Compilation

« Positions d’accouchement »

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Compilation

« Positions d’accouchement »


Convention : Le numéro entre [crochets] est celui de la fiche dans la base de données.

| La position verticale et la déambulation pendant le travail contribuent à une meilleure oxygénation du bébé. |
| INTRODUCTION: Upright or ambulatory birth positions are favorable for fetal oxygenation. Studies of fetal oxygenation with regard to maternal position require free maternal mobility. Therefore, telemetry for a fetal sensor for such investigations is a pre-requisite. Telemetry—if technically feasible—could enable monitoring of fetal oxygen partial pressure using an existing sensor without restricting the mobility of the parturient woman. We have developed a telemetry system for use with a fetal transcutaneous partial oxygen pressure sensor (ttcpO2) and have studied effects of maternal position and position changes during normal labor. |

MATERIALS AND METHODS: The monitoring system consists of three parts: the telemetry unit with the ttcpO2 sensor to transmit the tcpO2 and the heating output telemetrically, a modified CTG monitor and a personal computer storing the measurements. All data were plotted on the CTG recording paper and fed into a new purpose-designed software, displaying fetal heart rate, the uterine contraction intensity, ttcpO2 and the heating output. Three laboring women, randomly and successively adopting classical birth positions (supine or side positions), sitting or vertical or walking position, were studied.

RESULTS: Fetal heart rate, uterine contractions, ttcpO2 and heating output are influenced by the birth positions and by changes of the birth position. In the classical supine and side position there seemed to be lower fetal oxygenation. Sitting, standing and especially walking were more favorable.

DISCUSSION: Telemetry is useful to study a possible clinical benefit of individual birth positions.

Braun T, Sierra F, Seiler D, Mainzer K, Wohlschlager M, Tutschek B, Schmidt S. Continuous telemetric monitoring of fetal oxygen partial
Objective:
To determine whether the rate of instrumental birth in nulliparous women using epidural analgesia is affected by maternal position in the passive second stage of labour.

Design:
A pragmatic prospective randomised trial.

Setting:
Consultant maternity unit in the Midlands.

Participants:
One hundred and seven nulliparous women using epidural analgesia and reaching the second stage of labour with no contraindications to spontaneous birth.

Interventions:
The lateral versus the supported sitting position during the passive second stage of labour.

Measurements:
Mode of birth, incidence of episiotomy, and perineal suturing.

Findings:
recruitment was lower than anticipated (107 vs. 220 planned). Lateral position was associated with lower rates of instrumental birth rate (lateral group 33%; sitting group 52%; p=0.05, RR 0.64, CI for RR: 0.40–1.01; Number-needed-to-treat (NNT)=5), of episiotomy (45% vs. 64%; p=0.05, RR 0.66, CI for RR: 0.44–1.00, NNT=5), and of perineal suturing (78% vs. 86%; p=0.243, RR 0.75, CI for RR 0.47–1.17). The odds ratio for instrumental birth in the sitting group was 2.2 (CI 1.00–4.6). Logistic regression of potential confounder variables was undertaken, due to a large variation in maternal weight between the randomised groups. Of the nine possible confounders tested, only position of the baby’s head at full dilation affected the risk of instrumental birth.
significantly (p=0.4, OR 2.7 where the fetal head was in the lateral or posterior position). Maternal weight did not appear to have any effect. The odds ratio for instrumental delivery for women randomised to the sitting position was slightly higher within the logistic regression model (adjusted OR 2.3).

Key conclusions:

Women randomised to the lateral position had a better chance of a spontaneous vaginal birth than those randomised to the supported sitting position. Position of the baby's head at full dilation had an additional effect on mode of birth. These effects are not conclusively generalisable.

Recommendations for practice:

The lateral position is likely to be at best beneficial, and at the worst no less harmful than the sitting position for most women and their babies who meet the criteria set for this study. Conclusive evidence for or against the technique should be established using larger trials.


http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6WN9-4BDY5VM-1&_user=10&_handle=B-WA-A-W-AE-MsSAYVW-UUW-AUEWVZAUBU-AUEUUVAYBU-CWUYDBZZA-AE-U&_fmt=summary&_coverDate=06/30/2004&_rdoc=6&_orig=browse&_srch=%23toc%236957%232004%23999799997%235038971&_cdi=6957&view=c&_acct=C000050221&_version=1&_userid=10&md5=70f8e1f1cc94abb2f746a1ff6b63b20

Cet article étudie la validité d'opinions établies sur le bénéfice de la mobilité pendant le travail et passe en revue les tendances actuelles d'anesthésie ambulatoires. [1086] A simple statement that describes the degree of the patient's satisfaction with the pain relief from her labor epidural analgesia has often assessed the quality of labor analgesia as perceived by the patient. Many laboring parturients, midwives, obstetricians and anesthesiologists are increasingly concerned by the limitations of traditional epidural labor analgesia. In general, women dislike the inability to void, the often-dense motor block, the feeling of numbness of the lower body, the total lack of the urge to bear down, and the complete perineal anesthesia. Continuous search for balanced labor analgesia that provides relief from pain, while preserving motor function, has led to the development of an ambulatory labor analgesia technique. This article assesses the validity of various strongly advocated opinions as to whether
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parturients benefit from ambulation in labor and also reviews the current trends in ambulatory labor analgesia.


