

## **Drinks for young children marketed as ‘growing-up’ and ‘toddler milk’**

### **Key points:**

Many infant formula companies extend their product range into the second and third year of life by marketing products as ‘growing-up’ and ‘toddler’ milks labelled as stage 3 and stage 4 ‘formula’. There are no specific compositional, marketing or labelling regulations for these products.

The NHS and the European Food Safety Authority say **these products are not a necessary part of a young child’s diet.**

Drinks marketed as growing-up and toddler milks are ultra-processed foods and the combination of flavours that can be tasted (the taste profile), does not accustom young children to the real taste of the unprocessed and minimally processed foods that will offer them a healthy diet during childhood.

Drinks marketed as growing-up and toddler milks can provide substantial amounts of free sugars to the diet and are a burden on family budgets. If used daily, they could typically provide 400-500g of extra free sugar a month to a young child’s diet and would cost 2-3 times as much as an equivalent amount of cows’ milk.

We recommend that:

- ‘Growing-up’ should not be allowed in product names since this is a claim suggesting a product is needed for adequate growth.
- Companies should not be allowed to market milk drinks for children over 1 year of age by extending a formula range, including through using misleading stage numbers or similar branding, labelling and packaging to infant formula.
- Any drink marketed for children over 1 year of age should be called a ‘drink for young children’ and these products should be included in any recommendations from the UK Government on reducing sugar in foods and drinks marketed to young children.
- All drinks marketed for young children should have mandatory front-of-pack labelling highlighting the free sugar content in proportion to a young child’s dietary requirements.
- Nutrition statements and health claims should not be allowed on these products.

## Introduction

In the first year of life infants will receive breastmilk, or a first infant formula as their main milk drink. Breastfeeding is recommended in the second year of life (and beyond), but where breastmilk is not given then young children can have a full-fat animal milk (or an appropriate unsweetened, fortified plant-based milk alternative) as the main milk drink. From 2 years of age if children eat well, they can have a semi-skimmed animal milk.

Whilst it is not possible for companies to increase the total number of infants having infant formula in many western countries, it is possible for them to extend the age of child for which products are marketed. Brand-extended formula milk ranges for children over 1 year of age and 2 years of age have been heavily marketed over the past decade and have become an increasingly prominent source of revenue for breastmilk substitute manufacturers (Rollins et al, 2016). Drinks marketed for use by children aged 1 year and over includes products often called 'growing-up' or 'toddler' milks aimed at toddlers and young children from 1 year of age up to about 3 years of age and milk drinks marketed for older children from 3 years of age. Many of these milks are branded and packaged to extend an existing series of infant and follow-on formula milks which can be confusing for parents, and which allows infant formula manufacturers to advertise their brands directly to families in a context in which infant formula advertising is against the law.

Drinks marketed as 'growing-up' and 'toddler milks' are considered an ultra-processed food (Monteiro et al., 2017) and are mainly made up of powdered milk or individual milk components, added sugars, and vegetable oil (Pomeranz et al, 2018). Sweet drink consumption is associated with an increased risk of overweight and obesity among children (Malik et al, 2013), including among young children under 36 months of age (Welsh et al, 2005). It has long been established that these milks targeted for young children are not necessary and this was highlighted in the World Health Assembly (WHA) resolution 39.28 in 1986 and in 2010 (WHA resolution 63.23) where it was agreed that nutrition claims should not be made on foods for infants and young children unless agreed by Codex<sup>1</sup> or in national legislation. In 2016 WHA resolution 69.9 it was again recognised that any milk drink marketed for children under 3 years was a breastmilk substitute and therefore should not be advertised or promoted.

Despite national and international recommendations that these drinks for young children are not necessary they form a substantial part of the global infant milk market. Drinks marketed for children as 'growing-up' and 'toddler' milks are considerably more expensive than cows' milk and they are the fastest growing sector of the infant milk market. These products are heavily advertised globally and in 2019, toddler milks accounted for 48% of total infant milk sales by volume globally, compared with 24% for first milk, 22% for follow on formula and 5.6% for specialised milks (Baker et al, 2020).

