The Association of UK Dietitians

Policy Statement

Introducing a Cup to an Infant's Diet

Summary

This BDA Policy Statement provides guidance for the provision of consistent advice on introducing a cup to the diet of under 5-years healthy infants. It includes an overview of the evidence underpinning the timing of the introduction of a cup as well as recommendations including the type of cup.

Inappropriate introduction and use of a cup to an infant, through delayed timing of introduction, prolonged use of a bottle alongside a cup, the incorrect style of cup and the provision of unsuitable contents (in terms of nutritional content and quantity) contribute to health issues in children and subsequent risk of non-communicable diseases in adult life.

Recommendations

- A cup can be introduced to an infant at around 5-6 months of age, once the infant is sitting up and able to hold their head steady.
- An open cup should fully replace a bottle at around 1 year of age.
- The cup should be made of appropriate food safe material, have two handles and preferably no lid.
- A free-flow, lidded beaker (that lets the liquid run out when held upside down) is also suitable, but the lid should be removed to make an open cup as soon as the infant has learnt how to drink. Cups and beakers with non-drip valves are not suitable.

- A small amount of water or milk (breast or formula) should be offered in a cup initially. From 1 year of age, full fat cows' milk can be offered. Milk and water are the best drinks for children.

- Juice or squash are not required by infants, but if they are given they should be diluted 1 part pure juice to at least 10 parts water, given only at mealtimes and in an open cup.
- For children over 1 year of age, flavoured milk and smoothies should also only be given with meals (not between meals) and from an open cup.

- Avoid giving fizzy, sugary drinks and those containing caffeine (such as tea and coffee).

- A lidded cup or bottle should not be given to infants to help them get to sleep.

- An infant should never be left alone when drinking and they should always be sitting upright. Solid food (e.g. rusk or baby rice) should never be put into a cup or bottle.

Discussion

Research has shown that in the U.K. guidance on introducing a cup is not being followed and that bottles continue to be commonly used (either solely or in addition to a cup) beyond the appropriate age [1]. Additionally in breast fed babies, there may also be a delay in the introduction of a cup.

A cup should be introduced to an infant when they are developmentally ready at around 5-6 months of age [1,2]

Infants and children that continue with prolonged bottle use have an increased risk of early childhood caries (ECC), especially if they sleep with a bottle at night. The use of a night time bottle is one of the strongest predictor variables for caries (alongside the presence of plaque due to poor toothbrushing) [3,4]

Other risk indicators include the frequent drinking of sugared non-milk drinks and sipping from a bottle during the day [5]. Both non-milk extrinsic sugar (NMES) intake and the frequency with which it is consumed are associated with caries development. If bottles are used for liquids other than milk or water there is a higher risk of severe early childhood caries (S-ECC) [4,6.]

Drinks high in NMES sugars, such as fruit juices (including baby juice) are not required by infants. If given, sugar-containing drinks such as juice should be diluted 1 part pure juice to at least 10 parts water [1.] Providing at a mealtime in an open cup, not at snack times, avoids

additional ‘sugar contact occasions’ with teeth. This is particularly important as, up to 6 years of age the tooth enamel is still being developed and is relatively soft.

A baby bottle is frequently used in combination with a cup [7]. Complete cessation of bottle use at 1 year and the use of a cup and non-sugar containing drinks reduces ECC [8]. Prolonged use of lidded cups with bill-shaped extensions also show increased risk of ECC as they encourage sugary drinks to be in contact with teeth over long periods of the day [9]. Removing the lid to make an open cup as soon as possible, and certainly when the infant has learnt how to drink, reduces the risk of ECC.

Cups and beakers that can be turned upside down and do not allow liquid to flow out freely contain non-drip (spill) valves. These encourage a baby to suck and don’t teach them how to develop the skill of sipping, which is important in the development of the muscles used for babbling and talking. An open cup is the most appropriate choice to encourage skill development[10].

Observational studies support associations between prolonged bottle feeding, excessive milk intake and iron deficiency anaemia. Bottle-fed children have an increased probability of iron depletion compared with cup-fed children, beginning after the age of 16 months and, in the second and third years of life, there is an almost 2-fold association between iron depletion and daytime bottle-feeding compared with cup feeding [11]. Excessive volumes of milk, as provided by prolonged bottle feeding can limit an infant’s appetite and so may limit their intake of iron-rich foods. An open cup should fully replace a bottle at around 1 year of age to help establish a good eating pattern and limit excess milk. Good sources of iron-containing foods such as red meats, beans, pulses and green vegetables should also be promoted.

Likewise, a prolonged use of bottles and excessive intake of liquids, including milk is emerging as a risk factor for obesity in young children [12,13]. Each additional month of bottle use has been shown to correspond to a 3% increase in the odds of being a higher BMI category [13]. Encouraging the use of an open cup for infants will help avoid prolonged bottle-feeding and excessive liquid intake.

This guidance is in line with Department of Health 2011 guidelines[1] and NICE Public Health Guidance 11, Maternal and Child Nutrition (2008, Reviewed 2014) [2].

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