Remarques :

Conclusions de l'article: Ambulatory labor analgesia has become a popular choice of labor analgesia for many parturients. Ambulation in labor is commonly believed to be of value in the establishment and progression of labor, as well as increasing maternal satisfaction and improving neonatal outcome (83). In summary, the purported advantages of ambulation in the upright position during labor include enhancement of the pelvic diameter, increased coordination, frequency and intensity of uterine contractions, increased maternal comfort and satisfaction and improved neonatal outcome (higher Apgar scores), decreased perception of labor pain, decreased need for labor augmentation, and decreased requirements for labor analgesia (1,84– 86). Although the effect of ambulation in labor on the progress of labor is still under investigation, the ability to walk to the bathroom and change positions in bed are compelling enough as reasons in support of ‘‘walking epidurals.’’ A laboring parturient should never walk alone, a support person (delivery roomnurse) and the ability to monitor the fetus (telemetry) allow for ambulation in labor to be safe for both the mother and the fetus (83,86).

Bien que ne permettant pas un travail plus court ni une réduction des douleurs, la mobilité pendant le travail semble présenter des avantages.

[1087] Ambulation during labor is becoming more popular, although its impact on the progress of labor and on pain intensity remains unclear. We wondered whether prolonged ambulation with epidural analgesia had a possible effect on duration of labor and pain. In this prospective, randomized trial, 61 parturients with uncomplicated term pregnancies were allocated to be recumbent (n = 31) or to ambulate (n = 30). Epidural analgesia was provided with intermittent administrations of 0.08% bupivacaine-epinephrine plus 1 mug/mL of sufentanil. Of the 30 women assigned to the ambulatory group, 25 actually walked. Their ambulating time was 64 +/- 34 min (mean +/- SD), i.e., 29% +/- 16% of the first stage. There were no differences between the two groups in the length of labor and in pain visual analog scale scores.
However, the ambulatory group received smaller doses of bupivacaine (6.4 ± 2.2 mg/h versus 8.4 ± 3.6 mg/h; P = 0.01) and of oxytocin (6.0 ± 3.7 mU/min versus 10.2 ± 8.8 mU/min; P < 0.05). A greater ability to void was also found in the ambulatory group (P < 0.01). Although the duration of labor and pain relief was unchanged, these findings support that ambulation during labor may be advantageous.


En Tanzanie, les femmes bougent peu pendant le travail et choisissent la position lithotomique... parce qu'elles ignorent qu'il existe d'autres alternatives.

[1098] BACKGROUND: Emerging research evidence suggests a potential benefit in being upright in the first stage of labour and a systematic review of trials suggests both benefits and harmful effects associated with being upright in the second stage of labour. Implementing evidence-based obstetric care in African countries with scarce resources is particularly challenging, and requires an understanding of the cumulative nature of science and commitment to applying the most up to date evidence to clinical decisions. In this study, we documented current practice rates, explored the barriers and opportunities to implementing these procedures from the provider perspective, and documented women’s preferences and satisfaction with care.

METHODS: This was an exploratory study using quantitative and qualitative methods. Practice rates were determined by exit interviews with a consecutive sample of postnatal women. Provider views were explored using semi-structured interviews (with doctors and traditional birth attendants) and focus group discussions (with midwives). The study was conducted at four government hospitals, two in Dar es Salaam and two in the neighbouring Coast region, Tanzania.

MAIN OUTCOME MEASURES: Practice rates for mobility during labour and delivery position; women’s experiences, preferences and views about the care provided; and provider views of current practice and barriers and opportunities to evidence-based obstetric practice.

RESULTS: Across all study sites more women were mobile at home (15.0%) than in the labour ward (2.9%), but movement was quite restricted at home before women were admitted to labour ward (51.6% chose to rest with little movement). Supine position for delivery was used routinely at all
four hospitals; this was consistent with women's preferred choice of position, although very few women are aware of other positions. Qualitative findings suggest obstetricians and midwives favoured confining to bed during the first stage of labour, and supine position for delivery.

CONCLUSIONS: The barriers to change appear to be complicated and require providers to want to change, and women to be informed of alternative positions during the first stage of labour and delivery. We believe that highlighting the gap between actual practice and current evidence provides a platform for dialogue with providers to evaluate the threats and opportunities for changing practice.


Remarques : Texte en acces libre.
confiance à 95% (2.95 à 5.64 minutes) — ce résultat était en grande partie du aux femmes assignées à utiliser un coussin d’accouchement; une petite diminution des accouchements instrumentaux (18 trials: risque relatif 0.84, intervalle de confiance à 0.95% 0.73 à 0.98); une diminution des épisiotomies (12 trials: RR 0.84, IC 95% 0.79 à 0.91); une augmentation des déchirures du second degré (11 trials: RR 1.23, IC 95% 1.09 à 1.39); une augmentation des pertes sanguines supérieures à 500 ml (11 trials: RR 1.68, IC 95% 1.32 à 2.15); moins de douleurs sévères rapportées pendant le second stade du travail (1 trial: RR 0.73, IC 95% 0.60 à 0.90); moins d’anomalies du rythme cardiaque foetal (1 trial: RR 0.31, IC 95% 0.08 à 0.98).

