

# Childbirth amenities

## *Udogodnienia porodowe*

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### Abstract

Labour is definitely a challenge for every woman. Fortunately, every delivery room has amenities, that will help a future mom to go through the difficult but undoubtedly beautiful time in life that is childbirth. By using items like abean bag, a ladder, a labour chair, a rope or a ball, we can majorly fasten and uprate labour. Giving a woman in labour a choice and freedom, within the sense, of course, because the woman's body knows best which position to assume in order to stand the pain, the tiredness and also to help the baby to come to this world. The key to success, which in this case is giving birth to a newborn, may be achieved by using vertical positions. They use the power of gravity that dramatically helps the child's head to adapt in the birth canal and also shortens the time of birth. The help of a partner or other close person is priceless, with their attitude, commitment, presence and support they can help a woman get through labour and try to ease the pain with walks, exercises or back massages. It is worth to know that childbirth does not have to be a traumatic experience. Huge pain that is an inseparable part of a child coming into the world can be minimized by using hypnosis, TENS, adequate breathing, that is the Biofeedback method, massage or acupuncture. Pain relief can also be achieved with pharmacological agents that are safe for the mother and child, as well as epidural which is more frequently used during the natural birth.

### Streszczenie

Poród zdecydowanie dla każdej kobiety jest nie lada wyzwaniem. Na szczęście na każdej sali porodowej są do dyspozycji wszelkie udogodnienia, które pozwolą przejść przyszłej mamie przez ten trudny, ale niewątpliwie najpiękniejszy czas w życiu. Korzystając z takich przedmiotów, jak worek sacco, drabinki, krzeselko porodowe, lina czy piłka, w znacznym stopniu przyspieszamy i ulepszamy poród, dając rodzącej wybór i swobodę, oczywiście w granicach rozsądku, ponieważ to ciało kobiety wie najlepiej, jaką przyjąć pozycję, żeby znieść ból, przetrwać ogromne zmęczenie i pomóc dziecku przyjść na

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świat. Złotym kluczem do sukcesu, czyli w tym przypadku urodzenia noworodka, mogą się okazać pozycje wertykalne, które przez działanie siły grawitacji fenomenalnie pomagają zaadoptować się główce w kanale rodny i także w krótszym czasie przyjąć dziecku na świat. Nieoceniona jest pomoc partnera bądź innej osoby bliskiej, która swoją postawą, zaangażowaniem, obecnością i wsparciem pomoże przejść kobiecie przez cały poród i postara się znaleźć ukojenie w bólu poprzez spacer, ćwiczenia czy masaż pleców. Warto pamiętać, że poród nie musi być traumatycznym przeżyciem. Ogromny ból, który jest nieodłącznym elementem przychodzenia dziecka na świat, można zminimalizować na przykład za pomocą hipnozy, prądów TENS, odpowiedniego oddychania, czyli metody biofeedback, masażu czy akupunktury. Ulgę w bólu przynoszą także wszelkie środki farmakologiczne, które są bezpieczne dla matki i dziecka, a także coraz częściej używane podczas porodu drogami i siłami natury znieczulenie zewnątrzoponowe.

## Introduction

The pain during labour may be considered as a factor of danger for both, the mother and the child. The woman instinctively assumes positions that minimize the pain. Every woman senses these painful experiences in a different way. It denotes a different level of the pain brink. The task of a midwife is to continuously evaluate the intensity of stimuli felt by the mother. Scales may be used for that task. During birth, pain is an enhancer of the precipitation of hormones. The introduction of different amenities allows to minimize those negative experiences in a non-invasive way.

## Hypnosis

The technique of hypnosis may be approached towards treating the pain during labour. It causes changes of awareness in a woman giving birth. This method requires a lot of time and patience. To use this form of convenience, the woman should start preparing for at least four months before childbirth. She can be introduced into this state by both verbal and nonverbal signals. The hypnosis affects the quality of relations between the mother and a doctor or her accompanying person. Research has shown that pregnant women introduced into the state of hypnosis expressed less need for analgesic therapy during labour. In addition, the stimulation with oxytocin is

used less often. Women are likely more satisfied with giving birth in the natural way. Hypnosis does not have a negative impact on neither the newborn nor the mother. [5,15].

## Biofeedback

The dominant approach to breathing during labour should be the diaphragm-relaxation track. At the time, the muscles within the abdomen become relaxed so that the contracting uterus does not push on the neighbouring structures. This minimizes the pain. The woman in labour is at peace and relaxed. The breathing pattern depends on the phase of childbirth. In the first period, the goal is to reduce the pain sensations and the tonicity. The respiratory rate should be between eight and sixteen per minute. Then, the woman in labour loosens her muscles. The breathing technique consists of inhaling air through the nose. The air should be then blown through the mouth.

The breathing pattern is different in the second period of childbirth. On the peak of the contraction the diaphragm should be in the inhaling position. At this time, the greatest amount of air fills it. It is recommended to alternate inhaled and exhaled. After such an intense cycle of about three to four times, the woman in labour should deepen her breath to fill her oxygen reserves. The pushing should correlate with exhaling.

