

Infant Formulas for Healthy Term Infants Compendium

For Professional Reference Only

Alberta Health Services is committed to the protection, promotion, and support for breastfeeding. Breastfeeding is the normal and unequalled method of feeding infants. (1) Exclusive breastfeeding for the first 6 months, and continued for up to 2 years or longer, is recommended for the healthy growth and development of infants and toddlers. (1) This document is intended for professional reference only when advising those who cannot breastfeed and those that have made an informed feeding decision not to breastfeed or to partially breastfeed.

Updated by Nutrition Services, Alberta Health Services

Product information for all infant formulas for healthy term infants available in Alberta was obtained from nutrition labels through store visits in various communities in Alberta or from manufacturer websites and is current as of January 8, 2018.

If you question the appropriateness of a product, contact your local Registered Dietitian.

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Overall Recommendations

This document was prepared with the full recognition that breastmilk is the normal and unequalled food for infants. This document provides information on commercial infant formula and is intended for professional reference only when advising those who cannot or have made an informed decision not to breastfeed or to partially breastfeed.

Homemade infant formulas are not recommended as an alternative to breastmilk or commercial infant formula as they may:

- be nutritionally incomplete (2,3)
- deliver a high renal solute load (2,3)
- increase food safety risk (3)
- exceed recommended levels of some vitamins or minerals (3)

For more information refer to the *Nutrition Guideline: [Homemade Infant Formula](#)*.

Commercial infant formula sold in Canada will meet the nutrition needs of infants and is the only recommended alternative to breastmilk for infants younger than nine months of age. All commercial infant formulas undergo a full safety and nutritional quality assessment before they can be sold in Canada.(4) All manufacturers, importers and distributors of infant formula are responsible to ensure their products comply with Canadian legislation.(4)

Caution regarding infant formula produced outside of Canada. Health Canada cautions against the purchase of infant formula from internet sites or from other countries. (5) There is no clear way to confirm if formulas purchased on the internet or outside of Canada meet Canadian safety and nutrition guidelines.

Some commercial infant formulas have a product number which can be used for claiming on health insurance or [Income Support programs](#) (e.g. Extensively Hydrolyzed Casein Formulas). Commercial infant formulas are classified as a food, not a drug and therefore do not have a Drug Identification Number (DIN).

For more information on infant formula labelling, safety, and recalls see the Health Canada Food and Nutrition page at <http://www.hc-sc.gc.ca/contact/fn-an/index-eng.php#3>.

When reconstituted, the nutrition content of powder, liquid concentrate or ready-to-feed infant formulas is very similar. Powdered infant formula (PIF) is not sterile, but can be safely used for healthy full term infants when prepared and handled appropriately.(6) Liquid concentrate or ready-to-feed formulas are recommended for infants at greatest risk of infection (ie. pre-term, low-birth weight, immunocompromised, or less than 2 months of age). (2,6) Where nutritionally appropriate liquid infant formula is not available, PIF may be recommended by the infant's healthcare provider. Parents are advised to follow AHS guidelines for preparing infant formula and to follow the manufacturer's instructions (on the formula can label) for the amount of infant formula and water to use. For more information refer to the *Nutrition Guideline: [Safe Preparation and Handling of Infant Formula](#)*. In emergency response situations, additional safety precautions may be needed.

A daily 400 International Unit (IU) vitamin D supplement is recommended for all healthy term infants. This applies to exclusively breastfed, partially breastfed and formula fed infants. For more information refer to the *Nutrition Guideline: [Vitamin D](#)*.

Comments on Infant Formula Composition

Allergy Prevention

Breastfeeding is the normal feeding method for infants at high risk of allergy. (7-9) There is no evidence to support giving hydrolyzed infant formula over exclusive breastmilk to prevent allergies. (7) For infants who are not breastfed or are partially breastfed and are at high risk of allergy (at least one first-degree relative with a diagnosed atopic disease such as atopic dermatitis, asthma, allergic rhinitis, or food allergy), there is limited evidence that feeding with a hydrolyzed formula (i.e. extensively hydrolyzed casein infant formula or a partially hydrolyzed 100% whey infant formula) as compared to a standard cow's milk formula, can help reduce the risk of allergic disease, particularly eczema (7,8,10-15), if used for the first 6 months of life. (9,14,16,17) More research is needed to conclude how these types of infant formulas compare in terms of allergy prevention. (7,11,18-20) Parents may select a hydrolyzed formula based on selections available. Evidence does not support using extensively or partially hydrolyzed protein infant formula after 6 months for allergy prevention. (9,16,17) For more information refer to the *Nutrition Guideline: [Allergy Prevention](#)*.

Allergy Treatment

For an infant with a diagnosed allergy to cow's milk protein, encourage and support a breastfeeding mother to continue breastfeeding; the mother may need to avoid all sources of cow's milk protein in her diet. (21) If this is the case, nutrition counselling by a Registered Dietitian is recommended. (21)

For non-breastfed or partially breastfed babies, extensively hydrolyzed casein infant formulas are the first choice in the treatment of cow's milk protein allergy. (22) (See [Extensively Hydrolyzed Casein Formulas](#) section for more information).

Some infants with a cow's milk protein allergy may not tolerate an extensively hydrolyzed casein formula and may require an amino acid-based formula. (21) (See [Amino Acid-based Formulas](#) section for more information)

Soy infant formula may be a second option for infants older than 6 months if a tolerance to soy has been established. (21) (See [Soy Formulas](#) section for more information).

DHA and ARA

DHA (docosahexaenoic acid) and ARA (arachidonic acid) are long-chain polyunsaturated fatty acids (LCPUFA) that are essential for maturation of the developing brain, retina and other organs in newborn infants. (23,24) DHA, ARA and their precursors are found naturally in breastmilk. (25) The preferred source of nutrition for infants is breastmilk, and the availability of infant formulas with DHA and ARA does not change this recommendation. (26)

Standard infant formulas do not contain DHA and ARA; they contain the essential fatty acids alpha-linolenic acid and linoleic acid from which formula-fed infants synthesize their own DHA and ARA, respectively. (24) Some infant formula manufacturers add DHA and ARA directly to infant formulas. These are typically labeled as 'omega 3 and omega 6' on formula packaging and are marketed as providing an advantage

for infant development. As the addition of DHA and ARA is not mandatory in Canada (22); there are no Canadian guidelines that specify levels of DHA and ARA to be added. (27) Infant formulas with added DHA and ARA currently cost more than the same infant formula without added DHA and ARA.

For term infants, adding DHA and ARA to infant formulas may provide possible benefits for visual and neurodevelopmental outcomes, but results are inconsistent. (26) There are no studies which report negative side effects of consuming an infant formula with added DHA and ARA. Based on the potential benefits, and no known adverse effects, parents may select to provide a formula with added DHA and ARA based on selections available and their financial means. However, at this time the evidence is not strong or consistent enough to make a public health recommendation for routine and compulsory DHA and ARA supplementation for formula-fed term infants. (24)

For preterm infants who are not breastfed or require supplementation of breastmilk and are not discharged home on Post Discharge Preterm Formula (PDPF), a term infant formula with iron and DHA and ARA is recommended. (28) For more information refer to the *Nutrition Guideline: [Post-discharge Preterm Formula \(PDPF\)](#)*.

Iron Fortification

Iron deficiency is the most common micronutrient deficiency worldwide. Young children are a special risk group because their rapid growth leads to high iron needs. (29) The amount of iron needed to prevent iron deficiency is controversial and needs more research. In Canada, commercial infant formulas for healthy term infants currently contain levels of iron of 6.5 to 13 mg/L and are acceptable for most healthy term infants. (22) Formulas with iron at the lower levels should be sufficient for most healthy term infants. (30,31)

For infants at risk of iron deficiency, it is prudent to recommend infant formula with iron levels at the higher end of the range (eg.10 – 13mg/L).(30) Infants at risk of iron deficiency include infants with a birth weight of less than 3000 grams; those born to iron deficient mothers, mothers with diabetes, or mothers who consumed excess alcohol during pregnancy; or infants not fed according to current recommendations (e.g. Infants started on complementary foods prior to 6 months, infants whose first foods were not iron rich). (22)

Organic Formulas

Within this document, infant formulas certified as organic have received organic certification from a certification body accredited by the Canadian Food Inspection Agency (CFIA). (32) The organic certification does not represent specific claims about the health, safety and nutrition of the organic product. (33) While organic infant formulas are safe and acceptable choices, current evidence does not identify any health advantages to choosing organic food products over non-organic food products. (34,35) Parents may select an organic infant formula based on the options available and their preference for this food production method.

Nucleotides

Although human bodies are able to produce nucleotides, dietary sources of nucleotides may be important during periods of rapid growth or illness. (36) Currently, nucleotides may be added to commercial infant formulas, but are not mandatory. Some studies have shown that

adding nucleotides to infant formulas may have potential health benefits, such as improved maturation of the immune system and a decreased incidence of diarrhea. (37) However, most supplemented infant formulas do not contain the levels most research studies have associated with potential health benefits. (37) More research is still needed to show that adding nucleotides to infant formulas consistently leads to health benefits, and to identify the optimal level of supplementation. Because of possible benefits and lack of adverse effects, parents may select infant formulas with added nucleotides based on the options available.

Palm Olein (PO)

Fat sources in commercial infant formulas vary and include a mix of soy, coconut, sunflower, and safflower oils. Palm olein (PO) from fractionated palm oil is added to some infant formula to create a fat profile with 23% palmitic acid and 34% oleic acid, the same ratio found in human milk. No growth or weight gain differences have been observed in infants consuming formula containing PO. (38) However, due to structural differences, the added PO results in insoluble fatty acids that form poorly absorbed salts that are excreted in stool, causing stools to be firmer, greener in colour, and less frequent. (39,40).

Not all infant formulas contain PO; parents may select infant formulas based on the options available. As the addition of PO to infant formulas may cause hard/ firm stools (41), it may be worthwhile for infants with hard stools to try an infant formula that does not have PO added.