CONCLUSIONS: Les analyses de cette revue suggèrent plusieurs bénéfices possibles des positions verticales, alliés à la possibilité d’une augmentation du risque des pertes sanguines supérieures à 500 ml. Les femmes devraient être encouragées à donner naissance dans la position qu’elles trouvent la plus confortable. Jusqu’à ce que les bénéfices et risques des différentes positions d’accouchement aient pu être établis avec une plus grande certitude, par des trials de méthodologie robuste, les femmes devraient pouvoir faire des choix éclairés sur les positions d’accouchement qu’elles souhaiteraient utiliser pour la naissance de leurs bébés.


Aucune différence notable des effets d’une péridurale ambulatoire par rapport à une péridurale habituelle obligeant à rester couchée. [1120] BACKGROUND: New techniques for administering epidural analgesia allow increased mobility for labouring women with epidurals. Aim: To determine the effect of ambulation or upright positions in the first stage of labour among women with epidural analgesia on mode of delivery and other maternal and infant outcomes.

METHODS: We undertook a systematic review and meta-analysis of randomised controlled trials (RCT) of ambulation or upright positions versus recumbency in the first stage of labour among women with effective first-stage epidural analgesia in an uncomplicated pregnancy. Trials were identified by searching Medline, Embase and CINAHL databases and the Cochrane Trials Register to March 2004. Trial eligibility and outcomes were prespecified. Group tabular data were obtained for each trial and analysed using meta-analytic techniques.

RESULTS: There were five eligible RCT, with a total
of 1161 women. There was no statistically significant difference in the mode of delivery when women with an epidural ambulated in the first stage of labour compared with those who remained recumbent: instrumental delivery (relative risk (RR) = 1.16, 95% confidence interval (CI) 0.93–1.44) and Caesarean section (RR = 0.91, 95% CI 0.70–1.19). There were no significant differences between the groups in use of oxytocin augmentation, the duration of labour, satisfaction with analgesia or Apgar scores. There were no apparent adverse effects of ambulation, but data were reported by only a few trials.

CONCLUSIONS: Although ambulation in the first stage of labour for women with epidural analgesia provided no clear benefit to delivery outcomes or satisfaction with analgesia, neither were there any obvious harms.


Les femmes occidentales ne connaissent en général que la position en décubitus dorsal, mais apprécient de recevoir de l’information sur d’autres positions, et d’être encouragées à prendre la position qui leur convient.

[1121] The aim of this study was to gain insight into the influences on women’s use of birthing positions, and into the labor experiences of women in relation to the birthing positions they used. Quantitative studies have shown some medical advantages of non-supine birthing positions. They also suggested some psychological benefits but these are difficult to interpret. In this study in-depth interviews were conducted to gain a deeper understanding of the relationship between birthing positions and the labor experience. We found that the advice given by midwives was the most important factor influencing the choice of birthing positions. If medically possible, women benefited from having the autonomy to find the positions that were most useful to them. Their choices varied greatly, as did their experience of pain in relation to the type of position. Women, regardless of ethnicity, were most familiar with the supine position but valued practical information on other options. In conclusion, because the supine position is dominant in westernized societies, midwives have an important role to play in widening the range of women’s choices. Midwives should empower women to find the positions that are most suitable for them, by giving practical advice during pregnancy and labor.

De Jonge A, Lagro-Janssen AL. Birthing positions. A qualitative study into the views of women about various birthing positions.

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### Bibliographie

**De Jonge A, Teunissen TA, Lagro-Janssen AL. Supine position compared to other positions during the second stage of labor: a meta-analytic review.**


[1122] L'utilisation en routine de la position lithotomique pendant la deuxième phase du travail peut être considérée comme une intervention en soi dans le déroulement physiologique de l'accouchement. Le but de cette étude est d'établir si il est justifié que cette pratique perdure. Neuf études randomisées contrôlées, et une étude de cohorte, ont été incluses. Une méta-analyse montre qu'il y a plus d'extractions instrumentales et d'épisiotomies en position lithotomique. Les pertes de sang et taux d'hémorragie post-partum sont plus faibles, mais il n'est pas certain que cette différence soit réelle ou due à la méthode de mesure. Bien qu'hétérogènes, les données indiquent que les femmes ressentent plus de douleur sévère en position lithotomique et qu'elles préfèrent d'autres positions pour accoucher.

Nous avons décelé beaucoup de problèmes méthodologiques dans ces études, et nous remettons en question la pertinence des études randomisées contrôlées pour l'étude de ce problème. Une étude de cohorte serait plus appropriée, associée à une méthode qualitative pour étudier les expériences des femmes. Des mesures de laboratoire objectives devraient être utilisées pour examiner les différences de perte sanguine.