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<sup>1</sup> The Codex Alimentarius is a collection of internationally adopted food standards and related texts presented in a uniform manner. These food standards and related texts aim at protecting consumers' health and ensuring fair practices in the food trade. Codex standards and related texts are not a substitute for, or alternative to national legislation. Every country's laws and administrative procedures contain provisions with which it is essential to comply.

## Drinks marketed as growing-up and toddler milks in the UK

Drinks marketed as 'growing-up' and 'toddler' milks for children in the UK are replacements for breastmilk or plain cows' milk. They are offered by infant milk manufacturers for children from 1 year of age, usually called 'Stage 3' milks, and some manufacturers also offer a 'Stage 4' product aimed at children from 2-3 years of age. Most of these are available both in a powdered format and as ready to feed versions. Some are made available in cartons with a straw for a child to drink without the need to decant into a cup. Alpro also produce a 'growing-up' milk but do not manufacture other formula milks.

**Table 1: Drinks marketed as 'growing-up' and 'toddler' milks for children in the UK.**

Product	Manufacturer	Target age group
Alpro Junior Growing Up Soya Drink (ready to feed version only)	Alpro (Danone)	1 to 3 years
Aptamil 3 Toddler Milk	Nutricia (Danone)	1 to 2 years
Aptamil Organic 3 Toddler Milk	Nutricia (Danone)	From 12 <sup>th</sup> month
Aptamil Profutura 3 Growing Up Milk	Nutricia (Danone)	1 to 3 years
Aptamil 4 Toddler Milk	Nutricia (Danone)	2-3 years
Cow & Gate 3 Growing Up Milk	Nutricia (Danone)	1 to 2 years
Cow & Gate 4 Growing Up Milk	Nutricia (Danone)	2-3 years
Cow & Gate 3 Simply A2 Toddler Milk	Nutricia (Danone)	From 1 year
Hipp Combiotic 3 Growing Up Milk	Hipp	1+ years
Hipp Combiotic 4 Growing Up Milk	Hipp	2+ years
Kendamil Classic Toddler Milk	Kendal Nutricare	From 12-36 months
Kendamil Goats' Milk Toddler Milk	Kendal Nutricare	From 12-36 month
Kendamil Organic Toddler Milk	Kendal Nutricare	From 12-36 months
Nannycare Growing Up Milk	Nannycare Ltd	1-3 years
Paediasure Shake	Abbott Nutrition	1-10 years
Piccolo Growing Up Milk	Piccolo	12 <sup>th</sup> month to 3 years
SMA Advanced Growing Up Milk	Nestlé	12 <sup>th</sup> month to 3 years
SMA Little Steps Growing Up Milk	Nestlé	1 to 3 years
SMA Organic Growing Up Milk	Nestlé	12 <sup>th</sup> month to 3 years
SMA Pro Growing Up Milk	Nestlé	1 to 3 years

*Data correct at April 2021.*

**Packaging of drinks marketed as ‘growing-up’ and ‘toddler’ milks**

As can be seen in the images on this page manufacturers cross-brand their ‘growing-up’ and ‘toddler’ milks to infant formula and follow-on formula. This gives parents the impression that there is a natural progression from stages 1 to stages 2,3, and potentially 4.



## **Current guidance on milk choice for young children 1-4 years.**

By the age of 1 year, children should be consuming a varied diet. Where children are not receiving breastmilk in the second year of life, whole cows' milk should be their main drink to meet their nutrient requirements. The health departments in the UK consistently recommend that children under 2 years of age should drink whole milk, but that after the age of 2 children can move to semi-skimmed milk if they are eating well.

The NHS says:

*'Growing-up and toddler milks are marketed as an alternative to whole cows' milk for toddlers and children over 1 year. There's no evidence to suggest that these products provide extra nutritional benefits for young children'*

(NHS, 2021).

In 2013 the European Food Safety Authority (EFSA) produced a scientific opinion which stated: *'No unique role of young-child formulae with respect to the provision of critical nutrients in the diet of infants and young children living in Europe can be identified, so that they cannot be considered as a necessity to satisfy the nutritional requirements of young children when compared with other foods that may be included in the normal diet of young children.'* (EFSA, 2013).

## **Potential risks associated with the use of milk drinks marketed as 'growing-up' and 'toddler' milks.**

Drinks marketed as growing-up and toddler milks are a concern for a number of reasons. They are aimed at children who are still growing and developing, who will have specific nutrient needs and for whom cocktails of ingredients and added nutrients may have particular but not fully understood consequences.

