

# ACOG COMMITTEE OPINION

Number 820

## Committee on Obstetric Practice Breastfeeding Expert Work Group

*This Committee Opinion was developed by the American College of Obstetricians and Gynecologists' Breastfeeding Expert Work Group and the Committee on Obstetric Practice in collaboration with work group members Adetola F. Louis-Jacques, MD; Andrea B. Joyner, MD, IBCLC; and Susan D. Crowe, MD.*

## Breastfeeding Challenges

**ABSTRACT:** Breastfeeding is associated with a decrease in a woman's risk of breast cancer, ovarian cancer, diabetes mellitus, and hypertensive heart disease. Breastfeeding initiation rates in the United States are increasing, and many women are aware of the maternal and infant health benefits of breastfeeding. However, problems may arise that can keep women from achieving their breastfeeding goals, and only 25% of women in the United States are breastfeeding exclusively at 6 months. Many women experience early and undesired weaning because of persistent pain or nipple injury. A focused history and physical examination are essential to help obstetrician–gynecologists and other obstetric care professionals distinguish the specific cause of their patients' pain and determine appropriate treatment. Studies have shown that pain with breastfeeding may be associated with postpartum depression; therefore, postpartum depression screening is an important part of the medical history when caring for these patients. Some women choose not to initiate breastfeeding, stop breastfeeding sooner than intended, or are unable to complete treatment with prescribed medications because they may have concerns regarding medication use during lactation. Health care professionals prescribing medications during lactation should base their counseling on accurate, current information from resources such as the National Center for Biotechnology Information's Drugs and Lactation database (known as LactMed). Causes of early weaning also may be attributed to societal factors, such as limited access to paid maternity leave and barriers to breastfeeding in the workplace. Obstetrician–gynecologists and other obstetric care professionals are uniquely positioned to support women in these situations.

## Recommendations and Conclusions

The American College of Obstetricians and Gynecologists (ACOG) makes the following recommendations and conclusions regarding breastfeeding challenges:

- Engorgement may be managed expectantly if symptoms are mild and the infant is able to latch appropriately.
- Many women experience early and undesired weaning because of persistent pain or nipple injury. A focused history and physical examination are essential to help obstetrician–gynecologists and other obstetric care professionals distinguish the specific cause of their patients' pain and determine appropriate treatment.
- Perceived or actual low milk supply is a common reason given for undesired weaning. Patients should be reassured that their milk supply is adequate if the average feeding frequency is 8–12 times per day (some infants need more frequent feedings), steady weight is gained by day four or day five, and 6–8 wet diapers occur on average per day.
- Women at increased risk of low milk supply should be informed of signs related to low milk supply or dehydration such as jaundice, insufficient wet or soiled diapers, lethargy, inconsolability, unchanged stool color (not bright yellow by day five), and a lack of steady infant weight gain by day four.
- Galactagogues should not be considered a first-line therapy because current research on the effectiveness of pharmaceutical and herbal galactagogues is relatively inconclusive and all substances have potential adverse effects.

- Obstetrician–gynecologists and other obstetric care professionals can support mothers of preterm and early-term infants by providing proactive lactation support, including education on hand expression, in anticipation of potential breastfeeding difficulties.
- Breastfeeding should be encouraged in women who are stable on medication-assisted treatment for opioid use disorders who are not using illicit drugs and who have no other contraindications to breastfeeding.
- A persistent palpable breast mass found during the lactation period should be evaluated to avoid a delay in the diagnosis of a pregnancy-associated breast cancer. Lactation support should be provided during evaluation and management.

## Introduction

Breastfeeding initiation rates in the United States are increasing, and many women are aware of the maternal and infant health benefits of breastfeeding. More than 83% of infants are breastfed at birth, and women are choosing to breastfeed longer (1). Breastfeeding is associated with a decrease in a woman’s risk of breast cancer, ovarian cancer, diabetes mellitus, and hypertensive heart disease (2). The American College of Obstetricians and Gynecologists recommends exclusive breastfeeding for the first 6 months of life, with continued breastfeeding while complementary foods are introduced during the infant’s first year of life, or longer, as mutually desired by the woman and her infant.

Problems may arise that can keep women from achieving their breastfeeding goals, and only 25.4% of women are breastfeeding exclusively at 6 months (1). In a longitudinal cohort study of women in the United States, 45% of women reported early, undesired weaning, and approximately two thirds of women weaned earlier than they had intended (3). Early weaning can be the result of many different factors. Persistent nipple pain, perceptions of low milk supply, and difficulty with infant latch are reasons women report for undesired early weaning (3). Causes of early weaning also may be attributed to societal factors, such as limited access to paid maternity leave and barriers to breastfeeding in the workplace. Obstetrician–gynecologists and other obstetric care professionals are uniquely positioned to support women in these situations. Providing anticipatory guidance to patients about how to continue breastfeeding after returning to work, offering a letter to an employer about lactation accommodation needs, and informing patients of lactation laws may relieve some of these societal barriers. To fully provide support to breastfeeding women, the obstetrician–gynecologist and other obstetric care professionals should be able to address lactation challenges such as mastitis, engorgement, perceptions of insufficient milk supply, pain, medication or substance use while breastfeeding, and a breast mass

during lactation. Women with negative early breastfeeding experiences may be at increased risk for postpartum depression (4). Therefore, these mothers should be screened for postpartum depression and treated or referred appropriately as needed. The purpose of this Committee Opinion is to give an overview of common challenges associated with breastfeeding.