En conclusion, les résultats ne justifient pas de continuer à utiliser la position lithotomique en routine pour le second stade du travail.

### Remarques

Texte en acces libre
professionals and parents. A mother will never forget a midwife who positively supports her capacity to give birth to her baby. The context of this debate, the chapter aims to:

- consider the nature of the transitional and second stage phases of labour
- describe the usual sequence of events during these stages
- summarise signs of transition and of the expulsive phase of labour
- discuss the care of the mother and her partner
- review the observations that should be carried out at this time.


Régression de la pratique de l’épisiotomie au Canada (67 à 38% sur 11 ans)

[15] L’épisiotomie était jusqu’à présent une pratique habituelle, censée éviter les déchirures du perinée lors d’un accouchement. Toutefois depuis les années 80, plusieurs études ont montré qu’il n’y a pas d’avantage et qu’il y a parfois des risques accrus à effectuer une épisiotomie systématique. Selon certaines études, une déchirure guérit mieux et provoque moins de souffrances après la naissance qu’une coupure chirurgicale.

Un article dans Pre & Post Natal News rapporte que des chercheurs du Civic Hospital d’Ottawa (Canada) ont étudié l’influence des recherches récentes sur la pratique obstétrique. Ils ont établi qu’en 11 ans, le taux annuel d’épisiotomies au Canada a diminué de 29% (66.8% en 1981/82 et 37.7% en 1993/94). Ils en ont conclu que, en ce qui concerne l’épisiotomie, la pratique médicale avait changé parallèlement aux résultats de recherche.

La Société des Gynécologues et Obstétriciens (SOGC) ne recommande pas actuellement l’épisiotomie systématique. Elle indique que les facteurs qui permettent les muscles du périnée de se détendre sont l’adoption de la position verticale, qui permet à la femme de pousser spontanément, une seconde phase d’expulsion sans limite de temps, et une sortie de la tête lente. Dans certains cas, l’épisiotomie est utile, par exemple quand, lors de l’utilisation de forceps, il est important de faire naître le bébé rapidement.

Spicer, Susan. Episiotomy Rates are Dropping. Recent studies question necessity of routine episiotomies
Etude randomisée contrôlée, sur des femmes en travail spontané ou déclenché. Le fait de marcher sous péridurale ambulatoire a pour seul effet une réduction notable du temps du travail.

[238] OBJECTIVES: Ambulatory epidural analgesia has become a common option for women in labor in France. We tested the hypothesis that a method of epidural analgesia that allowed women to walk had specific advantages regarding mode of delivery, consumption of local anesthetic, oxytocin requirement, and labor duration.

METHODS: Two hundred and twenty-one women with uncomplicated pregnancies who presented in spontaneous labor between 36 and 42 weeks of gestation or who were scheduled for induced labor were randomly divided into two groups, ambulatory and non-ambulatory. All were given intermittent epidural injections of 0.1% ropivacaine with 0.6 microg/ml sufentanil for analgesia during labor (P<0.05 was considered significant). None of the women had previous cesarean delivery.

RESULTS: There were no significant differences between the two groups in mode of delivery, consumption of local anesthetic, or oxytocin requirement. However, a significant difference was noted in labor duration (173.4+/−109.9 min vs. 236.4+/−130.6 min; P=0.001).

CONCLUSIONS: Walking with ambulatory labor analgesia shortens labor duration but has no other effect on the progress and outcome of labor.


Remarques :
Mais les conditions si artificielles n’ont guère laisse de spontanéité aux femmes. Le mélange entre travail spontané et déclenché est un aussi un gros point faible de cette étude.

Les primipares sous péridurale ambulatoire peuvent maintenir une position verticale jusqu'à la naissance, à

[1100] PURPOSE: To present research findings and related nursing implications from an observational study designed to evaluate the use of upright positioning during second stage labor with patients who had received low-dose epidural analgesia.

STUDY DESIGN AND METHODS: This descriptive study
| condition d'être soutenues physiquement et émotionnellement en permanence. | evaluated outcomes from a sample of 74 healthy women having their first childbirth. They had all received epidural analgesia during the first and second stages of labor. Data were also collected by nurses on the use of birthing beds, and the extent of physical and emotional support the women needed while following the upright positioning study protocol.

RESULTS: All women were able to maintain upright positions throughout the second stage of labor following epidural analgesia administration. No adverse neonatal outcomes or maternal problems (such as excessive vaginal bleeding) were documented.

CLINICAL IMPLICATIONS: Although women were capable of assuming upright positions during second stage, the study results indicated that constant physical and emotional support was necessary for most women. Future research on methods to prepare women for multiple position options after administration of low-dose epidural analgesia should be undertaken. In addition, nurses should evaluate the benefits of upright positioning in terms of facilitating progress of labor.


Remarques : Parce que les femmes sous peri mais allongées n'ont besoin d'aucun accompagnement émotionnel ….

Moins de douleur en position assise. | [1123] BACKGROUND: While the effect of the maternal position on reducing labor pain has been studied, the data presented to date have not been conclusive.

OBJECTIVES: To determine if maternal position reduced the intensity of labor pain during cervical dilatation from 6 to 8 centimeters.

