



BABY COMPASS BAVARIA

**Health care recommendations
on the following issues:**

Breastfeeding

Nutrition for Breastfeeding Mothers

Infant Nutrition

Preventive Medicine

Vaccinations



sponsored by the
Bavarian State Ministry of the
Environment and Public Health



Greetings

Dear parents,

Children are our future. As a result, it is essential that we do everything we can to give them a good start in life. Young parents nowadays are almost overloaded with advice, which often leaves them uncertain as to which information can be trusted.

We are therefore extremely pleased to welcome this joint initiative between the Berufsverband der Kinder- und Jugendärzte Bayerns (Bavarian Association of Paediatricians), PaedNetz® Bavaria and the Bayerischer Hebammenverband (Bavarian Midwives Association). The Baby Compass supports mothers and fathers throughout their child's first year, providing them with first hand information on important health issues, e.g. nutrition, vaccinations and medical check-ups. All of the recommendations in this guidebook are scientifically founded and based on statements made by recognised professional associations.

Health promotion and prevention are also central aspects of Bavarian health care policy. The Gesund.Leben.Bayern. (Live Healthily Bavaria) initiative is run by the Bavarian State Ministry of the Environment and Public Health and supports projects that encourage people living in Bavaria to lead healthy lives. Children form an important focus of this initiative, given that the childhood years are the most successful time to pave the way to a long-lasting focus on healthy living. As a result, lifestyle diseases such as hypertension and diabetes can be avoided or at least made less severe, giving individuals a better quality of life and, in addition, proving extremely useful for society on an economical scale. According to experts, Germany could save 80 billion Euros per year through health-conscious behaviour.

We are pleased to have supported the Baby Compass using funds from the Gesund.Leben.Bayern. initiative. We are certain that it will be of valuable assistance and hope that you, the parents, will be able to thoroughly enjoy watching your children grow up both healthily and happily.



Dr. Markus Söder MdL
Bavarian State Minister



Melanie Huml MdL
Bavarian State Secretary

Dear parents,

The **dietary condition** of an expectant and breastfeeding mother does not only affect her own health, but also that of her child. Many pregnant and breastfeeding women are not provided with enough vitamins and trace elements. In particular, the provision of folic acid, iron, calcium and iodine is often considerably lower than recommended by the DGE (German Society of Nutrition). According to German statutory maternity regulations ("Gemeinsamer Bundesausschuss der Ärzte und Krankenkassen" [Federal Joint Committee of Doctors and Health Insurance Companies] of the Federal Ministry of Health and Social Security), pregnant and postnatal women should receive advice and be provided with recommendations concerning health promotion through nutritional medicine. The following recommendations and information stem from current scientific knowledge and were compiled for you by the Pädnetz® Middle Franconia Competence Team together with the Bayerischer Hebammen Landesverband e.V. (Bavarian Midwives Association) and the German National Breastfeeding Committee.

Who looks after the mother and child following the birth?

German legislation generously states that medicinal care for both mother and child must be included in health insurance. In the first few weeks following the birth, midwives and paediatricians take shared responsibility for your baby's well-being.

Your midwife will take care of you after the birth, helping you to breastfeed or feed your infant and showing you how to correctly clean and look after them. In order to carry out these tasks and provide follow-up care, your midwife is able to visit you daily for up to ten days following the birth. In addition, statutory health insurance companies cover midwife visits and telephone advice from the eleventh day after the birth through to the end of the child's eighth week. Further midwife visits concerning breastfeeding and nutrition queries or arranged by a doctor are even possible after the eighth week. The first scheduled doctor's appointment for your baby is the U3 check-up, which is carried out by your chosen paediatrician between the fourth and sixth weeks following the birth.

Please note: In the case of any slight abnormalities that may indicate a medical problem with your baby, you should contact your paediatrician immediately. Disorders such as eye infections, problems with the healing of the navel or increased newborn jaundice can quickly become threatening illnesses during the newborn period. You should be particularly careful in the case of aversion to drinking, vomiting, breathing difficulties, cold hands and feet or a pale blue skin colour, all of which may help to identify and handle life-threatening illnesses (e.g. cardiac defects, blood poisoning) in good time.

Even if your baby does not have any medical problems, it is a sensible idea to book an appointment to meet your future paediatrician in the second or third week following the birth. Your child will undergo a thorough medical examination and their physical development, nutritional condition and first stages of development will be reviewed. The doctor will also ask you about any illnesses in your family that may pose a risk and will give you individual advice about sensible preventive medicine measures for your child.

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A. Preventive Medicine Measures for Breastfeeding Mothers

General Nutritional Information

The need for energy and nutrients is even greater during breastfeeding than it is during pregnancy – full breastfeeding requires an 'energy boost' of 500 kcal per day. This makes a balanced diet with a sufficient number of calories especially important for breastfeeding mothers.

You also require considerably more liquid because the water released with the breast milk needs to be replaced. You should always drink when you are thirsty. Every time you breast-feed, make sure that you have a drink too, whilst also continuing to drink at and between mealtimes as per usual. Avoid stimulating energy drinks. Where possible, you should also only drink small amounts of coffee, tea and soft drinks, as well as alcoholic beverages. It is, incidentally, unfortunately yet to be proven that 'milk enhancing' drinks and teas actually increase the amount of milk produced.

A breastfeeding woman should have a varied diet, thus generally eat all kinds of food because numerous substances pass into the breast milk. These substances create the specific and unique taste of the breast milk, which varies from day to day depending on what the mother eats. As a result, the infant is already able to 'share the taste' of the various foods eaten by the family and there is no reason to avoid any strong tasting foods. Although certain foods such as leeks, onions, pulses, cabbage or particular fruits are said to cause colic (flatulence, diarrhoea), it has yet to be proven that these foods actually lead to stomach pains in infants when eaten by the mother. Colic has numerous causes, which are not necessarily connected to what you eat. Nevertheless, you should of course pay

attention to your child's reactions and in individual cases, without being overly cautious, make a decision concerning the removal of certain meals from your diet.

Common allergies pose a higher risk to up to approx. 25% of pregnant women. A low-calorie, so-called elimination diet is ineffective and therefore not recommended nowadays during pregnancy and breastfeeding. Instead, the baby should be exclusively breastfed for 4 to 6 months where possible. Only in a few individual cases is it sensible for a breastfeeding mother to avoid foods that regularly trigger allergies (cow's milk, eggs, fish, and nuts). Please only follow such a diet after consulting your paediatrician.

Incidentally, infants should not be given any honey before their first birthday due to the risk of honey botulism, which has led to the occurrence of severe cases of botulinum poisoning, paralysing the respiratory muscles.

Breastfeeding causes the weight **gained** during pregnancy to disappear mostly by itself. However, if this is not the case, a diet should be used to carefully approach weight loss and, once you have reached your start weight (your weight prior to the pregnancy), you should not lose any more than 2kg per month whilst breastfeeding.

