Lactation & Breastfeeding

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EDITORIAL

Dear members, dear colleagues, dear readers,

summer has gone, it has started raining, the wind is blowing and leaves are falling from trees. In this ELACTA magazine you will find some nice issues to read about, even by authors from overseas. About situations that will come up unexpectedly and are sometimes unwanted. Our profession is really important, also after hospitalization. Convince your colleagues and other health care providers about the important role you play as an IBCLC.

Actually the ELACTA board is writing this editorial from Opatija in Croatia. It is a beautiful place where one of our board members lives and does her job as an IBCLC in her private practice. We have board meetings on Friday and Saturday from 9 am to 5 pm. During this enjoyable time together, we bridge the differences we experience in lactational care. Being the president of this important association makes me feel grateful and responible. Beside a laugh and a tear, we work very hard and efficiently to reach the goals we have given ourselves. One goal we have reached is opening the registration of the 10th ELACTA congress in Rotterdam on 1st September. Please find your way to the website, to catch up with the latest news on this upcoming event. You are invited to register early for this conference on the amazing steamship Rotterdam. German translation will be provided.

Last but not least it is my pleasure to thank our editorial team for this magazine! They have managed again to make a professional and interesting issue! Have fun reading!

Warm regards,

Karin Tiktak
President ELACTA

IMPRINT

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With its articles, Lactation and Breastfeeding wants to go beyond expert information about breastfeeding and also stimulate discussion. Therefore, we welcome your views. Please send Letters to the Editor to the following email address: magazin@elacta.eu

The articles published in Lactation and Breastfeeding do not necessarily reflect the opinions of the editors or of ELACTA. Rather, they are the author's own personal views


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Dear editorial team,

today I am writing to you because I want to express my praise and thanks for your magazine and in particular for your successful and competent latest issue of L & S. Again you have succeeded in getting me to read your magazine with enthusiasm even after having had 20 years of experience as an IBCLC myself. What I found extremely fascinating was the article "A different way of breastfeeding". It sounds very consistent, logical and very much hands-on orientated and encourages me in my efforts to use none or at least as little lactation equipment as possible because I often experience it as cumbersome and disturbing and only rarely helpful for the breastfeeding relationship. I also find the controversial discussion in the articles about the use of nipple shields really interesting and helpful. It is amazing how you deal with the topic neither taking extreme points of view nor being one-sided. Although I, myself, really never use nipple-shields as a lactation consultant I am often confronted with them if mothers get in touch with me. Thank you so much for the good job you do and for this wonderful scientific magazine.

Gabi Hörandner, IBCLC
Schörfling, Austria

Jaundice Therapy: D
Icterus And The Supp

Letter to the editor in regard to the article "Hyperbilirubinaemia" by Petra Schwaiger and Anke Prothmann,
Lactation and breastfeeding 2/2017

The subtitle of the article deals with prevention, breastfeeding management and a new family-friendly therapy approach. In these days of an early discharge of mothers and babies after birth it is outstanding if the phototherapy as described by the authors would be offered more frequently and would be paid for by both statutory and private health insurances in the future.

This is cheaper and also less stressful than being sent to hospital again where rooming-in is rarely possible. Apart from the minimization of the enterehopathic circulation, phototherapy the therapeutic strategy of choice whereby the separation of mother and baby is described as the most severe side-effect in the AWMF guideline.

The importance of a successful breastfeeding management from the very beginning is illustrated very impressingly. Newborns that suffer from an elevated bilirubin value, are tired whereby it is unclear if they are breastfed insufficiently due to their tiredness or if they are tired due to their bilirubin value.

What counts is that by nursing the baby frequently/feeding mother´s milk and a higher defecation frequency the enterohepathic circulation is minimised.

What is yet irritating is the paragraph on the so-called "breastmilk icterus", which is rather known as „Icterus prolongatus". This phenomenon that breast-fed babies have higher bilirubin values than children fed on formula probably depends on a stronger enterohepathic circulation of the biblirubin due to the ß-glukuronidase in the bowels of the breast-fed child, which is inhibited by the protein components in the formula. Reasons like the increased intake of maternal hormones that competitively inhibit the Glukuronyltransferase in the child´s liver or other inhibitors of the Glukuronyltransferase, such as an elevated fat-content in the breastmilk, an increased concentration of free fatty acids, a strikingly divergent composition of specific fatty acids in the breast milk as well as an increased activity of the lipoprotein lipase and the stimulable lipase which is stimulated by the bile acid have been excluded so far.

Nonetheless it is argued that according to AWMF guidelines feeding formula is considered to be an optional therapy in order to break the enterohepathic circle. This is not expicitly described as a therapy for icterus prolongatus. Generally speaking the possiblity of making good use of it exists. Yet the side effects should not be neglected; in this case it would be a negative effect on the microbiom of the child´s intestines with longterm effects. It is essential to exclude other reasons as the authors cite from the AWMF guideline. With the help of good breastfeeding management and photo therapy without separating mother and child, feeding formula can be marginalised.

Gudrun von der Ohe,
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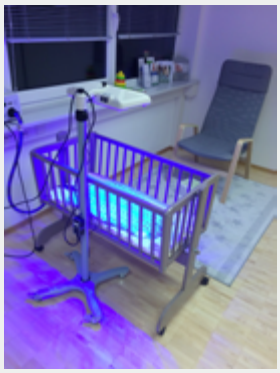
iscussion About Breastmilk plementary Feed Of Formula

Hyperbilirubinemia – additional comment

The article was written on the grounds of our experiences with babies that suffer from elevated bilirubin values and the resulting problems and strains for both parents and infants as well as for the nursing staff. It is our aim to make our contribution in the fields of prevention and successful breastfeeding management and thus to contribute to the relief of the strain for all parties involved.

To prevent irritations a further explanation will be given:
There are two periods of time that have to be regarded considering different aspects. First of all in the birth clinic, risk detection, prevention and different methods of treatment are at the centre of attention. Later on in the domestic and outpatient sector it is mainly about prolonged, mother´s milk associated Icterus, which is usually referred to as "breastmilk icterus" or " breastmilk jaundice".



It is generally known that in the daily hospital routine conflicts between different professional groups on the best prevention available and the best therapy tend to occur and additionally there are shortages in staff due to work overload. Defined, harmonised standards and algorithms on a recent scientific basis can help to defuse conflicts. If efficient measures are taken as standard, also mothers and babies with certain risk factors such as a neonatal jaundice automatically receive a better basic medical care because thus the effort of additional necessary medical treatment can be reduced. Successful breastfeeeding without disruption can be more easily achieved for more mother-child pairs.

Criteria and recommendations for prevention and therapy of Hyperbilirubinemia of the newborn can be found in the AWMF guideline (2015) and in the ABM protocol 22 (2010).

In case the bilirubin value remain elevated throughout weeks in the further course, some paediatricians often wish to confirm their diagnosis " breastmilk jaundice" by interrupting breastfeeding or/and lowering the bilirubin values. If the mother has to interrupt breastfeeding and must discard the expressed milk, even if it is only for half a day or a day, it massively interferes with their breastfeeding relationship. It conveys the feeling to the mother that her milk is hazardous for her child. For this reason it is important to initially check if the bilirubin value puts the child in danger and has to be lowered. If this question has to be answered affirmatively there are other ways of lowering the bilirubin values apart from disrupting breastfeeding. We have already introduced the outpatient phototherapy. By a supplementary feed of about 5 ml of formula in each feed, particularly with partially hydrolysed formula, the bilirubin value can be lowered as well. In comparison with a disruption of the breastfeeding this is a a much less intrusive measure that leaves the breastfeeding relation intact and minimises the stress for mother and child.

Generally, all the professional groups that get in touch with mother and baby during the early stage of developing their relationship or mother-child-relationship, should work together very effectively and closely.

From my point of view it is also essential that the professional exchange about different approaches in treatment does not disregard the experience-reality of those people who do practical work for newborns and their mothers under difficult working conditions every day. Not in order to paint a positive picture of something that does not work well. But to increase the understanding why things work differently from what we would all expect them to. Having a closer look can enable us to develop effective solutions to sustainably improve the situation.

Petra Schwaiger, pediatric nurse, lactation consultant IBCLC in private praxis, Munich, and one of the authors of the article

DETAILS ON THE SOURCES
Both authors have submitted detailed sources which can be obtained at magazin@elacta.eu

Infant Hand Movements During Breast Seeking

Catherine Watson Genna BS, IBCLC

Picture top left: Infant hugs the breast, improving neck, jaw and tongue stability and contact with mother's trunk.