## Engorgement

Breast engorgement is the physiologic bilateral breast fullness that occurs most often between day three and day five postpartum. It is typically a reassuring sign that mature milk is being secreted. The distention of the alveolar ducts with milk causes vascular and lymphatic compression that can vary in incidence and severity. Factors associated with severely symptomatic breast engorgement may include primiparity, large amounts of intravenous fluids given during labor, history of premenstrual breast tenderness, and a history of breast surgery (5). For more information regarding issues that may arise with a history of breast reduction, please see ACOG Committee Opinion 756, *Optimizing Support for Breastfeeding as Part of Obstetric Practice*. Women who undergo a cesarean delivery typically experience peak engorgement 24–49 hours later than those who give birth vaginally (6). Concomitant breast edema from fluid collection in the interstitial breast tissue may exacerbate tenderness and feeding difficulties in the immediate postpartum period. A study on postpartum engorgement found a reduction in engorgement in women who expressed colostrum once or twice for 25–30 minutes the first 1–2 days (vaginal birth) or 2–3 days (cesarean delivery), suggesting early milk expression may help prevent engorgement (7). Data on prevention of engorgement are limited and, although studies have been performed comparing therapies that are widely considered beneficial, there is insufficient evidence to recommend specific treatment (5). A systematic review evaluated the effectiveness of treatments for engorgement including acupuncture, hot and cold packs, herbal remedies, and cabbage leaves and found insufficient evidence to recommend a particular treatment regimen (5). Patients experiencing engorgement should use milk expression minimally to relieve symptoms, because excessive breast emptying may induce an oversupply with associated risks of mastitis and plugged ducts. Engorgement may be managed expectantly if symptoms are mild and the infant is able to latch appropriately (Box 1). More detailed information about the management of engorgement can be found in the Academy of Breastfeeding Medicine Engorgement Protocol #20 at <https://abm.memberclicks.net/assets/DOCUMENTS/PROTOCOLS/20-engorgement-protocol-english.pdf>.

## Persistent Pain With Breastfeeding

Many women experience early and undesired weaning because of persistent pain or nipple injury. The

### Box 1. Example Case: Engorgement

*Example case:* A 38-year-old patient, gravida 1, para 1, is postpartum day after a 72-hour induction of labor for preeclampsia. She has been breastfeeding exclusively and noticed her milk volume increasing yesterday, but today both of her breasts are firm, painful, and her infant is not able to latch deeply. She has no fever or breast erythema. How should this patient's symptoms be managed?

*Answer:* The timing of this patient's presentation and absence of fever or erythema is suggestive of physiologic breast engorgement. However, the history of a lengthy induction and preeclampsia should make the obstetrician-gynecologist and other obstetric care professionals suspicious of co-existing breast and nipple edema, which could be contributing to difficulties with latching. Failure to properly diagnose and treat symptomatic engorgement increases a woman's risk for early weaning and inadequate milk supply. Milk transfer during breastfeeding requires infants to be able to latch deeply onto the nipple-areolar complex. The diffuse, bilateral breast fullness from severe engorgement can secondarily stretch and flatten the nipple-areolar complex. This flattening can be relieved by reducing some of the tensile pressure in the breast tissue by expressing milk before feeding. When engorgement is complicated by breast edema that flattens the nipple-areolar complex, expression alone may worsen the interstitial collection of fluid in the nipple-areolar complex. Reverse pressure softening techniques may be used to manage breast edema (8). The reverse pressure softening technique utilizes gentle digital pressure applied 3 to 4 centimeters from the base of the nipple to temporarily shift edema away from the nipple/areolar complex so that a deeper latch can be achieved.

differential diagnosis includes a wide range of disorders that include latch issues, pump trauma, dermatoses, infection, vasospasm, allodynia or functional pain, oversupply or plugged ducts, and neonatal ankyloglossia (9). Table 1 lists the symptoms and management of the different diagnoses associated with persistent breast and nipple pain. A focused history and physical examination are essential to help obstetrician-gynecologists and other obstetric care professionals distinguish the specific cause of their patients' pain and determine appropriate treatment. Studies have shown that pain with breastfeeding may be associated with postpartum depression; therefore, postpartum depression screening is an important part of the medical history when caring for these patients (4, 10, 11) (Box 2).