Standard Cow's Milk Formulas

Commercial cow's milk-based infant formulas are the standard choice for healthy term infants who are not exclusively breastfed. (22, 31) Standard cow's milk infant formulas are not suitable for use for cow's milk protein allergy, galactosemia, or for those who cannot consume dairy-based products for cultural or religious reasons. (22)

Partially Hydrolyzed Protein Formulas

There are two different types of partially hydrolyzed protein infant formulas, and the indications for use differ between the two.

- **Partially Hydrolyzed Protein, Lactose-Reduced Formulas**

These infant formulas have reduced lactose levels and contain partially hydrolyzed whey and casein proteins, (42,43) These infant formulas are marketed as "Easy to Digest" or for infants with fussiness and gas. (42,43) There is insufficient evidence identifying a need for these infant formulas in reducing colic. (44) In addition, evidence does not support using a partially hydrolyzed infant formula, containing both casein and whey proteins, for allergy prevention. (45) Partially hydrolyzed protein, lactose-reduced infant formulas are considered safe and acceptable choices; however, based on current evidence, there is no clear indication for the use of these infant formulas for most healthy term infants. (46) The only time lactose reduced infant formulas may be justified is for situations of severe dehydration, malnourishment, severe enteropathy, or when lactose-containing formula worsens the condition, such as with confirmed lactase deficiency. (46) Current lactose reduced formulas contain only 20-25% of the lactose of the standard cow's milk based formulas. (43,47)

- **Partially Hydrolyzed 100% Whey Formulas**

These infant formulas contain partially hydrolyzed whey protein. There is some evidence that for infants at high risk of allergy, who are not exclusively breastfed, using a partially hydrolyzed 100% whey infant formula instead of a standard cow's milk infant formula in the first 6 months of life may reduce the risk of developing an allergy. (7,12,13,19) See [Allergy Prevention](#) section for more information.

Formulas with Prebiotics

Prebiotics are nondigestible food components that selectively stimulate growth and/or activity of one or a limited number of bacterial species in the colon, and thereby improve host health. (48) Prebiotics studied for use in infant formula include galacto-oligosaccharides (GOS), polydextrose (PDX), fructooligosaccharides (FOS), lactulose, inulin, as well as various combinations. (49) Currently, GOS and PDX are the only prebiotics added to commercial infant formulas in Canada.

Formula fed infants not yet introduced to complementary foods experiencing hard stools may benefit from consuming an infant formula supplemented with GOS (4g/L) or PDX/GOS blend (2g/L PDX and 2g/L GOS). (50-52) While some prebiotic infant formulas in Canada have 4.0g/L of prebiotic GOS or PDX/GOS blend added, some contain lower dosages. Lower dosages of GOS in formula (e.g. 2.9 g/L) have not been studied and therefore, it's unknown if these formulas will also improve stool consistency. Further research is needed before it can be recommended that prebiotics are needed in infant formula. For more information refer to the *Nutrition Guideline: [Prebiotics and Probiotics](#)*.

Parents may select an infant formula with prebiotics based on the options available. It may be worthwhile for infants with hard stools to try an infant formula that contains 4.0g/L of prebiotics.

Formulas with Probiotics

Probiotics are live microorganisms which, when consumed in adequate amounts, confer a health benefit on the host. (53) When specific strains are consumed at proper doses, probiotics can have potential health benefits (54) for infants. (55,56) More research is needed to determine the best dose, strain and duration. (57) *Bifidobacterium animalis* subsp *lactis* (*B. lactis*) (58) and *Lactobacillus rhamnosus* GG (LGG) are 2 probiotics currently available in infant formulas. (59)

Although current infant formula supplemented with probiotics is safe for healthy term infants, (55,60) further studies are required before it can be recommended that probiotic cultures are needed in infant formula. Parents may select an infant formula with probiotics based on the options available. More research is needed regarding the safety of probiotics in vulnerable groups such as premature and low birth weight infants.

For more information refer to the *Nutrition Guideline: [Prebiotics and Probiotics](#)*.

Follow-Up Formulas

Cow's milk follow-up infant formulas are not suitable for infants younger than 6 months (61), or for infants with a cow's milk allergy, lactose intolerance or galactosemia.

Follow-up or second stage infant formulas, which are designed for infants 6 months of age and older who are eating solid foods, (62) contain higher amounts of calcium and phosphorus than starter infant formulas because calcium needs increase for the second 6 months of life. (62-64) However, follow-up formulas do not offer any nutrition or health benefits over infant formula and are not recommended. (63)

Infants begin to eat solid foods at 6 months and therefore calcium and phosphorus needs should be met from standard (starter) infant formulas and food sources. (63) Pasteurized 3.25% milk may be introduced to infants 9-12 months of age, who eat iron-rich foods at most meals, and continued throughout the second year of life. (62)

Toddler nutritional supplements (e.g. Enfagrow® 3, Go and Grow 3, Good Start 3, and Parent's Choice or President's Choice Toddler 3) are not included in this document. These toddler drinks are not the same as follow-up or second stage infant formulas, and are inappropriate for infants under 12 months of age. (65) Toddler drinks, which are marketed as an alternative or complement to breastmilk or cow's milk for children older than 12 months of age, have added sugars and are not needed. After 9 -12 months, a child can transition directly to 3.25% milk. (62) If parents offer toddler drinks instead of 3.25% milk, advise them to ensure the product contains calcium, vitamin D, vitamin A, protein, and fat, in comparable amounts to the 3.25% milk. If parents provide these toddler drinks due to a nutrition concern, a referral to a Registered Dietitian is recommended.

Infant Formulas with Other Considerations

When an infant past one year of age needs to continue on an infant formula for a special condition, encourage parents to provide calcium-rich foods as many of these infant formulas contain less calcium than whole milk. (66) Referral to a Registered Dietitian for related resources and further information is recommended.

Soy Formulas

There are limited indications for feeding soy formulas to healthy term infants. These indications include the management of infants with galactosemia or primary lactase deficiency, and infants who cannot consume dairy-based products for cultural, ethical or religious reasons, such as a vegetarian lifestyle. (67)

The use of soy infant formulas is contraindicated for non-IgE-mediated cow's milk protein allergy (CMPA) due to the high rate of coincident soy allergies. (67,68) If a non-IgE mediated CMPA can be satisfactorily ruled out, then the use of soy infant formula is an acceptable alternative as the coincident soy allergy for IgE mediated CMPA is much less frequent. (67) However, from a public health standpoint, until a non-IgE mediated CMPA can be satisfactorily ruled out it is safer and more appropriate to recommend an extensively hydrolyzed casein infant formula to treat infants with CMPA (67,68) especially in infants younger than 6 months of age. (68,69) Soy infant formulas may be considered for therapeutic use *after* 6 months of age (68-71) if a tolerance to soy protein has been established under physician guidance. (70) Infants with documented cow's milk protein-induced enteropathy or enterocolitis are often sensitive to soy protein and should not be given soy formulas. (72)

Soy-based infant formulas have been used in North America for over a century, (73) and have been shown to support normal growth and development in term infants. (68,72,74) The patterns of growth, bone health, reproductive, endocrine, immune and neurological functions are

similar to those observed in children fed cow's milk infant formula or human milk. (75) No overt harm has been proven with the use of soy-based infant formulas with the exception of preterm infants, infants with congenital hypothyroidism, (68) and infants with renal failure. (75)

Opponents of soy infant formula counter that the safety of soy infant formula has not been rigorously tested, particularly health effects associated with the phytoestrogens in soy products. (73) Soy infant formulas contain phytoestrogens called isoflavones (68) which are non-steroidal chemicals that are structurally similar to estrogens. (76) Some studies found that most of the phytoestrogens present in soy infant formula are in a conjugated form and therefore are unable to exert hormonal effects. (75) A lack of evidence is available to suggest that soy infant formulas adversely affect endocrine function, development or reproduction in infants. (68,72) As such, further research is warranted and use of soy infant formulas should be limited to the indications described above. Soy infant formula has no proven value in the prevention or management of infant colic. (72)

Soy infant formula is not appropriate for:

- (a) Soy protein allergy
- (b) Prevention of allergy in healthy term infants at high risk of allergy. (77)
- (c) Preterm infants. Soy infant formulas have high aluminum content and aluminum toxicity may develop in preterm infants due to their reduced renal function. (75) As aluminum competes with calcium for absorption, this may result in reduced skeletal mineralization (osteopenia). (75) Serum phosphorus concentrations are lower, and alkaline phosphatase concentrations are higher in preterm infants and infants with intrauterine growth restriction (IUGR) fed soy infant formula, compared to preterm infants fed cow's milk infant formula. Therefore, the degree of osteopenia is increased in infants with low birth weight receiving soy infant formulas. (72)
- d) Congenital hypothyroidism. Infants with congenital hypothyroidism fed soy infant formula need close monitoring due to reported abnormal thyroid function. This does not appear to be a concern in infants with healthy thyroid function. (70)

Note: The vitamin D in soy infant formula is from an animal source. This information is important to share with vegan families. (67)

Soy Follow-Up Formulas

Follow-up or second-stage infant formulas, which are intended for infants 6 months of age and older who are eating solid foods, (62) contain more calcium and phosphorus than starter infant formulas as needs for these nutrients are higher for older infants. (64) When infants need to continue on a soy-based formula, a soy follow-up formula is recommended by 12 months of age to help meet calcium needs. A soy follow-up formula is advised until 2 years of age at which time a child can then transition to a fortified plant-based beverage, such as a soy beverage. Soy follow-up formulas, if consumed in recommended amounts (500 mL per day), may not contribute enough calcium to meet the calcium requirements of a 1-year old. (64) Therefore, other calcium-rich foods will also need to be emphasized and consultation with a Registered Dietitian may be beneficial.