Picture top right: Tongue-tied infant pulls breast into her mouth with her fists.

Pictures below: Infant shapes his mother's breast with his hands to bulge out the areola to facilitate latch.

Infant hand to mouth movements can be a source of frustration for new mothers and health care professionals during early breastfeeding attempts, and many restrain the baby's hands with positioning or swaddling. There is no doubt that hand and mouth movements are linked in young infants. Newborn infants flex their fingers (make a fist) more often as the time since their last feeding (and inferentially, their hunger) increases 1 (Turkewitz 1966). Mouthing or sucking the hand, (especially in combination with an unhappy facial expression) is recognized as a hunger cue by breastfeeding mothers 2 (McNally et al).

Hand to mouth behaviors are associated with swallowing during fetal life. Miller 3, in an ultrasound exploration of the development of swallowing behavior, found that fetuses invariably brought their hand to their orofacial area before swallowing amniotic fluid. Myowa-Yamakoshi 4 and colleagues (2006) observed fetal movements on ultrasound and found that 50% of hand to face movements made contact with the mouth. Moreover, the majority of fetuses began moving the hand with the mouth closed, and opened the mouth as the hand approached. The researchers interpreted this as showing the fetus' intent to bring the hand in contact with the mouth. Reissland 5 and colleagues showed that the frequency of mouth opening in anticipation of hand contact increased with each week of gestation. Direct brain stimulation in young children and adults undergoing epilepsy surgery showed that the particular movement pattern of a closing hand approaching an opening mouth is encoded in the precentral gyrus of the brain 6 (Desmurget, 2014). This implies that feeding related movements important to survival are specially encoded as a complete pattern so they can be more easily deployed and require no prior learning to use. In adults, the intended objective of movements affected kinematics (organization of movement in space and time) of the right hand. The intent to place an object in the

mouth made right hand movements more efficient (smaller opening of the hand, less wasted movement) than grasping the same objects to move them 7 (Flindall, 2014). So far, fetuses have not shown consistent differences between left and right hand movements.

Infants are born with an understanding of how hands operate. Eye tracking tests are often used to test preverbal infants' understanding of the world 8,9 (Aslin & McMurray, 2004; Gredebäck, Johnson, & von Hofsten, 2009). Infants look longer at things that are surprising, counterintuitive, or physically impossible, such as a square moving unaided uphill. 24-48 hour old babies look longer at videos (but not still pictures) of impossible hand movements than possible ones 10 (Longhi, 2015).

Immediately after birth, infants placed skin to skin with their mothers initiate a series of behaviors to find and attach to the breast 11 (Widström, Lilja, Aaltomaa-Michalias, Dahllöf, Lintula, & Nissen, 2011). These behaviors include identification and massage of the maternal nipple with the infant's hands 12 (Matthiesen, Ransjö-Arvidson, Nissen, & Uvnäs-Moberg, 2001). Hand to nipple to mouth movements seem to be an important part of this pre-feeding sequence, the more of these movements, the faster the infant latches on to the breast 11 (Widstrom). Exogenous oxytocin given during labor suppresses the hand to nipple movements and impairs the infant's ability to self-attach in the hour after birth 13 (Bell 2013). Induction of labor with exogenous oxytocin increases the risk of abandoning breastfeeding 14 (García-Fortea, P., González-Mesa, E., Blasco, M., Cazorla, O., Delgado-Ríos, M., & González-Valenzuela, M. J. 2014).

Even after the first attachment, infants use their hands to help identify the nipple and shape and move the breast to help them latch 15 (Genna & Barak 2011). Neonates have been observed pushing the breast to better position the nipple, pulling the breast into the mouth with both fists, and lifting the breast for better nipple access. Using positions which improve gravitational stability (use gravity to press the infant to the mother's body) free the babies' arms and hands from supporting their position and allow better control of hand movement 16 (Bertenthal & Von, 1998). These semi-prone positions improve the functioning of many feeding-related reflexes, both infant and maternal 17 (Colson, Meek & Hawdon, 2008). Bringing the baby to breast with his arms "hugging" the breast can help facilitate their use of their hands to move and shape the breast while simultaneously improving trunk contact with mother's body 15. Newborns may fatigue while trying to use their hands while lifting their heads in completely prone positions 18 (Soska & Adolph, 2014). If a young infant seems to be tiring of lifting the head, supporting them against their mother in a semi-upright prone or seated position may improve latching attempts.

Newborns preferentially feel for the nipple area with their cheeks, lips and philtrum (the dent between the nose and upper lip) while drawn by the odor of the areolar glands 19,20 (Varendi, Porter & Winberg, 1994; Doucet, Soussignan, Sagot, & Schaal, 2012). If the face falls away from the breast, the baby brings the hands to the nipple area to help identify the nipple by manual touch. The face must remain in contact with the breast to suppress manual searching, if there is room for even a sheet of paper between mother and infant, the baby will bring their hands to the nipple area unless they are restrained. The baby may close his hand on the nipple or bring it right below the nipple and suck his fist. This seems to function to orient the infant to the place his hand is touching while calming himself for another attempt. If allowed to continue sucking the fist, the infant will then move his head and hands and come back to the ›

USING THIS INFORMATION IN CLINICAL PRACTICE:

- **Use gravity:** lean mom back on a chair or sofa or in side-lying on a safe mattress.
- **Position baby** at breast with his arms hugging the breast and his chin on the breast and his chest and belly against mother.
- Allow the infant to **use his hands** to move and shape the breast to improve his access to the nipple area.
- Allow baby to **suck his hand** at the breast, expect him to spontaneously reposition himself and latch where the hand was touching.
- **Educate mothers** about these infant behaviors so they can work with them.
- Keep baby's lower face or cheek in contact with the breast if mother's **nipples are sore** to suppress manual searching.
- If the baby **returns to his hand repeatedly,** either lift his upper body so his face touches the breast above the nipple or bring him closer to mom so his lower face touches the breast below the nipple.

Massage: Infant massages the contralateral nipple to stimulate milk ejection.

Infant self-soothing and orienting to an optimal spot to subsequently grasp with his tongue.

› breast to attempt to latch to the area where his hand previously was touching. Very young babies may respond differently than older ones. Neonates can distinguish between self-touch when sucking their hand and outside touch from the experimenter touching the corner of their mouth, and respond by rooting toward the experimenter's finger 21 (Rochat & Hespos, 1997). By 4 weeks of age, the infants were more likely to suppress rooting while sucking on their hands. Restraining the infant's arms, covering their hands with mittens, or pulling their hands away when they are sucking them can disorganize the baby and cause him to cry or shut down.

Occasionally, the baby gets stuck in a reflex loop, and returns consistently to sucking his hand. In this case, lifting the baby's upper body slightly so the cheek rests on the breast just above the nipple can allow the infant to root down to the nipple and attach 22 (Glover & Wiessinger). Bringing the baby's body and face in closer contact with the mother so that the breast touches his face will also cause him to release his hand and orient to the breast 15 (Genna & Barak, 2011).

If the baby is unable to locate the nipple area with their face or their hands, they will use their arms to push away from the breast to look for the nipple (figure). Mothers can interpret this behavior as unwillingness to breastfeed. Providing explanations for the baby's behavior before they occur can calm the mother and allow her to help her baby remain organized while searching for the breast. Placing the mother between the baby and the center of the earth allows gravity to press the infant to the mother. If the mother is not between the infant and gravity's pull, the baby can be pulled away from the mother and lose his contact cues. This can disorient and frustrate the infant. If the mother needs to sit upright because of a back injury or fractured coccyx, she can be counseled to snuggle her baby in closely by hips and shoulders to aid his stability.

Babies use their hands to help them identify, shape and move the nipple to facilitate latch. Allowing these normal infant behaviors by bringing the baby to the breast with his hands and arms surrounding it and face to the areola under the nipple improves infant competence, unless mother's nipples are very sore can help maintain the baby's organized state and maximize their ability to use their hands skillfully.

Catherine Watson Genna BS, IBCLC,
has been an IBCLC in private practice in New York City since 1992. She is particularly interested in the scientific aspects of breastfeeding and human lactation and clinical application of this knowledge to helping dyads with biomedical challenges. She is the author of Supporting Sucking Skills in Breastfeeding Infants (3rd edition, 2017, Jones and Bartlett Publishers) and Selecting and Using Breastfeeding Tools (Praeclarus Press, 2009) as well as journal articles. In addition to lecturing to health care professionals around the world, she serves as associate editor of the USLCA journal Clinical Lactation, and collaborates in a lactation research collaborative with Columbia University & Tel Aviv University departments of Biomedical Engineering.

