Basic Nutrition Guidelines and Needs of Infants

There is global recognition that the first 1,000 days of life (from conception to two years of age) is a key window of opportunity for improving health outcomes during childhood and into adulthood. Optimal infant and young child feeding is defined by the World Health Organisation (WHO) as exclusive breastfeeding from birth to six months and continued breastfeeding to two years and beyond along with complementary feeding from the age of six months (World Health Organisation, 2003). South Africa has adopted these recommendations.

Babies should be given only, where possible, breast milk from birth until the age of six months. Following the 6 month period, small amounts of food introduced into a baby's diet, called complementary foods, should be safe, available, affordable, appropriate and culturally acceptable. Breastfeeding should continue while complementary foods are introduced, for up to two years of age and beyond.

The principle of responsive feeding, (i.e. when a child communicates feelings of hunger and satiety through verbal or non-verbal cues and the mother/caregiver responds appropriately) should guide the amount of complementary food that is offered. Since each child's needs differ, each child consumes different quantities of breast milk and complementary foods, and each child grows differently, the amount of complementary foods should not be overly prescriptive.

The WHO and the Institute of Medicine (IOM) (IOM, Dietary Reference values 2006) recommend that an infant's energy (which is provided by breast milk and complementary foods) should come from about 30 – 45% of total fat, 6 – 7% of protein with the remainder from carbohydrates. This is very much in line with the composition of breast milk at that age. It is also recommended that infant diets do not contain more than 15% of energy from protein, until more is known on the effect of protein on obesity later on in life (Michaelsen & Greer 2014). Major expert paediatric committees such as the The European Society for Paediatric Gastroenterology Hepatology and Nutrition (ESPGHAN), American Academy of Paediatrics (AAP) and Canadian Paediatric Society (CPG) support these guidelines, until more research becomes available on the matter.

High nutrient needs, due to babies' rapid growth and development in the first two years of life, coupled with the relatively small amounts of complementary foods eaten in this period, means that the nutrient density in complementary foods must be very high. Gradually increase the amount of food, number of feeds and food variety as your child gets older.

Guidelines on suitable complementary foods (Du Plessis, et al., 2013)

• Provide a variety of foods to ensure that nutrient needs are met. This includes vegetables, fruit, whole grains, meat and meat alternatives (meat, poultry, fish, eggs, legumes, nuts, seeds and nut butters) and dairy products (from the age of 12 month and in addition to, but not replacing breast milk).

• Foods from animals (meat, poultry, fish or egg) should be eaten daily, or as often as possible to meet protein and iron needs. In infants and young children, vegetarian diets cannot meet nutrient needs, unless nutrient supplements or fortified products are used.
• Dark green leafy vegetables and orange coloured vegetables and fruit rich in Vitamin A (e.g. sweet potato, carrot, pumpkin, broccoli and spinach, mango, peaches, apricot, paw-paw) should be eaten daily.
• Provide diets with an adequate fat content (from plant foods e.g. vegetable oils, avocado, nut butters and foods from animals, listed above, and also including breast milk).
• Use fortified complementary foods or vitamin-mineral supplements for infants, as needed or prescribed.

Low nutrient-dense liquids, such as tea and coffee, energy-dense sugar-sweetened drinks, an excessive intake of fruit juice, high-fat and salty snacks, and highly refined starchy carbohydrates worsen poor nutrient intake and displace healthy food in the diet, and are therefore not recommended for complementary feeding.

When considering nutrition guidelines and dietary advice, it is very important to differentiate between public health messages and those that are tailored to meet the specific needs of individual members of the public. Public health messages are intended for the general public, and can be communicated as "blanket" evidence-based messages based on proven public health problems in a population and based on the profile of the majority of the population. Messages to individual members of the public should be interpreted following a one-on-one consultation with a qualified healthcare worker, based on scientific reasoning and motivation for deviation from the public health message, if needed and appropriate.

Restrictive diets for infants should only be followed in specific medical conditions and under strict medical supervision.

Sources:

1. Du Plessis LM, Kruger S, Sweet L. Complementary feeding: a critical window of opportunity from six months onwards. South African Journal of Clinical Nutrition 2013;26(3)(Supplement):S129-S140 Available at http://sajcn.co.za/index.php/SAJCN/issue/view/67/showToc (Accessed 25 April 2015)
2. Pan American Health Organization PAHO/World Health Organization (2003) Guiding Principles for Complementary Feeding of the Breastfed Child. Available at http://whqlibdoc.who.int/paho/2003/a85622.pdf (Accessed 15 April 2015)
3. World Health Organization (2003) Global Strategy for Infant and Young Child Feeding. WHO: Geneva.
4. Institute of Medicine (IOM). Dietary Reference Intakes Essential Guide Nutrient Requirements. 2006.
5. Michaelsen KF, Greer FR. Protein needs early in life and long-term health. Am J Clin Nutr 2014 Jan, 99(suppl):718S-22S.
6. Agostoni C, Desci T, Fewtrell M et al. Medical position paper on complementary feeding: a commentary by ESPGHAN Committee on Nutrition. J Pediatr Gastroenterol Nutri, 2008; 46(1): 99-110.
7. Handbook of Paediatric Nutrition, 3rd Edition, American Academy of Paediatrics, 2005.
8. Grueger B; Canadian Paediatric Society. Weaning from the breast. Paediatr Child Health 2013;18(4):210

For more information, contact the Association for Dietetics in South Africa +27 (0)82 376 4446