All correspondence to:

The Breastfeeding Network
PO Box 11126, Paisley PA2 8YB
Admin Tel: 0844 412 0995
e-mail: admin@breastfeedingnetwork.org.uk
www.breastfeedingnetwork.org.uk

Lactose intolerance and Breastfeeding

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- Lactose is the sugar in all mammalian milks.
- The amount of lactose in breastmilk is independent of the mother's consumption of lactose and hardly varies.
- The quantity of lactase, the enzyme needed to breakdown the sugar, does vary

Lactose intolerance occurs when a person does not produce the enzyme lactase, or does not produce enough of it, and is therefore unable to digest lactose. If it is not digested and broken down, lactose cannot be absorbed. The undigested lactose passes rapidly through the gut until it is broken down by bacteria, producing acids and gas. The production of lactase decreases in most humans from the age of two years although symptoms of intolerance are rare before the age of six. Lactose intolerance in adults is very common. Lactose intolerance is not the same as intolerance to cows' milk protein (Anderson).

Primary lactose intolerance

Primary lactose intolerance is a rare, inherited metabolic disorder. It is incompatible with life without medical intervention and a lactose free diet. A truly lactose-intolerant baby would fail to thrive from birth (i.e. not even start to gain weight) and show obvious symptoms of malabsorption and dehydration (Kellymom). Savilahti et al identified only 16 cases of congenital lactase deficiency over 17 years despite the fact that the genes are very common in Finland. In each case the mother reported watery diarrhoea usually after the first breastfeed but up to 10 days after birth. Poor absorption of lactose was confirmed between 3 and 90 days after delivery at which time all infants were dehydrated and 15 of the 16 weighed less than at birth. On a lactose feed diet the children all caught up with their growth. Some premature babies are temporarily lactose intolerant due to their immaturity.

Secondary lactose intolerance

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Secondary lactose intolerance can appear at any age due to damage to the brush borders of gut villae (where lactase is produced) by infection, allergy or inflammation. This reduces lactase activity. It is a temporary condition and removal of the cause permits the gut to heal. It may also become apparent in a breastfed baby following maternal use of antibiotics but resolves without treatment even with continued breastfeeding (Anderson).

Lactose free formula

Healthcare professionals should only recommend the use of lactose-free artificial baby milk if the baby is artificially-fed and is very malnourished and/or losing weight. Breastmilk remains the optimal milk and will assist with gut healing in secondary lactose intolerance (Shulman). Average recovery time for the gut of a baby with severe gastroenteritis is 4 weeks, but may be up to 8 weeks for a baby under 3 months. For older babies, over about 18 months, recovery may be as rapid as 1 week. Medical advice should be sought for any baby with long-term symptoms and/or who is failing to thrive.

Symptoms blamed for lactose intolerance

Lactose intolerance is often blamed as being a contributory factor for colic, resulting in cessation of breastfeeding and substitution of lactose free formula. Infants with gastrointestinal symptoms on exposure to cows' milk are more likely to have cows' milk allergy than lactose intolerance (Jones)

Green and frothy bowel motions may be a sign that the baby is receiving too much lactose, which has a rapid gut transit time. This may be due to an excess of the early less fat-rich milk or switching the baby between breasts before emptying one breast first. Babies may be very unsettled and windy. Mothers may have an overactive letdown reflex.

Assessment by an experienced breastfeeding worker may be beneficial to ensure optimal milk removal by the baby is taking place before considering lactose free formulae. Imbalance of milk transfer (caused by less than perfect attachment) can produce similar symptoms i.e. loose bowel motions, which may be green and frothy. This is due to the rapid transit time of large volumes of lower fat milk and consequently an excessive consumption of lactose (Woolridge 1988). Breast compression when the baby is not actively sucking may improve milk transfer.

Babies can exhibit excess wind and gastric discomfort, which may be diagnosed as lactose intolerance, but which in fact is transitory lactase deficiency i.e. too much lactose for the available lactase.

Lactase drops

Addition of lactase enzymes (Colief®) to breastmilk has been suggested as a treatment for colic. Kanabar et al (2001) conducted a study of 53 babies Formula or expressed "fore-milk" had lactase or placebo added and incubated for a period before being given to the baby. Formula was refrigerated for four hours, and then re-warmed. "Fore-milk" was incubated during the feed and given at the end of the feed. Total crying time over the 10-day treatment period was reduced in all 46 and in the 32 compliant families reached statistical significance. Lack of compliance (undefined), was possibly due to a high proportion of non-native English speakers.

