



Phototherapy

Revised: June 15, 2024.

Drug Levels and Effects

Summary of Use during Lactation

In general, laser therapy and phototherapy are considered acceptable during breastfeeding.[1,2] Phototherapy for psoriasis is also generally acceptable; however, nursing should be withheld for 24 hours after ingestion of an oral psoralen, such as methoxsalen.[3]

Laser therapy was used in some Russian and Austrian studies to prevent and treat lactation mastitis and nipple fissures.[4-8] However, these studies are rather old and not well controlled. Two more recent, well-controlled studies found somewhat conflicting results. In one, laser light applied to the nipple improved the pain from nipple lesions one day sooner than sham therapy.[9] In the other, a single application of laser light resulted in no difference in nipple pain during the first 24 hours after application.[10]

Some small studies have found that application of laser light to the breasts increases serum prolactin and milk production. Laser application to cesarean section wounds did not adversely affect serum prolactin.[11]

A study from China indicated that high-intensity red light (630 nm) plus antibiotics were more effective than antibiotics alone in healing mastitis and preventing recurrence.[12] Laser light has also been used as part of a 5-step procedure to treat mastitis.[13]

Effects in Breastfed Infants

Relevant published information was not found as of the revision date.

Effects on Lactation and Breastmilk

Use of low-level laser therapy to enhance healing of the surgical incision following cesarean section was evaluated in a small, poorly controlled study. Laser light was applied for 15 minutes on 3 consecutive days postoperatively. On the third day, serum prolactin levels were not significantly different in the two groups. The treatment appeared to help wound healing.[11]

A small, randomized study compared primiparous mothers who were supplementing their infants with formula during the first month postpartum and who received either 12 sessions of low-level laser light to the breasts over

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3 weeks (n = 20) or no treatment (n = 20). All mothers received similar counseling by a blinded physician certified in lactation counseling. The treated group had greater increases in serum prolactin, and breastmilk lactose, protein and fat at 3 weeks and 3 months after the start of therapy.[14]

A randomized study of women (n = 20 in each group) who were mixed feeding their infants in the first month postpartum compared 12 session of electroacupuncture or low-level laser therapy to the breast over 1 month and control women. All women also received oral domperidone 10 mg three times daily. Laser therapy increased serum prolactin, infant weight and maternal perception of milk production more than domperidone alone, but less than electroacupuncture.[15]

References

1. Lee KC, Korgavkar K, Dufresne RG, Jr, et al. Safety of cosmetic dermatologic procedures during pregnancy. *Dermatol Surg* 2013;39:1573-86. PubMed PMID: 24164677.
2. Yaghi M, McMullan P, Truong TM, et al. Safety of dermatologic medications in pregnancy and lactation: An Update - Part II: Lactation. *J Am Acad Dermatol* 2024. PubMed PMID: 38280680.
3. Menter A, Korman NJ, Elmets CA, et al. Guidelines of care for the management of psoriasis and psoriatic arthritis: Section 5. Guidelines of care for the treatment of psoriasis with phototherapy and photochemotherapy. *J Am Acad Dermatol* 2010;62:114-35. PubMed PMID: 19811850.
4. Dotsenko AP, Chinchenko EI, Khodos VA. [Use of carbon dioxide laser in the treatment of acute lactation mastitis]. *Sov Med* 1989;(9):39-42. PubMed PMID: 2513650.
5. Kovalev MI. [Prevention of lactation mastitis by the use of low-intensity laser irradiation]. *Akush Ginekol (Mosk)* 1990;(2):57-61. PubMed PMID: 2339766.
6. Skobelkin OK, Brekhov EI, Chegin VM, et al. [The carbon dioxide laser in the complex treatment of acute suppurative lactation mastitis]. *Vestn Khir Im I I Grek* 1984;132:67-9. PubMed PMID: 6424314.
7. Skobelkin OK, Derbenev VA, Velikii Ia, et al. [Use of lasers in the treatment of acute suppurative lactation mastitis]. *Vestn Khir Im I I Grek* 1988;141:46-9. PubMed PMID: 3149064.
8. Pietschnig B, Pani M, Kafer A, et al. Use of soft laser in the therapy of sore nipples in breastfeeding women. *Adv Exp Med Biol* 2000;478:437-8. PubMed PMID: 11065120.
9. Coca KP, Marcacine KO, Gamba MA, et al. Efficacy of low level laser therapy in relieving nipple pain in breastfeeding women: A triple-blind, randomized, controlled trial. *Pain Manag Nurs* 2016;17:281-9. PubMed PMID: 27363734.
10. Camargo BTS, Coca KP, Amir LH, et al. The effect of a single irradiation of low-level laser on nipple pain in breastfeeding women: a randomized controlled trial. *Lasers Med Sci* 2020;35:63-9. PubMed PMID: 31030379.
11. Mokmeli S, Khazemikho N, Niromanesh S, et al. The application of low-level laser therapy after cesarean section does not compromise blood prolactin levels and lactation status. *Photomed Laser Surg* 2009;27:509-12. PubMed PMID: 19405857.
12. Miao M, Fan CN, Liu N, et al. Clinical application research on the use of carnation photon therapeutic apparatus in treatment for acute postpartum mastitis. *Proc 2016 Int Conf Biol Sci Technol* 2016:154-7. doi:10.2991/bst-16.2016.2410.2991/bst-16.2016.24
13. Yao Y, Long T, Pan Y, et al. A 5-step systematic therapy (FSST) for treating plugged ducts and mastitis in breastfeeding women: A case control study. *Asian Nurs Res (Korean Soc Nurs Sci)* 2021;15:197-202. PubMed PMID: 34048977.
14. El Taweel A, Yousef A, Hasanin M, et al. Effect of low level laser therapy of the breasts on milk production and composition in supplement dependent mothers. *Breastfeed Med* 2017;12 (Suppl 1):S13. doi:10.1089/bfm.2017.29058.abstracts
15. Maged AM, Hassanin ME, Kamal WM, et al. Effect of low-level laser therapy versus electroacupuncture on postnatal scanty milk secretion: A randomized controlled trial. *Am J Perinatol* 2020;37:1243-9. PubMed PMID: 31327162.

Substance Identification

Substance Name

Phototherapy

Drug Class

Breast Feeding

Lactation

Milk, Human

Laser Therapy

Low-Level Light Therapy

PUVA Therapy