Confusion over fortification of foods and drinks stems from the success of some national and international policies which have been able to raise the intake of a particular nutrient across a population relatively rapidly – for example, in the case of iodisation of salt. However, there is an enormous difference between mandatory fortification of foods or drinks managed and debated by public health agencies, and voluntary fortification which is unregulated. It is therefore not surprising that there is confusion about the usefulness of fortified foods and drinks and about the claims made in marketing. Significant funding of research by manufacturers showing benefits from use of these products can also confuse the picture.

The main areas of concern related to drinks marketed as 'growing-up' and 'toddler' milks are:

- The free sugar content of these products is high, and the taste profile of ultra-processed milk drinks encourages the liking of a sweet taste and does not accustom young children to the tastes of the unprocessed and minimally processed foods that will provide a healthy diet in childhood.

- The products are expensive. There are implications for both the diet of the toddler and the rest of the family if expensive unnecessary products are purchased which reduce the amount of household income available for buying unprocessed and minimally processed food.

### **Free sugars in drinks marketed as ‘growing-up’ and ‘toddler milks’**

The majority of the carbohydrate in processed drinks marketed as ‘growing-up’ and ‘toddler’ milks is sugars since the ingredients for the majority of products are skimmed milk, lactose, maltodextrin and vegetable oils. Drinks marketed as ‘growing-up’ milks and ‘toddler’ milks contain free sugars from the addition of extra lactose and maltodextrins. Maltodextrin is frequently used as a carbohydrate source and is mainly derived from maize (corn) or potatoes. Maltodextrin is produced from starch by breaking up the carbon chains to change its structure. Maltodextrin is easily digestible, being absorbed as rapidly as glucose in the body, and can be either moderately sweet or almost flavourless. It is commonly used as an ingredient in a wide variety of processed foods, particularly where bulk without sweetness is needed at low cost.

The change from breastmilk or infant formula to cows’ milk involves a taste transition for infants who should become accustomed to a less sweet taste in their main milk drink. Given that the development of taste preference is influenced by both genetic factors and experience, parents can influence their children’s taste preferences through the food choices they make for them (Savage et al, 2007; Benton, 2004). It is unclear whether repeated exposure to sweet drinks in infancy and toddlerhood might contribute to the development of a preference for sweet drinks in later life. The naturally occurring sugar in milk is lactose, but this does not give milk an overly sweet taste. Adding sugars to fortified milks serves a number of purposes for manufacturers:

- The sweet taste it gives the product is attractive to children.
- The addition of extra carbohydrate allows the protein and fat content to be moderated.
- Sugars are cheap ingredients, particularly components such as maltodextrin.

Manufacturers do not provide information on the free sugar content of drinks marketed as ‘growing-up’ and ‘toddler’ milks or allow the consumer to see clearly how much additional sugar they provide compared with whole animal milk.

Plain animal milk has a composition which may be protective against the development of insulin resistance and chronic disease (Pereira et al, 2002) and therefore if alternatives to this increase risk of chronic disease, this is of concern to public health. The consumption of free sugars can stimulate excessive postprandial hypoglycaemia and insulinaemia, which may be linked to risks of obesity, type 2 diabetes and coronary heart disease (Brand-Miller et al, 2013).

Free sugars content can be calculated by subtracting the sugars expected to be found in the main milk source used in the product from the total carbohydrate content. Free sugar in Alpro Junior Growing Up soya drink can be calculated by subtracting sugars in unsweetened soya milk from total carbohydrates. To aide comparisons between products given that manufacturers suggest different portion sizes of between 300ml and 450ml, the daily free sugar intake has been calculated on the basis of a daily portion size of 400ml/day for products marketed for 1-

2 years (and those marketed for 1-3 years) and 350ml/day for products marketed for those aged 2-3 years. Paediasure shake recommend a daily portion of 225ml so this is used here.

The total amount of free sugars that these drinks marketed as 'growing-up' and 'toddler' milks may provide is shown in Table 2. Drinking 400ml/day of many of these milks could result in free sugar intakes close to or even in excess of half a kilo a month, with monthly free sugar intakes from stage 3 'growing-up' and 'toddler' milks averaging almost 100g a week. This is equivalent to about 400kcal/week that could be unnecessarily consumed by young children.