METHOD: Pain intensity was measured using the visual analogue scale (VAS) on 39 primiparous and 19 multiparous women (N = 58) who alternately assumed the sitting and supine positions for 15 minutes during cervical dilatation from 6 to 8 centimeters.

RESULTS: The pain scores for the sitting position were significantly lower than those for the supine
position. The Wilcoxon signed-ranks test showed the VAS scores for the (a) total labor pain ("total" being defined as both abdominal and lumbar pain) during contraction (p = .011), (b) continuous total labor pain (p = .001), (c) lumbar pain during contraction (p < .001), and (d) continuous lumbar pain (p < .001) in the sitting position (significantly lower than in supine position). The diminished pain scores were greater than 13 millimeters, which is the minimum clinically significant change in patient pain severity as measured with the 100 millimeter VAS. The largest decrease occurred in lower back pain. No significant differences were found for abdominal pain scores in either the sitting or supine positions.

CONCLUSION: The sitting position offers an effective method to relieve lower back labor pain during cervical dilatation from 6 to 8 centimeters. Similar relief was experienced for women who reported pain only on contraction as well as those with continuous pain.


[475] Summary points

- Obstetricians play an important role in preserving lives when there are complications of pregnancy or labour
- In developed countries, however, obstetrician involvement and medical interventions have become routine in normal childbirth, without evidence of effectiveness
- Factors associated with increased obstetric intervention seem to include private practice, medicolegal pressures, and not involving women fully in decision making
- Emerging evidence suggests that higher rates of normal births are linked to beliefs about birth, implementation of evidence based practice, and team working


http://bmj.bmj.journals.com/cgi/content/full/324/7342/892?eaf
La position et le type d'accoucheur, obstétricien ou sage-femme, ont une influence sur l'état du périnée.

[1101] BACKGROUND: The literature is tentative in establishing links between birth position and perineal outcome. Evidence is inconclusive about risks and benefits of women's options for birth position. The objective of this study was to gain further evidence to inform perinatal caregivers about the effect of birth position on perineal outcome, and to assist birth attendants in providing women with information and opportunities for minimizing perineal trauma.

METHODS: Data from 2891 normal vaginal births were analyzed. Descriptive statistics were obtained for variables of interest, and cross-tabulations were generated to explore possible relationships between perineal outcomes, birth positions, and accoucheur type. Logistic regression models were used to examine potential confounding and interaction effects of relevant variables.

RESULTS: Multiple regression analysis revealed a statistically significant association between birth position and perineal outcome. Overall, the lateral position was associated with the highest rate of intact perineum (66.6%) and the most favorable perineal outcome profile. The squatting position was associated with the least favorable perineal outcomes (intact rate 42%), especially for primiparas. A statistically significant association was demonstrated between perineal outcome and accoucheur type. The obstetrician group generated an episiotomy rate of 26 percent, which was more than five times higher than episiotomy rates for all midwife categories. The rate for tear requiring suture of 42.1 percent for the obstetric category was 5 to 7 percentage points higher than that for midwives. Intact perineum was achieved for 31.9 percent of women delivered by obstetricians compared with 56 to 61 percent for three midwifery categories.

CONCLUSION: Findings contribute to growing evidence that birth position may affect perineal outcome. Women’s childbirth experiences should reflect decisions made in partnership with midwives and obstetricians who are equipped with knowledge of risks and benefits of birthing options and skills to implement women's choices for birth. Further identification and recognition of the strategies used by midwives to achieve favorable perineal outcomes is warranted.


http://www.blackwell-
Les femmes pauvres de la région des Chiapas préfèrent un accouchement traditionnel qui leur donne le choix du lieu, de la position d'accouchement, de la présence de leurs proches.

[1102] This study was designed to better understand how women in a developing region choose between the multiple options available to them for birthing. We conducted focused, open-ended ethnographic interviews with 38 nonindigenous, economically marginal women in Chiapas, Mexico. We found that although medical services for birthing were readily available to them, these women most often chose traditional birth attendants (TBAs) for assistance with their births. They expressed a clear preference for TBAs in the case of a normal birth, but viewed medical services as useful for diagnosing and managing problem deliveries and for tubal ligations. They favored TBAs because they valued being able to choose birthing locations and birthing positions and to have relatives present during the birth, all features they must give up for medically attended births in this region.


Revue des facteurs obstétriques optimaux pendant le second stade, en particulier les positions de la femme et le réflexe de poussée. Réflexion sur ces facteurs en cas de péridurale.