Research shows that over one third of women notice the beneficial effect of proper breathing on the course of labour. Proper breathing during labour is the main focus of birthing classes. Women who participate in these classes are aware of the positive influence proper breathing has on the condition of the child's oxygenation. The stress induced by labour often disturbs the proper pattern of breathing. At this time, the midwife's job is to instruct the woman in labour on the subject [1,5,12,16].

## TENS

The term TENS stands for transcutaneous electrical nerve stimulation. An electrical stimulator generates an electric current. It is biphasic. In addition, the device has two self-adhesive electrodes. In the first period of labor it should be placed along the spine line at the level of Th10-L1. In the second period, this level decreases to S2-S4. At this time, it stimulates with high and mixed electrical frequencies of up to 200 Hz. The midwife or the woman in labour can themselves adapt the electrical current to their own needs.

Research shows that this method significantly minimizes labour pain. The patients that had used the TENS stimulator express their desire to use it again. According to research, births using this percutaneous stimulant are faster. At an advanced stage (cervical dilatation above six centimeters), TENS lowers its effectiveness. This method is completely safe for both the mother and the child. There are some contraindications such as artificial pacemakers, arrhythmia, epilepsy, varicose veins.

Although the main advantage of TENS is the ability to control the pain intensity by the woman, this method is not commonly used in Poland. There is no information on this subject. TENS stimulants are used in almost every European country. The pioneer was Sweden. In Poland, such equipment is very rare to meet in labour rooms. Propagation and implementation of such knowledge should take place in birthing classes, and also during education conducted by midwives carrying for their pregnant patients [1,6,8,9].

## Massage

Medicinal impact on the spine during childbirth soothes sacral and lumbar spine pain. They are strongly felt mainly during the first period of labour. During massaging, we avoid too much rapid pressure in fear of circulatory system complications. The technique of massage consists of stroking, rubbing and gentle kneading. A massage while sitting on a ball can be an additional amenity. It is worth to keep in mind the principle of validity. It initially involves relaxing cutaneous tissues then going deeper and deeper. The person performing the massage should use a lubricant. Prior to commencing this form of relaxation, consent must be obtained from the physician and the midwife delivering the baby.

An interesting fact is that the cervical dilatation of more than eight centimeters increases the woman's irritability which affects the pejorative sensations associated with the massage. Massaging the tissues makes the reception of pain stimuli reduced. Improved blood flow, endorphin release, and resting muscle tone are positive aspects of a labour massage. Research shows that massage has a positive effect on the psychological condition of the woman in labour. Performing this relaxation technique by a close person increases the sense of trust and safety in the course of childbirth [2,3,13].

## Acupuncture

This therapeutic method has been in use for 10,000 years. It originated in China, however in many centers of European medicine research is conducted on whether these activities are effective. The use of this method during pregnancy and childbirth is not likely to result in adverse effects on both the mother and the fetus. Acupuncture used during labour shows an analgesic effect. Studies show that the use of this method by pregnant women reduces the number of epidural anesthesia and the use of painkillers during labor.

Acupuncture can also be used in labour preinduction. Proper punctures in the L4 to SP6 region accelerate cervical ripening. The reduction of pain is mainly related to puncturing the SP6 region.

Acupuncture is a great alternative that should be put into practice in the functioning procedures used in labour rooms. This is due not only from the safety of its use but also from the costs involved [17].

## Vertical positions

Vertical positions are positions that have a positive and beneficial influence on the course of physiological labour thanks to the discovery of gravity in 1687. These positions include: standing, squatting and the on hands and knees position. Research confirms the huge importance of the positions aforementioned. They affect to a more efficient labour, support the baby to set in the birth canal properly, reduce labour pain, give the mother a sense of control over the situation and also cause an inflow of strength, energy and faith in her own abilities.

### *Advantages of using vertical positions during childbirth:*

1. The cervix dilates much faster because the babies head pushes it much harder than in a horizontal position, that is laying on the back. That is why giving birth laying on your back requires more effort from both, the mother and the baby.
2. Contractions are more regular, stronger and more frequent.
3. The birth time compared to traditional births is reduced by up to 35%.
4. The placenta will have a better blood flow which unquestionably means that the baby will be getting more oxygen. While laying flat on your back. The descending aorta is tightened and the inferior vena cava is tightened, which makes it difficult to oxygenate the baby.
5. With the vertical position, a woman can use the power of her breathing, which will be deep, free, relaxed and more effective and will lead to experiencing less pain. When lying on the back, breathing becomes shallow and the use of the diaphragm is practically impossible.
6. It is easier for the woman to take control of her labour rhythm.
7. Pushing is definitely easier. When a woman is squatting, sitting or standing the birth canal is facing downwards. An additional force of gravity is thus working on the baby going through the birth canal. In the horizontal position, the birth canal is facing upward, the uterine muscle must overcome additional resistance. The force of gravity holds the baby down to the mothers spine.
8. The risks of crotch ruptures are smaller, as the tissues around the crotch tense evenly during the birth of the childs head outside. In the back position, the head of the baby is most likely to press on the perineal area around the anus, which is associated with the risk of rupture of the mucosa or the vaginal wall.
9. Tension and anxiety are reduced as less adrenaline is released and that inhibits contractions. Never the less the production of natural oxytocin is increased. Thanks to this, childbirth becomes faster and more regular. The horizontal position enhances anxiety, which disrupts the hormonal balance and the mechanism of childbirth.