### **Impact of consumption of 'growing-up' and 'toddler' milks on the recommended free sugar intake of young children**

It is currently recommended that free sugars provide no more than 5% of energy to the diet (SACN, 2016). Daily consumption of drinks marketed as 'growing-up' and 'toddler' milks may result in young children having significantly more than 5% of their energy intake as free sugars. We have used 1g free sugar = 4 kcal in these calculations with the average energy requirements for each age highlighted in the table and using the portion sizes highlighted in Table 2. The contribution of free sugars to total energy intake of children 1-3 years is shown in Table 3. All those shaded provide more than the total daily amount of free sugar recommended from the milk drink alone, aside from the contribution from the rest of the child's diet.

**Table 2: Free sugars intake from drinks marketed as ‘growing-up’ and ‘toddler’ milks**

Product	Sugars present	Daily portion size (ml)	Free sugar intake per 100ml (g)	Free sugar intake per day (g)	Free sugar intake per week (g)	Free sugar intake per month (30 days) (g)
Alpro Junior Growing Up Soya Drink	Maltodextrin, Sugar, Fructose	400	7.9	31.6	221.20	948
Paediasure Shake (Vanilla flavour)	Corn syrup, Sucrose, Maltodextrin	225	8.5	19.1	133.9	573
SMA Pro 3 Growing Up Milk	Lactose, Maltodextrin	400	4.4	17.6	123.2	528
Aptamil Profutura 3 Growing Up Milk	Lactose, Maltodextrin	400	4.1	16.4	114.8	492
Aptamil 3 Toddler Milk	Lactose Maltodextrin	400	4.1	16.4	114.8	492
SMA Little Steps Growing Up Milk	Maltodextrin Lactose	400	4.0	16.0	112	480
Cow & Gate 3 Growing Up Milk	Lactose, Maltodextrin	400	3.9	15.6	109.2	468
Cow & Gate Simply A2 Toddler Milk	Lactose Maltodextrin	400	3.8	15.2	96.6	456
SMA Organic Growing Up Milk	Lactose Maltodextrin	400	3.7	14.8	103.6	444
Aptamil 3 Organic Toddler Milk	Lactose Maltodextrin	400	3.3	13.2	92.4	396
Aptamil 4 Toddler Milk	Lactose, Maltodextrin	350	3.3	11.6	80.9	348
SMA Advanced Growing Up Milk	Lactose	400	3.3	13.2	92.4	396
Kendamil Organic Toddler Milk	Lactose	400	3.2	12.8	102	384
Kendamil Goat Toddler Milk	Lactose	400	2.9	11.6	81.2	348
Piccolo Growing Up Milk	Maltodextrin, Lactose	400	2.9	11.6	81.2	348
Kendamil Classic Toddler Milk	Lactose	400	2.8	11.2	78.4	336
Nannycare Growing Up Milk	Lactose	400	2.8	11.2	78.4	336
Cow & Gate 4 Growing Up Milk	Lactose, Maltodextrin	350	1.9	6.7	46.6	201
Hipp Combiotic 4 Growing Up Milk	Lactose	350	0.5	1.8	12.3	54
Hipp Combiotic 3 Growing Up Milk	Lactose	400	0.4	1.6	11.2	48

Data correct April 2021



**Table 3: Free sugars intake as a percentage of total average energy requirements at ages 1, 2 and 3 years from drinks marketed as ‘growing-up’ and ‘toddler’ milks**