### Low Milk Supply and Use of Galactagogues

Lactogenesis stage II is initiated by a decrease in progesterone after delivery of the placenta, and after

concentrated colostrum is produced, there usually is a transition to higher milk volumes, starting at approximately 4 days postpartum. Perceived or actual milk supply is a common reason for undesired weaning. Once an evaluation of potential underlying physiologic and psychosocial contributors to perceived insufficient milk supply has been completed, patients should be reassured that their milk supply is adequate if the average feeding frequency is 8–12 times per day (some infants need more frequent feedings), steady weight is gained by day four or day five, and 6–8 wet diapers occur on average per day. An infant who does not lose excessive weight and is nursing effectively should obtain enough milk to begin gaining weight by day four or day five at a rate of approximately 15–30 g per day, exceeding their birth weight by 10–14 days. Because human milk is easily digested (usually within 1.5–2 hours), frequent feedings are not a sign of insufficient milk volumes. Although every 2 to 3 hours is the average, new parents should be provided anticipatory guidance on the variation of feeding frequency from infant to infant during a 24-hour period. If an actual low milk supply exists, the patient can often be supported to feed or express milk more frequently to increase her supply. Patients at increased risk of low milk supply should be informed of signs related to low milk supply or dehydration such as jaundice, insufficient wet or soiled diapers, lethargy, inconsolability, unchanged stool color (not bright yellow by day five), and a lack of steady infant weight gain by day four. Occasionally, infants may need supplementation (donor milk or breast milk substitutes) if there is excessive early weight loss (greater than 8% by day four), suboptimal infant growth, dehydration, or hyperbilirubinemia or other medical conditions. Concerning findings should be communicated to the obstetric care professional so that the maternal-infant dyad can receive appropriate care and interventions as needed. Breastfeeding initiation may require additional support for late preterm and early-term infants (see "Special Concerns With Breastfeeding Late Preterm and Early-Term Infants" for more information about late-term and early-term infant feeding issues).

Galactagogues are medications and other substances believed to assist initiation, maintenance, or augmentation of rate of maternal milk synthesis. Pharmaceutical galactagogues include domperidone and metoclopramide; herbal galactagogues include fenugreek, fennel, and milk thistle. Galactagogues should not be considered as first-line therapy because current research on the effectiveness of pharmaceutical and herbal galactagogues is relatively inconclusive and all substances have potential adverse effects. A lactation expert should assess the entire feeding process, evaluate the mother for medical causes of low milk supply, and maximize nongalactagogue management. The breastfeeding dyad should be observed during a feeding to evaluate for comfortable, effective latch, and newborn position (Box 3). Table 2 outlines a list of conditions associated with increased

**Table 1. Conditions, Symptoms, and Management of Persistent Nipple and Breast Pain\***

Condition	Symptoms/Signs	Management
Infant ankyloglossia	Ongoing nipple damage and an infant with restricted tongue movement due to a tight lingual frenulum	<ul style="list-style-type: none"> <li>• Frenotomy/frenectomy using scissors or laser by a trained health professional (1–3)</li> <li>• Nipple care until frenulotomy/frenectomy can be completed</li> </ul>
Breast pump trauma/misuse	Nipple or soft tissue injury/bruising	<ul style="list-style-type: none"> <li>• Observe a pumping session.</li> <li>• Adjust level of suction or fit of flange.</li> </ul>
Eczematous conditions	<p>Erythematous skin</p> <p><i>Acute episodes:</i> blisters, erosions, weeping/oozing, and crust formation</p> <p><i>Chronic eruptions:</i> dry, scaling and lichenified (thickened) areas</p> <p>Lesions can be pruritic, painful, or even burning.</p>	<ul style="list-style-type: none"> <li>• Reduce identifiable triggers.</li> <li>• Apply an emollient.</li> <li>• Apply low/medium-strength steroid ointment twice daily for 2 weeks (immediately after a breastfeeding to maximize contact time before the next breastfeed).</li> <li>• Use second-generation antihistamines for pruritus.</li> <li>• Consider a short course (less than 3 weeks) of oral prednisolone or prednisone in resistant cases. (4, 5)</li> </ul>
Psoriasis	<p>Erythematous plaques</p> <p>Clearly demarcated borders</p> <p>Fine silvery overlying scale</p>	<ul style="list-style-type: none"> <li>• Apply an emollient</li> <li>• Apply low/medium-strength steroid ointment twice daily (immediately after a breastfeeding) as a first-line treatment.</li> <li>• Avoid prolonged topical steroid use to prevent thinning of the nipple epithelium and delayed healing.</li> <li>• Topical vitamin creams or gels and phototherapy (UVB) are safe to use.</li> <li>• Immunomodulating agents should not be used on the nipple due to the risk of infant oral absorption.</li> </ul>
Superficial bacterial infection associated with skin trauma	<p>Persistent cracks, fissures</p> <p>Weeping, yellow crusted lesions especially in conjunction with other skin conditions</p> <p>Cellulitis</p>	<ul style="list-style-type: none"> <li>• Topical mupirocin or bacitracin ointment</li> <li>• Oral antibiotics such as cephalosporin or penicillinase-resistant penicillin</li> </ul>
Candida infection	<p>Pink nipple/areola</p> <p>Shiny or flaky appearance of the nipple</p> <p>Nipple pain out of proportion to the clinical findings</p> <p>Burning nipple pain and pain radiating into the breast</p>	<ul style="list-style-type: none"> <li>• Topical azole and antifungal ointment or cream (miconazole and clotrimazole also inhibit the growth of <i>Staphylococcus</i> species) on the nipples.</li> <li>• Nystatin suspension or miconazole oral gel for infant's mouth</li> <li>• Oral fluconazole (200 mg once, then 100 mg daily for 7–10 days) may be used for resistant cases.</li> <li>• Before prescribing fluconazole, review all maternal medications and assess for drug interactions. Do not use fluconazole in combination with domperidone or erythromycin due to concern of prolonged QT intervals.</li> </ul>
Herpes simplex	<p>Small, clustered exquisitely tender vesicles with an erythematous, edematous base</p> <p>Solitary small ulcer</p> <p>Axillary lymphadenopathy</p>	<ul style="list-style-type: none"> <li>• Oral antiviral therapy such as acyclovir or valacyclovir should be used in doses recommended for treating primary or recurrent herpes simplex infections.</li> <li>• Mothers should temporarily not breastfeed or feed expressed breast milk to their infants on the affected breast. Lesions on the affected breast should be covered. They may resume feeding or providing expressed milk from the affected breast once the lesions have resolved.</li> <li>• They may feed or provide expressed milk from the unaffected breast if the lesions on the affected breast are covered.</li> <li>• Provide lactation support as needed.</li> </ul>

