriSTEP (parent administered nutrition screen for 3-5 year olds) score</li> </ul>

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	<p>interest in mealtimes. When hungry, they will focus on eating. When satisfied, their attention turns elsewhere<sup>18</sup></p>	<ul style="list-style-type: none"> <li>▪ Encourage parents to sit down and eat with the child, provide a pleasant setting and leave the TV off during meal times<sup>8,18</sup></li> <li>▪ The use of external cues related to feeding such as prompts or rewards is likely to build resistance, food dislikes, and lack of self-regulation<sup>7,17,22</sup></li> <li>▪ Encourage parents to be patient. If an unfamiliar food is rejected the first time, it can be offered again later<sup>18</sup></li> <li>▪ Let the child assume responsibility for how much to eat. Forcing a child to clean their plate may lead to overeating or the development of aversions to certain foods<sup>7,17,18</sup></li> <li>▪ Encourage parents to involve their child in simple food-related tasks (e.g., making muffins together) to encourage them to try these foods<sup>18</sup></li> <li>▪ Fruit drinks and pop are not recommended as they displace nutrient-dense foods and beverages. Encourage parents to offer water<sup>17</sup></li> <li>▪ Limit TV watching to 1-2 hours or less per day<sup>24</sup></li> </ul>	<p>of 26 or greater (i.e., high nutrition risk)<sup>25</sup></p> <ul style="list-style-type: none"> <li>▪ Parents are using a highly restrictive approach to feeding<sup>17</sup></li> <li>▪ Does not self feed<sup>3,15,17</sup></li> <li>▪ Not eating a variety of table foods from the four food groups in Canada's Food Guide<sup>18</sup></li> <li>▪ Does not eat at regular times throughout the day (breakfast, lunch, and supper and 2-3 snacks)<sup>17</sup></li> <li>▪ Drinking liquids primarily from a baby bottle<sup>15,17</sup></li> <li>▪ Excessive fluid consumption, e.g., milk (more than 24 oz a day<sup>19</sup>), juice (more than 4-6 oz a day<sup>16</sup>), pop and fruit drinks<sup>3,7</sup></li> <li>▪ More than 2 hours of TV watching a day<sup>24</sup></li> </ul>

### General risk factors that indicate the intervention of a registered dietitian (RD) or other primary health care providers

- Family is experiencing problems around feeding – mealtimes are unpleasant; infant/child refuses many foods, or drinks excessive fluids throughout the day so is not hungry at mealtimes. Parents are possibly force feeding or offering inappropriate amounts of food.
- Parents have distorted issues with their own eating and/or body image.
- Infant/child has medical problems that make eating or drinking a problem such as swallowing issues, gagging or choking, etc.
- Infant/child has other health problems that may be related to diet such as iron deficiency anemia, constipation, obesity, or body image issues.
- Family has different beliefs related to foods (e.g., the use of herbal products, exclusion of food groups such as meat and meat alternatives, use of unsafe products such as unpasteurized milk).
- Family is low income. In order for families to access foods that will nourish them they need to have enough money.
- Family has problems with adequate food storage, cooking facilities or provision of adequate amounts of food because of lack of information.

### Dietary sources of important nutrients

**Dietary sources of iron:** iron-fortified infant cereal, egg yolk, beef, chicken, turkey, lamb, fish, pork, legumes (beans, lentils, chick peas) and tofu.

Iron from meat sources is better absorbed than iron from non-meat sources. However, as a first food, some children may not like the taste or texture of meat and refuse to eat this food. Infant cereal may have a more palatable taste and parents may be more successful starting with this type of food as a first food.

**Dietary sources of vitamin D:** fortified cow's milk (88 IU in 250 mL); fortified infant formula (100 IU in 250 mL); fortified plant based beverage (80 IU in 250 mL); fortified margarine (25 IU in 5 mL); salmon-cooked (103 IU in 1 oz); and egg yolk (25 IU in one).<sup>6</sup>

### Choking and aspiration

Hard, small and round, smooth and sticky solid foods can block a young child's airway. The following foods are not safe for infants and children under 4 years of age: popcorn, hard candies, gum, cough drops, raisins, peanuts or other nuts, sunflower seeds, fish with bones, and snacks using toothpicks or skewers. The following foods are safer for infants and young children when they are prepared as described: wieners diced or cut lengthwise, grated raw vegetables or fruit, fruit

with pits removed, chopped grapes, and peanut butter spread thinly on crackers or bread. Peanut butter served alone or on a spoon is potentially unsafe because it can stick in the palate or posterior pharynx leading to asphyxia.<sup>3</sup>

## Bisphenol A

Bisphenol A (BPA) is an industrial chemical used to make a hard, clear plastic known as polycarbonate which is used in many consumer products including some baby bottles and reusable water bottles. BPA is also found in epoxy resins, which act as a protective lining on the inside of metal-based food and beverage cans. The main source of exposure for infants is from BPA migrating from the lining of cans into liquid infant formula and migrating from the polycarbonate baby bottles into the liquid inside following the addition of boiling water. Exposure levels are close to the levels where potential health effects could occur, therefore, Health Canada is working with infant formula manufacturers to reduce levels of BPA in the lining of infant formula cans and encouraging the development of alternatives. The following is the Government of Canada's advice for parents and caregivers:

- Breastmilk is the best food for optimal growth. Infant formula is still the best alternative as the nutritional benefits of infant formula far outweigh possible risk for BPA exposure.
- If using a polycarbonate bottle, water used for formula preparation should be boiled and allowed to cool to lukewarm in a non-polycarbonate container before transferring to baby bottles. This advice is consistent with proper instructions for the preparation of infant formula.
- Polycarbonate bottles can be sterilized according to instructions on infant formula labels and can be cleaned in the dishwasher. They should be left to cool to room temperature before adding the infant formula.<sup>26</sup>

## Pesticides on vegetables and fruit

A healthy diet rich in vegetables and fruit may help reduce the risk of cardiovascular disease and some types of cancer.<sup>18</sup> To reduce or eliminate pesticide residues on fresh vegetables and fruit, follow these recommendations:

- Wash all fresh vegetables and fruit with running water.
- Use a small scrub brush to clean the outer skin of vegetables and fruit, if appropriate – for example, before eating apples, potatoes, cucumbers or other produce in which you eat the outer skin.
- Peel vegetables and fruit and trim the outer leaves of leafy vegetables, along with washing them thoroughly.<sup>27</sup>

## References

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