Managing weaning problems and complementary feeding

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Abstract

This review article aims to pull together the latest research and guidelines regarding weaning infants from breast or bottlefeeding onto solid foods. It summarizes the guidelines from the World Health Organisation, Department of Health and the British Dietetic Association. It also attempts to capture the changes to guidelines as the understanding of an infants development has changed. Guidelines tend to apply to normally developing children and do not take into account aspects such as developmental delay, physical conditions, environmental factors and syndromes effecting feeding. The aim of the article is to raise the level of awareness of these factors in health professionals so that they can help contain parental anxiety and expectations of their infant's feeding. The article explores the research on when to wean, what to wean with, along with factors that influence the disruption of stages.

Keywords anxiety; baby led weaning; complementary feeding; development; expectations; weaning

Definition of weaning

By weaning we mean the transitional process from exclusive milk feeding (breast or formula) to the consumption of family foods. This may also be termed complementary feeding (CF). This is an area characterized by strongly held beliefs, and guaranteed to inspire heated debate amongst parents and health professionals alike. The timing, the type and quantity of foods offered and the extent to which an infant should be in control of their own intake are all hot topics currently. What follows is an attempt to sort the recommendations from the reality and to suggest some amendments to the guidelines based on available evidence and clinical practice.

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When to wean?

Recommendations

Until 2003, recommendations in the UK were to introduce solid foods between 4 and 6 months of age. However, in 2001, the World Health Organisation had issued a revised recommendation that mothers should breastfeed exclusively for approximately 6 months (WHO, 2001) and the Department of Health (DH) guidelines were amended accordingly in 2003. The rationale provided for this was that a baby's gut does not mature until around 6 months and that introducing complementary foods before this increases the risk of infections and allergies (DH 'Birth to Five'). Where parents are considering starting the process earlier than 6 months, the DH advises consultation with a health professional. The British Dietetic Association (BDA) takes a less prescriptive stand, suggesting an 'individual' weaning age dictated by a child's specific developmental stage (BDA, 2011). Both the Department of Health and the BDA have provided guidelines on the signs to indicate a child's readiness to eat solid foods. Despite the known implications for long-term health of early nutrition, the evidence base for changing the recommendations in 2003 was subjected to very little investigation and even the Department of Health's own Scientific Advisory Committee on Nutrition were not asked to formally comment.

The reality

In the UK, 30% of mothers had introduced solids by 4 months, 75% by 5 months and 94% by 6 months according to the 2010 Infant Feeding Survey (DH, 2013). Only roughly 5% waited until after 6 months to begin complementary feeding. Earlier weaning was associated with age and social class, such that younger mothers and those from more deprived backgrounds were more likely to wean early, as were mothers who returned to work when their baby was between 4 and 6 months of age. Ethnicity was also a factor predicting weaning age. Mothers from Asian, Black, Chinese and other ethnic backgrounds tended to introduce solid foods later than their white counterparts, with Asian and Chinese mothers the least likely to have begun weaning before 4 months.

The best evidence

The WHO recommendation to breastfeed exclusively for 6 months was principally based on a systematic review undertaken by Kramer and Kakuma (subsequently published in 2003), the aim of which was to compare mother and child outcomes of exclusive breastfeeding for 6 months vs 4 months or less. Only two studies were randomized controlled trials and both of these were conducted in Honduras (a developing country) where all studies of developed countries were observational. Conclusions were that exclusive breastfeeding for 6 months was advantageous in some respects (reducing infection rate), but also potentially risky (iron deficiency with associated risks of long-term adverse effects on development). A review published simultaneously of the evidence concerning the timing of weaning, concluded that there was insufficient evidence to justify a change from the existing recommendations of 4–6 months. In the developing world where clean water and food are scarce, exclusive breastfeeding for 6 months made sense as a recommendation, but in developed countries evidence is mounting that the costs may outweigh the benefits.

For example, an emerging literature base suggests that earlier introduction to solids may actually reduce the risks of allergic

sensitization to foods, inhalant allergens and celiac disease and that a window of opportunity exists between the 17th and 27th week of life in which to introduce all foods and that after this point, the risk of atopic diseases actually increases. The idea that all infants mature and become ready to begin the transition to an adult diet at the same time despite differing gestational age at birth, height and weight etc, seem implausible and some researchers have proposed that babies should be "managed according to their individual needs". In support, a recent review of evidence from developed countries by the EFSA Panel of Dietetic Products, Nutrition & Allergies concluded that the "…introduction of complementary food into the diet of healthy term infants in the EU between 4 and 6 months is safe and does not pose a risk for adverse health effects…" and that some infants may indeed *need* additional sources of nutrients to support growth and development.