Lactose-Free Formulas

Lactose-free infant formulas are not suitable for infants with congenital lactase deficiency, a rare disorder, or galactosemia as these infant formulas may contain residual galactose. (22) Lactose-free infant formulas are also not suitable for infants with cow's milk protein allergy and are ineffective in the dietary management of infant colic. (22)

Lactose-free infant formula was previously recommended for infants with diarrhea and gastroenteritis because of possible small intestinal injury during such illness. Breastfeeding during acute diarrhea is still recommended and is well tolerated in spite of its higher lactose content compared to most cow's milk infant formulas. Breastmilk is often provided as smaller, more frequent feedings than infant formula and this may decrease the lactose load delivered per feed, resulting in enhanced absorption (46) The use of lactose-free infant formula during acute diarrhea is not justified in most cases. (2,46) Enough lactose digestion and absorption are typically preserved in acute gastroenteritis that low lactose and lactose-free infant formulas do not have clinical advantages over lactose-containing infant formulas. (22,46) If dehydration has been treated, or if mild to moderate dehydration is present, lactose-free infant formulas are not indicated. (2,46) If severe dehydration, malnutrition, or severe enteropathy exist, or when a lactose-containing infant formula worsens the condition (confirmed lactase deficiency) then the use of a lactose-free or low lactose infant formula by formula fed infants may be justified. (2,46)

Extensively Hydrolyzed Casein Formulas

Extensively hydrolyzed casein infant formulas are intended for infants who have diagnosed food allergies (22,79,80) including cow's milk (80) or soy protein, or for specific malabsorption problems. (22)

For infants who are not breastfed or are partially breastfed and are at high risk of allergy (at least one first-degree relative with a confirmed allergy diagnosed atopic disease such as atopic dermatitis, asthma, allergic rhinitis, or food allergy), some research shows an extensively hydrolyzed casein infant formula may reduce the risk of developing an allergy (compared to a standard cow's milk formula) if used for the first 6 months of life. (7,13,16,17) See [Allergy Prevention](#) section for more information.

Amino Acid-Based Formulas

Amino acid-based infant formulas are designed for infants with a cow's milk allergy and multiple food protein intolerances who cannot tolerate extensively hydrolyzed casein infant formulas. (81,82) Amino acid-based infant formulas should be used under medical direction and only in infants with extreme cow's milk allergies who cannot tolerate extensively hydrolyzed casein formulas (83). Amino acid-based infant formulas have not been used for allergy prevention (17); they have higher cost, poor palatability and limited availability.

Infant Formulas that Become Thickened

Regurgitation (spitting up) is normal in infancy and only rarely leads to health problems such as failure to thrive. In infants, regurgitation reflects physiological immaturity, usually improves without any medical intervention, (84) becomes less frequent with time, and resolves in 90% of infants before 1 year of age. (85)

Further assessment is needed if regurgitation persists or increases in severity. (22) As a milk protein allergy is sometimes a cause of vomiting in infants, formula-fed infants with recurrent regurgitation and vomiting may benefit from a 2 – 4 week trial of an extensively hydrolyzed formula. (86)

Gastroesophageal reflux (GER), with or without regurgitation is relatively common in healthy term infants with regurgitation occurring daily in approximately 50% of infants three - four months of age.(22,86) Education on feeding position modifications and feeding changes,

anticipatory guidance, and support are usually sufficient to manage healthy, thriving infants with physiologic GER. (86) Formula that thickens in an infant's stomach is intended for infants with mild GER, and should be used only when recommended by a physician. Thickened infant formula does not decrease frequency of reflux episodes but may decrease visible regurgitation which may improve quality of life for caregivers. (86) This infant formula is not intended for infants who need specialized thickened formula due to swallowing difficulties. It is not recommended to thicken infant formula with infant cereal (22) as this may increase coughing during feeding and may increase the energy density of the formula causing excessive energy intake. (86)

Post-Discharge Formulas for Preterm Infants

Post-discharge infant formulas for preterm infants have been specifically designed to meet the needs of preterm and low-birth weight infants after discharge from a hospital and should only be used with the advice of a physician or dietitian. For more information on these infant formulas refer to the *Nutrition Guideline: [Post-discharge Preterm Formula](#)*.

Other Milks

Cow's Milk

3.25% Homogenized Milk

3.25% milk is not recommended for infants before 9-12 months of age as it increases the risk of iron-deficiency anemia (due to low iron content, displacement of iron rich foods, and inhibition of iron absorption) (45) and has smaller amounts of essential fatty acids and other essential nutrients than breastmilk. (62,22,87) Cow's milk contains a less digestible form of protein (22) and may cause occult blood loss in infants less than 6 months of age. (88,89)

3.25% cow's milk is appropriate for infants after 9-12 months of age who are eating iron-rich solid foods at most meals, and continues to be recommended for the second year of life. (62)

Partly Skimmed (2%, 1%) and Skim Cow's Milk

Lower fat milks are not appropriate milk sources before 2 years of age because they provide inadequate energy and essential fatty acids. (62) They are not recommended for children under 2 years of age unless under the supervision of a physician or dietitian.

Goat's Milk

Whole goat's milk

As with 3.25% cow's milk, whole goat's milk is not recommended for infants before 9-12 months of age because it is low in iron, low in essential fatty acids and other nutrients, and contains a less-digestible form of protein. (62) Fortified whole goat's milk may be offered in place of cow's milk for infants 9-12 months of age who are eating iron-rich foods at most meals. (62,90)

Pasteurized, whole goat's milk is available at grocery stores in Alberta, however it is hard to find goat's milk that is fortified with recommended amounts of vitamin D and folic acid. Children consuming non-fortified whole goat's milk may not meet their daily vitamin D requirements. Advise parents who offer non-fortified goat's milk to consult with their child's doctor or dietitian to see if their infant needs more than the 400 IU Vitamin D supplement recommended for all children.

Although unfortified goat's milk is low in folic acid, infants 9 – 12 months of age can get folate in their diet by eating foods such as vegetables (especially dark green vegetables), fruits, beans, poultry and meat, eggs, seafood, and grains.

Goat's milk is not recommended for cow's milk allergy or for lactose intolerance. Cow's and goat's milk are very similar in composition in terms of their protein, fat and carbohydrate content.(91) Due to the similarity in proteins, older infants and young children who have a food allergy to cow's milk protein are also likely to have an allergic reaction to goat's milk. (62,90)

Partly Skimmed Goat's Milk

As with cow's milk, lower fat goat's milk is not appropriate before 2 years of age. For more information on cow's and goat's milk refer to the *Nutrition Guideline*: [Milk](#)

Soy and Other Plant-Based Beverages

Plant-based beverages are not appropriate alternatives to breastmilk, 3.25% milk, or commercial infant formula in the first 2 years of life as they are generally lower in protein, fat, calories and iron. (3,62)

For children 2 years of age and older not consuming breastmilk, 3.25% milk, or commercial infant formula, *Eating Well with Canada's Food Guide* recommends a fortified soy beverage. (92) If parents choose another plant-based beverage as the main milk source for their child, advise them to look for a product that:

- provides at least 6 g of protein per 250 mL (1 cup) (93)
- provides at least 30% Daily Value of calcium and vitamin D per 250 mL (1 cup); and (93)
- contains less than 10g of sugar per 250 mL (1 cup). (94)

For more information refer to the *Nutrition Guideline*: [Plant-Based Beverages](#).

Infant Formulas – Product Listing

This information is for professional reference only. The type of protein, fat and carbohydrate is based on powder format unless otherwise specified. It is current as of January 8, 2018. Alberta Health Services does not endorse or recommend any specific commercial infant formula products.

Cow's Milk Infant Formulas for Healthy Term Infants

Cow's Milk Starter Formulas						
Standard Starter Formulas						
Product (Manufacturer)	Protein	Fat	Carbohydrate	Available format(s)	Nutritional Considerations	Comments
Earth's Best Organic with DHA & ARA	<ul style="list-style-type: none"> Skim milk 	<ul style="list-style-type: none"> Palm olein Soybean oil Coconut oil High oleic (sunflower or safflower) oil DHA & ARA 	<ul style="list-style-type: none"> Corn syrup solids Maltodextrin 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 12 mg/L Nucleotides: 24 mg/L Vitamin D₃ source unspecified 	<ul style="list-style-type: none"> 0-12 months Organic
Enfamil A+ with DHA and ARA (Mead Johnson)	<ul style="list-style-type: none"> Modified milk ingredients Whey:Casein ratio = 60:40 	<ul style="list-style-type: none"> Palm olein oil Soy oil Coconut oil High oleic sunflower oil Mono and Diglycerides DHA & ARA 	<ul style="list-style-type: none"> Lactose Corn syrup solids Maltodextrin GOS Polydextrose 	<ul style="list-style-type: none"> Powder Concentrate Ready-to-feed Nursettes 	<ul style="list-style-type: none"> Iron: 12.2 mg/L Nucleotides: 28 mg/L Vitamin D₃ from sheep's wool lanolin GOS 2.0 g/L PDX 2.0 g/L 	<ul style="list-style-type: none"> 0-12 months Kosher
Enfamil Lower Iron (Mead Johnson)	<ul style="list-style-type: none"> Modified milk ingredients Whey:Casein ratio = 60:40 	<ul style="list-style-type: none"> Palm olein oil Soy oil Coconut oil High oleic sunflower oil 	<ul style="list-style-type: none"> Lactose Corn syrup solids Maltodextrin 	<ul style="list-style-type: none"> Powder Concentrate 	<ul style="list-style-type: none"> Iron: 7.4 mg/L Nucleotides: 28 mg/L Vitamin D₃ from sheep's wool lanolin 	<ul style="list-style-type: none"> 0-12 months Kosher
Enfamil with Iron (Mead Johnson)	<ul style="list-style-type: none"> Modified milk ingredients Whey:Casein ratio = 60:40 	<ul style="list-style-type: none"> Palm olein oil Soy oil Coconut oil High oleic sunflower oil 	<ul style="list-style-type: none"> Lactose Corn syrup solids Maltodextrin 	<ul style="list-style-type: none"> Powder Concentrate 	<ul style="list-style-type: none"> Iron: 12.2 mg/L Nucleotides: 28 mg/L Vitamin D₃ from sheep's wool lanolin 	<ul style="list-style-type: none"> 0-12 months Kosher
Kirkland Omega + (Perrigo Nutritionals)	<ul style="list-style-type: none"> Skim milk powder 	<ul style="list-style-type: none"> Palm olein High oleic 	<ul style="list-style-type: none"> Lactose Maltodextrin 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 12 mg/L Nucleotides: 	<ul style="list-style-type: none"> 0-12 months Kosher