Iodine and Folic Acid

The body needs iodine in order to form hormones in the thyroid gland, which are important for controlling growth, metabolism and mental development. From the 12th week of pregnancy onwards, your child's thyroid gland will independently produce hormones, but needs iodine from the mother's blood (during pregnancy) or breast milk (during

the breastfeeding period) in order to do so. The use of table salt containing iodine (20 mg/kg iodised salt) has distinctly improved iodine intake over the past 20 years, with a current average intake of 120µg iodine per day. Even when following a diet containing meals rich in salt-water fish, it is difficult for a breastfeeding mother to obtain a sufficient intake of iodine. Please note that sea salt is low in iodine! You should solely use iodised table salt in your cooking. Scientific investigations have discovered considerable iodine deficiencies in 40 – 50% of postnatal women. Please consider that a lack of iodine in a mother will also lead to breast milk low in iodine, which is then passed on to the breastfed infant. The mental and physical development of your child depends on the thyroid gland functioning normally and a sufficient iodine intake. Children who are not breastfed receive enough iodine from the infant formula. In the case of breastfeeding mothers, the DGE (German Society of Nutrition) recommends a total intake of 260µg iodine per day. **It is recommended that you take a daily nutritional supplement containing 150 – 200µg iodine in order to achieve this intake.**

Folic acid was already important during your pregnancy, enabling the ovum to settle into a stable position in the womb and, at a later stage, allowing the spinal canal of the embryo to close. Folic acid, a B vitamin, is also important for the healthy growth of your baby, assisting its cell division and blood formation. You have an increased need for folic acid throughout your entire pregnancy and the breastfeeding period – the German Society of Nutrition recommends a total daily intake 600µg folic acid. It is difficult to achieve this intake during the breastfeeding period, even if you change your diet to include more foods rich in folic acid, such as green vegetables

(e.g. spinach and broccoli), pulses, potatoes, wheat germs, egg yolk, wholegrain products and citrus fruits and juices.

It is recommended that you take a daily nutritional supplement containing 400µg folic acid in order to achieve this intake. A good way of doing this is to continue using the nutritional prophylaxis taken during pregnancy with a combined supplement of 150 – 200µg iodine and 400µg folic acid.

Iron

The DGE (German Society of Nutrition) recommends that breastfeeding mothers have an iron intake of 20mg per day. The **biological presence** of iron is significantly higher in foods of animal origin than foods of plant origin.

As a result, it is beneficial for breastfeeding mothers to have two meals containing meat per week. If you follow a vegetarian diet, you should switch to foods of plant origin that are rich in iron (e.g. wholegrain products, millet, carrots, fennel, kohlrabi and spinach) and consume these alongside juices rich in vitamin C (blackcurrant juice, orange juice and acerola cherry juice). This will significantly increase the **presence** of plant iron in your meals.

Calcium

To start with, ample amounts of calcium are taken from the mother's bones in order to form the breast milk. This is balanced out at the end of the breastfeeding period, when the calcium is returned to the bones. As a result, breastfeeding women do not face a higher long-term risk of osteoporosis as long as they

meet the recommend daily intake of calcium (pregnant and breastfeeding women: 1000 – 1200mg calcium). Despite this, nutritional medicine investigations have shown that only approx. half of breastfeeding mothers actually follow this maturational recommendation.

You can fulfil your daily calcium requirement by consuming 3 to 4 portions of milk or milk based products per day (1 portion = 200ml milk, 1 yoghurt, 30 g cheese). If you do not eat or only eat a very limited amount of milk products, then you should take a nutritional supplement containing calcium. We recommend that you use effervescent calcium tablets and mineral water that is rich in calcium (and also suitable for making tea), containing more than 500mg calcium per litre.

Vitamin B12

Only mothers following long-lasting strict vegetarian diets (vegan diets eliminating all foods of animal origin) are at risk of displaying deficiency symptoms.

Long-Chain Unsaturated Fatty Acids

New brain research findings show that “long-chain polyunsaturated fatty acids” (e.g. DHA) play an important role in the development of the central nervous system and retina. The baby depends on the breast milk **to be provided** with these fatty acids. Compared to industrial infant formula, breast milk contains a larger amount of these highly unsaturated fatty acids. The **mother's organism** is only able to **produce** a limited amount of these fatty acids from plant oils (rapeseed oil, linseed oil). DHA can be found in oily salt-water fish such as salmon, herring or mackerel. Dieticians therefore recommend that pregnant

and breastfeeding women consume two portions of oily salt-water fish per week in order to achieve the recommended daily intake of an average of at least 200mg DHA.

Women who do not eat or only eat a very limited amount of fish should consider using special nutritional supplements that are designed to fulfil the needs of breastfeeding women (e.g. “Folic Acid + DHA”). There is, however, no officially recommended nutritional supplement for all breastfeeding women that contains these special fatty acids.

Caffeine, Alcohol, Nicotine

You should only drink small quantities of caffeinated drinks such as coffee and black tea in order to avoid overexciting the infant's sensitive organism and preventing the child from sleeping. Alcohol should be completely avoided.

If a mother smokes, the baby will also take in nicotine and other toxins (e.g. heavy metals) from the breast milk. Nicotine passes quickly into breast milk and can reach levels up to three times as high as in the mother's blood, thus causing severe colic and sickness in the infant. In addition, smoking is one of the major risk factors for sudden infant death and the manifestation of allergic bronchial asthma. Smoking should be avoided during the breastfeeding period and you should ensure that your infant is not exposed to any passive smoking. Mothers who can't fully ‘ditch the habit’ should at least try to limit the number of cigarettes they smoke to a maximum of 5, stop smoking an hour before breastfeeding and have a break of at least 2 hours before smoking again after breastfeeding. Smoking does not mean that you should not breastfeed, as the advantages of breastfeeding outweigh the disadvantages of smoking.

Medicines

If a breastfeeding mother becomes ill, the use of medicines is sometimes essential. There is a wide range of substances available for treating illnesses that do not require you to stop breastfeeding (see table). In principle, you should choose medicines that could also be given to your infant to treat an illness. Your

general practitioner or gynaecologist will be able to select medicines for you that are suitable for breastfeeding, while your paediatrician will inform you of the likelihood of side effects on your breastfed baby and what you can expect. Chronically ill patients may, of course, continue taking the long-term medication that they took during pregnancy throughout the breastfeeding period.

| Indication | The Best Medication during the Breastfeeding Period |
|----------------|--|
| Pain | Paracetamol, ibuprofen and aspirin with a daily dose of up to 1.5g. |
| Antibiotics | Penicillin, cephalosporin, erythromycin and roxithromycin. |
| Cough Medicine | ACC (acetylcysteine) and ambroxol. Further medicines should only be used after consulting your doctor. |
| Nasal Spray | Decongestant and moistening nasal sprays or drops can both be used. |
| Hayfever | Loratadin, cetirizine and dimetindene. |
| Asthma | Salbutamol, terbutaline and inhaled corticosteroids. |

B. Preventive Medicine Measures for Infants

Feeding a Newborn Baby

If you are able to and want to breastfeed your child, congratulations! This is the ideal food for healthy infants. Nevertheless, if you are unable to breastfeed your child, you are also being a great mother by bottle-feeding them!