[1124] Recognition that the available evidence does not support arbitrary time limits for the second stage of labor has led to reconsideration of the influence of maternal bearing down efforts on fetal/newborn status as well as on maternal pelvic structural integrity. The evidence that the duration of "active" pushing is associated with fetal acidosis and denervation injury to maternal perineal musculature has contributed to the delineation of at least two phases during second stage, an early phase of continued fetal descent, and a phase of "active" pushing. The basis for the recommendation that the early phase of passive descent be prolonged and the phase of active pushing shortened by strategies to achieve effective, but non-detrimental pushing efforts is reviewed. The rational includes an emphasis on the obstetric factors that are optimal for birth and conducive to efficient maternal bearing down. Explicit assessment of these obstetric factors and observation of maternal behavior, particularly evidence of an involuntary urge to push, should be coupled with the use of maternal positions that will promote fetal descent as well as reduce maternal pain. The use of epidural analgesia for pain relief can also be accompanied by these same principles, although further research is needed to verify the strategies of "delayed pushing" and maintenance of pain relief along with a reconceptualization of the second stage of labor.
Les femmes sous péridurale ambulatoire en profitent effectivement pour bouger et ont une seconde phase du travail plus courte.


La péridurale ambulatoire ne raccourcit pas la durée entre la pose de la péridurale et la dilatation complète.


[1220] Neuraxial blockade is widely used for pain relief in labour. This form of analgesia may be associated with an increase in instrumental delivery rates due to dystocia. 'Traditional' epidurals cause motor blockade and hence immobility. Using a low dose anaesthetic-opioid combination with either epidural or combined spinal-epidural, selective sensory blockade can be achieved, allowing mobility as well as pain relief. In this study, we randomised women with combined spinal-epidural analgesia either to mobilise (upright group n=25) or to remain recumbent (n=41) in the second stage of labour. We found women in the upright group had significantly shorter total second stage, (132 vs 109 min, P =0.019) particularly during the pushing phase (73 vs 51 min, P=0.011) Although there were fewer instrumental deliveries in the upright group, this was not statistically significant. Women who were randomised to the upright group, did actually mobilise. We conclude that mobilisation in the second stage of labour is possible, and may reduce the length of the second stage.


[1089] Background: Ambulatory epidural analgesia (AEA) is a popular choice for labor analgesia because ambulation reportedly increases maternal comfort, increases the intensity of uterine contractions, avoids inferior vena cava compression, facilitates fetal head descent, and relaxes the pelvic musculature, all of which can shorten labor. However, the preponderance of evidence suggests that ambulation during labor is not associated with these benefits. The purpose of this study is to determine whether ambulation with AEA decreases labor duration from the time of epidural insertion to complete cervical dilatation.

Methods: In this prospective, randomized study, 160 nulliparous women with AEA were randomly assigned to one of two groups: AEA with ambulation and AEA without ambulation. AEA blocks were initiated with 15-20 ml ropivacaine (0-07%) plus 100 mug fentanyl, followed by a continuous infusion of 0.07% ropivacaine plus 2 mug/ml fentanyl at 15-20 ml/h.
Maternal measured variables included ambulation time, time from epidural insertion to complete dilatation, stage I1 duration, pain Visual Analogue Scale scores, and mode of delivery. APGAR scores were recorded at 1 and 5 min.

Results are expressed as mean +/- SD or median and analyzed using the t test, chi-square, or the Mann-Whitney test at P less than or equal to 0.05.

Results: The ambulatory group walked 25.0 +/- 23.3 min, sat upright 40.3 +/- 29.7 min, or both. Time from epidural insertion to complete dilatation was 240.9 +/- 146.1 min in the ambulatory group and 211.9 +/- 133.9 min in the nonambulatory group (P 0.206).

Conclusion: Ambulatory epidural analgesia with walking or sitting does not shorten labor duration from the time of epidural insertion to complete cervical dilatation.


La position assise ou couché sur le ventre est favorable pour l’oxigénation foetale comparée avec la position allongée sur le dos.

[1095] Abstract: Background: The evaluation of the birth position and its effects on maternal and fetal wellbeing has been a topic of perinatal research over the last decades. The aim of our observational study was to determine the effects of a modified and vertical maternal position on fetal oxygen saturation measured by pulse oximetry.

Methods: Fetal oxygen saturation was measured by pulse oximetry in 56 labouring women randomly and successively adopting the supine position in 96.4%, the sitting position in 25.0%, the standing position in 14.3% and the prone position in 12.5%. The statistical analysis addressed the integrated 10 minutes period of SpO(2) registrations before versus after adopting the modified position, Furthermore the mean values and the standard deviation (SD) for the total registration periods of different birth position was calculated.

Results: While the supine position induced a reduction in oxygen saturation, sitting and prone position were favorable for fetal oxygenation as compared to horizontal position.

Discussion: These findings implicate a clinical benefit of the modified birth position.

Schmidt S, Sierra F, Hess C, Neubauer S, Kuhnert M,
### Compilation « Positions d’accouchement » 