Cow's Milk Starter Formulas						
Standard Starter Formulas						
Product (Manufacturer)	Protein	Fat	Carbohydrate	Available format(s)	Nutritional Considerations	Comments
	<ul style="list-style-type: none"> Whey protein concentrate Whey:Casein ratio = 60:40 	(safflower or sunflower) oil <ul style="list-style-type: none"> Coconut oil Soybean oil Monoglycerides DHA & ARA 	<ul style="list-style-type: none"> GOS 		24 mg/L <ul style="list-style-type: none"> Vitamin D3 source unspecified GOS 2.9 g/ L 	<ul style="list-style-type: none"> Halal
Parent's Choice Lower Iron Milk-Based (Perrigo Nutritionals)	<ul style="list-style-type: none"> Skim milk Whey protein concentrate Whey:Casein ratio = 60:40 	<ul style="list-style-type: none"> Palm olein High oleic (safflower or sunflower) oil Coconut oil Soybean oil Monoglycerides 	<ul style="list-style-type: none"> Lactose 	<ul style="list-style-type: none"> Powder Concentrate 	<ul style="list-style-type: none"> Iron: 8 mg/L Nucleotides: 24 mg/L Vitamin D3 from sheep's wool lanolin 	<ul style="list-style-type: none"> 0-12 months Kosher Halal
Parent's Choice with Iron Milk-Based (Perrigo Nutritionals)	<ul style="list-style-type: none"> Skim milk powder Whey protein concentrate Whey:Casein ratio = 60:40 	<ul style="list-style-type: none"> Palm olein High oleic (safflower or sunflower) oil Coconut oil Soybean oil Monoglycerides 	<ul style="list-style-type: none"> Lactose 	<ul style="list-style-type: none"> Powder Concentrate 	<ul style="list-style-type: none"> Iron: 12 mg/L Nucleotides: 24 mg/L Vitamin D3 from sheep's wool lanolin 	<ul style="list-style-type: none"> 0-12 months Kosher Halal
Parent's Choice with Omega 3 & 6 (Perrigo Nutritionals)	<ul style="list-style-type: none"> Skim milk powder Whey protein concentrate Whey:Casein ratio = 60:40 	<ul style="list-style-type: none"> Palm oil or palm olein High oleic (safflower or sunflower) oil Coconut oil Soybean oil Monoglycerides DHA & ARA 	<ul style="list-style-type: none"> Lactose Maltodextrin GOS 	<ul style="list-style-type: none"> Powder Concentrate 	<ul style="list-style-type: none"> Iron: 12 mg/L Nucleotides: 24 mg/L GOS 2.9 g/ L Vitamin D3 from sheep's wool lanolin 	<ul style="list-style-type: none"> 0-12 months Kosher Halal
Parent's Choice Organic (with Omega 3 & 6) (Perrigo Nutritionals)	<ul style="list-style-type: none"> Organic skim milk Whey:Casein ratio = 60:40 	<ul style="list-style-type: none"> Organic palm oil or palm olein Organic high oleic (safflower or sunflower) oil Organic coconut oil Organic soybean oil 	<ul style="list-style-type: none"> Organic corn syrup solids Organic maltodextrin 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 12 mg/L Nucleotides: 24 mg/L Vitamin D3 from sheep's wool lanolin 	<ul style="list-style-type: none"> 0-12 months Kosher Halal Certified Organic by Quality Assurance International

Cow's Milk Starter Formulas						
Standard Starter Formulas						
Product (Manufacturer)	Protein	Fat	Carbohydrate	Available format(s)	Nutritional Considerations	Comments
		<ul style="list-style-type: none"> DHA & ARA 				
Parent's Choice Probiotic (with bifidobacterium Lactis) (Perrigo Nutritionals)	<ul style="list-style-type: none"> Skim milk powder Whey protein concentrate 	<ul style="list-style-type: none"> Palm olein Coconut oil Soybean oil High oleic (safflower or sunflower) oil Monoglycerides DHA & ARA 	<ul style="list-style-type: none"> Lactose Maltodextrin 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron 12 mg/L B. <i>lactis</i> cultures 130 million per 3 oz (100mL) Nucleotides 24mg/L 	<ul style="list-style-type: none"> 0-12 Months Kosher
Presidents Choice Lower Iron Infant Formula (Perrigo Nutritionals)	<ul style="list-style-type: none"> Skim milk Whey protein concentrate Whey:Casein ratio = 60:40 	<ul style="list-style-type: none"> Palm olein High oleic (safflower or sunflower) oil Coconut oil Soybean oil Monoglycerides 	<ul style="list-style-type: none"> Lactose 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 8 mg/L Nucleotides: 24 mg/L Vitamin D3 from sheep's wool lanolin 	<ul style="list-style-type: none"> 0-12 months Kosher Halal
Presidents Choice Infant Formula with Iron (Perrigo Nutritionals)	<ul style="list-style-type: none"> Skim milk Whey protein concentrate Whey:Casein ratio = 60:40 	<ul style="list-style-type: none"> Palm olein High oleic (safflower or sunflower) oil Coconut oil Soybean oil Monoglycerides 	<ul style="list-style-type: none"> Lactose 	<ul style="list-style-type: none"> Powder Concentrate 	<ul style="list-style-type: none"> Iron: 12 mg/L Nucleotides: 24 mg/L Vitamin D3 from sheep's wool lanolin 	<ul style="list-style-type: none"> 0-12 months Kosher Halal
President's Choice with Iron Omega + (Perrigo Nutritionals)	<ul style="list-style-type: none"> Skim milk powder Whey protein concentrate Whey:Casein ratio = 60:40 	<ul style="list-style-type: none"> Palm oil or palm olein High oleic (safflower or sunflower) oil Coconut oil Soybean oil Monoglycerides DHA & ARA 	<ul style="list-style-type: none"> Lactose Maltodextrin GOS 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 12 mg/L Nucleotides: 24 mg/L GOS 2.9 g/L Vitamin D3 from sheep's wool lanolin 	<ul style="list-style-type: none"> 0-12 months Kosher Halal
President's Choice Organics Omega + (Perrigo Nutritionals)	<ul style="list-style-type: none"> Organic reduced minerals whey Organic skim 	<ul style="list-style-type: none"> Organic palm oil or palm olein Organic high oleic (safflower or 	<ul style="list-style-type: none"> Organic corn syrup solids 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 12 mg/L Nucleotides: 24 mg/L Vitamin D3 from 	<ul style="list-style-type: none"> 0-12 months Kosher Halal Organic

Cow's Milk Starter Formulas						
Standard Starter Formulas						
Product (Manufacturer)	Protein	Fat	Carbohydrate	Available format(s)	Nutritional Considerations	Comments
	<ul style="list-style-type: none"> milk Organic whey protein concentrate Whey:Casein ratio = 60:40 	<ul style="list-style-type: none"> sunflower) oil Organic coconut oil Organic soybean oil DHA & ARA 			sheep's wool lanolin	
President's Choice Probiotic (with B. lactis probiotic and Iron Plus Omega 3 & Omega 6) (Perrigo Nutritionals)	<ul style="list-style-type: none"> Skim milk powder Whey protein concentrate Whey:Casein ratio = 60:40 	<ul style="list-style-type: none"> Palm oil or palm olein High oleic (safflower or sunflower) oil Coconut oil Soybean oil Monoglycerides DHA & ARA 	<ul style="list-style-type: none"> Lactose Maltodextrin 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 12 mg/L Nucleotides: 24 mg/L Vitamin D3 from sheep's wool lanolin B. lactis cultures 130 million per 100mL 	<ul style="list-style-type: none"> 0-12 months Kosher Halal
Similac Lower Iron Step 1 (Abbott)	<ul style="list-style-type: none"> Skim milk Whey protein hydrolysate and concentrate Whey:Casein ratio = 48:52 	<ul style="list-style-type: none"> High oleic sunflower oil Coconut oil Soy oil 	<ul style="list-style-type: none"> Lactose 	<ul style="list-style-type: none"> Powder Concentrate 	<ul style="list-style-type: none"> Iron: 6.5 mg/L Nucleotides: 72 mg/L Vitamin D₃ source unspecified No palm olein oil 	<ul style="list-style-type: none"> 0-12 months Kosher Halal Gluten free
Similac Iron Fortified Step 1 Regular (Abbott)	<ul style="list-style-type: none"> Skim milk Whey protein concentrate and hydrolysate Whey:Casein ratio = 48:52 	<ul style="list-style-type: none"> High oleic sunflower oil Coconut oil Soy oil 	<ul style="list-style-type: none"> Lactose 	<ul style="list-style-type: none"> Powder Concentrate 	<ul style="list-style-type: none"> Iron: 12 mg/L Nucleotides: 72 mg/L Vitamin D₃ source unspecified No palm olein oil 	<ul style="list-style-type: none"> 0-12 months Kosher Halal Gluten free
Similac Advance Step 1 with Omega - 3 and Omega-6 and lutein (Abbott)	<ul style="list-style-type: none"> Dry skim milk Whey protein concentrate and hydrolysate Whey:Casein ratio = 48:52 	<ul style="list-style-type: none"> High oleic (sunflower or safflower) oil Coconut oil Soy oil DHA & ARA 	<ul style="list-style-type: none"> Lactose GOS 	<ul style="list-style-type: none"> Powder Concentrate Ready to use Nursettes 	<ul style="list-style-type: none"> Iron: 12 mg/L Nucleotides: 72 mg/L GOS 4.0 g/ L Vitamin D₃ source unspecified No palm olein oil 	<ul style="list-style-type: none"> 0-12 months Kosher Halal Gluten free