*(continued)*

**Table 1.** Conditions, Symptoms, and Management of Persistent Nipple and Breast Pain\* (continued)

Condition	Symptoms/Signs	Management
Herpes zoster	Pain and vesicular rash following a dermatome	<ul style="list-style-type: none"> <li>• Oral antiviral therapy such as acyclovir or valacyclovir should be used in doses recommended for treating herpes zoster.</li> <li>• Avoid breastfeeding or feeding expressed breast milk to infants from an affected breast/nipple until the lesions are healed.</li> </ul>
Vasospasm	Shooting or burning breast pain with blanching and other color changes (purple or red) of the nipple associated with pain	<ul style="list-style-type: none"> <li>• Warmth (compresses, heat pads) following a breastfeed or whenever the mother experiences pain.</li> <li>• Avoid cold on the breasts and nipples.</li> <li>• Nifedipine 30–60 mg sustained release daily or immediate release 10–20 mg three times a day for 2 weeks initially if pain persists. Longer treatment may be necessary for some women.</li> </ul>
Allodynia/functional pain	Pain to light touch Clothing brushing against the nipple causes excruciating pain, or drying the breasts with a towel is painful History of other pain disorders	<ul style="list-style-type: none"> <li>• Round-the-clock nonsteroidal antiinflammatory medications.</li> <li>• Propranolol starting at 10 mg three times a day if not responding can titrate up to 80 mg three times a day (6). (Based on treatment of TMJ pain)</li> <li>• Antidepressants may also be effective (see Academy of Breastfeeding Medicine Protocol #18 Use of Antidepressants in Breastfeeding Mothers at <a href="https://abm.memberclicks.net/assets/DOCUMENTS/PROTOCOLS/18-use-of-antidepressants-protocol-english.pdf">https://abm.memberclicks.net/assets/DOCUMENTS/PROTOCOLS/18-use-of-antidepressants-protocol-english.pdf</a>).</li> <li>• Antihistamines</li> <li>• Consider evaluation for trigger points and treatment with massage therapy.</li> </ul>
Recurrent plugged (blocked) ducts	Localized tender cord of tissue, usually a few centimeters in size, which is usually reversible with expression	<ul style="list-style-type: none"> <li>• Heat, direct pressure, and milk expression usually offer relief.</li> </ul>
Oversupply	Breast fullness, milk leakage	<ul style="list-style-type: none"> <li>• Stop any over stimulation by not pumping or hand expressing between breastfeeds. Only hand express or pump in lieu of breastfeeding or if breasts are overfull before bedtime.</li> <li>• Block feeding is a strategy that many lactation consultants endorse, but this is controversial with limited evidence. This involves feeding more from one breast for a block of time, typically 3 hours. The other breast rests, allowing the fullness to provide feedback to the breast to reduce milk supply.</li> <li>• Medication such as pseudoephedrine and sage extract have been used to reduce milk supply as has the oral contraceptive pill containing estrogen.</li> </ul>

Abbreviations: TMJ, temporomandibular joint pain.

\*Data to support management of persistent breastfeeding-associated pain are limited and based largely on expert opinion.

Modified from Berens P, Eglash A, Malloy M, Steube AM. ABM clinical protocol #26: persistent pain with breastfeeding. Academy of Breastfeeding Medicine. Breastfeed Med 2016;11:46–53.

risk of low or inadequate milk supply. Galactagogues may be helpful under certain conditions, such as if a woman would like to produce milk for an adopted infant. More details on the use of galactagogues are available in Academy of Breastfeeding Medicine Clinical Protocol #9: Use of Galactagogues in Initiating or Augmenting the Rate of Maternal Milk Secretion at <https://abm.memberclicks.net/assets/>

[DOCUMENTS/PROTOCOLS/10-breastfeeding-the-late-pre-term-infant-protocol-english.pdf](https://abm.memberclicks.net/assets/DOCUMENTS/PROTOCOLS/10-breastfeeding-the-late-pre-term-infant-protocol-english.pdf) (Box 4).

## Mastitis

Mastitis is one of the most common complications associated with breastfeeding. Women with a history of oversupply, nipple injury, latch difficulties, or skipped

## Box 2. Example Case: Persistent Pain

*Example Case:* A primipara woman presents to your office 1 week postpartum with complaints of severe bilateral nipple pain every time she breastfeeds her infant. The pain persists throughout the feeding. While observing the infant feeding, one can see the infant does not open his mouth widely upon initially latching. During the feeding, the infant's lower lip is curled inward. What steps can be taken to minimize any breastfeeding discomfort?

