

**CLINICAL REVIEW**

# Diagnosis and Management of Breast Milk Oversupply

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**Managing breastfeeding problems is an essential part of newborn care. While much is written on breast milk undersupply, little is written on oversupply, sometimes known as hyperlactation or hypergalactia. Infants of mothers with oversupply may have increased or decreased weight gain. Some may have large, frothy stools. They may develop a disordered latch. Mothers may report overly full, leaking breasts. Thyroid function should be assessed. Treatment is mostly anecdotal and includes methods to maintain breast fullness, such as block feedings. Pseudoephedrine and oral contraceptive pills may decrease the supply. Dopamine agonists such as carbergoline can be used as a last resort. (J Am Board Fam Med 2016;29:139–142.)**

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Managing breastfeeding problems is an essential skill for family physicians. Exclusive breastfeeding provides an optimal start to an individual's nutritional life, reducing their lifelong risk of many devastating diseases, including obesity, asthma, diabetes mellitus, and childhood leukemia and lymphoma.<sup>1</sup> The American Academy of Family Physicians and the American Academy of Pediatrics recommend exclusive breastfeeding until 6 months, and then continued breastfeeding until at least age 1 year for optimal health.<sup>1,2</sup> The CDC tracks breastfeeding initiation and continuation rates, as well as provider support of breastfeeding, in their Breastfeeding Report Card.<sup>3</sup> Maintaining optimal breastfeeding initiation and duration should be a primary concern of health care providers. Although breast milk oversupply occurs rarely and is often underreported, the damage it can cause to the breastfeeding relationship can be irreparable.

## Literature Search

PubMed Clinical Queries was searched using the key search terms *hypergalactia*, *breast milk oversupply*, *breast milk oversupply*, and *hyperlactation*. We also searched Clinical Evidence, the Cochrane database, and the CINAL database using the same terms and the reference lists of retrieved articles. Our initial search date was April 2015.

## Clinical Presentation

Although there is a large body of literature on the problems accompanying a low milk supply, little has been written concerning oversupply.<sup>4</sup> In addition, the prevalence of oversupply is unclear because of a lack of diagnostic criteria and research on the topic. Most define oversupply as milk production in excess of that needed for normal growth of the infant.<sup>4</sup> Other terms for this include *hypergalactia* or *hyperlactation*. The term *galactorrhea* is usually applied only to nonlactating women or men. Early signs of an oversupply can include excessive infant weight gain (>30 g (1 oz)/day up to age 3 months).<sup>5</sup> It is important to use the World Health Organization growth charts when assessing infant weight gain because these are normed with breastfeeding infants.<sup>6</sup> Other infants of mothers with oversupply have poor weight gain because of excessive exposure to the carbohydrate-rich foremilk and a lack of fat-rich hind milk.<sup>7</sup> These infants may be fussy, particularly at the beginning of a feeding, and

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have difficulty maintaining a latch. They may cry or act averse to the offer of feeding. They may gulp frequently and break off multiple times during a feeding, and then later exhibit signs of gassiness. Stools may be frequent, large, frothy, and green, especially when the infant is consuming inadequate protein-rich hind milk. Infants may develop a disordered latch and move the tongue to the tip of the nipple to avoid being choked by an aggressive let-down reflex.<sup>7</sup> An overactive let-down can cause the baby to pull off and refuse to re-latch, often damaging the mother's nipple.<sup>8</sup> Infants of mothers with oversupply may be misdiagnosed with gastroesophageal reflux disease, colic, or milk protein allergies.<sup>9</sup>

Mothers with breast milk oversupply may report full, leaking breasts that are not noticeably softened by a feeding.<sup>7</sup> In the presence of a baby who is gaining weight adequately or excessively, excess leaking should raise the question of an oversupply. Breast pain, severe engorgement, and painful milk ejection reflexes or let-downs are common. Mothers may report leaking continually between feedings, an ability to pump several ounces after a feeding, or being awakened at night by painful engorgement when the baby seems satisfied and not yet ready to eat. Engorgement persisting for longer than 1 to 2 weeks should raise a question of oversupply. Nipple trauma resulting from a poor latch may lead to cracked, sore, fissured nipples, increasing the likelihood of breast infections, including infections with *Candida*.<sup>7</sup> Incomplete emptying of the breast can lead to blocked ducts and mastitis, and over time it can produce chronic mastitis and scarring in the breast tissue.<sup>7,9</sup> Striae on the skin overlying the breast have been reported.<sup>8</sup>

Mothers experiencing oversupply often report feelings of frustration and loneliness. Breastfeeding becomes very difficult, and excessive leaking and breast pain make social and professional interactions challenging. Having too much milk is often viewed as desirable, which can lead to inadequate support from friends and family, as well as by medical personnel who fail to grasp the severity of the problem.<sup>10</sup> Women may be advised to wean following recurrent bouts of severe mastitis or after breast abscesses, which may require surgical drainage. Working mothers may lack the time needed for increased pumping. Regardless of a mother's initial commitment to

breastfeeding, having an unhappy, uncomfortable baby and being in continual pain herself can quickly lead to a determination that breastfeeding will not work for her and that formula is a better feeding option.