Cow's Milk Starter Formulas						
Standard Starter Formulas						
Product (Manufacturer)	Protein	Fat	Carbohydrate	Available format(s)	Nutritional Considerations	Comments
Simply Kids Lower Iron (Perrigo Nutritionals)	<ul style="list-style-type: none"> • Skim milk • Whey protein concentrate • Whey:Casein ratio = 60:40 	<ul style="list-style-type: none"> • Palm olein • High oleic (safflower or sunflower) oil • Coconut oil • Soybean oil • Monoglycerides 	<ul style="list-style-type: none"> • Lactose 	<ul style="list-style-type: none"> • Powder • Concentrate 	<ul style="list-style-type: none"> • Iron: 8 mg/L • Nucleotides: 24 mg/L • Vitamin D3 from sheep's wool lanolin 	<ul style="list-style-type: none"> • 0-12 months • Kosher • Halal
Simply Kids with Iron (Perrigo Nutritionals)	<ul style="list-style-type: none"> • Skim milk powder • Whey protein concentrate • Whey:Casein ratio = 60:40 	<ul style="list-style-type: none"> • Palm olein • High oleic (safflower or sunflower) oil • Coconut oil • Soybean oil • Monoglycerides 	<ul style="list-style-type: none"> • Lactose 	<ul style="list-style-type: none"> • Powder • Concentrate 	<ul style="list-style-type: none"> • Iron: 12 mg/L • Nucleotides: 24 mg/L • Vitamin D3 from sheep's wool lanolin 	<ul style="list-style-type: none"> • 0-12 months • Kosher • Halal
Simply Kids Omega+ (Perrigo Nutritionals)	<ul style="list-style-type: none"> • Skim milk powder • Whey protein concentrate • Whey:Casein ratio = 60:40 	<ul style="list-style-type: none"> • Palm oil or palm olein • High oleic (safflower or sunflower) oil • Coconut oil • Soybean oil • Monoglycerides • DHA & ARA 	<ul style="list-style-type: none"> • Lactose • Maltodextrin • GOS 	<ul style="list-style-type: none"> • Powder • Concentrate 	<ul style="list-style-type: none"> • Iron: 12 mg/L • Nucleotides: 24 mg/L • GOS 2.9 g/ L • Vitamin D3 from sheep's wool lanolin 	<ul style="list-style-type: none"> • 0-12 months • Kosher • Halal

Cow's Milk Starter Formulas						
Partially Hydrolyzed Protein Lactose Reduced Formulas						
Product Manufacturer	Protein	Fat	Carbohydrate	Available format(s)	Nutritional Considerations	Comments
Enfamil Gentlease A+(Mead Johnson)	<ul style="list-style-type: none"> Partially hydrolyzed modified milk ingredients (soy) Whey protein concentrate Whey:Casein ratio = 60:40 	<ul style="list-style-type: none"> Palm olein oil Soy oil Coconut oil High oleic sunflower oil DHA & ARA 	<ul style="list-style-type: none"> Corn syrup solids (~80%) Lactose (~20%) 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 12.2 mg/mL Lactose-reduced Vitamin D₃ from sheep's wool lanolin 	<ul style="list-style-type: none"> 0-12 months Kosher Not recommended for allergy prevention
Parent's Choice Gentle with Omega 3 & 6 (Perrigo Nutritionals)	<ul style="list-style-type: none"> Skim milk powder Whey protein hydrolysate Whey:Casein ratio = 60:40 	<ul style="list-style-type: none"> Palm olein Coconut oil Soybean oil High oleic (safflower or sunflower) oil Monoglycerides DHA & ARA 	<ul style="list-style-type: none"> Corn syrup solids (~75%) Lactose (~25%) 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 12 mg/L Lactose-reduced Vitamin D₃ from sheep's wool lanolin 	<ul style="list-style-type: none"> 0-12 months Kosher Halal Not recommended for allergy prevention
President's Choice Gentle with Omega 3 & 6 (Perrigo Nutritionals)	<ul style="list-style-type: none"> Skim milk powder Whey protein hydrolysate Whey:Casein ratio = 60:40 	<ul style="list-style-type: none"> Palm olein Coconut oil Soybean oil High oleic (safflower or sunflower) oil Monoglycerides DHA & ARA 	<ul style="list-style-type: none"> Corn syrup solids (~75%) Lactose (~25%) 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 12 mg/L Lactose-reduced Vitamin D₃ from sheep's wool lanolin 	<ul style="list-style-type: none"> 0-12 months Kosher Halal Not recommended for allergy prevention
Similac Partially Broken Down Protein with Omega 3 and 6	<ul style="list-style-type: none"> Whey protein hydrolysate Whey:Casein ratio = 100:0 	<ul style="list-style-type: none"> High oleic safflower oil Coconut oil Soy oil DHA & ARA 	<ul style="list-style-type: none"> Corn maltodextrin Sucrose 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 10.1 mg/L Nucleotides: 73 mg/L Vitamin D₃ from sheep's wool lanolin No palm olein oil 	<ul style="list-style-type: none"> 0 – 12 months Kosher Halal Manufacturer does not recommend for allergy prevention

Cow's Milk Starter Formulas						
Partially Hydrolyzed Protein 100% Whey Formulas						
Product Manufacturer	Protein	Fat	Carbohydrate	Available format(s)	Nutritional Considerations	Comments
Good Start (Nestlé)	<ul style="list-style-type: none"> Partially hydrolyzed reduced minerals whey protein concentrate Whey:Casein ratio = 100:0 	<ul style="list-style-type: none"> Palm olein oil Soybean oil Coconut oil High oleic (safflower or sunflower) oil 	<ul style="list-style-type: none"> Lactose Corn maltodextrin 	<ul style="list-style-type: none"> Powder Concentrate Ready-to-feed 	<ul style="list-style-type: none"> Iron: 10 mg/L Nucleotides: 26 mg/L Vitamin D₃ from sheep's wool lanolin 	<ul style="list-style-type: none"> 0-12 months For infants at high risk of allergy, may reduce risk if used for the first 6 months
Good Start with Omega-3 & Omega-6 and GOS (Nestlé)	<ul style="list-style-type: none"> Partially hydrolyzed whey protein concentrate Whey:Casein ratio = 100:0 	<ul style="list-style-type: none"> Palm olein oil Soybean oil Coconut oil High oleic (safflower or sunflower) oil DHA & ARA 	<ul style="list-style-type: none"> Lactose Corn maltodextrin GOS syrup 	<ul style="list-style-type: none"> Powder Concentrate Ready-to-feed Nurser 	<ul style="list-style-type: none"> Iron: 10 mg/L Nucleotides: 26 mg/L GOS 3.4 g/L Vitamin D₃ from sheep's wool lanolin 	<ul style="list-style-type: none"> 0-12 months For infants at high risk of allergy, may reduce risk if used for the first 6 months
Good Start Probiotic (Nestlé)	<ul style="list-style-type: none"> Partially hydrolyzed reduced minerals whey protein concentrate Whey:Casein ratio = 100:0 	<ul style="list-style-type: none"> Palm olein oil Soybean oil Coconut oil High oleic (safflower or sunflower) oil DHA & ARA 	<ul style="list-style-type: none"> Lactose Corn maltodextrin 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 10 mg/L Nucleotides: 26 mg/L 130 million <i>B. lactis</i> cultures per 3 oz (100 mL) bottle Vitamin D₃ from sheep's wool lanolin 	<ul style="list-style-type: none"> 0-12 months For infants at high risk of allergy, may reduce risk if used for the first 6 months To preserve the probiotic cultures, follow the instructions on the label carefully. Instructions may differ from other powdered infant formulas.

Cow's Milk Follow-up Formulas						
Product Manufacturer	Protein	Fat	Carbohydrate	Available format(s)	Nutritional Considerations	Comments
Enfamil 2 (Mead Johnson)	<ul style="list-style-type: none"> Milk ingredients Whey:Casein ratio = 20:80 	<ul style="list-style-type: none"> Palm olein oil Soy oil Coconut oil High oleic sunflower oil 	<ul style="list-style-type: none"> Corn syrup solids Lactose 	<ul style="list-style-type: none"> Powder Concentrate 	<ul style="list-style-type: none"> Iron: 12.0 mg/L Vitamin D₃ from sheep's wool lanolin 	<ul style="list-style-type: none"> 6+ months Kosher
Enfamil 2 A+ (Mead Johnson)	<ul style="list-style-type: none"> Milk ingredients Whey:Casein ratio = 20:80 	<ul style="list-style-type: none"> Palm olein oil Soy oil Coconut oil High oleic sunflower oil DHA & ARA 	<ul style="list-style-type: none"> Corn syrup Lactose GOS Polydextrose 	<ul style="list-style-type: none"> Powder Concentrate Ready to Feed 	<ul style="list-style-type: none"> Iron: 10.1 mg/L GOS 2.0 g/ L Polydextrose 2.0 g/L Vitamin D₃ from lanolin 	<ul style="list-style-type: none"> 6+ months Kosher
Follow-Up Transition (with Iron and Calcium) (Nestlé)	<ul style="list-style-type: none"> Skim milk powder Whey:Casein ratio = 18:82 	<ul style="list-style-type: none"> Palm olein oil Soybean oil Coconut oil High oleic (safflower or sunflower oil) 	<ul style="list-style-type: none"> Lactose Corn syrup Corn maltodextrin 	<ul style="list-style-type: none"> Powder Concentrate Ready-to-feed 	<ul style="list-style-type: none"> Iron: 12 mg/L Vitamin D₃ from sheep's wool lanolin 	<ul style="list-style-type: none"> 6+ months Kosher
Good Start 2 (Nestlé)	<ul style="list-style-type: none"> Partially hydrolyzed reduced mineral whey protein concentrate Whey:Casein ratio = 100:0 	<ul style="list-style-type: none"> Palm olein Soybean oil Coconut oil High oleic (safflower or sunflower oil) 	<ul style="list-style-type: none"> Lactose Corn maltodextrin 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 13 mg/L Calcium enriched Vitamin D₃ from sheep's wool lanolin 	<ul style="list-style-type: none"> 6+ months
Good Start 2 with Omega-3 & Omega-6 (Nestlé)	<ul style="list-style-type: none"> Partially hydrolyzed reduced mineral whey protein concentrate Whey:Casein ratio = 100:0 	<ul style="list-style-type: none"> Palm olein oil Soybean oil Coconut oil High oleic (safflower or sunflower) oil DHA & ARA 	<ul style="list-style-type: none"> Lactose Corn maltodextrin GOS 	<ul style="list-style-type: none"> Powder Concentrate Ready to Feed 	<ul style="list-style-type: none"> Iron: 13 mg/L GOS 3.4g/L Calcium enriched Vitamin D₃ from sheep's wool lanolin 	<ul style="list-style-type: none"> 6+ months
Good Start 2 Probiotic (Nestlé)	<ul style="list-style-type: none"> Partially hydrolyzed reduced mineral whey protein 	<ul style="list-style-type: none"> Palm olein oil Soybean oil Coconut oil High oleic (safflower or 	<ul style="list-style-type: none"> Lactose Corn maltodextrin 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 13 mg/L Calcium-enriched Vitamin D₃ from sheep's wool lanolin 	<ul style="list-style-type: none"> 6+ months To preserve the probiotic cultures, follow the instructions