Lactose is a specific nutrient for infancy, supplying about 40% of the baby's energy needs, facilitating calcium, magnesium, zinc and iron absorption, promoting a normal healthy gut by promoting the growth of bifidobacterium, and providing the galactose which is incorporated directly as galactolipids into the tissues of the central nervous system (Akre 1990). Soya formula is not recommended for children under six months

Soya formula

Soya milk is not recommended as substitute milk for babies under six months due to phyto-oestrogens and high sugar content. Babies who are cow's milk protein allergic are likely to be allergic to soya protein as well (Chief Medical Officer, COT)

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Lactose intolerance in adults

Lactose intolerance is very common in adults. The production of lactase decreases from approximately 2 years of age although symptoms are rare before 6 years of age.

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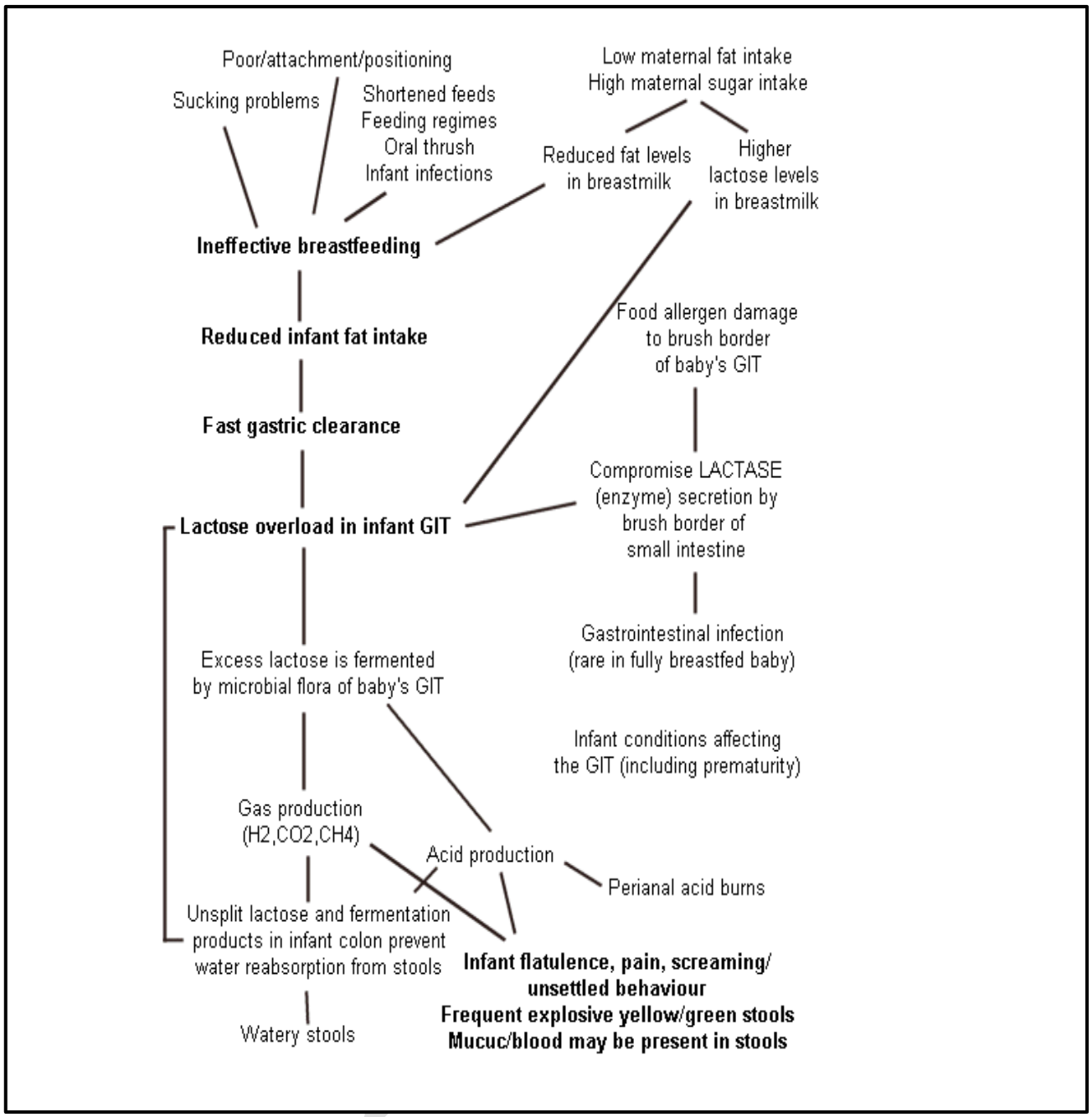

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