

submissions

From: Maine Norberg [REDACTED]
Sent: Thursday, 14 April 2016 1:17 PM
To: submissions
Subject: Submission on Consultation Paper – Proposal P1028 Infant formula
Attachments: Iodine content of IF (2).doc

Categories: Colleen

Please find attached a commentary on the iodine content of Infant Formulas I compiled in my past position as an early childhood dietitian. Whilst some of the details have changed (especially the names/branding of some of the formulas), the amounts of IF specified in the NH&MRC 2012 Infant Feeding Guidelines is the same as the 2003 amounts used for my calculations. I am concerned that Formula fed infants cannot obtain an adequate iodine intake within the current levels of permitted added iodine (1.2 micrograms/100kj to 10 micrograms/100kj). There needs to be a review of the adequacy of the permitted levels of iodine in infant formulas.

I summarised my comments as:

“Average daily formula requirements for full-term infants requirements seem to be based on formula alone which does not apply around or after the age of 6 months when solids are recommended. Once solids are commenced and the infant is eating family foods at 12 months, the recommendation is for the equivalent of 600mls/day for milk. So there needs to be a gradual decline in the amount of formula offered, especially after 9 months, as increasing amounts of solid foods are consumed. It is therefore unlikely that a child who is eating well between 9 and 12 months will be having the amounts of formula recommended in the above table.

Also, when comparing the above recommended amounts with the amounts needed to meet iodine requirements, the amount of formula needed to provide adequate iodine appears to be between two and 6 times more than is recommended by the NH&MRC. This is especially so in the case of smaller infants, who do not appear to be able to meet their iodine requirements from formula.

There is a greater than three fold variation in iodine content of infant formula, and the highest levels are still only added at about 50% of the recommended maximum of about 28 micrograms per 100ml.”

Regards,
Maine Norberg

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Iodine content of Infant Formula

Formula	Iodine content from Formula companies (µg/100ml)	Volume needed per 24 hrs to provide AI (mls)	Iodine Nutrient Reference Values ¹ .
Amcal Infant (Starter) (Sigma)	4	2250	<p>Adequate Intake (AI): 0-6 months – 90 µg/day 7-12 months – 110 µg/day</p> <p>Upper level of intake (highest level likely to pose no adverse effects): “not possible to establish. Source of intake should be (breast) milk, formula and food only”.</p> <p>Infant Formula Regulations stipulates 1.2 to 10 µg/100 kj Iodine is to be added to formula. IF provide about 280 kj/100mls therefore recommended range of added iodine is approx = 3 to 28 µg/100ml.</p> <p>“The iodine concentration of human milk varies widely due to maternal iodine intake. Mean breast milk iodine concentrations are reported as ranging from 5.4 to 2170 microg/L (median 62 microg/L) in worldwide studies.” Dorea JG. Iodine nutrition and breast feeding. J Trace Elem Med Biol. 2002;16(4):207-20.</p>
Amcal Follow On (Sigma)	4	2750	
Bellamy's Organic Starter	4.5	2000	
Bellamy's Follow On	4	2750	
Isomil Soy Infant Formula (Abbott)	10	900	
Karicare Infant Formula (Nutricia)	12	750	
Karicare Gold Plus (Nutricia)	12	750	
Karicare Follow-On (Nutricia)	11	1000	
Karicare Gold Plus Follow-On (Nutricia)	12	920	
Karicare goat 1 (Nutricia)	8.1	1110	
Karicare goat 2 (Nutricia)	8.7	1035	
Karicare soy (Nutricia)	13	690	
Karicare delact (Nutricia)	9.5	1055	
Karicare AR (Nutricia)	12	750	
Karicare HA gold from birth (Nutricia)	12	750	
NAN Pro 1 Gold (Nestle)	13	690	
NAN Pro 2 Gold (Nestle)	16	690	
NAN HA 1 GOLD with Bifidus (Nestle)	10	900	
NAN HA 2 GOLD with Bifidus (Nestle)	9.6	1150	
Lactogen (Nestle)	10	900	
Nurture 1 starter (Heinz)	10	900	
Nurture 1 gold starter (Heinz)	10	900	
Nurture 2 Follow On (Heinz)	10.6	1040	
Nurture 2 gold (Heinz)	10.6	1040	
Novalac 1 Starter (Bayer)	5.2	1730	
Novalac 2 Follow On (Bayer)	6.5	1690	
Novalac Colic (Bayer)	5.9	1525	
Novalac Diarrhoea (Bayer)	6.5	1385	
Novalac AR (Bayer)	5.9	1525	
Novalac HA (Bayer)	9.8	918	
Novalac Constipation (Bayer)	5.6	1607	
Novalac Sweet Dreams (Bayer)	5.9	1525	
SMA (Wyeth*)	10	900	
S-26 [®] Original Newborn* (from birth)	10	900	
S-26 GOLD [®] Alpha Pro [®] * (from birth)	10	900	
S-26 AR Formula all ages *	10	900	
S-26 LF Formula –all ages*	10	900	
S-26 Soy Formula all ages*	12	750	
S-26 GOLD [®] Progress* (from 6 months)	12	915	
S-26 [®] Original Progress* (from 6 months)	12	915	

Rationale: The AI for 0-6 months was calculated by multiplying the average intake of breast milk (0.78 L/day) by the average concentration of iodine in breast milk (115 µg/L), and rounding. The figure used for breast milk was that recommended by FAO:WHO (2001) which is also consistent with the study of Johnson et al (1990) in New Zealand. The AI for 7-12 months was extrapolated from that of younger infants using a metabolic weight ratio. (NH&MRC).

Reference: 1. Australian Department of Health and Ageing, NH&MRC, and the New Zealand Ministry of Health. Nutrient Reference Values for Australia and New Zealand. Commonwealth of Australia, 2006.

Recommended daily amounts of Infant Formula

Age	Recommended amount of IF ² .	Amount for female child on 3 rd centile for weight (mls)	Amount for female child on 97 th centile for weight (mls)	Amount for male child on 3 rd centile for weight (mls)	Amount for male child on 97 th centile for weight (mls)
5 days	150mls/kg	390	645	375	675
3 months	120mls/kg	504	840	550	900
6 months	120mls/kg	690	1080	750	1190
12 months	90-100mls/kg (taken as 95mls/kg)	740	1100	800	1200

2. NH&MRC Infant feeding guidelines 2003.

COMMENTS

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