Cow's Milk Follow-up Formulas						
Product Manufacturer	Protein	Fat	Carbohydrate	Available format(s)	Nutritional Considerations	Comments
	<ul style="list-style-type: none"> concentrate Whey:Casein ratio=100:0 	<ul style="list-style-type: none"> sunflower) oil DHA & ARA 			<ul style="list-style-type: none"> 130 million <i>B. lactis</i> cultures per 3 oz (100 mL) bottle 	<ul style="list-style-type: none"> on the label carefully. Instructions may differ from other powdered infant formulas.
Parent's Choice 2 Growing Up (Perrigo Nutritionals)	<ul style="list-style-type: none"> Skim milk powder Whey protein concentrate Whey:Casein ratio = 60:40 	<ul style="list-style-type: none"> Palm olein Coconut oil High oleic (safflower or sunflower) oil Soybean oil 	<ul style="list-style-type: none"> Lactose Corn syrup solids 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 12 mg/L Vitamin D3 from sheep's wool lanolin 	<ul style="list-style-type: none"> 6+ months Kosher Halal
President's Choice with Iron & Calcium (Perrigo Nutritionals)	<ul style="list-style-type: none"> Skim milk powder Whey protein concentrate Whey:Casein ratio = 60:40 	<ul style="list-style-type: none"> Palm olein Coconut oil High oleic (safflower or sunflower) oil Soybean oil Monoglycerides 	<ul style="list-style-type: none"> Lactose Corn syrup 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 12 mg/L Vitamin D3 from sheep's wool lanolin 	<ul style="list-style-type: none"> 6+ months Kosher Halal
President's Choice Omega+ 2 (Perrigo Nutritionals)	<ul style="list-style-type: none"> Skim milk powder Whey protein concentrate Whey:Casein ratio = 60:40 	<ul style="list-style-type: none"> Palm olein Coconut oil High oleic (safflower or sunflower) oil Soybean oil Monoglycerides DHA & ARA 	<ul style="list-style-type: none"> Lactose Corn syrup solids 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 12 mg/L Vitamin D3 from sheep's wool lanolin 	<ul style="list-style-type: none"> 6+ months Kosher Halal
Similac Advance Step 2 with Omega-3 and Omega-6 and GOS (Abbott)	<ul style="list-style-type: none"> Skim milk Whey protein concentrate Whey:Casein ratio=48:52 	<ul style="list-style-type: none"> High oleic (sunflower or safflower) oil Coconut oil Soy oil DHA & ARA 	<ul style="list-style-type: none"> Lactose GOS 	<ul style="list-style-type: none"> Concentrate 	<ul style="list-style-type: none"> Iron: 12 mg/L Nucleotides: 72 mg/L GOS 4.0 g/L Vitamin D₃: source unspecified No palm olein oil 	<ul style="list-style-type: none"> 6+ months Kosher

Infant Formulas for Special Conditions

Soy Starter Formulas						
Product Manufacturer	Protein	Fat	Carbohydrate	Available format(s)	Nutritional Considerations	Comments
Earth's Best Organic Soy with Omega 3 & 6 (Perrigo Nutritionals)	<ul style="list-style-type: none"> Organic soy protein 	<ul style="list-style-type: none"> Organic palm oil or palm olein Organic coconut oil Organic high oleic (safflower or sunflower) oil Organic soybean oil DHA & ARA 	<ul style="list-style-type: none"> Organic corn syrup solids 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 12 mg/L Lactose-free Vitamin D3 from sheep's wool lanolin 	<ul style="list-style-type: none"> 0-12 months Kosher Halal Organic Vegetarian
Enfamil Soy A+ (Mead Johnson)	<ul style="list-style-type: none"> Soy protein isolate 	<ul style="list-style-type: none"> Palm olein oil Soy oil Coconut oil High oleic sunflower oil DHA & ARA 	<ul style="list-style-type: none"> Corn syrup solids 	<ul style="list-style-type: none"> Powder Concentrate 	<ul style="list-style-type: none"> Iron: 12.2 mg/L Lactose-free Vitamin D₃ from sheep's wool lanolin 	<ul style="list-style-type: none"> 0-24 months Kosher Vegetarian
Good Start Alsoy with Omega-3 & Omega-6 (Nestlé)	<ul style="list-style-type: none"> Soy protein isolate 	<ul style="list-style-type: none"> Palm olein oil Soybean oil Coconut oil High oleic (safflower or sunflower) oil DHA & ARA 	<ul style="list-style-type: none"> Corn maltodextrin Sucrose 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 12 mg/L Lactose-free Vitamin D₃ from sheep's wool lanolin 	<ul style="list-style-type: none"> 0+ months Kosher Halal Vegetarian
Similac Isomil (Abbott)	<ul style="list-style-type: none"> Soy protein isolate 	<ul style="list-style-type: none"> High oleic (sunflower) oil Soy oil Coconut oil 	<ul style="list-style-type: none"> Corn syrup Sucrose 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 12 mg/L Lactose-free Vitamin D₃ source unspecified No palm olein oil 	<ul style="list-style-type: none"> 0+ months Kosher Halal Vegetarian
Similac Isomil with Omega-3 and Omega-6 (Abbott)	<ul style="list-style-type: none"> Soy protein isolate 	<ul style="list-style-type: none"> High oleic (sunflower) oil Coconut oil Soy oil DHA & ARA 	<ul style="list-style-type: none"> Corn syrup Sucrose 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 6.8 mg/L Lactose-free Vitamin D₃ source unspecified No palm olein oil 	<ul style="list-style-type: none"> 0+ months Kosher Halal Gluten free Vegetarian

Soy Follow-up Formulas						
Product Manufacturer	Protein	Fat	Carbohydrate	Available format(s)	Nutritional Considerations	Comments
Good Start Alsoy 2 with Omega-3 & Omega-6 (Nestlé)	<ul style="list-style-type: none"> Soy protein isolate 	<ul style="list-style-type: none"> Palm olein oil Soybean oil coconut oil High oleic (safflower or sunflower) oil DHA & ARA 	<ul style="list-style-type: none"> Corn maltodextrin Sucrose 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 13 mg/L Calcium-enriched Lactose-free Vitamin D₃ from sheep's wool lanolin 	<ul style="list-style-type: none"> 6+ months Kosher Vegetarian
Similac Isomil Step 2 (Abbott)	<ul style="list-style-type: none"> Soy protein isolate 	<ul style="list-style-type: none"> High oleic (sunflower) oil Coconut oil Soy oil 	<ul style="list-style-type: none"> Corn syrup Sucrose 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 12 mg/L Lactose-free Vitamin D₃ source unspecified No palm olein oil 	<ul style="list-style-type: none"> 6+ months Kosher Halal Vegetarian

Lactose-Free Formulas						
Product Manufacturer	Protein	Fat	Carbohydrate	Available format(s)	Nutritional Considerations	Comments
Enfamil Lactose Free A+ (Mead Johnson)	<ul style="list-style-type: none"> Milk protein isolate Whey:Casein ratio = 20:80 	<ul style="list-style-type: none"> Palm olein oil Soy oil Coconut oil High oleic sunflower oil DHA & ARA 	<ul style="list-style-type: none"> Corn syrup solids Maltodextrin 	<ul style="list-style-type: none"> Concentrate 	<ul style="list-style-type: none"> Iron: 12.2 mg/L Nucleotides: 28 mg/L Lactose-free Vitamin D₃ from sheep's wool lanolin 	<ul style="list-style-type: none"> 0-12 months Kosher For infants with lactose intolerance Not for galactosemia
Kirkland Sensitive to Lactose (Perrigo Nutritional)	<ul style="list-style-type: none"> Milk protein isolate Whey protein concentrate 	<ul style="list-style-type: none"> Palm olein Soy oil Coconut oil High oleic (safflower or sunflower) oil DHA & ARA Monoglycerides 	<ul style="list-style-type: none"> Corn syrup solids 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 12 mg/L Nucleotides: 24 mg/L 95% reduced lactose Vitamin D₃ source unspecified 	<ul style="list-style-type: none"> 0-12 months Kosher For infants with lactose intolerance Not for galactosemia
Parent's Choice Sensitive to Lactose (Perrigo Nutritional)	<ul style="list-style-type: none"> Whey protein concentrate Milk protein isolate 	<ul style="list-style-type: none"> Palm olein Coconut oil Soybean oil High oleic (safflower or 	<ul style="list-style-type: none"> Corn syrup solids 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron 12mg/L 95% reduced lactose Vitamin D₃ source unspecified 	<ul style="list-style-type: none"> 0-12 months Kosher Halal For infants with lactose