Infant pushes off the breast to reposition himself when his arms are trapped between his body and his mother.

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Do Mothers Really Have The Choice To Breastfeed?

"Breastfeeding is not just about breast milk. It is a relationship."

Every mother has the right to make *informed* choice to bottle feed her baby. Then why, when a mother makes an informed choice to breastfeed her baby, does she not have the same right?

Surely, I jest? Mothers can breastfeed if they want, who is to stop them? Often, in fact, mothers do not seem to have the right to breastfeed and are forced, by health professionals, judges and child protective agencies to bottle feed. There are mothers who want to breastfeed and trust the health care system to help them continue when in fact, they are frequently left feeling guilty for not breastfeeding, feeling that they "failed" or feeling that they "couldn't" breastfeed for medical reasons. A lot of formula feeding by mothers who had originally intended to breastfeed is unnecessary and not medically indicated. Mother's fear of the baby starving or his health being compromised are used as scare tactics to get mothers to consent to formula feeding and to shake her resolve to breastfeed.

If the slightest problem arises with regard to the mother or baby and their breastfeeding relationship, the first thing many mothers will hear from doctors is "give the baby formula" or even "stop breastfeeding altogether." And mothers are often forced, not infrequently in cases of slow weight gain, with a threat of the child protection services taking away the baby if they don't comply with "doctor's orders". From our experience with many thousands of mothers having come to our breastfeeding clinic during the past 32 years, I can say that in many such cases, with a little good help, the mother could carry on breastfeeding exclusively. Unfortunately, in only a small minority of cases do the mothers actually get the help they need. Sometimes the solution is easy, not complicated at all. Sometimes it's not so easy, but it can be done. Most of the time, however, mothers are left feeling frustrated and devastated because they desired to breastfeed and due to the lack of qualified help or incorrect medical advice they begin to see breastfeeding as "unreliable," "painful" and "potentially dangerous" and ultimately its importance as "exaggerated." When women are prevented from breastfeeding when they wanted to breastfeed they become angry and traumatized, unable to see and experience the joy of breastfeeding and they resort to all sorts of coping mechanisms which resurface in discussions of infant feeding.

Below are just a few examples of how we don't allow mothers to breastfeed their babies. They are examples of how formula feeding is considered the standard way of feeding and breastfeeding is seen as a dispensable, nice but not necessary.

1. Mothers of babies born prematurely are almost universally told (at least in North America) that they cannot put the baby to breast until the baby is 34 weeks gestation (still 6 weeks premature). This undermines breastfeeding because the doctors and nurses insist the "babies must to learn to bottle feed before they can breastfeed." Really? Where does that come from? Not from any scientific studies. But we do know from work in Scandinavia that premature babies will often latch on to the breast at 28 weeks and sometimes even earlier than that. Not all, but at least some. And it is not rare that premature babies can be exclusively and completely breastfed (at the breast) by 32 to 33 weeks gestation, 1 to 2 weeks before we even allow the babies to try to breastfeed in North America. (It is necessary to add "at the breast" because so many in Western societies believe that giving breast milk in the bottle is breastfeeding – no, it's not at all the same).

2. Mothers of premature babies are told that they must supplement with a bottle because breastfeeding is more tiring than bottle feeding (this is said about babies of any age actually). It is complete rubbish to say that breastfeeding is tiring for a baby, but it is widely believed because most health professionals learn almost nothing about breastfeeding in their training and nothing after they finish their training. Babies respond to milk flow and if the flow is slow, the baby tends to fall asleep at the breast, especially in the first few weeks of life. And this occurs simply because most mothers are not taught the basics of breastfeeding, (including how to get a good latch, and how to know a baby is getting milk from the breast).

Furthermore, premature babies have to compete with the flow the baby was getting from the bottle and the fact that the mother's milk supply is dwindling because they were pumping instead of being skin to skin with their babies and breastfeeding.

3. Mothers of premature babies are told they must "fortify" their milk with cow milk based "fortifier". It may be true that the tiniest of premature babies need fortification (but fortifiers can be made from human milk, and the need for fortifiers even by these very tiny babies is starting to be questioned). But what about a 33 week gestation baby? With good help, most babies of 33 or even younger do not need fortifiers. They need to breastfeed. Not even at 31 weeks do they necessarily need "fortified" breast milk. But again with tiresome regularity, the bottle is introduced, and breastfeeding undermined.

4. Mothers of babies born at risk for low blood sugar are often forced to give or allow the baby to be given formula (by bottle of course). But it is known that breast milk, especially the very early milk called colostrum, is better for preventing and treating low blood sugar than formula. Most often, if the mother gets good help with breastfeeding, the baby is protected by breastfeeding (at the breast, because skin to skin contact also helps prevent low blood sugar).

5. Mothers whose baby has jaundice in the first few days are often forced to supplement their babies with formula, or even take the baby off the

breast because the health professionals "helping her", think that breast milk causes jaundice. It doesn't. What causes higher than average levels of bilirubin in the majority of babies of that age is that the baby is not getting enough breast milk. And the answer is not formula, but rather helping the mother breastfeed better and get more milk to her baby. In the first few days, it can be so easy to turn inadequate breastfeeding around and make it work well and even prevent problems in the first place. Unfortunately, too many mothers and babies are not getting that help. And the worst of it all is that because the baby's jaundice decreases rapidly once the baby is being formula fed, this proves to the health providers that they were right, that the breast milk caused the jaundice, when in fact, the reason the jaundice decreases is that the baby now gets more milk. Could this decrease have been accomplished by helping the mother breastfeed more effectively? Yes, but it happens only rarely that mothers get this help and the default treatment is formula feeding by bottle.

6. Mothers are told that if their babies have a cleft palate then they cannot breastfeed and should not even bother trying. True many can't latch on to the breast, but some can. But one thing is certain; if one doesn't try, breastfeeding can't happen.

7. Mothers are told that if their baby loses more than 10% of their birth weight the baby must have formula by bottle. But the notion of 10% weight loss is based on nothing scientific at all and results in many babies being unnecessarily supplemented and much too often ending up only bottle feeding. Again, the mother and baby getting good hands on help can change the situation dramatically for the better. . People sometimes act as if getting the baby fed and the baby being breastfed were mutually exclusive things. The goal of helping mothers should be to get the baby fed by improving breastfeeding. Health professionals need to start looking at the long term effects of their interventions, not just grabbing at the quick fix which formula feeding seemingly offers.

8. Mothers are told that if they have had breast reduction surgery, they won't be able to breastfeed. Maybe most won't be able to breastfeed exclusively, but they can still breastfeed with additional donated breast milk or formula as supplements. And the baby can be at the breast, without bottles, the supplement given with a lactation aid at the breast. Supplementing while the baby is still on the breast is important because, aside from the baby getting more milk even as the baby is being supplemented, but very importantly, breastfeeding is so much more than breast milk. It is a close, intimate relationship between two people who are usually very much in love with each other. The value of that relationship is not measured by how much breast milk the mother can produce and it is important that people start seeing breastfeeding in its different forms.

9. Too many mothers are told they must interrupt or stop breastfeeding for medications they are taking. This is not true except with a very few, usually infrequently used, drugs, many of which can be substituted by other equally effective drugs. The vast majority of drugs don't get into the milk in quantities that are harmful to the baby, the amounts being vanishingly small. There are some drugs that don't get into the milk at all and yet mothers are told they will harm their babies if they continue breastfeeding. In any case, the real question is this: Which is safer for the baby, breastfeeding with tiny amounts of drug in the milk (and the amounts are almost always tiny) or formula? Given the risks of not breastfeeding, in the vast majority of cases, breastfeeding is safer.

10. Judges dealing with access and custody cases, do not include the needs of the breastfed baby in their decisions. Both father and mother could be accommodated in terms of spending time with the baby if the judge realized that breastfed babies are different from bottle fed babies. And breastfed toddlers are even more different. Whether one agrees or not, the breastfed baby and toddler derives security from the breast. As mentioned previously breastfeeding is not just about nutrition, a notion that seems foreign to so many people, including judges.

11. In many areas the child protective services are a huge problem. Instead of mothers getting help to continue breastfeeding, what the mothers usually get is "Stop breastfeeding, give formula, or we will apprehend your child".

These 11 problems are just a few of dozens of situations when mothers are unnecessarily told to stop breastfeeding, must stop breastfeeding, or else. Most of the time, the problems could have been prevented in the first place or treated without using formula or stopping breastfeeding. But most of the time, the mothers do not get the help they need.