Traditional infant formulas are produced from cow's milk in a complex process. The high quality formulas are subject to the extremely strict dietary food regulation, whatever manufacturer you choose. It is theoretically possible to produce infant formula yourself, but this is not recommended due to quality and

hygiene factors. Other alternatives (almond, goat's, mare's and soya milk) are not suitable for feeding newborns and infants due to their composition.

How much should my child drink? How much weight should my child gain?

The amount of milk needed for normal growth varies from child to child, with some children needing up to twice as much as others. The best idea is to go by weight gain: your baby should gain 150 – 200g per week (or 20 – 30g per day) in its first six months. The ideal aim is to have doubled the weight of your child after 5

or 6 months. You cannot 'overfeed' fully breastfed children - even 'well nourished' breastfed infants are more likely to face a lower risk of being overweight later in life.

Should my baby also drink water or tea?

Not normally – the general rule is that the water contained in the milk is sufficient for your child, provided that they do not become constipated (with hard faeces that are difficult to pass). Tea or tap water may only become necessary for bottle-fed children in the case of fever or summer heat, when they can be used in addition to infant formula to quench thirst. Breastfed children do not require additional liquids, even during the summer and in the case of fever, when they should be breastfed more often, where appropriate, so that your milk supply suits your baby's requirements. Special 'baby drinking water' is available on the market, claiming to be 'low in nitrates', but the drinking water supplied in Bavaria has such a low nitrate content that it is not necessary to buy any 'special water'.

Breast-Fed Babies

Breastfeeding is the natural and ideal way of feeding healthy infants. You will have received information about breastfeeding in your antenatal classes and from your doctors, midwife and nursing staff in the hospital. You will also receive a lot of often contradictory information about breastfeeding from the media, relatives, friends and acquaintances. This brochure is designed to act as your personal guide.

First a few words about everyday life with a newborn baby: looking after a newborn is a twenty-four hour job.

In order to maintain the necessary strength and stamina to deal with the strain of new

motherhood, it is essential that you also pay attention to your own needs.

It's great to have visitors but think carefully about who you want to invite to visit in the first few weeks! The ideal visitors are those who bring round a meal for your family, take care of the laundry, giving you the chance to sit and admire your baby, or take an older sibling or your baby for a walk while you spend some precious time with your newborn child or older son or daughter. Avoid inviting anybody who expects to be entertained, responds negatively to your decision to breastfeed or simply causes you too much stress.

Relaxation is essential, so enjoy as much peace and quiet as possible!

- Make sure that you sleep while your baby is sleeping.
- Cut down your number of household tasks.
- Take advantage of all offers of help.
- Create your own welcoming breastfeeding corner with an armchair or comfortable sofa, enough cushions, a small footstool, a vacuum flask filled with your choice of drink, a telephone, something to read, a pen and a notepad – in fact, with whatever you need in order to breastfeed in a relaxed manner without being interrupted.

Recommendations for the first few days of breastfeeding

The breast milk composition changes over the duration of the breastfeeding period and flexibly adjusts to suit your child's needs. In the first few days following the birth, your child will receive the yellowish looking first milk (colostrum), which is extremely rich in protein and immunological components (immunoglobins and defence cells), which also enable the breast milk to offer your baby protection against infections. From your child's

second week onwards, the composition will transform into 'ripe' breast milk, rich in fat and lactose. The supply of breast milk is controlled by demand: the more milk your child drinks, the more milk your breasts will provide. In the same way, the amount of milk will decrease if less milk is needed, for example if you breast-feed less often.

How often should I breastfeed?

After the first few days, most newborn babies adapt to being breast fed between 8 and 12 times in 24 hours. Many babies tend to breastfeed at shorter intervals and like to have a longer period of sleep. Regular and short breastfeeding sessions stimulate milk production and quench your baby's thirst. They are also more comfortable for both mother and child compared to overlong breastfeeding sessions separated by long breaks because they prevent the breasts from becoming too tight and mean that the baby does not have to be comforted throughout periods of unrest.

How long does a breastfeeding session last?

A normal breastfeeding session lasts between 20 and 45 minutes, but shorter breastfeeding sessions are also perfectly acceptable. It is not always true that the majority of milk is drunk in the first 10 minutes because a mother has up to 6 continuous milk ejection reflexes per breastfeeding session. The breast milk composition changes throughout the breastfeeding session. The foremilk comes first, which is lacking in fat but quenches the baby's thirst (and, unlike tea, provides vitamins, minerals and antibodies). This is followed by milk containing more fat and finally, at the end of the breastfeeding session, hindmilk, which is rich in fat and ensures that the baby is full and satisfied, releases the breast and successfully gains weight.

The **correct breastfeeding** position can help you to avoid pain and breastfeeding problems. You should make the most of your midwife's help, particularly in the first few days of breastfeeding, because it is not an innate ability, but a skill that needs to be acquired by both mother and child. If your child is in the correct position, there should be no reason to limit the duration of the breastfeeding session. If your nipples become injured, this is not due to the duration of suction but is much more likely to be a sign that your child is in an unsuitable position.

What is the correct breastfeeding position?

- Support your breast with your free hand.
- Hold your baby so that their body is facing you ('tummy to tummy'). Your baby's lips should be at nipple height.
- Use your nipple to stimulate your baby's lips. This will trigger your child's rooting reflex and cause them to open their mouth wide. Once the mouth is open wide, bring your baby quickly to your breast, if they do not latch on automatically, and ensure that they latch on to the nipple and a large area of your breast tissue ('a mouthful of breast').
- Never let your child only suck on your nipple. This prevents the breast from being well emptied and is the most common trigger for sore nipples and reason behind your baby not thriving as well as they could.
- If you find yourself in pain once your child has been positioned and starts to suck, place your finger in the corner of your baby's mouth to break the suction, take the baby away from your breast and start again. It is completely normal to have to repeat the procedure several times while you are learning how to breastfeed, but it is well worth the effort.

This recommendation is suitable for healthy newborns of a normal weight

| | |
|---------------|--|
| Day 0 = Birth | The baby should be breastfed as soon as possible after the birth according to individual needs! |
| Day 1 | Breastfeed as required (4 to 6 times). Feed for at least 10 minutes on each breast (milk ejection reflex). Wake the baby after 6 hours and attempt to breastfeed. |
| Day 2 | Breastfeed as required, up to 8 to 12 times! There are no set recommendations for the duration of each breastfeeding session, which can vary from 0 to 45 minutes. |
| Day 3 onwards | Breastfeed according to the needs of both mother and child, e.g. wake the child when your breast starts to tighten. |

Try out various breastfeeding positions at an early stage with your midwife because the breast will be most effectively emptied where your child's chin and tongue are positioned. Regularly changing your breastfeeding position prevents blocked ducts, stimulates lactation and avoids sore nipples. The three most common breastfeeding positions (see diagram) are the cradle position, rugby ball position and side-lying position (particularly comfortable at night). In addition, breastfeeding at night particularly stimulates the lactation hormone prolactin, thus increasing the amount of milk produced.

