

# Drugs affecting milk supply during lactation

## SUMMARY

There are morbidity and mortality benefits for infants who are breastfed for longer periods. Occasionally, drugs are used to improve the milk supply.

Maternal perception of an insufficient milk supply is the commonest reason for ceasing breastfeeding. Maternal stress or pain can also reduce milk supply.

Galactagogues to improve milk supply are more likely to be effective if commenced within three weeks of delivery. The adverse effects of metoclopramide and domperidone must be weighed against the benefits of breastfeeding.

Dopamine agonists have been used to suppress lactation. They have significant adverse effects and bromocriptine should not be used because of an association with maternal deaths.

## Introduction

Breast milk is a complex, living nutritional fluid that contains antibodies, enzymes, nutrients and hormones. Breastfeeding has many benefits for babies such as fewer infections, increased intelligence, probable protection against overweight and diabetes and, for mothers, cancer prevention.<sup>1</sup> The World Health Organization recommends mothers breastfeed exclusively for six months postpartum.

Breastfeeding is influenced by many complex physiological and psychosocial factors. While most women have a desire to breastfeed, some do not. In high-income countries such as Australia the duration of breastfeeding is shorter than in low- and middle-income countries. A 2011 Australian Institute of Health and Welfare survey estimated that only 56% of infants younger than six months were exclusively breastfed, and by 12 months this dropped to 30%. While breastfeeding should be encouraged, a woman's right to choose not to breastfeed should be respected. By understanding the reasons for their decision, strategies can be offered to support their choice.

## Physiology of lactation

Milk production begins between 10 and 22 weeks gestation. Within 48 hours of delivery, the mother produces a small amount of milk, mainly colostrum. However, it is not until serum progesterone decreases sufficiently, up to four days postpartum, that milk supply becomes more plentiful. Lactogenesis may be delayed if the baby is premature.

Milk production is controlled by a complex interplay of hormones and neurotransmitters. Prolactin is secreted by the anterior pituitary in response to

nipple stimulation. Its release is inhibited by dopamine from the hypothalamus. Within a month of delivery, basal prolactin returns to pre-pregnant levels in non-breastfeeding mothers. It remains elevated in nursing mothers, with peaks in response to infant suckling. Drugs that act on dopamine can affect lactation.

In response to suckling, oxytocin is released from the posterior pituitary to enable the breast to let down milk. Oxytocin release is inhibited by catecholamines produced if the mother is stressed or experiencing pain.

The feedback inhibitor of lactation is a peptide found in breast milk. If the milk is not removed, the inhibitor will stop milk production. When the baby cannot suckle, expressing the milk will remove the inhibitor and encourage more production.

## Milk supply

A maternal perception of insufficient milk is the commonest reason for ceasing breastfeeding. Some women have difficulty producing sufficient breast milk after a difficult labour, delayed initiation of breastfeeding, separation due to the baby being preterm, formula substitution, cracked nipples or maternal illness.

Support and reassurance are as important as determining the cause of the problem, before recommending infant formula. Simple strategies can restore confidence and assist in increasing milk supply. Encourage the mother to 'hang in a bit longer' as babies have adequate nutrient stores to cover the first postpartum week. Make sure she is well hydrated, has adequate nutrient intake and home support, and reassure her that a crying baby is not necessarily a hungry baby. Increase the frequency of feeding or

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