I am not saying that breastfeeding will always work, even with the best of help, but a lot more mothers and babies could be doing a lot better.

If I went through all the situations I hear about on a daily basis, situations where mothers do not have the right to breastfeed even though they made an informed decision to do so, I would be writing something longer than War and Peace. Even if I just went into details regarding the 11 problems, it would take a book.

Jack Newman, MD, FRCPC
International Breastfeeding Centre, author of Dr Jack Newman's Guide to Breastfeeding

Lactation & Breastfeeding

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Sudden Weaning – Actively Structuring a Difficult Situation

Foto: © Mikolette, iStock

If you are forced to wean quickly, you and/or your baby are probably in a difficult situation. Possibly your health or the health of your baby give you cause to worry. But be cautious here: Even if, at first sight, it looks to be the case, weaning is not always really necessary. Perhaps you need more information. For the moment, feed your baby with infant formula and maintain your milk production with a milk pump. In this way, you gain time to be able to make a good decision that works for you.

Is weaning really necessary?

- **Breastfeeding strike – the baby refuses the breast:** It sometimes happens that a baby – mostly in the ages between three and eight months – suddenly, out of the blue, refuses the breast. Such a breastfeeding strike mostly lasts from a few hours to a few days and can stop as suddenly as it started.

- **Medication:** For most illnesses, there is a range of medications. Your doctor can often choose a preparation compatible with breastfeeding, which can also be taken without limitation while breastfeeding.

- **Interruption of breastfeeding:** Taking some medications, some diagnostic methods with radioactive isotopes or other circumstances may perhaps make an interruption of breastfeeding necessary. When a temporary impairment of the mother's milk or a temporary absence of the mother is unavoidable, this must not necessarily mean weaning.

Even with rapid weaning, allow for some time:

The breasts react in the sense of supply and demand. Even if, at the moment, little or no milk is requested, the breast needs some time to adapt to the new situation.

If you also have a few days' time, despite an urgent reason to wean, first replace only every 3rd - or, if necessary, every 2nd feeding with infant formula and (depending on whether the time allows for it) two to three days later, substitute for further feedings. In between, you should express or pump only as much milk as needed to ease the painful tension in the breast. A certain residual pressure reduces the milk production.

If you are not allowed to or don't want to put the baby to breast from now on, a pump can help. If your baby was breastfed every two hours, you can, for instance, pump every three hours and gradually lengthen the intervals. In this way, you can avoid uncomfortable engorgement. If you pump less and less milk, milk production will gradually be reduced.

A hot shower can be good preparation for pumping. After pumping, cooling compresses (i.e. quark – [curds] – or cabbage leaves) are comforting for most women. A bra that fits well can support the full breast, but should not exert uncomfortable pressure.

Drink according to your thirst. It may make sense to limit your intake of table salt because salt binds fluid in the body.

Many women report good experience with sage or peppermint tea for milk reduction.

Weaning without medication?

This ancient art of weaning is frequently forgotten today. However, it is a good possibility to actively structure the weaning yourself and to avoid the side effects of medication. After the immediate post-partum phase, the effectiveness of prolactin inhibitors (weaning medication) has never been demonstrated. Because milk production is no longer so strongly controlled by hormones after a few weeks, successful use of prolactin inhibitors is unlikely. Even directly after the birth, the milk can come in despite taking prolactin inhibitors. If you gradually delay the breastfeeding or pumping times as described and/or express less and less milk, you support the regulatory capacity of your body itself to reduce the milk production and reabsorb milk that has already been produced – completely without medication.

Consolation for the baby

Abrupt weaning is mostly traumatic for mother and baby. Suddenly, the familiar source of comfort, closeness and food is no longer available. There are many other possibilities (also, if necessary, by the father or other close attachment figure) to offer the baby closeness, body and skin contact, i.e. carrying the baby in arms or in a baby carrier, baby massage, a bath together, singing and dancing with the baby in arms, gentle rocking in a hammock or also a pacifier. Give your fantasy and creativity free reign!

During this difficult time, look for help and support from an IBCLC.

IBCLC

International Board Certified Lactation Consultants are the only internationally approved breastfeeding and lactation specialists having a medical background.

The decision to breastfeed or not to breastfeed has short- and long-term impact on the health of child and mother. However, breastfeeding sometimes turns out to be difficult and perhaps professional, competent assistance is needed.

Contact your IBCLC

Breastfeeding After Cosmetic Breast Surgery

From Myth to Truth Author: Gina Weissman DMD, RN, IBCLC, Israel

Photos: © Gina Weissman

Reduction Surgery Vertical technique – note no horizontal incision

Let's start with the bottom line: in principle, all breast surgery is likely to affect a woman's ability to breastfeed. Breast reduction surgery has more of an impact than augmentation but lifts, augmentation and other surgeries may also affect a woman's milk supply and ability to breastfeed. The question we should be asking however is not: if a woman is able to breastfeed after surgery or not, but rather: to what extent a woman will be able to breastfeed. Almost every woman who has undergone breast surgery can produce something. (Harris et al., 1992)

While full and exclusive breastfeeding are not always possible after surgery, as in any situation where the mother's milk supply is insufficient to meet the baby's needs, the mother can often partially breastfeed and supplement with formula. Thus, both mother and baby benefit from the breastfeeding experience.

What is hiding behind the scar? The factors that affect postoperative milk production.

The extent of the effects of breast surgery on breast feeding depend on a few different factors such as, preoperative mammary gland function; types of incisions; degree of removal or destruction of the glandular tissue; the extent of the nerve damage; time elapsed between surgery and breastfeeding; if there were breastfeeding experiences or attempts between the surgery and the current breastfeeding; and most importantly the way breastfeeding is conducted and the mother's attitude toward breastfeeding - as with every mother.

Types of incisions

The location, nature, and length of the incisions in the surgery may affect breast feeding/milk production due to the damage to the glandular tissue and areolar nerves. An incision near or above the areola, especially in the lower quadrant, may damage the fourth intercostal nerve that plays a crucial role in breastfeeding and the milk ejection reflex affecting the amount of milk that the baby will receive. Stretching the nerve, not just cutting it, can also impair function. (Neifert 1992)

Breast augmentation

There are many reasons for breast augmentation surgery, usually related to the woman's self-image and may include things such as asymmetry which may mean surgery on a single side. When breast milk production is assessed, the condition of the breasts before surgery is a crucial component to be considered even before examining the effect of surgery. Although a small breast does not necessarily predict difficulty in breastfeeding, there are certain breast structures that may indicate difficulty in producing milk.

Lack of breast tissue (hypoplasia), ›

Photo 1: Augmentation with the PeriAreolar technique. Silicone leak-causing capsular contracture

cone-shaped breasts, breasts very far apart; Lack of development or asymmetry. Women who choose augmentation in these cases usually receive information that they lack breast tissue or that enlargement may harm breastfeeding. In addition, they are sometimes mistakenly told that they can breastfeed normally from the breast that did not undergo surgery. (Didie and Sarwer 2003)

There are various implant insertion methods designed to reduce scars and create a natural appearance. The fold of the breast is the most common position, and today the implant is most often inserted under the muscle which allows the surgeon to release the muscle without damaging the mammary glands, preserving the nerves and blood vessels of the nipple-areola complex. This is good news for mothers who want to breastfeed. *(see photo 1)*

Revision

It is important to note that despite precise incision and location of the implant, breast augmentation surgery revised on average every 7 years (Spears et al., 2003). This is often due to breast prolapse, a desire to resize, hematomas, infections and other complications. *(photo 1)* This may cause nerve damage, affect the milk production system, and reduce the chances of breastfeeding. (Strom 1997, Michalopoulos, 2007)

Silicon and its implications on breastfeeding

In recent years, concerns have been raised about the transference of silicon to the milk. The silicone used in modern implants is a high viscosity silicone gel, this significantly reduces the risk of leakage from the implant.

In 2001, the AAP Drug Committee determined: „The levels of silicone in the blood and milk of breastfeeding women with silicone implants are similar to those in milk of women without implants (Semple et al., 1998). In addition, the levels of silicon in cow's milk has been found to be 10 times higher than that of the milk of women with implants and even higher in formula."