Painful Nipples?

Over the first few days of breastfeeding, many mothers say that their nipples have become tender or irritable. This is nothing to worry about as the sensitivity will go away as soon as your milk flows again. Nevertheless, if your nipples become very painful or start to display cracks or rhagades, you should get help in order to avoid having to take a break from breastfeeding. The most common causes of sore nipples are incorrect breastfeeding positions, your child slipping during breastfeeding, skin irritations

caused by fabrics, detergents or toiletries or exceedingly long breastfeeding sessions without changing position. Such discomfort may, but rarely does, stem from a baby's suction problems, canker sores or skin diseases. It can be alleviated by: a correct breastfeeding position, changing positions, starting breastfeeding with the breast that hurts the least, letting the hindmilk dry on your nipple at the end of the session, exposing your nipples to light and air, keeping them dry between breastfeeding sessions (changing breast pads, wearing cotton clothing and avoiding synthetic fabrics) and not using any creams or ointments.

Swollen Breasts and Blocked Ducts

Some mothers experience extremely swollen mammary glands the first time they give milk. Regular breastfeeding is the best way of promoting early lactation and lessening or putting a stop to the swelling caused by increased blood flow. You can encourage your milk to flow by using damp warm compresses for 1 to 3 minutes before breastfeeding. In difficult cases, in which the infant is unable to drink from the firm breast, you should slightly empty your breast by hand or using a good electric pump before breastfeeding.

After you have breastfed, you can use cold compresses, such as cold, damp cloths, cold gel packs or a bag of frozen peas or cherry stones (always wrap frozen items in a dry towel before use!) for 20 minutes to help relieve any swelling.

In the case of blocked ducts, which are mostly caused by overlong breastfeeding sessions or pressure on an area of glandular tissue, it is essential that you take some time to relax! The measures described above are also useful in this situation. In addition, you can always first have your baby latch onto the blocked breast, ensuring that you use a breastfeeding position in which the baby can clear the

blockage particularly well (with your baby's chin pointing towards the blocked area). Following your milk ejection reflex, you can then use extremely light and flat hand movements in the direction of the nipple to encourage milk flow in the blocked area.

Ask your midwife to show you how to do this. After some practice, this method is just as hygienic and effective as using an electric breast pump and does not depend on technical aids or electricity. Many women prefer to empty their breast by hand because they find it more comfortable than using a breast pump, which also has to be cleaned, creating more work.

BREASTFEEDING POSITIONS



Cradle position leaning up in bed



Sitting cradle position



Rugby ball position leaning up in bed



Seated rugby position leaning forward for the baby to latch on



Leaning back for relaxed breastfeeding



Side-lying position



Kangaroo position



Lying on your back with your baby



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How long can I store (pumped) breast milk?

To keep your child healthy, you can store pumped milk in your fridge at home for 3 to 5 days, keeping it in closed (sterile) containers (e.g. milk bottles that have been sterilised or cleaned using your dishwasher's hot cycle). Breast milk can also be stored in a freezer at -20°C without adverse effects for 3 to 6 months.

Supplementary Feeding?

Drinking from a bottle or teat is different from breastfeeding. At first, it is best to solely have your newborn baby suck on your breast in order to 'feed' their requirements. Avoiding teats and dummies in the first few weeks helps your child learn how to breastfeed. A healthy newborn baby requires neither water nor tea when it has unlimited access to your breasts (breastfeeding when required). As a rule, supplementary feeding is not necessary. Nevertheless, some newborn babies need an extra supply of food and liquid to prevent dehydration before engorgement takes place. If regular breastfeeding also fails to satisfy your baby's appetite, you can express more milk by hand or with a pump or give your baby first-stage formula. Several special methods of feeding breastfed children are also available alongside traditional bottle-feeding: cups, small medicine vessels, spoons, finger feeders or breast feeding tubes (supplemental nursing systems). Your midwife is experienced in assisting you with such special techniques.

Do I have enough milk for my child?

It is rather difficult to state how much milk a breastfed child ingests. In order to answer this question, pay attention to the following indicators: A child that is satisfied and active, regularly breastfeeds, produces 6 to 8

wet nappies per day and has 3 to 4 bowel movements per day in their first four weeks is definitely receiving enough milk.

According to experience, there will be phases lasting 2 to 3 days during your breastfed child's first year when they want to be breastfed more frequently. Unlimited access to your breasts and a lot of skin contact will increase the amount of milk needed. If you are unsure about any aspect of breastfeeding, please ask your midwife or paediatrician for advice before beginning supplementary feeding!

What do I do if my baby cries?

Children use crying and screaming in order to communicate in the early stages of their life. You should therefore not ignore these signals when made by your child because they indicate that they require your attention, even if the reason behind this discomfort is sometimes unclear.

It may be that your baby wants to be breastfed – whether its due to hunger or simply a way of soothing your baby, sucking at the breast is often the ideal solution to satisfy, or indeed 'feed', your child's needs. You can calm your baby with rhythmic movement, for example rocking them in your arms, holding them in a rocking chair, taking them for a walk in the pushchair, going for a drive or carrying them in your arms or in a baby sling. A ticking clock, humming fan or soothing music may also prove useful. If your child seems to have stomach-ache, make sure that you are using a good breastfeeding position that best prevents your baby from swallowing air. Babies often find it uncomfortable to be held in a position that puts pressure on their stomach, to be 'hung' over your shoulder or to be laid on your arm in an 'airplane position'. Some infant cry more, sleep less and simply require more care than others. Each baby has their own personality, so try not to compare

them with other babies. Adjust yourself to your baby's needs and try to find as much support and assistance for yourself as possible

What is breast-milk jaundice?

Natural newborn jaundice can continue in breastfed children with slightly higher bilirubin levels and may take longer to disappear. This so-called breast-milk jaundice, also known as icterus is, however, harmless.

Bottle-Fed Babies

Which bottle milk is the best choice for my child?

So-called 'first-stage' (German: 'Pre-') infant formulas are the most similar to breast milk and should be the first formulas used to feed your baby. They have a low viscosity similar to that of breast milk and contain milk sugar (lactose) as their sole carbohydrate.

Second-stage (German: 'Stufe 1') infant formulas contain starch as an additional carbohydrate, with some also containing maltodextrin or crystalline. These added ingredients make the milk both more viscous and filling. These formulas can also be used as starter formulas.

Third and fourth-stage (German: 'Stufe 3/4') infant formulas, also known as follow-on milks, contain even more filling carbohydrates. They are **not** suitable for use in your child's first 6 months due to their composition. In fact, in terms of nutritional physiology it is **not** necessary to switch infant formula throughout your child's entire first year. Both the 'first-stage' formula and 'second-stage' formula that are initially used can be used for bottle-feeding up until the infant starts to drink conventional cow's milk from a cup at the end of their first year.