Case study 1

Oliver was born full term, but had difficulties breastfeeding. His Mother had terrible feelings of guilt as she had desperately wanted to breastfeed. She reported feeling unsupported by health professionals and judged by her inability to breastfeed. Their advice was to give Oliver a bottle which she did. This guilt continued and when Oliver was difficult to wean, her feelings of anxiety and guilt increased. Oliver was a bright child who in all areas was developing well and meeting all of his milestones. However his mother continually compared him to other infants in her NCT group and appeared unable to see how well Oliver was doing and how he was thriving. She had a very supportive husband and parents-in-law. Oliver and his parents were referred to the Feeding Disorder Service at GOSH where they were seen by a Specialist Feeding Disorder Practitioner. She reassured them that Oliver was doing well and highlighted the fact that he was thriving. She offered regular telephone support to help the parents manage their anxieties. Eventually Oliver's mother was able to manage her feelings of guilt and contain the constant comparisons she made with other children. This allowed her to acknowledge the progress that Oliver was making albeit at his own pace.

Problems with weaning

The Infant Feeding Survey found that 11% of UK mothers of 1-year-olds reported having experienced difficulties in weaning their child. Breaking this figure down by age at weaning, the survey revealed that 17% of mothers who had introduced solids to their infant between 5 and 6 months or later stated that they had experienced difficulties compared with only 7% of those who had introduced solids between 3 and 4 months. Four per cent described their child as having 'fussy eating habits'.

Recommendations for weaning do not take into account any significant difficulties in the temperament, family context for the infant or their health. Conditions that can impact on the development of feeding in an infant include symptoms of gastro-esophogeal reflux (GR), food allergies, cleft lip and palate, syndromes such as Down's, Noonan's are just some of the conditions that are known to have an impact on feeding development. Symptoms associated with severe reflux can also disrupt the relationship a baby develops with food and the memory of milk becoming the 'enemy' may be carried over into the weaning process creating significant difficulties for the infant. If the reflux has been caused by underlying pathology then a restricted diet may be introduced. It is common for the early signs of GR to be missed.

Other factors that can impact on the weaning process are sensory issues and developmental delay, along with the sensory issues specifically associated with autistic spectrum disorders. Heightened senses including smell, touch and taste can result in negative experiences with certain foods, generating significant anxiety and sometimes leading to the development of aversions to foods or to textures, especially mixed textures such as lumps in puree. It is often at this stage in the weaning process that disruptions occur. There is an assumption that infants progress from milk, to smooth puree to lumpy puree, then to solids and finger foods. However there is growing evidence that some infants miss out the lumpy puree stage and adapt better to finger foods.

The child's temperament is also important to consider, as are any mental health difficulties in parents or postnatal depression in the main care giver. These can have a significant impact on the weaning process, and are important for health professionals to consider and be aware of.

If not contained, the parental anxiety that can ensue from feeding difficulties can lead to exaggerated feelings of failure and rejection which in turn significantly impact on the tension at meal times. As a result, the child may accept even less food and this can lead to concerns from professionals regarding failure to thrive. When discussed with parents, this can increase parental anxiety and may leave the family trapped in a cycle of anxiety, withdrawal from meal times, extra pressure being exerted, high tensions, shouting and force-feeding.

Case study 2

Padraig S was born full term, he breastfed well. His mother described him as feeding all day and night (which she loved). Weaning was introduced at 6 months as per the guidance in the baby books; Mrs S reported that Padraig refused several meals a day. She asked for a referral to the Feeding Disorders Clinic. At assessment when asked what the refusal looked like she described Padraig as turning his head away and covering his mouth. When this was explored further she reported that she would feed Padraig every four hours, even after weaning. As part of the assessment Padraig was observed feeding. After Padraig had eaten adequate amounts he did indeed turn his head and covered his mouth. However, this was an appropriate response in a baby who had eaten enough food. Following a discussion with Padraig's parents it transpired that as a small child Mrs S had a history of being underfed by a carer, this lead to Mrs S being treated for malnutrition and left her with a distorted view on feeding her own infant. With support and encouragement Mrs S was able to read Padraig's cues more easily and respond appropriately without feeling guilty.