In another study, „Silicon is found in a simplified form in the environment and it is difficult to prevent ingestion." The study concluded: „There is no reason why women with silicone breast implants should not breastfeed." (Berlin 1994)

Silicon is considered to be inert, and it is unlikely to be absorbed into the baby's digestive system (Hale, 2008). From 1994-2006, the Food and Drug Administration (FDA) banned the use of silicone because of suspected increased risk of breast cancer. It later retracted the ban when it became clear that not only does silicone not increase the risk of breast cancer, but may, to some extent reduce the risk of breast cancer. It is hypothesized that this can be attributed to the localized pressure of the implants which reduces the blood supply that tumors need to thrive or perhaps the body's immune system's response to implants reduces the risk of developing cancer in the region. (Breast Implant Surveillance Reports to the U.S. Food and Drug Administration: Maternal-Child Health Problems

S. Lori Brown, Joan Ferlo Todd, Judith U. Cope & Hari Cheryl Sachs)

Breast reduction surgery

There are many physical and psychological reasons that lead women with large breasts (breast hypertrophy) to undergo breast reduction surgery. They suffer greatly from their condition and in the end just want to be like everyone else and are not necessarily concerned with breast function and the ability breastfeed in the future. The effect of surgery on breastfeeding depends on the amount of tissue removed, the location of the removal and the extent of damage to the remaining tissue. There are many methods to perform breast reduction surgery and the one chosen is dependent on the woman's breast structure, surgeon's preferences, experience and the purpose of the surgery. Even standard methods vary between surgeons, and all of them can impair milk production.

The surgeries that most moderately affect milk production are the operations where the nipple-areola complex is not completely cut, but only shifted and

Photo 2a: Reduction surgery – verticular technique 4 weeks pp; second birth, fully breastfeeding

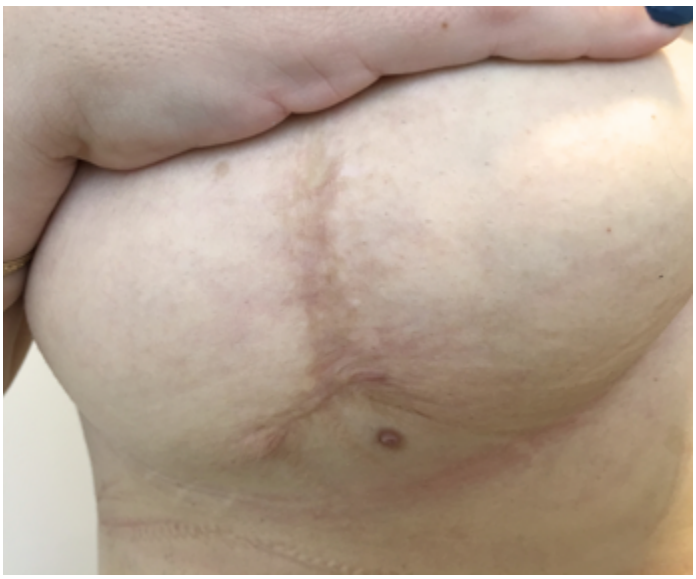

Photo 2b: Reduction Surgery Vertical technique – note no horizontal incision

the lower part of the breast attached to the nipple-areola complex remains intact (Sandsmark, M., et al 1992). *(photo on page 15, photos 2a and 2b)* This connection is called a pedicle and contains ducts, nerves and blood supply that are still attached to their relative systems. The pedicle can be in different areas of the breast and the scar position will be according to the placement of the pedicle. The use of the lower pedicle, which means that the blood vessels and nerves are in the area below the nipple-areola complex, best preserves the ability to produce milk.

Other methods include: the free implant method in which the nipple-areola complex is completely severed from the breast and then re-connected; the vertical incision method, most common in Israel and the United States in recent years as it requires a shorter surgery. This is more aesthetic but more harmful to milk production because the tissue is removed from the lower part of the breast and usually involves cutting the fourth intercostal nerve; a Bellini cut is a cut made around the areola and then liposuction is performed, this technique is usually used for minimal reductions or in addition to other methods.

Many researchers have tried to determine the effect of breast reduction surgery on breastfeeding, and have reached different conclusions about the success of safe breastfeeding, between 70% and 0%, depending on the type of surgery performed. The large range reflects the lack of uniformity in the criteria for evaluating breastfeeding. It is also important to consider that additional health background factors also influence success in breastfeeding. Women who undergo reductions, are often also overweight, this is a risk factor for successful breastfeeding. They may also suffer from hormonal effects that contribute to obesity and may affect breastfeeding as well, such as polycystic ovaries, diabetes, or hypothyroidism. With such a background, some difficulty as a result of the surgery itself can even further challenge breastfeeding.

The body's amazing repair process post surgery:

Recanalization is an important physiological phenomenon in women who have undergone breast surgery. In this process, breast tissue is re-grown, cut-off milk duct reconnects and new duct develop. The process is greatly enhanced as a direct result of breastfeeding, which encourages the milk production system to create new ducts. In addition, branches of new ducts and fissures are generated in small amounts in response to hormones released with each menstrual cycle. The more the mother has breastfed in the past, and the more cycles she has undergone since the surgery, the more recanalization may occur. So, with her first baby after the surgery she may not reach full milk supply, but with the second she will have more milk and perhaps enough to exclusively supply the baby's needs.

Reinervation is the process in which nerve cells may be regenerated and reconnected.

The fourth intercostal nerve is the main messenger to the brain from the breast, it's lateral section innervates the nipple-areola complex and is located at around 4 o'clock on the left breast and 8 o'clock on the right breast. Its stimulation results in the release of oxytocin triggering the milk ejection reflex and prolactin for the production of milk. Regeneration of this neural-system is an important key to milk production. The degree of renewal does not depend on the previous breastfeeding experience, but mainly on the location of the cut and degree of damage to the nerve.

Severed nerves will regrow at a rate of about 1 mm per month and may take 6 months to a year to regrow (Shaw et al., 1997). When women show sensitivity to heat and touch, it indicates a functioning nerve and will communicate the appropriate sensations to the pituitary gland to produce prolactin and oxytocin. The ability of the breast to function depends on the condition of the glands and the ducts, but the more time has passed after the surgery, the more it is likely for the nerves crucial for breastfeeding have resumed function. ›

Photo 3: Reduction surgery – Vertical technique engorgement 4 days pp, first birth.

Breastfeeding challenges that mothers may face after breast surgery

Nipple pain:
Technique is a very important part of a pleasant and effective breastfeeding experience for all women. All the more so for women after breast surgery. It is therefore crucial to emphasize the importance of technique of a good latch to the breast from the first breast feeding in order to avoid nipple pain.

Women who have undergone breast surgery may sometimes experience conditions which are rare in women who have not had surgery, such as vasospasm, which causes the nipple to blanch after breastfeeding and can be accompanied by pain. Preventing any rubbing of the nipple with the tongue as a result of improper latch to the breast during breastfeeding may reduce this phenomenon.

Some babies may have difficulty latching and extracting milk because the nipple-areola complex may be incomplete due to surgical changes. A deep, asymmetric latch will increase the possibility of milk flow, it is also recommended to experiment with different positions. In addition, there are various techniques to help make the nipple more prominent when latching the baby to the breast, such as Dianne Wests's "Nipple Nudge" which can make it easier for them.

Engorgement
Women who have undergone breast surgery tend to experience more engorgement. If the breast produces milk and it is not used the cells begin the process of apoptosis (degeneration) this occurs in the cells connected to the severed ducts. It is important to pump to express the milk from those cells whose ducts have not been cut so as not to lose this critical active tissue mass. The faster the engorgement is relieved, the less it is likely to affect the functional cells and impair milk production. It is important to evaluate the efficiency of breastfeeding and consider pumping after each feeding, especially in the early days. Sometimes mothers experience a different degree of engorgement in each breast and some will experience engorgement only in certain areas of the breast.

After augmentation surgery, the implant sometimes presses the gland, making it difficult to remove the lymphatic fluid, thus increasing engorgement. If the mother's breasts were relatively small before the enlargement surgery, and in addition she experienced engorgement, she could lose quite a lot of her mammary gland function.

The engorgement experienced by most women who have undergone breast reduction surgery may increase from birth to birth. *(photo 3)* This is a result of additional regrowth and recanalization occurring with each pregnancy. Engorgement can be directly correlated with the duration of the lactation period in previous births.

Lack of fullness among mothers who undergo augmentation due lack of breast development
Postpartum mothers should to feel a change in their breasts that will manifest as a sense of fullness. If the mother does not experience fullness in the lactogenesis 2 phase, they need to be assessed by a doctor as she may have low prolactin levels, resulting in insufficient prolactin to affect milk production. She also may not have enough active mammary glands. The good news is that there is usually something that can be done to improve this.