Infant formulae contain a sufficient number of vitamin and mineral (iron, zinc, iodine)

supplements, meaning that no juice, fruit or vegetables should be included in bottle-feeding throughout the entirety of your child's first year.

Tips for preparing your bottles

Although milk bottles need to be adequately cleaned, it is not necessary to disinfect or sterilise them. It is sufficient to wash the used bottles and teats under hot tap water, then rinse them with pure water and finally, where appropriate, clean them using your dishwasher's hot cycle (65°C).

Alternatively, you can boil the bottles in simmering water for 3 minutes or clean them using a special steam steriliser (vaporiser) in the first three months of bottle-feeding. So-called sterilising units (Milton sterilisation) are not as hygienically safe as the aforementioned methods.

Do not dry the clean bottles, but place them on a tea towel, with the opening facing downwards, to dry.

The tap water used to prepare the bottles must always be boiled first during your baby's first year. It should then be left to cool to approx. 50°C. You can save yourself some work by storing the boiled water in a clean vacuum flask.

Special 'baby drinking water' is available on the market, claiming to be 'low in nitrates', but the drinking water supplied in Bavaria has such a low nitrate content that it is not necessary to buy any 'special water'.

You should always freshly prepare your infant formula directly before bottle-feeding. Do not try to keep a supply of prepared bottles (e.g. for feeding at night) because heat and water provide the ideal conditions for bacterial growth. Even storing the prepared bottles in the fridge does not prevent the growth of germs that can make your child ill. A prepared bottle should only be stored in a bottle warmer

for a maximum of 45 minutes. Leftover milk should never be reheated.

Special Foods

Anti-reflux formulas

It is perfectly natural and desirable for infants to have wind during and after feeding. As long as your child displays no other discomfort, moderate vomiting following a feed does not require treatment, as states the phrase "If they vomit a bit, then they're healthy and fit". Vomiting can often be avoided by giving your child more frequent, smaller feeds and carefully winding them. Traditional anti-reflux formulas are thickened, but this is only rarely a truly sensible option from a medical point of view. Please consult your paediatrician before buying any so-called anti-reflux formulas (AR formulas).

Hypoallergenic formulas

So-called HA formulas are characterised by their low allergen protein. They are made using a special production process, in which cow's milk proteins are broken down into smaller pieces, like in the human digestive process. To date there has been no truly convincing evidence of the effectiveness of these formulas – expectations are yet to be fulfilled on a scientific level.

Nevertheless, the positive effects of HA formulas in children at risk of with atopic dermatitis are becoming apparent. As a result, the use of HA formulas up to a baby's 6th month can be recommended for babies that cannot be breastfed, in the case of an appropriate familial risk.

In addition, HA formulas are not suitable for treating a general cow's milk allergy, due to their overly high residual antigen content. Such allergies require special formulas that are virtually allergen-free and available on

prescription from pharmacies (full hydrolysate formulas, also known as astronaut food).

Special formulas 'for slight digestive problems'

These formulas differ from normal formulas due to their reduced content of milk sugar and use of a cow's milk protein that is broken down into smaller pieces, as well as milk fat that is particularly easy to digest. These formulas (e.g. those referred to as 'sensitive') are designed to be easier to digest and therefore have an advantageous effect in the case of flatulence and screaming episodes. They are, however, not officially recommended.

Vitamin K

Vitamin K is an essential part of the body's blood clotting system. Without vitamin K, all wounds (cuts and other open wounds, internal bleeding) would continue to bleed. The vitamin causes small blood vessels to coagulate and close the wound. Adults take in vitamin K1 from food, whilst vitamin K2 is produced by their intestinal bacteria. Newborn babies are at risk from a lack of vitamin K because their intestines are yet to exhibit any real colonisation of bacteria in their first few days, while your breast milk only has a relatively low vitamin K content. This lack of vitamin K can lead to grave consequences – one in 30,000 newborn babies suffers from severe bleeding. It can cause cerebral haemorrhage (which leads to death in a quarter of cases), nosebleeds and intestinal bleeding for your baby from its first to twelfth week. Such bleeding can be effectively prevented by giving newborn babies a vitamin K supplement. Immediately following birth, all newborn babies should be fed a routine dose of two drops (2mg) of vitamin K, which should be repeated at the U2 and U3 check-ups.

Credé's Prophylaxis

Credé's prophylaxis prevents your newborn baby from being infected by the virus of the sexually transmitted disease gonorrhoea (tripper).

In the worst case scenario, this eye infection can lead to blindness. Yet it is theoretically possible that a pregnant woman has (unknowingly) become infected in the days leading up to the birth, thus presenting an acute risk of infection to the baby. Credé's prophylaxis consists of eye drops containing silver nitrate, which can burn when used, sometimes causing discomfort to the baby. The legal requirement for the use of Credé's eye prophylaxis was lifted due to a declining number of cases of the disease, so that the decision as to whether to use the silver nitrate eye drops now rests in the hands of the parents. If you have decided against the use of eye drop prophylaxis, you should definitely take your baby to see your paediatrician at short notice in the case of an eye infection.

Vitamin D Prophylaxis

Vitamin D ensures that calcium enters the bloodstream from food and is deposited in the bones. Rickets is a disease caused by a lack of vitamin D, which causes the abnormal 'softening of bones', leading to lasting bone curvature. In extreme cases, it can also lead to cerebral seizures and life-threatening laryngeal spasms. According to the German Society of Nutrition (DGE), the intake of vitamin D provided by breast milk and infant formulas does not meet the amount required by infants in their first two years. Even the addition of baby food and mashed food (supplementary food) from 5 months onwards is unable to balance the deficit. The baby's own production of vitamin D, which takes place in their skin, is

also insufficient because Germany does not receive the **necessary** amount of sunlight between November and February. Incidentally, placing your baby on the windowsill to give them more sunlight is of very little help because normal window glass repels most of the required light spectrum.

Infants in Germany should therefore receive a daily tablet containing 500 units of vitamin D in order to prevent the Rickets disease. To start with, this process should be followed until your baby's first birthday. If your baby was born in Autumn or Winter, they should continue to receive vitamin D tablets after their first birthday until the following spring. As a rule, the vitamin D administration is combined with a dose of fluorine, which is taken to prevent tooth decay. Premature babies receive pure vitamin D tablets without additional fluorine (e.g. Vigantoletten®) until they reach a weight of 3kg.

Fluoride Prophylaxis

Fluoride is a natural trace element that significantly aids the formation of healthy teeth. The body mainly needs fluoride for the creation of teeth and bones. On the one hand, fluorides prevent the release of minerals such as calcium and phosphorus from the tooth enamel (demineralisation), thus maintaining the hardness and resistance of the tooth enamel. Fluorides prevent the bacteria that cause tooth decay from settling on the surface of the tooth. They inhibit the metabolism of the tooth decay bacteria, causing it to produce less acid, which is ultimately responsible for attacking the tooth enamel. Fluoride incorporates itself into the tooth enamel, thus also increasing its resistance against the acids that form tooth decay. The most important phase for the incorporation of this fluoride takes place when the tooth enamel forms,

which starts as early as just after the birth in the case of permanent teeth!