*Answer:* The newborn may be experiencing an ineffective latch, which can result in inadequate milk transfer during feedings. Breast engorgement and leaking milk suggests that lactogenesis II has occurred, but persistent pain throughout feedings implies that there is a problem with the latch. Gentle downward pressure on the newborns chin will often facilitate eversion of the lower lip, correcting the latch. The breastfeeding dyad should be observed during a feeding to evaluate for comfortable, effective latch, and newborn positioning. Early intervention and lactation support can alleviate the pain cycle that is often associated with undesired early weaning. In addition to addressing latch, managing maternal complications such as nipple trauma, including dermatitis, infection, and vasospasm can relieve pain and symptoms. Patients should be encouraged to express milk if breastfeeding is too painful in order to maintain milk supply. If a patient continues to experience pain and feeding difficulties in the setting of a normal latch and an otherwise negative workup, a diagnosis of neonatal ankyloglossia should be considered. Obstetrician-gynecologists and other obstetric care professionals should refer patients to specialized care such as a lactation consultant, ear nose and throat specialist, or a breastfeeding medicine provider if there is not an obvious solution to treat persistent pain. Patients may also be referred for additional care with a diagnosis of ankyloglossia and related conditions, as needed.

feedings may be at risk for mastitis (12). Early recognition and treatment may prevent complications, such as breast abscess, sepsis, and early weaning. Milk stasis is often the initiating factor in mastitis, and the most important management step is frequent and effective milk removal during the treatment. A patient may experience a decrease in her milk supply (this has been documented in animal studies), but this decrease usually will improve once she begins to recover, as long as she continues to breastfeed or adequately express her breast milk (13). Women should be reassured that the antibiotics and antiinflammatory medications used to treat mastitis are safe for her infants. Unless otherwise indicated, the patient should be encouraged to either continue breastfeeding her baby or to express her milk. If there is no clinical response to antibiotics, methicillin-resistant *Staphylococcus aureus* or an abscess should be considered. Untreated abscess can result in maternal sepsis (Box 5).

## Box 3. Signs of a Good Latch

- Infant's chest rests against the mother's body
- Infant's chin touches the breast
- Infant's tongue is down
- Infant's lips flanged outwards
- Little or no areola is visualized
- Rhythmic sucking present
- Audible swallowing present
- The latch is not uncomfortable or painful.
- The nipple is not injured or misshapen after breastfeeding.

For more details on a good latch, refer to [womenshealth.gov](https://www.womenshealth.gov) at <https://www.womenshealth.gov/breastfeeding/learning-breastfeed/getting-good-latch>.

Department of Health and Human Services, Office on Women's Health. Getting a good latch. Washington, DC: OWH; 2018. Available at: <https://www.womenshealth.gov/breastfeeding/learning-breastfeed/getting-good-latch>. Retrieved April 15, 2020.

## Special Concerns With Breastfeeding Late-Preterm and Early-Term Infants

Compared with mothers of infants born after 39 weeks of gestation, mothers of late-preterm (34–36 6/7 weeks of gestation) and early-term (37–38 6/7 weeks of gestation) infants encounter more difficulty with establishing breastfeeding (13). In addition, their infants are at increased risk for multiple medical morbidities when compared with term infants. Establishing breastfeeding in the late-preterm infant is more difficult because late-preterm infants are less alert, have less stamina, and have greater difficulty with latch, suck, and swallow than full-term infants (14). Late-preterm or early-term infants often are separated from their mothers for evaluation and treatment, and mothers are discharged before mature milk production. Mothers of late-preterm and early-term infants are more likely to give birth to multiples or to have medical conditions, such as diabetes mellitus, hypertensive disorders of pregnancy, chorioamnionitis, or a cesarean birth that may adversely affect the onset of lactation and the success of breastfeeding. Obstetrician-gynecologists and other obstetric care professionals can support mothers of preterm and early-term infants by providing proactive lactation support, including education on hand expression in anticipation of potential breastfeeding difficulties. Emphasis should be placed on developing and maintaining the maternal milk supply while infants learn how to effectively latch, suck, and swallow. Patients also should be educated about the benefits of frequent hand expression (with or without mechanical milk expression) during the immediate postpartum period (14). More information about breastfeeding challenges in late-preterm and early-term infants can be found at Academy