Lack of milk ejection reflex (MER):
Absence of or partial sensation in the nipple may indicate nerve damage that may interfere with milk extraction and may adversely affect milk supply. Frequent breastfeeding and extra milk extraction by manual expression and pumping with a good pump in the first few weeks will ensure that the breasts produce as many prolactin receptors as possible, and the milk supply will reach its maximum potential. *(photos 4 and 5)*

Helping postoperative mothers to maximise their breastfeeding potential

If a mother who has undergone breast surgery seeks help before she gives birth her

Photo 4: Engorgement after augmentation The incision location prevented MER.

Photo 5 Manual expression helped milk removal in the lack of MER due to large incision.

chances of achieving a successful breastfeeding experience are higher. There are many proactive steps that she can take and factors that will contribute to her success such as, document breast changes in pregnancy in order to predict breastfeeding ability; considering birth approaches that minimize interventions; AME: Antenatal Manual Expression.

What to do once the baby is born:
Early and frequent extraction of milk from the breast

Unless the duct in nipple-areola complex are completely severed by the free implant method, it is reasonable to assume that a mother who has undergone breast surgery can provide at least a little colostrum for her baby in the first few days. As with all new mothers the first hour and then the first 24 hours can have a huge effect on the amount of milk produced. The Parker Study shows that mothers who breastfeed or express milk in the first hour and then breastfeed or express at frequent intervals in the first 24 hours have significantly more milk 2-3 days later when lactogenesis 2 occurs.

Ensure Effective Technique

An effective latch is an important part of any comfortable and successful breastfeeding experience - for the postoperative mother even more so. Ensuring an effective latch is an important part of the process to maximise a mother's breastfeeding ability and avoiding possible complications such as engorgement and nipple pain.

Treat engorgement as quickly as possible

Engorgement signals to the body that the milk it has produced is not required and this triggers the process of shutting down the system and mammary glands that produced it, apoptosis. In the case of a mother with many branches of mammary glands the shutting down of a few of them may not affect her breastfeeding experience in any significant way. In a postoperative mother who is likely to have fewer functioning branches of mammary glands it is critical to avoid engorgement as the loss of even a few could greatly reduce her ability to produce milk.

Monitor

It is very important to monitor the baby's stool and urine output and weight. It is possible that in the first few days the baby will gain weight well and will not need supplementation, but later weight gain may be reversed and it will be necessary to reevaluate the need for formula supplements.

Support

Studies have shown the importance of a supportive medical staff with knowledge of successful breastfeeding after breast surgery. In addition, it is recommended to refer to sources of information and support for breastfeeding after breast surgery such as:

- Clinics in Human Lactation: Breastfeeding after Breast and Nipple surgeries by Diana West, IBCLC, and Dr. Elliot Hirsch, MD
- The BFAR book: Defining your Own Success: Breastfeeding After Breast Reduction Surgery by Diana West, IBCLC
- www.bfar.org

Gina Weissman, DMD, RN, IBCLC
IBCLC since 1999; Doctor of medical Dentistry (DMD), Registered Nurse

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Dental Treatment During Breastfeeding

Elien Rouw, doctor and breastfeeding expert and Christina Ziegler-Zanotta, dentist in Basel respond to questions and concerns of breastfeeding mothers. Interview by Dr. phil. Dipl.-Biol. Zsuzsa Bauer

Photo: © Kzenon/fotolia

Cristina Ziegler-Zanotta, Dentist in Basel

Elien Rouw, Physician and Breastfeeding Expert

Dental examinations and treatments are among the most frequent medical interventions while breastfeeding. At the same time, there is great uncertainty among breastfeeding mothers about which treatments are risky and which are not. These concerns are mainly focused on the substances used in the course of dental treatment that might reach the baby via the mother's milk. In the worst case, women forego necessary treatments or anesthetics or prematurely - and unnecessarily - wean their babies. Even a temporary interruption of breastfeeding for dental treatment, which is occasionally recommended for breastfeeding mothers, is questionable. The following interview covers the most important questions about visits to the dentist while breast-feeding.

Our interview partners are dentist and breastfeeding mother, Cristina Ziegler-Zanotta in Basel and Elien Rouw, medical expert in the Arbeitsgemeinschaft Freier Stillgruppen (AFS) [Association of Free-Standing Breastfeeding Groups], member of the German National Breastfeeding Committee and Board Member of the Academy of Breastfeeding Medicine.

Basic questions on dental treatment and breastfeeding

Dear Dr. Ziegler, Dear Dr. Rouw: During pregnancy, maternal dental diseases can, in the worst cases, lead to a premature birth or low birthweight of the newborn. Do dental diseases during the breastfeeding period also have negative effects on the baby?

C. Ziegler: Not as directly as in the pregnancy. However, attention should be paid to the fact that cavities are, simply expressed, an infectious illness. The babies are infected by adults with the ›

bacteria that lead to the development of cavities by, for instance, the mother licking the baby's spoon. Furthermore, the mother is a model for her children and this also applies to dental hygiene. If the mother has healthy teeth, takes care of them diligently and goes to the dentist regularly, then her children will have a better chance for their teeth to remain healthy.

E. Rouw: This is how I see it too. It is important that mothers go to the dentist while they are breastfeeding. This is important, above all, for their own health, but also for that of their children. I frequently see the problem that dental appointments are put off due to the fear of undesirable effects on the child. However, this is problematic. When treatment is indicated, then it should also be carried out without delay while the mother is still breastfeeding.

Do the same precautionary measures for medications during pregnancy apply during breastfeeding?

E. Rouw: No. Many medications are evaluated quite differently during breastfeeding than they are during pregnancy. In the pregnancy, a medication goes directly from the mother's circulatory system, via the placenta and the umbilical cord, into the baby's circulatory system. During breastfeeding, however, there are many intermediate stages. In order to affect the baby's body, an active substance must pass, in an initial intermediate step, from the mother's bloodstream into her milk. Furthermore, not all substances contained in the mother's milk, are absorbed by the infant's intestinal tract. Many of them are already degraded in the baby's gastrointestinal tract or are bound there and, therefore, are not absorbed into the baby's bloodstream. Thus, many medications don't end up in the baby's circulatory system at all or only in minimal concentrations that are not harmful.

This means that, during breastfeeding, two further factors must be considered: The ability of the substance to pass into the milk as well as its absorption via the intestinal system. Medications that are poorly absorbed into the mother's milk, degraded in the gastrointestinal tract or not well absorbed into the circulatory system are not particularly problematic during breastfeeding and are, therefore, less critical than during the pregnancy. However, there are medications, which accumulate in the mother's milk. In such cases, one must, naturally, be more careful.

Dental anesthesia and pain relief

Local anesthetic injections, which make possible pain-free treatment, contain local anesthesia and, mostly, adrenalin additives, in order to prolong the effect of the anesthesia. During pregnancy, anesthetic injections are given in as low a dose as possible in order not to damage the fetus. Are safety measures during breastfeeding, such as a lower dosage or possibly an interruption of breastfeeding, still necessary?

C. Ziegler: A low dosage should, in any case, be standard, not only during pregnancy and breastfeeding. Furthermore, it depends on the individual substances. To be on the safe side, one should fall back on the ordinary proven means. Here in Switzerland, the effective substance, articaine, is most often used for anesthesia as no noteworthy transfer into the mother's milk is expected. For lidocaine the same applies. With other special substances (i.e. prilocaine) I would avoid it during breastfeeding.

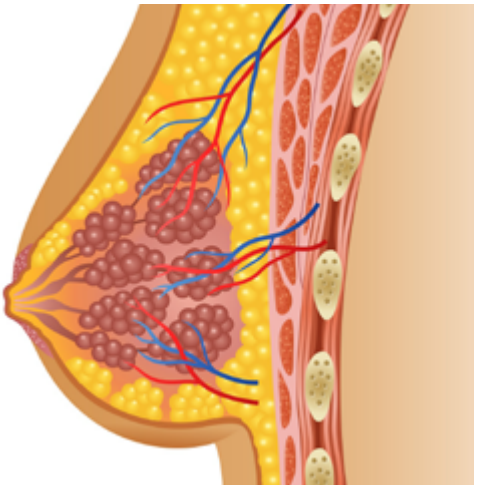
With the adrenaline additives, there are different potencies: "normal" and "forte" (stronger). I would avoid the "forte" during pregnancy and choose the "normal" potency.

E. Rouw: Adrenaline during the breastfeeding period is assessed very differently than during pregnancy. For adrenaline is destroyed in the intestinal tract. That is the reason it is injected and not given orally. As a rule, local dental anesthetics during breastfeeding are not harmful.

Which over-the-counter pain relievers can be taken for toothache during breastfeeding and which should be avoided?