A considerable part of the preventive effect of fluoride against tooth decay can be linked to its local effect, which is widely used in the form of fluoride toothpaste. Children's fluoride toothpaste contains 0.25 – 0.5mg fluoride per gram of toothpaste, while fluoride toothpaste for adults has a fluoride content of 1.5mg per gram of toothpaste.

Can infants and children be given fluorides?

Experts have conflicting views as to the healthiest and most effective form of tooth decay prevention using fluoride - dentists and paediatricians have different opinions. It is, however, indisputable that the correct amount of fluoride can protect teeth from tooth decay. Too much fluoride can actually be harmful to infants and young children, leaving stained patches known as dental fluorosis on the tooth enamel.

Since 2000, **dental associations** have been advising parents not to use fluoride tablets but to use a pea-sized amount of fluoride toothpaste once a day to clean teeth as soon as a child's first tooth comes through. The children's toothpaste used should not contain more than 500ppm (0.05%) of fluoride. They also recommend that teeth are cleaned this way twice a day from the age of two. These dentists base their recommendation on studies that show that the direct use of fluorides on the teeth is more effective than the administration of tablets. In addition, they have concerns that fluoride tablets may lead to an excessive fluoride intake.

Paediatrician associations take a different stand:

They agree that those living in countries with fluoridated drinking water may have an exces-

sive intake of fluoride and therefore recommend that fluoride tablets are either fully avoided or limited in these countries (e.g. the Netherlands, the USA, Switzerland and Ireland).

The situation is different in Germany: Infant formulas and children's foods in Germany are not rich in fluorides, neither naturally or due to fluoridated drinking water. It is nevertheless important that children receive the correct amount of fluoride in order to aid the hardening of the teeth during the teeth formation phase. Notable scientific societies (The German Paediatric Society and German Society of Nutrition (DGE)) therefore recommend that fluoride tablets are administered as early as during your child's first year. Fluoride tablets are not necessary if your child receives drinking or mineral water with a fluoride content of over 0.3mg per litre. Consult your paediatrician, who will know about the fluoride content of your local drinking water and will be able to give you good advice.

You could also enquire about the values of the drinking water in your area at your local water company.

Paediatricians recommend that you use either no toothpaste or fluoride free toothpaste to clean your baby's first teeth. Infants taking fluoride tablets should not use fluoride toothpaste until they are three because they are likely to swallow some of it. Following this guideline helps to avoid incalculable overdoses of fluoride. In addition, paediatricians are critical of the daily intake of a mixture of chemically defined cosmetic substances (abrasive materials, cleaning agents, binding agents, flavouring, dampening solutions, preservatives, colourings, antiseptics, etc.) involved when children swallow toothpaste. They refer to the lack of scientific investigations concerning the harmlessness of these substances when used over a long-term period.

Paediatricians recommend that fluoride toothpastes are first used when your child has stopped taking fluoride tablets. If your child is good at spitting out toothpaste, you can then start using children's fluoride toothpaste (0.5mg fluoride per gram of toothpaste). Once your child has reached school age, they may start using toothpaste for adults (1.5 mg fluoride per gram of toothpaste).

Fluoride salt is generally recommended for household use. Given that children under three years old still consume lower amounts of salt, it is a sensible idea to add to this using tablets containing 0.25 mg fluoride (German Society of Nutrition (DGE))

Recommendations for the Prevention of Sudden Infant Death

The term 'Sudden Infant Death Syndrome' (SIDS) refers to the unforeseeable death of a healthy child in their first year during their sleep. Doctors are still puzzled by the mystery of sudden infant death, with a variety of risk factors being suggested over the years, including lying in a face-down position, overheating and contamination caused by passive smoking. The extensive avoidance of a face-down sleeping position has halved the number of sudden infant deaths in Germany from 1.5/1000 to 0.7/1000.

Please observe the following rules:

1. The dorsal position is the healthiest sleeping position for your baby. You should therefore only use this sleeping position and avoid laying your child on their stomach or side.
2. Your baby likes to lie on a firm surface in order to sufficiently support itself while sleeping. You should therefore place a firm mattress in your baby's bed; but

please do not use any pillows, fur sheets or any other form of soft padded surface. Please ensure that your baby is unable to slide under their blanket so that their head becomes covered. Sleeping bags have proven useful in preventing such an occurrence.

3. Although your baby likes to sleep in close proximity to you, this should still be in their own separate bed. Co-sleeper cots in the parents' bedroom are an approved solution, allowing your child to sleep within arm's reach. Your baby's body significantly controls their temperature biologically through the skin on the head and face, to avoid sweating whilst sleeping. As a result, it is normally not necessary for your baby to wear a hat and gloves when sleeping.
4. Fresh air is good for your baby. Regularly airing your rooms for short periods (opening two windows to fully replace the air in the room) ensures fresh air and protects your child from draughts. You can tell if your baby is sufficiently dressed and covered by carefully feeling their neck or the area between the shoulder blades. The skin should be warm but not sweaty.
5. Close physical contact and breastfeeding are good for your baby.
6. Infants should grow up in a smoke-free environment, both during your pregnancy and after the birth. Convince your family not to smoke when your baby is present and avoid spending long periods in rooms where smoking normally takes place.
7. Necklaces, for example amber necklaces, should be avoided. This also applies to long dummy cords, which pose a strangulation risk that should not be underestimated.

You can find more information online at: www.babyschlaf.de

Help, My Baby Will Not Stop Crying!

Does your baby's crying wear you down so much that you feel helpless and even aggressive towards your child? If there is nobody who can look after the little one for a while then it is best that you take a short break. Put your baby in their cot and leave the room. It is better to leave your baby crying alone for a few minutes than to accidentally handle them roughly. You should never ever shake your baby in order to calm them down. Even very light shaking can cause cerebral haemorrhages. According to estimates, around 300 to 500 children a year in Germany are shaken so hard that they suffer trauma. Roughly a third of these infants die as a result of their injuries, while another third are left mentally handicapped. Only one third sustain no lasting damage.

Babies have disproportionately large heads. If they are shaken, the head swings uncontrollably back and forth because the stabilising neck muscles are not yet developed. It only takes around five seconds of strong shaking to expose the cerebral tissue to a centrifugal force so strong that it tears blood vessels and nerves, leading to cerebral haemorrhages, brain lesions and retinal bleeding.

If you notice that being a parent is wearing you out, contact your paediatrician or midwife as a precaution. They will be able to provide you with initial assistance and help you find a 'Schreiambulanz', a clinic to help you cope with crying babies.

Even Healthy Infants Cry

There is always a reason as to why your baby is crying, but this reason is often hard to find. Healthy infants cry when they are hungry or tired, their nappy is full, they want to hear your voice or they need physical contact. On average, healthy infants cry for two to three hours per day (or also at night).

Nevertheless, My Baby Keeps On Crying ...