Lactose-Free Formulas						
Product Manufacturer	Protein	Fat	Carbohydrate	Available format(s)	Nutritional Considerations	Comments
		<ul style="list-style-type: none"> sunflower) oil DHA & ARA 				<ul style="list-style-type: none"> intolerance Not for galactosemia
President's Choice Sensitive to Lactose (Perrigo Nutritionals)	<ul style="list-style-type: none"> Whey protein concentrate Milk protein isolate 	<ul style="list-style-type: none"> Palm olein Coconut oil Soybean oil High oleic (safflower or sunflower) oil DHA & ARA Monoglycerides 	<ul style="list-style-type: none"> Corn syrup solids 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron 12mg/L 95% reduced lactose Vitamin D₃ source unspecified Nucleotides 24mg/L 	<ul style="list-style-type: none"> 0-12 months Kosher Halal For infants with lactose intolerance Not for galactosemia
Similac Sensitive Lactose Sensitivity (Abbott)	<ul style="list-style-type: none"> Milk protein isolate Whey:Casein ratio = 18:82 	<ul style="list-style-type: none"> High oleic (sunflower or safflower) oil Coconut oil Soy oil 	<ul style="list-style-type: none"> Corn syrup Sucrose 	<ul style="list-style-type: none"> Powder Concentrate 	<ul style="list-style-type: none"> Iron: 12 mg/L Nucleotides: 72 mg/L Lactose-free Vitamin D₃ source unspecified 	<ul style="list-style-type: none"> 0-12 months Kosher For infants with lactose intolerance Not for galactosemia

Extensively Hydrolyzed Casein Formulas						
Product Manufacturer	Protein	Fat	Carbohydrate	Available format(s)	Nutritional Considerations	Comments
Similac Alimentum with Omega-3 & Omega-6 (Abbott)	<ul style="list-style-type: none"> Casein hydrolysate Free amino acids Small peptides Whey:Casein ratio = 0:100 	<ul style="list-style-type: none"> High oleic Safflower oil MCT oil (modified coconut oil or palm kernel oil) Soy oil DHA & ARA 	<ul style="list-style-type: none"> Sucrose Modified corn starch Corn maltodextrin 	<ul style="list-style-type: none"> Powder Ready-to-feed 	<ul style="list-style-type: none"> Iron: 12 mg/L Hypoallergenic Lactose-free Corn-free MCTs (medium chain triglycerides) are shortened fatty acids for better fat absorption or utilization Vitamin D₃ source unspecified 	<ul style="list-style-type: none"> 0 + months Use under medical supervision for infants with diagnosed allergies, including <u>cow's milk or soy</u> protein and/or fat malabsorption. For infants at high risk of allergy, may reduce risk if used for the first 6 months Gluten free

Extensively Hydrolyzed Casein Formulas						
Product Manufacturer	Protein	Fat	Carbohydrate	Available format(s)	Nutritional Considerations	Comments
Nutramigen A+ (Mead Johnson)	<ul style="list-style-type: none"> Hydrolyzed casein Amino acids Whey:Casein ratio = 0:100 	<ul style="list-style-type: none"> Palm olein oil Soy oil Coconut oil High oleic sunflower oil DHA & ARA 	<ul style="list-style-type: none"> Corn syrup solids Modified corn starch 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 12.4 mg/L Hypoallergenic Lactose-free Vitamin D₃ from sheep's wool lanolin 	<ul style="list-style-type: none"> 0 + months Use under medical supervision for infants with a diagnosed <u>cow's milk protein</u> allergy For infants at high risk of allergy, may reduce risk if used for the first 6 months
Nutramigen A+ with LGG (Mead Johnson)	<ul style="list-style-type: none"> Hydrolyzed casein Amino acids Whey:Casein ratio = 0:100 	<ul style="list-style-type: none"> Palm olein oil Soy oil Coconut oil High oleic sunflower oil DHA & ARA 	<ul style="list-style-type: none"> Corn syrup solids Modified corn starch 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 12.4 mg/L Hypoallergenic Lactose-free Lactobacillus rhamnosus GG (LGG) 1.35 X 10⁷ cultures per 100mL Vitamin D₃ from sheep's wool lanolin 	<ul style="list-style-type: none"> 0 + months Use under medical supervision for infants with a diagnosed <u>cow's milk protein</u> allergy For infants at high risk of allergy, may reduce risk if used for the first 6 months
Pregestimil A+ (Mead Johnson)	<ul style="list-style-type: none"> Hydrolyzed casein Amino acids Whey:Casein ratio = 0:100 	<ul style="list-style-type: none"> MCT oil: (fractionated coconut oil) Soy oil Corn oil High oleic vegetable (safflower &/or sunflower) oil DHA & ARA 	<ul style="list-style-type: none"> Corn syrup solids Modified corn starch 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 12.2 mg/L Hypoallergenic Lactose-free MCT (medium chain triglycerides) Vitamin D₃ from sheep's wool lanolin No palm olein oil 	<ul style="list-style-type: none"> 0 + months Use under medical supervision for infants with a fat malabsorption and/or a diagnosed <u>cow's milk protein</u> allergy For infants at high risk of allergy, may reduce risk if used for the first 6 months Available in pharmacies behind the counter.

Amino Acid-based Formulas						
Product Manufacturer	Protein	Fat	Carbohydrate	Available format(s)	Nutritional Considerations	Comments
Neocate Infant DHA/ARA (Nutricia)	<ul style="list-style-type: none"> 100% free amino acids Whey:Casein ratio = N/A 	<ul style="list-style-type: none"> Refined vegetable oil (MCT, high oleic sunflower oil, sunflower oil, canola oil) DHA & ARA 	<ul style="list-style-type: none"> Corn syrup solids 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 10 mg/L Hypoallergenic Lactose-free Milk protein-free Vitamin D₃ from sheep's wool lanolin No palm olein oil 	<ul style="list-style-type: none"> Prescribed formula; only under direction of physician or dietitian For cow's milk allergy and multiple food protein intolerance. Suitable for infants unable to tolerate soy or hydrolysate based formulas or other conditions where an elemental formula is indicated. Halal
Puramino A+ (Formerly Nutramigen AA) (Mead Johnson)	<ul style="list-style-type: none"> 100% free amino acids Whey:Casein ratio = N/A 	<ul style="list-style-type: none"> Palm olein oil Soy oil Coconut oil High oleic sunflower oil MCT:2.8% LCT:97% DHA & ARA 	<ul style="list-style-type: none"> Corn syrup solids: Tapioca starch: 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 12.2 mg/L Hypoallergenic Lactose-free Vitamin D₃ from sheep's wool lanolin 	<ul style="list-style-type: none"> 0-24 months Use under medical supervision For infants with severe cow's milk protein allergy or multiple food allergies Order through pharmacist

Infant Formulas That Become Thickened						
Product Manufacturer	Protein	Fat	Carbohydrate	Available format(s)	Nutritional Considerations	Comments
Enfamil Thickened A+ (Mead Johnson)	<ul style="list-style-type: none"> Milk ingredients Whey:Casein ratio = 20:80 	<ul style="list-style-type: none"> Palm olein oil Soy oil Coconut oil High oleic sunflower oil DHA & ARA 	<ul style="list-style-type: none"> Rice starch Lactose Maltodextrin Corn syrup solids Polydextrose GOS 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 12.2 mg/L Formula thickens in stomach due to the substitution of rice starch for a portion of the carbohydrate content Polydextrose 2.0 g/L GOS 2.0 g/L Vitamin D₃ from 	<ul style="list-style-type: none"> 0-12 months Kosher Use under physician guidance for mild gastroesophageal reflux

Infant Formulas That Become Thickened						
Product Manufacturer	Protein	Fat	Carbohydrate	Available format(s)	Nutritional Considerations	Comments
					sheep's wool lanolin	

Post-Discharge Formulas for Premature Infants						
Product Manufacturer	Protein	Fat	Carbohydrate	Available format(s)	Nutritional Considerations	Comments
Enfamil Enfacare A+ (Mead Johnson)	<ul style="list-style-type: none"> Whey protein concentrate Non-fat milk Whey:Casein ratio = 60:40 	<ul style="list-style-type: none"> High oleic vegetable oil Soy oil MCT oil (fractionated coconut oil) DHA & ARA 	<ul style="list-style-type: none"> Corn syrup solids Lactose 	<ul style="list-style-type: none"> Powder Ready-to-feed nursette bottles 	<ul style="list-style-type: none"> Iron: 13.3 mg/L Nucleotides: 31 mg/L Higher levels of protein, calcium, phosphorus and other vitamins and minerals per 100 kcal than standard term formulas 22 kcal/30 mL Vitamin D₃ from sheep's wool lanolin 	<ul style="list-style-type: none"> Kosher Post-discharge formula for premature or low birth weight infants Use only under the supervision of a physician or dietitian Use until recommended by physician or dietitian
Similac Neosure Omega-3 & Omega-6 (Abbott)	<ul style="list-style-type: none"> Non-fat milk Whey protein concentrate Whey:Casein ratio = 50:50 	<ul style="list-style-type: none"> Soy oil High oleic safflower oil MCT oil (fractionated coconut or palm kernel oil) Coconut oil DHA & ARA 	<ul style="list-style-type: none"> Corn syrup solids Lactose 	<ul style="list-style-type: none"> Powder 	<ul style="list-style-type: none"> Iron: 14 mg/L Nucleotides: 72 mg/L Higher levels of protein, calcium, phosphorus and other vitamins and minerals per 100 kcal than standard term formula 22.5 kcal/30 mL Vitamin D₃ source unspecified 	<ul style="list-style-type: none"> Kosher Halal Post-discharge formula for premature infants Use only under the supervision of a physician or dietitian Use until recommended by physician or dietitian