**Table 2. Conditions Associated With Increased Risk of Low or Inadequate Milk Supply**

Maternal medical history	<ul style="list-style-type: none"><li>● Difficulty breastfeeding or slow weight gain with previous children</li><li>● Endocrine disorders such as thyroid disease, diabetes mellitus or insulin resistance, polycystic ovary syndrome (PCOS), hypopituitarism</li><li>● Obesity</li><li>● Eating disorders</li><li>● Autoimmune disease</li><li>● Connective tissue disorders</li><li>● Psychiatric illness</li><li>● Renal failure</li><li>● Stress</li><li>● Tobacco use</li><li>● Extremes of maternal age</li><li>● Infertility</li><li>● Social concerns (lack of breastfeeding support, early return to work)</li></ul>
Maternal anatomy	<ul style="list-style-type: none"><li>● Breasts that did not increase in size during pregnancy</li><li>● Primary mammary glandular insufficiency (tubular breasts)</li><li>● History of breast surgery enlargement or reduction</li><li>● Nipple variations such as inverted and very large nipples</li></ul>
Antepartum, intrapartum, or postpartum conditions	<ul style="list-style-type: none"><li>● Preeclampsia</li><li>● Pregestational and gestational diabetes</li><li>● Theca lutein cyst</li><li>● Prolonged labor</li><li>● Medications during labor that can cause drowsiness in the newborn, eg opioids and benzodiazepines</li><li>● Preterm delivery</li><li>● Postpartum hemorrhage</li><li>● Retained placenta</li><li>● Infections</li></ul>
Fetal or neonatal conditions	<ul style="list-style-type: none"><li>● Allergy</li><li>● Ankyloglossia</li><li>● Biliary atresia</li><li>● Multiple gestation</li><li>● Prematurity</li><li>● Small for gestational age</li><li>● Genetic conditions such as Down syndrome, cystic fibrosis</li><li>● Neurological diseases</li><li>● Congenital anomalies<ul style="list-style-type: none"><li>— Central nervous system abnormalities</li><li>— Congenital heart defects</li><li>— Gastrointestinal anomalies</li><li>— Micrognathia</li><li>— Cleft lip or palate</li></ul></li><li>● Inborn errors of metabolism</li><li>● Malabsorption</li><li>● Sepsis or infections of the newborn</li><li>● Thyroid disorder</li><li>● Medical problems (eg, hypoglycemia, infection, jaundice, respiratory distress, birth trauma, birth asphyxia)</li></ul>
Maternal signs and symptoms	<ul style="list-style-type: none"><li>● Perceived inadequate milk supply</li><li>● Sore nipples or evidence of nipple compression with feedings</li><li>● Failure of “secretory activation” or lactogenesis stage II. (Milk did not noticeably “come in” by 72 hours postpartum.) This may be difficult to evaluate if mother and infant are discharged from the hospital in the first 24–48 hours postpartum.</li><li>● Mother unable to hand express colostrum</li><li>● Need for breastfeeding aids or appliances (such as nipple shields, breast pumps, or supplemental nursing systems) at the time of hospital discharge</li><li>● Use of breast milk substitutes during hospital stay</li></ul>

*(continued)*

**Table 2.** Conditions Associated With Increased Risk of Low or Inadequate Milk Supply (*continued*)

Infant signs and symptoms	<ul style="list-style-type: none"><li>● Persistently sleepy infant</li><li>● Difficulty in latching on to one or both breasts</li><li>● Ineffective or unsustained suckling</li><li>● Excessive infant weight loss (greater than 7–10% of birth weight in the first 48 hours or greater than 75th percentile for age and mode of delivery on the Newborn Weight Tool (<a href="https://www.newbornweight.org/">https://www.newbornweight.org/</a>))</li><li>● Supplementation with breast milk substitutes</li><li>● Early pacifier use</li><li>● Signs of infant dehydration:<ul style="list-style-type: none"><li>— Lack of bowel movements—example of early sign</li><li>— Urate crystals in diaper</li><li>— Dry mucous membranes—example of an early sign</li><li>— Loss of skin turgor</li><li>— Sunken eyes</li><li>— Depressed anterior fontanelle</li><li>— Thready radial pulse—example of late sign</li><li>— Cold extremities—example of late sign</li></ul></li><li>● Jaundice</li></ul>
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Data from: Evans A, Marinelli KA, Taylor JS. ABM clinical protocol #2: guidelines for hospital discharge of the breastfeeding term newborn and mother: “The going home protocol,” revised 2014. Academy of Breastfeeding Medicine. *Breastfeed Med* 2014;9:3–8 and Wambach K, Riordan J, editors. *Breastfeeding and human lactation*, enhanced fifth edition. Burlington, MA: Jones and Bartlett Learning; 2016.

of Breastfeeding Medicine Clinical Protocol #10: Breastfeeding the Late Preterm (34–36 6/7 Weeks of Gestation) and Early Term Infants (37–38 6/7 Weeks of Gestation) (<https://abm.memberclicks.net/assets/DOCUMENTS/PROTOCOLS/10-breastfeeding-the-late-pre-term-infant-protocol-english.pdf>) (Box 6).

### Medication Use During Lactation

Some women choose not to initiate breastfeeding, stop breastfeeding sooner than intended, or are unable to complete treatment with prescribed medications because they may have concerns regarding medication use during lactation (15). Health care professionals often incorrectly counsel women regarding medication use and the need for cessation or interruption of lactation (16). Yet, most medications are safe during breastfeeding. Health care professionals prescribing medications during lactation should base their counseling on accurate, current information from resources such as LactMed at <https://www.ncbi.nlm.nih.gov/books/NBK501922/>. Women who are taking medications during pregnancy should be counseled regarding the medication’s usage during lactation. They also should be counseled on potential maternal and newborn symptoms associated with the medications used. If there are concerns regarding medication use that need clarification, expressed milk should be appropriately stored, not discarded. Antibiotics can be administered as indicated. Nonsteroidal antiinflammatory drugs and certain opioids, such as morphine, can be administered through oral, intravenous, or intramuscular routes (17). Because opioids will be present in the breast milk, nonopioid analgesics should be optimized first. The infant should be observed for excessive sedation if opioids are required for pain control, and opioid use should be limited to the shortest reasonable course. Using accu-

rate resources, the safest and most effective medication in each class can be determined.