The new standard of perinatal care emphasizes all activity during childbirth. Women are encouraged to assume any position freely, not forced, using available equipment and spontaneous pushing at any position during the second period of labour [1,14].

## The attendance of a close person at childbirth

Family birth allows active participation of the closest and support of the woman in labour during the most important event in life, that is childbirth. It gives a sense of intimacy, closeness and helps create a unique atmosphere full of warmth, love, understanding and support, and also eliminates fear, anxiety or loneliness. Currently, hospitals allow close relatives to participate in childbirth by creating the necessary conditions. This situation causes the increase of interest in the attitudes of future parents towards collectively experiencing the birth of a child. The care of good memories and positive experiences of childbirth should be the responsibility of both parties, that is both future parents and medical institutions.

Obstetricians emphasise on every step that fear of the forthcoming birth in pain is a very important psychological stimulus. The presence of a partner helps to better relax the woman in labour which has a positive effect on the course and duration of childbirth. An accompanying person through active participation in giving birth and helping, for example: in vertical positions manifests love, understanding, willingness to help, respect and participating in this beautiful and important event that is childbirth. Joint childbirth strengthens existing relationships and feelings. It is also essential for the future relationship with the child. Active participation in childbirth has many advantages that can be exchanged indefinitely as they relate to many important aspects. Since the 1930s it has been a much appreciated and propagated attitude of future parents which requires constant publicity and nurturing in modern hospitals. Childbirth is an extraordinary event that brings partners together and creates incredible connections between the parents and the child; it also gives the urge to a new perception of past reality and existence [7,11,18,19].

## Pharmacological methods of analgesia

Soothing labour pain is one of the components of healthcare, characterized by a medical procedure as spontaneous childbirth and includes all methods that have been scientifically proven to be effective. Pharmacological pain management methods that have documented clinical efficiency include: inhalation analgesia, intravenous or intramuscular use of opioids and regional or local analgesia.

Implementation of pharmacological pain relief methods require an individualised outline that will be appropriate for the method in clinical condition of the woman in labour. Prior to introducing these methods, the woman must obtain information from her obstetrician on the effects of the method on fetal wellbeing and on the course of childbirth, and provide simple and understandable information on the potential for complications and side effects. The woman in labour is obligated to express written,

voluntary, aware consent for the application of the method. Pharmacological methods to soothe labour pain are introduced in the absence of expected efficiency of nonpharmacological methods or when medical indications are used. The initiation of pharmacological labour pain relief is preceded by an obstetrician examination and pain intensity assessment or medical indications identification, and consent by the woman in labour for the use of the proposed method. The use of such pain relief methods requires the supervision of the obstetrician and midwife, and also additional monitoring of the woman and fetus. That includes in the woman's case assessment of respiratory function (number of breaths and pulse oxymetry) for at least six hours since the last opioid dose, including the type of opioid used and route of administration. The circulatory system (blood pressure and heart rate measurements) are also evaluated at least once every hour, and in justified cases, more frequently. Fetal heart rate should be assessed at least every fifteen minutes.

Inhalant analgesia is performed with a mixture of gases: oxygen and nitrous oxide in a ratio of 1:1. The ready-to-use formula used in labour rooms is called Entonox. The woman giving birth can dose the anesthetic herself with a special disposable mouthpiece. The chosen method is safe and the desired effect occurs quickly – in less than a minute.

The use of opioid drugs requires additional monitoring of the condition of the woman giving birth and the fetus. Due to the increased rate of cervical dilatation, and thus the shortening of the first period of labour and also the sedation of the woman giving birth; it should be considered to conduct an active birth, including labour in the lying position, more frequent cervical dilatation examinations and continuous cardiotocography monitoring.

Regional analgesia includes: epidural analgesia, combined subarachnoid and epidural analgesia and subarachnoid analgesia. Regional analgesia begins in the active phase of the first period of labour with a dilatation of at least one centimeter. In medically justified cases it is possible to start analgesia early. Local analgesia includes the blockage of the pudendal nerve [5].

## Summary

For the majority of women, childbirth is a difficult experience. The use of a variety of childbirth accessories and relaxation techniques helps the woman in labour to focus on her own body. Besides the positive effect on the ease of childbirth, these methods soothe labour pain for the woman experiencing childbirth. The use of these methods is not only a positive aspect of childbirth but also a new fashion commonly used in labour rooms in Western Europe. This improves not only the comfort of giving birth but also makes labour a nice memory.

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