Human Milk					
Product	Protein	Fat	Carbohydrate	Nutritional Considerations	Comments
Human milk	<ul style="list-style-type: none"> Whey:Casein ratio= 60:40 	<ul style="list-style-type: none"> Human milk fat <ul style="list-style-type: none"> Oleic acid Linoleic acid Palmitoleic acid Linolenic acid Arachidonic acid Docosahexaenoic acid 	<ul style="list-style-type: none"> Lactose 	<ul style="list-style-type: none"> Amounts of DHA and ARA vary depending on maternal diet Nutritional composition changes with time as the infant's needs change As milk composition relies primarily on the mother's nutrient stores, advise the mother consume more nutrients to conserve her stores. Most often, her nutritional needs can be met with a balanced diet following Eating Well with Canada's Food Guide that recommends 2-3 additional food guide servings each day. (62) Refer to <i>Nutrition Guideline: Nutrition for the Breastfeeding Mother</i>. Soon to be released. 	<ul style="list-style-type: none"> Exclusive breastfeeding for the first six months is accepted as the nutrition standard for infants and is promoted by WHO as a global public health recommendation. (62) Breastfeeding remains an important source of nutrition for infants as complementary foods are introduced. Breastfeeding for up to two years and beyond should be supported. Breastfeeding is rarely contraindicated. Situations where a mother should not breastfeed include: <ul style="list-style-type: none"> infant inborn error of metabolism (e.g., maple syrup urine disease, galactosemia) or maternal: <ul style="list-style-type: none"> HIV and human T-cell lymphotropic viruses Herpes lesion on both breasts if breastmilk cannot be collected without contamination In rare cases of untreated, active tuberculosis (consultation with Provincial TB Services recommended) Severe illness that prevents her from caring for her infant Use of certain drugs/ treatments incompatible with breastmilk Although rarely contraindicated, there are times when breastfeeding may not be possible, suitable, preferred or sufficient.

Other Milks

Cow's, Goat's and Soy Milks (71)						
Product	Protein	Fat	Carbohydrate	Available format(s)	Nutritional Considerations	Comments
3.25% Cow's Milk	<ul style="list-style-type: none"> Whey:Casein ratio= 20:80 8g/250mL 	<ul style="list-style-type: none"> Cow's milk fat 8g/250mL 	<ul style="list-style-type: none"> Lactose 	<ul style="list-style-type: none"> Powder Evaporated (concentrate) Ready-to-drink 	<ul style="list-style-type: none"> Low iron content 	<ul style="list-style-type: none"> Is an appropriate alternative for full-term infants after 9-12 months of age (12 months corrected age for pre-term infants) who are consuming a variety of iron rich solid foods
Partly Skimmed (1% or 2%) Cow's Milk	<ul style="list-style-type: none"> Whey:Casein ratio= 20:80 9g/250mL 	<ul style="list-style-type: none"> Cow's milk fat 1% - 3g/250mL 2% - 5g/250mL 	<ul style="list-style-type: none"> Lactose 	<ul style="list-style-type: none"> Powder Evaporated (concentrate) Ready-to-drink 	<ul style="list-style-type: none"> Lower in calories than whole cow's milk Low in total and essential fatty acids Low iron content 	<ul style="list-style-type: none"> Not recommended before 2 years of age Under 2 years, use only under the supervision of a physician or dietitian.
Skim Cow's Milk	<ul style="list-style-type: none"> Whey:Casein ratio= 20:80 9g/250mL 	<ul style="list-style-type: none"> Cow's milk fat 0.2g/250 mL 	<ul style="list-style-type: none"> Lactose 	<ul style="list-style-type: none"> Powder Evaporated (concentrate) Ready-to-drink 	<ul style="list-style-type: none"> Lower in calories than whole cow's milk Low in total and essential fatty acids Low iron content 	<ul style="list-style-type: none"> Do not use before 2 years of age due to inadequate energy and essential fats.
Whole Goat's Milk	<ul style="list-style-type: none"> Whey:Casein ratio= 14:86 9g/250mL 	<ul style="list-style-type: none"> Goat's milk fat 7 - 11g*/250mL <p>* Values obtained from products available in the market and the Canadian Nutrient File.</p>	<ul style="list-style-type: none"> Lactose 	<ul style="list-style-type: none"> Powder Evaporated (concentrate) Fluid 	<ul style="list-style-type: none"> Low in essential fatty acids, iron, and folic acid May not be fortified with vitamin D. 	<ul style="list-style-type: none"> Not recommended before 9-12 months of age or infants with cow's milk allergy. Fortified whole milk is appropriate for infants 9-12 months who are consuming a variety of iron rich solids. Lower fat goat's milk is not recommended for children under 2 years of age.
Soy and Other Plant Based Beverages	<ul style="list-style-type: none"> Soy 6-8g/250mL Pea 8g/250 mL Rice 0-2g/250mL Almond 1-2g/250mL Hemp 2-5g/250mL 	<ul style="list-style-type: none"> Soy 0-4g/250mL Pea 4.7g/250mL Rice 1-3g/250mL Almond 2-5g/250mL Hemp 4-7g/250mL 	Unsweetened: <ul style="list-style-type: none"> Soy ~4 g/250mL Pea 6g/250 mL Rice 1-3g/250mL Almond ~1g/250 mL 	Examples: <ul style="list-style-type: none"> Soy beverage Pea Rice Potato Oat Almond Hemp Coconut Cashew 	<ul style="list-style-type: none"> Nutritional content varies between product brands Plant based beverages are usually lower in protein, fat, calories, and iron compared to soy formula. (3) 	<ul style="list-style-type: none"> Not appropriate alternatives to breastmilk, commercial infant formula or pasteurized whole milk in the first 2 years of life. (62) If an infant requires soy formula, provide soy follow-up formula as the main milk until 2 years of age.

Glossary

Allergy: An allergy is an inappropriate or exaggerated reaction of the immune system to otherwise harmless substances that, in the majority of people, cause no symptoms. It is applied to all types of immunologically-mediated hypersensitivity reactions. (95)

Casein: Casein is the main protein in milk. (96) Milk protein fractions are subdivided into casein and whey proteins. The caseins constitute ~76–86% of the protein in cow's milk. (97)

Certified organic: Infant formulas certified as organic in this document have received organic certification from a certification body that has been accredited by the Canadian Food Inspection Agency (CFIA) to certify organic products; or that is recognized under an organic trade arrangement with a foreign competent authority under the *Organic Products Regulations, 2009*. (32) The organic certification does not represent specific claims about the health, safety and nutrition of the organic product. (33)

Colic: Periods of irritability, fussiness, or crying that start and stop without obvious cause and with no evidence of failure to thrive.(22) A commonly used definition of colic is that the episodes last three or more hours per day and occur at least three days per week for at least one week. (98) Infant colic typically starts before three to four weeks of age and resolves by four months. (22)

Congenital lactase deficiency: Inborn error of metabolism in which the lactase enzyme is absent or severely reduced at birth. It is an extremely rare disorder. (99)

Docosahexaenoic Acid (DHA) and Arachidonic Acid (ARA): These are long-chain polyunsaturated fatty acids that have a role in brain and retina development. (22) DHA is an omega 3 fatty acid. ARA is an omega 6 fatty acid.

Extensively hydrolyzed casein protein formula: is a formula where the proteins have been hydrolyzed (“digested”) by enzymatic activity to yield single amino acids and small peptides to achieve a product that has few proteins capable of initiating an immunological response. (100)

Follow-up formulas: Follow-up or second-stage infant formulas are formulas intended for infants 6 months of age or older who are consuming solid foods. (61,62)

Galactosemia: Lactose in food is broken down by the body into glucose and galactose. Galactosemia is a rare genetic condition of carbohydrate metabolism in which a blocked or inactive enzyme does not allow breakdown of galactose, causing serious illness in infancy. (101)

Gastroesophageal reflux: is the passage of gastric contents into the esophagus, with or without regurgitation ("spitting up") (22).

GOS (galactooligosaccharide): A non-digestible dietary fibre; a prebiotic that selectively stimulates the growth and/or activity of one or more bacteria in the colon and thus improves host health. (102)

Halal: Halal is an Arabic term meaning “permitted, allowed, lawful, or licit” when used in relationship to food or drink means permissible for consumption by a Muslim. (103) Food is determined to be Halal based on how it is obtained, processed and other factors. (103)

High allergy risk: at least one first-degree relative (parent or sibling) with a diagnosed atopic disease (such as atopic dermatitis, asthma, allergic rhinitis, or food allergy).

Hypoallergenic: means "less allergenic." Some experts consider an infant formula hypoallergenic if it can be tolerated by 90% of the individuals allergic to the parent protein (e.g. cow's milk or soy protein). (104)

Kosher: In Hebrew, kosher means “fit” or “proper”. Food is Kosher or acceptable to eat, when prepared in accordance with the conditions set by Judaic law. (103)

Lactose intolerance: the inability to digest lactose into the monosaccharides glucose and galactose for absorption due to low levels of lactase enzyme in the brush border of the duodenum. There are three types of lactase deficiency: congenital, primary, and secondary. (99)

MCTs: Medium chain triglycerides are shortened fatty acids that are effectively absorbed by infants with fat malabsorption. (105)

Nucleotides: Nucleotides are molecules that, when joined together, make up the structural units of ribonucleic acid (RNA) and deoxyribonucleic acid (DNA). (106) Nucleotides play key roles in many biological processes and are suggested to be conditionally essential nutrients in infancy. (36)

Partially hydrolyzed protein formula: infant formula which has a portion of the cow’s milk protein partially broken down.

Phytoestrogens: non-steroidal chemicals which are structurally similar to estrogens. (76)

Prebiotics: Prebiotics are nondigestible food components that beneficially affect the host by selectively stimulating the growth and/or activity of one or a limited number of bacteria in the colon and thereby improving host health. (56)

Probiotics: Probiotics are live microorganisms which, when administered in adequate amounts, confer a health benefit on the host. (53) Probiotics can have potential health benefits (54) for infants (55,56) if specific strains are consumed at proper doses. (54)

Regurgitation (spitting up): the passive movement of stomach contents into the pharynx or mouth. (107)

Whey to casein ratio: Whey and casein are two milk proteins. The whey to casein ratio represents the relative amounts of these two milk proteins in each type of infant formula.

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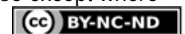
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