If contrast is necessary for an imaging study, women can breastfeed safely and do not need to “pump and dump” following intravenous contrast administration (18). When surgical intervention is indicated, lactation can be resumed once the mother is awake and alert after general anesthesia. For more information on analgesia and anesthesia during lactation, please refer to ACOG Practice Bulletin No. 209 *Obstetric Analgesia and Anesthesia* (<https://www.acog.org/clinical/clinical-guidance/practice-bulletin/articles/2019/03/obstetric-analgesia-and-anesthesia>) or Academy of Breastfeeding Medicine Clinical

#### Box 4. Example Case: Perceived Low Milk Supply

*Example case:* One of your patients on postoperative day two is concerned that she is not making enough milk. She is contemplating starting human milk substitutes because she feels like her infant is “starving and cluster fed all night long.” How should you counsel this patient?

*Answer:* Breastfeeding may be challenging at first, but most infants do well on their mother’s milk alone. In the first few days after birth, colostrum is sufficient for most infants. The patient should be encouraged to feed frequently (8–12 times per day) to build a full supply. Her milk supply should increase by day four. A breast assessment and breastfeeding history should be obtained as part of prenatal care and identified concerns and risk factors for breastfeeding difficulties should be discussed with the woman and communicated to the infant’s health care professional, either directly or as part of shared records (11).

### Box 5. Example Case: Mastitis

*Example case:* Your patient is 3 weeks postpartum, and she has struggled with sore and injured nipples. She comes into the clinic with a fever of 102 °F, and her right breast is sore. Initially, there was no distinct area of redness, but now there is erythema noted along the medial aspect of the right breast. How should this patient's symptoms be managed?

*Answer:* The clinical definition of *mastitis* is a tender, hot, swollen, wedge-shaped area of the breast associated with a fever, chills, flu-like aching, and systemic illness. Most women diagnosed with mastitis can be treated with antibiotics on an outpatient basis. Preferred antibiotics are usually penicillinase-resistant penicillin, such as dicloxacillin, 500 mg four times per day. Alternatively, cephalexin 500 mg four times a day or clindamycin 300 mg four times a day may be used if the patient has a penicillin allergy. A patient should be asked about a history of methicillin-resistant *Staphylococcus aureus* in herself or in members of her household. A 10–14-day course of antibiotics usually is recommended to reduce the risk of recurrence from suboptimally treated mastitis.

### Box 6. Example Case: Breastfeeding Late-Preterm and Early-Term Infants

*Example case:* A patient with a history of abdominal myomectomy presents to your office for a prenatal visit at 35 weeks of gestation. She has been counseled previously that she will need to have a scheduled primary cesarean delivery at 37 weeks of gestation and asks you about the implications that early-term delivery will have on her infant's health. The patient states that she intends to breastfeed exclusively.

*Answer:* Obstetrician–gynecologists and other obstetric care professionals should counsel patients that although an early delivery is medically indicated, feeding difficulties may be encountered in the late-preterm infant. The patient should be counseled that suckling difficulties could impair milk transfer, affecting both her milk supply and the infant's growth. She should be given specific instructions about hand and mechanical expression techniques and safe storage of breast milk. She also should be encouraged to initiate breastfeeding or expression of colostrum within 1 hour of birth. Arranging early consultation with lactation services can further support the breastfeeding dyad and ensure that the mother's milk supply is protected in the setting of these breastfeeding challenges.

Protocol #15: Analgesia and Anesthesia for the Breastfeeding Mother (<https://abm.memberclicks.net/assets/DOCUMENTS/PROTOCOLS/28-peripartum-analgesia-and-anesthesia-for-the-breastfeeding-mother-protocol-english.pdf>.) For more details on breastfeeding and pain management, please refer to ACOG Committee Opinion No. 742, *Postpartum Pain Management* (<https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2018/07/postpartum-pain-management>) (Box 7).

### Guidelines for Breastfeeding and Substance Use Disorder

Substance use is common among reproductive-aged women. Women who use nonmedical drugs, such as cocaine and phencyclidine, should be advised not to breastfeed, and use of these drugs should be discouraged. These drugs can be detected in human milk and may affect the infant negatively. Breastfeeding should be encouraged in women who are stable on medication-assisted treatment for opioid use disorders who are not using illicit drugs and who have no other contraindications to breastfeeding. Marijuana use should be discouraged because there is insufficient data to evaluate the effects of marijuana use on lactation and breastfeeding, and marijuana use may compromise caring for a child (19). Infant exposure to marijuana smoke also should be discouraged. Similar to marijuana, tobacco smoking is not an absolute contraindication to breastfeeding, but tobacco use should be discouraged. Secondhand exposure to tobacco smoke should be avoided to minimize harmful effects on infants, such as respiratory allergies

and increased risk of sudden infant death syndrome. For women who successfully quit tobacco use during pregnancy, breastfeeding may be associated with decreased recidivism (20). Tobacco cessation should be encouraged and facilitated by providing counseling and resources (including nicotine replacements if needed). Alcohol is readily distributed to human milk and the concentration is similar to the concentration in plasma. Alcohol negatively affects milk ejection reflex, which may lead to a

### Box 7. Example Case: Medication Use During Lactation

*Example case:* Your patient presents with signs and symptoms of appendicitis. She is 2 months postpartum and breastfeeding exclusively. The general surgeon requests a consultation regarding intravenous contrast and safe medications during lactation. How do you advise the surgeon?