Product	Energy from free sugar as % of total energy first to second birthday	Energy from free sugar as % of total energy at second to third birthday	Energy from free sugar as % of total energy at third to fourth birthday
	Estimated average requirement for energy = 741kcal/day	Estimated average requirement for energy = 968kcal/day	Estimated average requirement for energy = 1124kcal/day
Alpro Junior Growing Up Soya Drink	17.1	13.1	11.2
Paediasure Shake (Vanilla flavour)	10.3	7.9	6.8
SMA Pro 3 Growing Up Milk	9.5	7.3	6.3
Aptamil 3 Toddler Milk	8.9	6.8	5.8
Aptamil Profutura 3 Growing Up Milk	8.9	6.8	5.8
SMA Little Steps Growing Up Milk	8.6	6.6	5.7
Cow & Gate 3 Growing Up Milk	8.4	6.5	5.6
Cow & Gate Simply A2 Toddler Milk	8.2	6.3	5.4
SMA Organic Growing Up Milk	8.0	6.1	5.3
Aptamil 3 Organic Toddler Milk	7.1	5.5	4.7
SMA Advanced Growing Up Milk	7.1	5.5	4.7
Kendamil Organic Toddler Milk	6.9	5.3	4.6
Aptamil 4 Toddler Milk	N/A	4.8	4.1
Kendamil Goat Toddler Milk	6.3	4.8	4.1
Piccolo Growing Up Milk	6.3	4.8	4.1
Kendamil Classic Toddler Milk	6.1	4.6	4.0
Nannycare Growing Up Milk	6.1	4.6	4.0
Cow & Gate 4 Growing Up Milk	N/A	2.8	2.4
Hipp Combiotic 4 Growing Up Milk	N/A	0.7	0.6
Hipp Combiotic 3 Growing Up Milk	0.9	0.7	0.6

Shaded areas indicate where total daily amount of free sugar from the milk drink alone provides more than the recommended 5% of total energy.

## Cost of drinks marketed as 'growing-up' and 'toddler' milks

Table 4 gives the cost of drinks marketed as growing-up and toddler milks in the UK correct at April 2021. We calculated costs based on the volume of powder that would be achieved by reconstituting the powder based on the scoop weight and the standard of 1 scoop to 30ml of water (or 1 scoop to 38ml of water for PaediaSure Shake) and recalculating to the cost of powder that would then be present in 100ml of made-up product.

Costs per day or per week have been based on the rounded cost per 100ml, recalculated to the daily or weekly volume of milk based on average intakes of 400ml for stage 3 and Alpro Junior growing Up Soya Drink and 350ml for stage 4 drinks marketed as 'growing-up' and 'toddler' milks. The costs are our estimates based on the best information we have available and are given as a guide.

**Table 4: Cost of drinks marketed as 'growing-up' and 'toddler' milks available in the UK compared to cows' milk**

Product	Cost per 100ml	Daily portion size (ml)	Cost per day	Cost per week	Cost per month (30 days)
<b>Cows' milk</b>	<b>7p</b>	<b>400</b>	<b>28p</b>	<b>£1.96</b>	<b>£8.40</b>
Paediasure Shake (Vanilla flavour)	51p	225	£1.15	£8.05	£34.50
Kendamil Goat Toddler Milk	40p	400	£1.60	£11.20	£48.00
Nannycare Growing Up Milk	30p	400	£1.20	£8.40	£36.00
Aptamil Profutura 3 Growing Up Milk	27p	400	£1.08	£7.56	£32.40
SMA Advanced Growing Up Milk	24p	400	96p	£6.72	£28.80
Piccolo Growing Up Milk	24p	400	96p	£6.72	£28.80
Aptamil 3 Organic Toddler Milk	22p	400	88p	£6.16	£26.40
SMA Organic Growing Up Milk	20p	400	80p	£5.60	£24.00
Kendamil Organic Toddler Milk	20p	400	80p	£5.60	£24.00
Aptamil 3 Toddler Milk	19p	400	76p	£5.32	£22.80
SMA Pro 3 Growing Up Milk	17p	400	68p	£4.76	£20.40
Cow & Gate Simply A2 Toddler Milk	17p	400	68p	£4.76	£20.40
Aptamil 4 Toddler Milk	17p	350	60p	£4.20	£18.00
Alpro Junior Growing Up Soya Drink	14p	400	56p	£3.92	£16.80
Cow & Gate 3 Growing Up Milk	13p	400	52p	£3.64	£15.60
Kendamil Classic Toddler Milk	13p	400	52p	£3.64	£15.60
Cow & Gate 4 Growing Up Milk	13p	350	46p	£3.22	£13.80
Hipp Combiotic 4 Growing Up Milk	13p	350	46p	£3.22	£13.80
Hipp Combiotic 3 Growing Up Milk	13p	400	52p	£3.64	£15.60
SMA Little Steps Growing Up Milk	12p	400	48p	£3.36	£14.40

*Prices based on April 2021 data*

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