C. Ziegler: Basically, during breastfeeding, paracetamol, along with ibuprofen, are the drugs of choice. For the usual kind of toothache, these two agents are sufficient.

E. Rouw: I see it that way too. Acetylsalicylic acid (i.e. aspirin, Asa) is not recommended as an additional over-the-counter medication. A single tablet is, however,



For the medication to reach the baby, it must first be transmitted via the mother's circulatory system to the mother's milk. Many ingredients are only transmitted to the mother's milk in small amounts. Others, however, concentrate in the milk.

Image: © Tigatelu, Fotolia

The second barrier is the baby's intestinal tract

Image: © Sebastian Kaulitzki, Fotolia

acceptable. Other pain relievers may also be considered as needed. Diclofenac is also acceptable for brief therapy as is the rule in dental medicine.

Are there concerns about the prescription medications used after a tooth extraction or orthodontic measures, for instance?

E. Rouw: Most of the pain relievers that are used for dental treatment can also be used during breastfeeding. For in dental medicine, medication is only used once or very briefly. Usually, mothers are given medication for a day or two. Mostly, that is safe. This also applies to the opioid analgesics as long as they are only used very briefly, which is usually the case with dental treatment. It is not necessary to interrupt breastfeeding. The mother can continue to breastfeed without limitation.

Some women only want to take anthroposophical or homeopathic medication – even for a toothache or instead of anesthesia during treatment. Can alternative remedies replace the school medicine analgesics and local anesthesia?

C. Ziegler: What we in dental medicine have had good experience with – also for treating pain – is hypnosis before or during dental therapy. Anxiety can be taken away through the hypnosis and the pain can be mitigated in this way. Also, certain acupuncture treatments are possible. In follow-up care, arnica globules are said to support the healing process.

No mother must endure pain. Many pain medications are compatible with breastfeeding.

Photo: © Africa Studio, Fotolia

Dental examinations

Are there any special features of diagnostic examinations? In particular, can x-ray examinations be carried out while breastfeeding?

C. Ziegler: All diagnostic examinations, including dental x-ray examinations can be carried out while breastfeeding without any problems. In dental medicine, we do work without contrast agents, which could, in fact, be a problem. Naturally, a visual examination is no problem.

Materials for fillings, crowns and bridges

For precautionary reasons, an amalgam decontamination is sometimes postponed during pregnancy until after the birth. Can an amalgam filling be put in or removed while breast-feeding or must the mother interrupt breastfeeding or even wean beforehand?

C. Ziegler: Amalgam contains certain metals, in particular quicksilver, which one should better avoid during pregnancy and while breastfeeding. If the removal of amalgam is essential, there is still the possibility of carrying this out with a cofferdam. This is a plastic cover which is placed in the mouth to close off the mouth region from the throat region. In this way, it can be ensured that the patient does not swallow anything. However a small residual risk of inhalation remains. If the removal of the amalgam is not acutely necessary, I would wait until after the breastfeeding period.

E. Rouw: Here, I would only add that the breastfeeding period should not be shortened only to enable the treatment to be carried out earlier. If it is necessary, amalgam decontamination should be undertaken and the woman should continue breastfeeding without any restrictions.

Are the other materials for fillings, crowns and bridges, such as gold, ceramics, resin composites and titanium unproblematic while breastfeeding?

C. Ziegler: These materials can also be used while breastfeeding. There are no indications for potentially damaging effects.

Antiseptics and antibiotics

Controlling micro-organisms plays a central role in dentistry in order to prevent cavities, gum inflammation and diseases in other organs. Various antiseptics and antibiotics are used for this.

Local antiseptics (such as chlorhexidine or cetylpyridinium chloride (CPC)) are used to treat gum inflammation. Povidone-iodine (PVI) is used for wound disinfection during tooth and oral surgical interventions (i.e. when a tooth must be pulled). With root canal treatment, strong antiseptic solutions with sodium hypochlorite, high strength chlorhexidine gluconate, peroxides etc. are used. Are these substances permissible while breastfeeding?

C. Ziegler: During pregnancy and breastfeeding, iodine should, in general, be avoided. Otherwise: Root canal treatments are carried out with a cofferdam. In this way, having the bacteria in the saliva end up in the root canal that has already been decontaminated can be avoided. At the same time, the cofferdam prevents swallowing the antiseptic solution.

E. Rouw: Yes, iodine-containing disinfectants should be avoided during breastfeeding because iodine can be concentrated in the milk. As regards the other antiseptics, I have no concerns. Even if it is swallowed, that is a one-time thing: Due to the intermediary steps, only very little reaches the baby's circulatory system. ›

› **With gum infections or for periodontal disease/periodontitis, antibiotics must sometimes be used. Can breastfeeding women assume that all antibiotics may be used for them or should they ask their dentists to choose alternatives compatible with breastfeeding?**

C. Ziegler: It is important that breastfeeding women inform their dentist so that s/he can choose an antibiotic compatible with breastfeeding. Not all antibiotics are equally appropriate while breastfeeding.

E. Rouw: Yes, that is true. However, most antibiotics are unproblematic while breastfeeding and there are a great many alternatives should one antibiotic not be compatible with breastfeeding.

Treatment of patients with dental phobia

Even among breastfeeding mothers, fears of dental treatment occur. What about anti-anxiety and soothing agents, laughing gas anesthesia and general anesthesia? In particular, with the use of benzodiazepine one comes up against the recommendation that the mother express enough milk before treatment and for 10 hours after the treatment express and discard her milk. What approach do you advise?

E. Rouw: With respect to the anesthesia, the guideline is that the mother should put the baby to breast as soon as she is able to. Benzodiazepines, which are used for calming and reducing anxiety, are not a reason to interrupting breastfeeding. Benzodiazepines are a class of drugs which accumulate in the body. Therefore, they should be given in as low a dose as possible and taken as briefly as possible. But many drugs from this group are also acceptable, under these circumstances, both in dental medicine and for other indications, because only a very limited and non-toxic dose reaches the baby – due to the two intermediate stages. With dental treatment, short-acting drugs, such as lorazepam and oxazepam, are used – and only once. No special safety measures must be taken. Even when the treatment is spread out over many weeks with many treatment steps, the mother gets the benzodiazepine for only a short time each time. There is no need to interrupt the breastfeeding.

The notion of pumping the milk and discarding it to detoxify it, mostly does not make sense. Frequently, people assume that the breast is a closed system and that which is in the milk can only be gotten rid of by expressing or pumping. But this is not the case. There is a constant exchange between the mother's milk and the bloodstream. As soon as the concentration of a substance in the mother's blood sinks, the concentration in the mother's milk also sinks because substances from the milk are degraded and excreted via the mother's bloodstream. Therefore, the concentration of the drug in the milk sinks with time even if the breast is not emptied. For this reason, the guideline to the effect that, after general anesthesia, the baby can be put to breast as soon as the mother is able, applies. When the mother can hold and breastfeed her baby, then the concentration of the drug in the mother's milk has sunk so far that the anesthesia no longer has any effect on the baby.

Photo: © Elke Cramer

Pumping and discarding the mother's milk is frequently recommended but is not necessary with dental treatment.

Pumping and discarding mother's milk is only rarely appropriate. Sometimes an interruption of breastfeeding must be observed until the concentration of a critical substance in the mother's milk with a longer half-life time has gone down to a permissible level. Through pumping, pain, engorgement and breast infections can be avoided and the milk production maintained. In dental medicine such measures are, as a rule, not necessary.

Bleaching the teeth

Peroxide is used for bleaching yellowed teeth. Can bleaching be carried out during the breastfeeding period?

E. Rouw: Yes, that is no problem.

Mouth washes

Can mothers use the conventional mouth washes and gels for the prevention and treatment of plaque, gum inflammation and mouth ulcers?

E. Rouw: Yes, of course! We should not make the life of a breastfeeding mother unnecessarily complicated. We want to ensure that women breastfeed exclusively for six months and then continue to breastfeed, along with appropriate complementary foods, for two years and beyond in accordance with the WHO recommendations. But if we stir up anxieties and tell the mothers that while breastfeeding they must not do this and that and that this or that could possibly be dangerous, then must not be surprised when women wean early. It is well documented that premature weaning entails clear health risks

Informing the attending dentists

Should mothers also inform their dentists that they are breastfeeding when they receive routine treatment or only in the case of more complex measures (such as surgical interventions or periodontal treatment)?

C. Ziegler: I would always inform the doctors so they can take it into consideration.

E. Rouw: I would only tell them for the more complex measures because otherwise we only stir up unnecessary anxiety. Pathologisation can lead to a mother feeling insecure so that she weans early or declines the treatment.