*Answer:* A computed tomography scan can be used as needed in a lactating woman. Historically, women have been counseled to “pump and dump” for 24 hours after intravenous contrast. However, the amount of contrast absorbed by the infant is minuscule (less than .01 %). Mothers can continue to breastfeed safely without interruption following intravenous contrast (17). A pump should be provided at the bedside for regular milk expression if the infant is not directly breastfeeding.

reduction in milk production. It can also impair the infant's motor development. Alcohol intake should be occasional, and no more than 0.5 g alcohol per kg body weight should be consumed, which is approximately 8 ounces of wine or 2 ounces of liquor for a 130 -pound woman (21). Breastfeeding should be avoided for a minimum of 2 hours after the alcohol intake, depending on the quantity ingested, to minimize the concentration in the mother's milk. See Academy of Breastfeeding Medicine Clinical Protocol #21: Substance Use and Substance Use Disorders at <https://abm.memberclicks.net/assets/DOCUMENTS/PROTOCOLS/21-drug-dependency-protocol-english.pdf> for details on substance use during lactation (Box 8).

### Palpable Breast Mass While Breastfeeding

Pregnancy-associated breast cancer includes cancer diagnosed during pregnancy, throughout the first year postpartum, or during lactation (22). Pregnancy-associated breast cancer accounts for approximately 3% of all breast cancer diagnoses, and the rate is increasing because more women are giving birth later in their reproductive years when breast cancer rates are higher (22). Pregnancy-associated breast cancer carries a worse prognosis when diagnosed postpartum, and delays in diagnosis may be avoided by prompt evaluation of a palpable mass during lactation (23) (Box 9).

#### Box 8. Example Case: Breastfeeding and Opioid Use

*Example case:* A 28-year-old pregnant patient at 28 weeks of gestation is being maintained on methadone. During a prenatal visit, she asks about breastfeeding. How should this patient be counseled?

*Answer:* Counseling a patient with a history of substance use can be complicated. In women being treated for opioid use disorder, encourage breastfeeding first and address challenges if they arise. There are associated behaviors or conditions that need to be addressed. The patient's use of other drugs, psychiatric illnesses and use of psychotropic medications, and comorbid conditions such as infections (human immunodeficiency virus, hepatitis, etc.) should be assessed. Only a very small amount of methadone is secreted into human milk. Mothers taking methadone can be encouraged to breastfeed. Long-term prenatal opioid use is associated with neonatal abstinence syndrome. In addition to the other documented benefits for mothers and infants, breastfeeding may help decrease the severity and duration of neonatal abstinence syndrome and should be encouraged.

#### Box 9. Example Case: Palpable Breast Mass

*Example case:* A 38-year-old breastfeeding patient presents at 8 weeks after birth with a mass that she noticed just before being diagnosed and treated for mastitis at 6 weeks postpartum. The mass size remained unchanged after the antibiotics. She has no pain or fevers. On examination, you note a discrete 3 cm palpable mass that is nontender in her right breast. What is your next step in management of this mass?

*Answer:* A persistent palpable breast mass found during the lactation period should be evaluated to avoid delay in the diagnosis of pregnancy-associated breast cancer. If treatment of mastitis or a plugged duct has not resulted in resolution of a mass, the patient should be evaluated to avoid a delay in diagnosis. According to the American College of Radiology, a breast ultrasound is the first-line imaging choice in pregnant and lactating patients when assessing a palpable mass (21). Breast ultrasound can help identify a benign mass such as a galactocele. If the breast ultrasound result is negative and the mass persists, or if the ultrasound shows suspicious findings, further evaluation with mammography or digital breast tomosynthesis may be done. Emptying the breast before imaging tests may help increase their utility. A breast biopsy should be performed if there are abnormal findings on imaging. The risk of milk fistula and its management should be discussed (21). Breast magnetic resonance imaging with contrast may be done if needed, and breastfeeding should not be interrupted after gadolinium contrast. Lactation support should be provided during evaluation and management (17).

### Conclusion

Breastfeeding is associated with a decreased risk of breast cancer, ovarian cancer, diabetes mellitus, and hypertensive heart disease. Based on the benefits of lactation, ACOG recommends breastfeeding exclusively for 6 months with continued breastfeeding as complementary foods are introduced during the infant's first year of life or longer, as mutually desired by the woman and her infant. Persistent nipple pain, perceptions of low milk supply, difficulty with infant latch, and incorrect advice about medications and lactation can lead to undesired early weaning. Obstetrician-gynecologists are uniquely positioned to enable women to achieve their infant feeding goals and should be able to address common challenges with breastfeeding.

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Published online on January 21, 2021.

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Breastfeeding challenges. ACOG Committee Opinion No. 820. American College of Obstetricians and Gynecologists. *Obstet Gynecol* 2021;137:e42–53.

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