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<th>Une position acrobatique (les genoux jusqu’aux oreilles, allongée sur la table) pour augmenter l’efficacité des contractions. Les mêmes auteurs se font les avocats de l’expression abdominale &quot;calibrée&quot;.</th>
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<tr>
<td>[1224] McRoberts’ position is used during the second stage of labour to facilitate delivery of the fetal shoulders. Few clinical studies have been done to measure its efficacy. We measured intraterine pressure in 22 women in term labour, after the vertex reached 3+ station, in the dorsal lithotomy position. Patients pushed with legs either in stirrups or hyperflexed by 135° (McRoberts' position). Maternal valsala transiently increased the expulsive force by 32% over naturally occurring contractions. Use of McRoberts’ position almost doubled the intrauterine pressure developed by contractions alone (from 1653 mm Hg s to 3262 mm Hg s [97%]).</td>
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<th>Revue des articles sur la position maternelle pendant le travail.</th>
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<td>[1125] The position adopted naturally by women during birth has been described as early as 1882 by Engelmann. He observed that primitive woman, not influenced by Western conventions would try to avoid the dorsal position and was allowed to change position as and when she wished. Different upright positions could be achieved using posts, slung hammock, furniture, holding on to a rope, knotted piece of cloth, or the woman could kneel, crouch, or squat using bricks, stones, a pile of sand, or a birth stool. Today the majority of women in Western societies deliver in a dorsal, semi-recumbent or lithotomy position. It is claimed that the dorsal position enables the midwife/obstetrician to monitor the fetus better and thus to ensure a safe birth. This paper examines the historical background of the different positions used and its evolution throughout the decades. We have reviewed the available evidence about the effectiveness, benefits and possible disadvantages for the use of different positions during the first and second stage of labour.</td>
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<tr>
<th>Les présentations latérales ou postérieures du foetus ont plus de</th>
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<tr>
<td>[1196] BACKGROUND: Lateral and posterior position of the fetal presenting parts may be associated with more painful, prolonged or obstructed labour and difficult delivery. It is possible that</td>
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chance de se résoudre rapidement si la mère est en position “à quatre pattes” que si elle est allongée sur le dos ou sur le côté.

maternal posture may influence fetal position.

OBJECTIVES: The objective of this review is to assess the effects of adopting a hands and knees maternal posture in late pregnancy when the presenting part of the fetus is in a lateral or posterior position.

SEARCH STRATEGY: We searched the Cochrane Pregnancy and Childbirth Group trials register and the Cochrane Controlled Trials Register. Date of last search: February 1999.

SELECTION CRITERIA: Randomised trials of hands and knees maternal posture compared to other postures.

DATA COLLECTION AND ANALYSIS: Both reviewers assessed trial eligibility and quality.

MAIN RESULTS: One trial involving 100 women was included. Four different postures (four groups of 20 women) were combined for the comparison with the control group of 20 women. Lateral or posterior position of the presenting part of the fetus was less likely to persist following 10 minutes in the hands and knees position compared to a sitting position (relative risk 0.25, 95% confidence interval 0.17 to 0.37).

REVIEWER’S CONCLUSIONS: Hands and knees maternal posture for lateral or posterior fetal presentation appears to result in short term effects on fetal position. No other perinatal or maternal outcomes were reported. There is not enough evidence to evaluate the effectiveness of a hands and knees maternal posture when the fetal presenting part is lateral or posterior, on clinically important outcomes.


Les femmes devraient être incitées à accoucher dans la position qui leur paraît la plus confortable. (Revue systématique de la base de données Cochrane)

BACKGROUND: For centuries, there has been controversy around whether being upright (sitting, birthing stools, chairs, squatting) or lying down have advantages for women delivering their babies. OBJECTIVES: The objective of this review was to assess the benefits and risks of the use of different positions during the second stage of labour (i.e. from full dilatation of the cervix).

SEARCH STRATEGY: Relevant trials are identified from the register of trials maintained by the Cochrane Pregnancy and Childbirth Group, and from the Cochrane Controlled Trials Register.
SELECTION CRITERIA: Trials were included which compared various positions assumed by pregnant women during the second stage of labour. Randomised and quasi-randomised trials with appropriate follow-up were included.

DATA COLLECTION AND ANALYSIS: Trials were independently assessed for inclusion, and data extracted, by the two authors. Disagreements would have been resolved by consensus with an editor. Meta-analysis of data is performed using the RevMan software.

MAIN RESULTS: Results should be interpreted with caution as the methodological quality of the 18 trials was variable. Use of any upright or lateral position, compared with supine or lithotomy positions, was associated with:
1. Reduced duration of second stage of labour (12 trials – mean 5.4 minutes, 95% confidence interval (CI) 3.9 – 6.9 minutes). This was largely due to a considerable reduction in women allocated to use of the birth cushion.
2. A small reduction in assisted deliveries (17 trials – odds ratio (OR) 0.82, 95% CI 0.69 – 0.98).
3. A reduction in episiotomies (11 trials – OR 0.73, 95% CI 0.64 – 0.84).
4. A smaller increase in second degree perineal tears (10 trials – OR 1.30, 95% CI 1.09 – 1.54).
5. Increased estimated risk of blood loss > 500ml (10 trials – OR 1.76, 95% CI 1.34 – 3.32).
6. Reduced reporting of severe pain during second stage of labour (1 trial – OR 0.59, 95% CI 0.41 – 0.83).
7. Fewer abnormal fetal heart rate patterns (1 trial – OR 0.31, 95% CI 0.11 – 0.91).