You have tried everything but your baby still keeps on crying. You can feel yourself getting tired. There is only one solution left: Place your child in their cot, placing them on their side or back, turn the light down in the room and close the doors behind you. Try to distance yourself slightly from the situation and give yourself the chance to calm down. It sometimes helps to phone a friend for a quick chat. Your baby will probably continue to cry when in bed, but this is harmless for a short while. It is certainly far less worse than losing your nerve and shaking or hitting your baby.

You could try:

- picking up your baby and holding them,
- softly rocking them in your arms or carrying them around,
- talking to your baby, singing or whispering to them,
- giving them your finger or a dummy to suck on,
- lightly massaging their stomach or back
- or giving them something to drink.

And what do I do if my baby cries differently?

It is perfectly normal for babies to cry, but it is important to notice if their crying changes.

You should immediately contact your paediatrician or midwife or travel to your nearest children's emergency department if your baby ...

- cries for longer than usual.
- cries louder than usual.
- seems to be ill.
- cries in a way that worries you.

Hearing Screening

Every year, around 1000 children are born with a hearing difficulty in Germany. Children begin their linguistic development practically the moment they are born. If a baby is born with a severe hearing difficulty, they should start therapy, which is important to encourage both mental and social development, at 10 months old at the latest.

Currently in Bavaria, the average age at which hearing difficulties are diagnosed is as late as 27 months.

At this point, a lot of valuable time may have already been wasted. Parents often first notice that their child is responding to the parent's or sibling's glance rather than their voice at a late stage. Even if a child seems to notice that somebody is approaching from behind, this may be solely due to the movement of air or vibration of the floorboards.

Special electronic testing devices are already able to reliably (99%) detect hearing difficulties in newborn babies. The process is painless, only lasts a few minutes and may have a decisive effect on your child's life, given that it enables hearing difficulties to be treated at an early stage.

As of the 1st January 2009, all birth clinics are legally obliged to offer hearing screening for newborn babies. Following written consent from the parents, the child's so-called otoacoustic emissions (TEOAE) are measured using a probe placed in the ear canal or a brainstem evoked response audiometry test (AABR) is carried out. The results of the test are passed on to the responsible public screening centre.

The health authorities have the task of aligning these results with birth registrations in order to ensure that they have the complete records of children born in Bavaria. Parents

of newborn children who do not have a hearing screening result in their records receive a written request from the health authority asking them to ensure that their child undergoes the test.

Hip Screening

Hip joint dysphasia is one of the most common congenital deformities. It refers to the defective positioning of the femur head in the acetabulum. The acetabulum is too flat, meaning that the femur does not have a stable fit in the joint socket. If the femur head has already slipped out of the joint socket, the child has a so-called dislocated hip. Around 2 to 3 newborn children in 100 suffer from hip joint dysphasia. Overall, dislocated hips are about ten times as rare.

The screening process used or the early detection of this disorder involves a single sonographic and clinical examination. Your paediatrician normally carries out this ultrasound examination as part of the U3 check-up. If there is an increased risk of hip disease in your family, the examination should be brought forward and take place as early as during your baby's first week.

Metabolic Screening

Most children are born healthy and stay this way. Nevertheless, there are some rare congenital illnesses (in the case of one child in a thousand) that can still not be detected from external symptoms in newborn babies. If these illnesses are not treated, they can lead to organ damage and physical and mental handicaps.

In order to diagnose these illnesses early enough, all newborn babies are offered a preventive examination.

Which illnesses are covered by the examination?

The examination covers a wide range of severe hormonal disorders (e.g. a hyperfunctioning thyroid gland) and metabolic defects concerning amino acids, carbohydrates and lipometabolism. You can find more detailed information in the parent information booklet "More about the Preventive Examination for Newborns", which is available separately.

What is examined and when?

During the second or third day following your child's birth (after 36 to 72 hours), a few drops of blood will be taken from their heel or vein, placed on filter paper cards and send to the

responsible screening laboratory once dry. The samples will then be tested immediately using special, extremely sensitive examination techniques (tandem mass spectrometry). The blood samples are normally taken while the baby is still in the maternity ward. In the case of an outpatient birth, your allocated midwife or paediatrician is also able to take blood samples from your baby's heel.

Who receives the test result?

The sender of the blood sample (the midwife or doctor in the maternity clinic) will receive the written results within a few days. In urgent cases, the sender or parents will be contacted by telephone.

Please note:

**If no problems are detected
then parents will not be contacted!**

C. Vaccination

Do I Have to Have My Child Vaccinated?

No! Each parent has the right to consider and decide whether they want to be vaccinated and/or have their child vaccinated. It is therefore your decision as to whether your child is unprotected or protected throughout their life.

According to the vaccination recommendations from the Standing Committee on Vaccination for the Federal Republic of Germany (STIKO):

Vaccinations are one of the most effective preventive medicine measures. Modern vaccines are extremely compatible and unwanted lasting severe complications as a result of vaccination are only observed in very rare cases. The aim of a vaccination is to protect the vaccinated person against an infectious disease. If a large number of people have been vaccinated, there is the possibility of wiping out individual viruses on both a local and ultimately worldwide scale. The extermination of measles, infantile paralysis, hepatitis B and several other illnesses is the aim of both German and international health policy.

Vaccination is not compulsory in the Federal Republic of Germany. According to the Infection Protection Act, vaccinations that are particularly important for the health of the populations may be "publically recommended". These recommendations will be announced by the highest health authorities in each federal state of Germany. Each doc-

tor then has the important task of ensuring a sufficient amount of immunisation protection. This means that the doctor needs to start providing infants and young children with basic protection at an early stage, continue the process without unnecessary delays and successfully complete it within good time.

When Is the Right Time to Vaccinate?

Even newborn babies have a functioning defence system, although this displays 'gaps' in several sections.

Young infants are therefore particularly vulnerable to several life-threatening infections. In their first few months, a baby's defence system is strengthened through passive immunity, in the form of antibodies from the mother. This type of defence protects the baby against many viral illnesses but not against all viruses, for example the germ that causes whooping cough (which is a life-threatening illness at this age!).

Infants are also particularly at risk from meningitis viruses (e.g. Haemophilus influenzae B (Hib) and pneumococcus). They should therefore be vaccinated as early as possible after their eighth week. Even premature babies are vaccinated according to their actual date of birth and not their calculated due date (they can already be vaccinated at a point of development at which normal full-term children are not yet even born).

Incidentally, although it would be super, breastfeeding is no substitute for vaccination.

Recommended vaccinations for parents and those who come into contact with your baby

Whooping cough, a bacterial infectious disease that passes from person to person in the form of droplets, is of particular importance with regard to newborn babies and young infants. The illness is caused by numerous toxins (poisons) formed by bacteria. Whooping cough is particularly dangerous for infants, who may suffer from life-threatening apnoea. The Standing Committee on Vaccination therefore recommends that women wanting to have children receive a whooping cough vaccination before becoming pregnant. If this does not happen, the mother should preferably be vaccinated in the first few days following the child's birth. Furthermore, the Standing Committee on Vaccination recommends that any members of your house-

hold who have close contact with your child (parents and siblings) and any carers (e.g. nannies, babysitters and, where applicable, grandparents) have the whooping cough vaccination preferably four weeks before your child is born. It is best to receive this vaccine as part of a combination vaccination against whooping cough, diphtheria and tetanus.