### Differential Diagnosis

While breast milk oversupply is often idiopathic, it can sometimes (albeit rarely) be a sign of serious underlying disorders, including pituitary adenomas and prolactinomas.<sup>11</sup> Any cause of hyperprolactinemia, including hyperthyroidism, can result in a breast milk oversupply (Table 1). Thyroid function tests should generally be ordered. Interpretation of prolactin concentrations in breastfeeding mothers can be problematic since lactation increases prolactin concentrations, with a wide variation of concentrations among women who are successfully breastfeeding.<sup>12</sup> Women with known prolactinomas can often successfully breastfeed.<sup>13</sup> Remission occurs in approximately one third of prolactinomas during pregnancy and lactation.<sup>13</sup> Although retained placenta is usually associated with decreased milk production, a case report described overproduction relieved by the removal of a retained placental fragment.<sup>14</sup> Excessive pumping, overuse of galactagogues, and overstimulation by the baby may also result in oversupply<sup>4</sup> (Table 2).

### Management

Breast milk oversupply is generally caused by either breastfeeding mismanagement, hyperprolactinemia, or a congenital predisposition.<sup>7</sup> Most

**Table 1. Causes of Elevated Prolactin Concentrations**

Hypothalamic/pituitary stalk damage
Pituitary disorders
Chronic renal failure
Cirrhosis
Cranial radiation
Polycystic ovary disease
Medications
Antidepressants
Antihistamines
Antihypertensives

Adapted with permission from Melmed S, Casanueva FF, Hoffman AR, et al; Endocrine Society. Diagnosis and treatment of hyperprolactinemia: an Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab* 2011;96:273–88.

**Table 2. Differential Diagnosis Breastmilk Oversupply**

Overuse of galactogogues
Excessive breast-pumping
Normal engorgement in the early postpartum weeks
Excessive prolactin*

From ref. 4.

\*See Table 1.

interventions available for the treatment of oversupply are anecdotal and not well studied. Through complex interactions of prolactin receptors and the feedback inhibitor of lactation, retention of milk within the breast decreases production.<sup>7,15</sup> Most interventions to decrease milk production aim to retain milk in the breast while still meeting the infant's nutritional needs. The assistance of an experienced lactation consultant can be invaluable. Early interventions include feeding from only one breast per nursing session, pumping from the other breast only for comfort. Mothers often find that nursing "uphill" helps: the baby is positioned so that gravity slows the flow of milk. Moms may lean back or nurse with the infant above their nipple.<sup>16</sup> Block feedings are also recommended (strength of recommendation, C).<sup>4,7</sup> In these the mother nurses from a single breast for a block of time, typically 3 hours. She then alternates breasts for successive blocks. In this way milk accumulates in the unused breast and should decrease milk supply.<sup>4,7</sup> van Veldhuizen-Staas<sup>7</sup> reports that the complete drainage of both breasts before beginning the block feedings reduces the excess milk supply and thereby reduces the mother's engorgement and the infant's difficulties feeding with an overactive milk flow (level of evidence, 3). Use of a nipple shield may help slow the flow of milk for the infant and decrease distress during an overactive let-down. Topical green cabbage leaves have been described to decrease engorgement, but efficacy has not been well documented.<sup>17</sup> Nevertheless, it is a simple early intervention that could be suggested with little risk of harm pending further investigation. Nonsteroidal anti-inflammatory drugs may be given to reduce inflammation and breast pain. Although not well studied, sage and parsley have been reported to reduce milk supply.<sup>18,19</sup> Low doses of pseudoephedrine (30–60 mg) may be used to reduce supply; some studies suggest that even a single

dose may reduce breast milk production by 25% (level of evidence, 2).<sup>20</sup> Early use of estrogen-containing oral contraceptives may help reduce supply and can be considered when conservative measures fail (strength of recommendation, C). As a final resort, mothers may need use dopamine agonists such as cabergoline, especially if they are discontinuing nursing.<sup>4,17</sup>

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