Then, in the hustle and bustle of everyday practice, do dentists know straight away what needs to be considered with a breastfeeding woman?

E. Rouw: No, they don't know it. I am absolutely certain of it! Otherwise I would not have received the myriad of inquiries from them.

C. Ziegler: For normal everyday practice, breastfeeding does not mean any major limitations: The usual local anesthetic can be used, you can x-ray, you can examine as usua,l and put in the usual fillings.

How and where can dentists look up information or get advice about how they can optimally treat breastfeeding mothers?

E. Rouw: Ideally, doctors, including dentists, should have a copy of the reference work, "Drugs during Pregnancy and Lactation: Treatment Options and Risk Assessment". It is available from the publisher (Academic Press/Elsevier) and from the European Network of Teratology Information Services (ENTIS) at https://www.entis-org.eu among other sources.

Drug manufacturers do not conduct studies on the compatibility of medications during breastfeeding because this is expensive and is not cost-effective. They frequently issue blanket warnings about the use of medications while breastfeeding. They disregard the fact that not breastfeeding or the postponement of treatment also has side effects. In Schäfer/ Spielmann these aspects are also considered so that they often come to another – more dependable – result than other sources.

Apart from that, dentists can also fall back on Protocol Nr. 15 "Analgesia and Anesthesia for the Breastfeeding Mother" from the Academy of Breastfeeding Medicine, in which many questions of dental medicine are briefly discussed. The free online portal LactMed ® run by the U.S. National Library of Medicine is peer-reviewed and updated monthly. It can be accessed here: https://toxnet.nlm.nih.gov/newtoxnet/lactmed.htm.

The German original, *Arzneimittel in Schwangerschaft und Stillzeit*, is written, updated and completely revised, about every five years, under the editorship of Dr. Christoph Schaefer at the Embryonaltoxikologischen Beratungsstelle (Embryotoxicology Information Center) in Berlin (www.embryotox.de) and three other colleagues in Berlin, Dr. Horst Spielmann, Dr. Klaus Vetter and Dr. Corinna Weber-Schöndörfer. This is the source which supports my statements. It is very reliable and far less restrictive than many other sources on medications during breastfeeding.

How long does the breastfeeding period last?
When certain treatments are contraindicated during breastfeeding, then the question arises of how long the breastfeeding period is understood to last. Does this depend on the maturity, on the age or the body weight of the baby or on how much mother's milk he receives?

E. Rouw: With medicinal treatment of the mother, the dosage that a breastfed baby receives is certainly greater when he is still exclusively breastfed. Newborns and, in particular, premature babies are more at risk from some medications than an older infant or a breastfed toddler with a more mature metabolism. On the other hand, the side effects of *not* breast-feeding, an interruption of breastfeeding or even a single bottle with infant formula are much greater for a young baby than for a three-year old child who is already eating large amounts of other foods and is no longer reliant on (just) breastfeeding. Fundamentally, whether a mother breastfeeds or not should not influence when a treatment takes place.

Dear Dr. Rouw, Dear Dr. Ziegler, Thank you very much for the interview.

Dr. phil. Zsuzsa Bauer
has been working for many years in the biomedicalfield as well as in the field of nursing sience research and journalism. Her recent emphasis are publications on the promotion of breastfeeding.

ACKNOWLEDGEMENTS:

We thank both of our interview partners, Dr. Elien Rouw (Bühl, Germany) and Dr. Christina Zielger-Zannotta (Basel, Steinvorstadt) for the time they took for this interview. A very special thanks to Alexandra Waldschmidt-Battenberg (AFS), who collected questions on dental treatment and collaborated on the development of the interview guidelines. Thanks as well to Sibylle Lüpold and La Leche League Switzerland for finding a dentist who was prepared to address this topic.

The interviews were conducted by Zsuzsa Bauer, Ph.D. between the spring and fall of 2016. The original German was originally published under the following URL

https://www.still-lexikon.de/zahnarztbehandlungen-in-der-stillzeit

Cerps International May Salzburg Austria

In May of this year the biannual Cerps International was held in Salzburg Austria. Author: Janette Timmermans

Photo: © Andrea Hemmelmayr

Women from many different countries and cultural backgrounds met in the beautiful surrounds of the Austrian Alps.

19 Women who have the same passion for breastfeeding and lactation came together to share knowledge and stories and enjoy the company of being with like-minded people.

Andrea Hemmelmayr organised our stay in a comfortable family hotel just out of the city of Salzburg and we combined learning and leisure during five wonderful days.

In the mornings after a scrumptious breastfast we would divide into 2 groups; the German speaking and English speaking group. However, we were very fortunate to have several bilingual women amongst us who were willing and able to translate back and forth so that we all enjoyed the presentations, workshops and conversations. It made for an inclusive learning environment and most of us would say our language skills improved over those days.

Topics included: breastfeeding and Down Syndrome babies, lactation support in refugee camps, breastfeeding cultural and linguistic diversity, WHO code, breastfeeding from conception to weaning, breastfeeding and tongue tie, laid back breastfeeding, breastfeeding support in Egypt, breastfeeding and homeopathy.

The afternoons and evenings were for leisure and cultural activities. These included tasting the local cuisine, sightseeing with a local guide, sliding down a salt mine, taking a train ride up the mountain (Schafberg) at St. Wolfgang and having a mouthwatering picnic lunch while absorbing the mind-blowing view from 1800m height. Other activities included walking, swimming, dancing and shopping.

A perfect time away from our daily life getting to know women from the lactation world and recharging our batteries while being inspired to continue our very important work.

I know that I speak on behalf of all who attended CERPS International when I say we had the most amazing and fun time and we shared lots of laughs and all feel we made new friends for life.

The organization of this event was planned and delivered perfectly by Andrea Hemmelmayr and we are very grateful for her dedication and commitment to the ongoing education and support of lactation colleagues in Europe.

Please consider coming to the next CERPS International to be held in 2019. I hope to see you there.

Janette Timmermans, IBCLC
The Netherlands

24th-28th 2017

ELACTA's international board meeting – representants from Switzerland, Romania, Germany, Egypt, Austria, The Netherlands, Slovenia, Israel and Finland

learning in the green outdoors

Impressions of CERPS International 2017 in Salzburg

CERPS international is not a large congress; not being aware of that fact I was given one pleasant surprise after the other. Author: Sandra Gattiker

Photos: © Hemmelmayr und Alenka Benedik

As only members of ELACTA are admitted to this event, I registered with Nicole Toffol, in order to inscribe myself as a member of "IG Swilacta", which represents Switzerland towards ELACTA. I was sent a bus schedule by the contact of ELACTA which included all the bus connections to the venue. What an amazing service for so many participants (as I was still thinking). Andrea Hemmelmayr seemed to have taken over the organisation of all free time activities. What a well-managed association! After a 6-hour train ride, now going on the scheduled bus towards the venue, I saw with great astonishment that the surroundings were getting greener and greener. Well, congress houses might also be located on the outskirts of a city. Eventually I ended up in a hotel and enquired at the reception in a somewhat stressed manner: "Do you incidentally know where the people of CERPS international are going to meet tonight?" -"Well, walk down the corridor and take the lift to the 3rd floor."

I see, I thought, so lunch is going to be held only for those people who have been checked in by Geri, so I can relax, together we will be able to find the way to the congress centre. In one of the hotel appartments I encountered 14 ladies who were chatting in a lively way –"in English". I was given a warm welcome by the "organiser of spare-time activities" Andrea and was invited to a home-cooked lunch. At 2 pm our "organiser of spare-time activities" got up from her chair and said: "I cordially welcome you to CERPS international 2017 in Salzburg-Wals." My eyes were getting bigger and bigger and I looked utterly aghast and asked my Swiss neighbour "Is this all of us?" The answer "Yes, for the time being" was the biggest surprise of the day! Altogether we were 24 participants after all.

The "organiser of spare-time activities" Andrea abruptly took the role of the sole leader of the whole congress. An adorable organiser, guide, translator and lecturer. Again I would like to express a heart-felt thanks, Andrea! Four informative, inspiring days full of humour were still to come

during which I had the chance of meeting wonderful, humorous and interesting women. Never before in my life had I been able to listen to lectures sitting comfortably in the lounge in the conservatory. The lecturers were genuine professionals! They were not troubled by tumbling screens or broken projectors. Lactation consultants that is what they were - being able to adapt to any kind of situation.

The CERPS international meeting is worth taking part in in every respect – not only to collect CERPS- I would take part in it again at any time.

Sandra Gattiker, IBCLC
Switzerland

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