Combination Vaccines

In order to limit the number of injections needed, the Standing Committee on Vaccination (STIKO) recommends an inoculation with a combination vaccine (2 to 6-fold). If you were to convert all of the current vaccination recommendations in Germany into single vaccines, this would involve a total of over 30 injections in your baby's first two years, which would be rather unreasonable.

An Extract from the Vaccination Plan of the "Standing Committee on Vaccination" (STIKO)

| When? | Which Vaccine? | Protects against which disease? |
|---|--|--|
| at 2 months at 3 months at 4 months | Six-fold combination vaccine and pneumococcal vaccine (basic immunisation 1-3) | Diphtheria, tetanus, hepatitis B, polio (infantile paralysis), pertussis (whooping cough) Hib (meningitis, laryngeal swelling) and pneumococcus (meningitis) |
| from 1 year | Single vaccine (single administration is sufficient) Meningococemia (meningitis) | Meningococemia (meningitis) |
| at 11 – 14 months | MMRV four-fold combination vaccine (basic immunisation 1) | Measles, mumps, rubella, chickenpox |
| at 11 – 14 months | Six-fold combination vaccine and pneumococcal vaccine (basic immunisation 4) | Diphtheria, tetanus, hepatitis B, polio (infantile paralysis), pertussis (whooping cough) Hib (meningitis, laryngeal swelling) and pneumococcus (meningitis) |
| at 15 – 23 months | MMRV four-fold combination vaccine (basic immunisation 2) | Measles, mumps, rubella, chickenpox |

(Dated October 2009)

Are there any disadvantages that may cause concerns if vaccines are combined rather than administered individually?

Experience to date has shown that this is not the case. The combined use of vaccines does not, for example, adversely affect the protective effect of the individual vaccines. The combination vaccination is actually more compatible because several excipients and concomitant substances are added to individual vaccines and these individual vaccines may have side effects. The immune system is not overloaded because modern vaccines merely contain a fraction of the antigens found in earlier vaccines: the five vaccinations recommended in 1960 contained 3217 proteins, while the nine vaccinations currently recommended contain a total of 49 proteins!

Vaccination Intervals and the Duration of Protection

Following the completion of the basic vaccination, most vaccines maintain their protective effect for at least 5 to 10 years. The hepatitis B, pneumococcal and meningococcal vaccine can be expected to offer extremely long-lasting protection. In the case of measles, mumps and rubella there is also no definite evidence that the vaccine loses its protective effect even after a period of 20 years. With the relatively recently introduced chickenpox vaccine, there have understandably not yet been any definite statements regarding whether the immunisation protection remains active for an entire lifetime. A recommendation may possibly be given at some point in the future concerning a booster vaccine for adults.

Vaccinations and Homoeopathy – Do They Clash?

In his “Organon” the founder of homoeopathy, Hahnemann, writes: *“...the benefit given to mankind by the cowpox vaccination, which protected the person vaccinated against all future smallpox infections and thus, so to speak, cured it in advance,...and so their universally used vaccination put an end to all epidemics of that deadly and terrible smallpox in such a way that the present generation is fully unable to clearly imagine the extent of the one-time atrocious smallpox plague”*

Alongside this, the smallpox vaccination was by far the most dangerous vaccination. Hahnemann could not have known anything about the other inoculations. It is fully thanks to the compulsory smallpox vaccination that this epidemic was eradicated. As a result, we no longer need to be vaccinated against smallpox!

Possible “Normal” Reactions to Vaccinations

It is possible that the area injected will turn red and/or swell up and be sensitive to pain for a few days following the vaccination. In occasional cases, fever may occur, normally reaching its climax the evening after the vaccination or within 24 to 48 hours. This fever rarely lasts longer than 72 hours after the injection. In addition, there may be some general signs of adverse reaction such as a lack of appetite, drowsiness, restlessness or vomiting.

Vaccination Complications

It is extremely rare for undesired **vaccination complications** to occur alongside the aforementioned ‘normal’ reactions to vaccinations. Illnesses that arise at the same time as the vaccination may be mistakenly seen as the cause of undesired vaccination complications. In order to insure maximum safety, the Infection Protection Act therefore states that any occurrence greater than the normal reactions to vaccinations must be medically investigated as quickly as possible and specifically reported to the responsible health authority.

Are you having trouble deciding due to conflicting information?

Paediatricians are the experts when it comes to the topics of infection, infection protection and immunisation protection. Your paediatrician will be able to competently answer your open questions. In order to weigh up the pros and cons of vaccination more successfully in a personal discussion, simply book a vaccination consultation with your paediatrician.

Useful Website Addresses

| | |
|---|--|
| Paediatrician Search: | www.kinderaerzte-im-netz.de |
| Bavarian Midwives Association | www.bhlv.de |
| German Midwives Association | www.hebammenverband.de |
| Parent Leaflets from the Breastfeeding Committee | www.bfr.bund.de/cd/711 |
| Training Centre for Lactation and Breastfeeding | www.stillen.de |
| Breastfeeding Advice from La Leche League | www.lalecheliga.de |
| Baby Massage Information | www.dgbm.de/babymassage.html |
| Information on Feeding Your Baby | www.fke-do.de |
| Vaccination Information from the Standing Committee on Vaccination (STIKO) | www.rki.de |
| Child Allergies | www.pina-infoline.de |
| Accident Prevention | www.kindersicherheit.de |
| Keyword: Sudden Infant Death | www.kindergesundheit-info.de |
| Advice for the Prevention of Sudden Infant Death | www.babyschlaf.de |
| Keyword: Preventive Examination for Newborns | www.stmugv.bayern.de/gesundheit/vorsorge/ |
| Your Baby’s Sleep | www.kindergesundheit-info.de/581.0.html |

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We particularly thank the participating professional associations

The **Bayerischer Hebammen Landesverband e.V. (Bavarian Midwives Association)** is a union containing 2000 active specialists able to answer all of your questions concerning your birth, from prenatal care and birth preparation through to post-natal care following the birth. These midwives can advise you and physically help you with all of your queries concerning breast-feeding and feeding and caring for your baby. Midwives and paediatricians work in close consultation and are the ideal contacts for all of your questions.

The Berufsverband der Kinder- und Jugendärzte e. V. (BVKJ) – Association of Paediatricians represents the interests of paediatricians in Germany. Its members consist of over 10,000 paediatricians from hospitals, medical practices and the public health service. The BVKJ aims to ensure the best possible healthcare for children and young people in German and campaigns for the appropriate framework conditions.

PaedNetz® Bavaria is an association of paediatricians working at a consistent high quality standard to provide your children with the best possible medical care. Practice-based paediatricians and those working in paediatric clinics and in the public health service in Bavaria have all combined to achieve this common goal.

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