REVIEWER’S CONCLUSIONS: The tentative findings of this review suggest several possible benefits for upright posture, with the possibility of increased risk of blood loss > 500ml. Women should be encouraged to give birth in the position they find most comfortable. Until such time the benefits and risks of various delivery positions are estimated with greater certainty when methodologically stringent trials data are available, then women should be allowed to make informed choices about the birth positions in which they might wish to assume for delivery of their babies.


Accoucher en position verticale est aussi sûr qu’en position horizontale. [1103] The objective of the study was to assess whether vertical positions during childbirth are as safe as horizontal positions. In the course of
delivery the authors observed 328 women with normal pregnancies, matched for parity and age, divided into two groups by type of delivery. They compared the course of the delivery, length of stages I and II, birth injuries, haemorrhage of the mother (number of episiotomies and grade III rupt. and blood losses) and the condition of the infant after delivery (Apgar score during the fifth and tenth minute, pH of the umbilical artery). The differences were evaluated by the chi square test and were not statistically significant. In the vertical position no greater risk was found for mother or infant and it can be considered equally safe as the horizontal one but it is more apt for mother and foetus.


Remarques :
Article en langue tchèque

Etude randomisée contrôlée comparant l'accouchement en position accroupie et dans la position obstétricale classique. Aucune différence significative dans les variables prises en compte, sauf la satisfaction des femmes en couche dans la position accroupie.

[1184] Objectif de l'étude. Évaluer l'influence d'une position d'accouchement verticale, la position accroupie, sur la phase d'expulsion, en étudiant différents paramètres que sont la durée d'expulsion, l'état néonatal, le mode d'accouchement, la survenue d'hémorragie de la délivrance, l'état périnéal et enfin le confort des parturientes.

Type d'étude. Randomisée, monocentrique, comparative, ouverte, prospective.

Matériel et méthode. Après réalisation d'une étude de faisabilité de manière rétrospective, 240 patientes ont été incluses dans 2 groupes dans lesquels l'accouchement était réalisé soit en position accroupie soit en position classique. Tous les paramètres exposés ci-dessus ont été recueillis et traités par le logiciel EpiInfo, en utilisant les tests t de Student, du χ², de KruskallWallis.

Résultats. Notre étude a montré une tendance à la diminution de la durée d'expulsion ainsi qu'à la diminution des extractions instrumentales dans le groupe "position accroupie", sans toutefois atteindre le seuil de significativité. L'état néonatal n'était pas modifié. Le nombre d'hémorragies de la délivrance et le nombre de déchirures périnéales accusaient une tendance à l'augmentation, sans atteindre le seuil de significativité. Enfin, la satisfaction des

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parturientes ayant accouché en position accroupie était très forte.

Conclusion. L'essai comparatif réalisé ne permet pas de valider de façon certaine les avantages théoriques de l'accouchement en position accroupie. Ces données semblent conformes aux résultats des essais déjà effectués publiés dans la littérature. On soulignera enfin que si elle ne démontre pas d'avantage médical sur les paramètres étudiés, la position accroupie n'est pas délétère, et peut apporter un plus grand confort aux parturientes qui désirent l'appliquer.


http://www.e2med.com/index.cfm?fuseaction=viewArtDossier&DartIdx=66602&DIssIdx=4492&DChapIdx=32525

Remarques :
Texte en accès libre.

[438] The authors are the first in Hungary to have applied the method of vertical delivery with the husband's or partner's presence in the delivery room. This is part of the authors' family-centered delivery program at the Maternity Ward of Borsod-Abauj-Zemplen County Hospital, Miskolc. A comparison of 321 births was carried out, which included 158 vertical deliveries and 163 horizontal deliveries. During both vertical and horizontal deliveries, the husband or partner was present in the delivery room. The comparison included the mother's biometrics and social characteristics, as well as the circumstances of the delivery and the clinical parameters of the newborns. Certain stages of delivery in the vertical position took a shorter period of time compared to horizontal delivery, but the differences were not significant. Episiotomies were carried out in fewer cases of vertical deliveries, and significant injuries due to the lack of an episiotomy in the case of vertical deliveries were not detected. The parameters characterizing the clinical state of the newborns were the same in both groups. The answers given to questionnaires supported the favorable psychological effects of a vertical delivery. The authors hope that vertical delivery, as a possible alternative, will find its place in obstetric practice in Hungary.

Hagymasy L, Gaal J. A comparative study of vertical and horizontal deliveries in the presence and with the assistance of the woman's partner.
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<th>Source</th>
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<td></td>
<td>DESIGN AND METHODS: Clinical trial randomly selecting 127 volunteers for the sitting position and 121 for the horizontal position during the second stage of labor. Duration of the second stage and of expulsion of the placenta, vulvo vaginal and perineal lacerations, blood lost and Apgar score were evaluated.</td>
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<td>RESULTS: There was a non-significant decrease of 3.4 min in the duration of the second period in the vertical position in comparison with the horizontal position. There was a similar difference in the duration of delivery of the placenta, but also non-significant. Blood loss was slightly greater among women delivering in vertical position, but the difference did not reach significance. Breastfeeding did not show any influence on blood loss and on the time for delivering the placenta. The incidence of perineal trauma was 44.1% for vertical position and 47% for horizontal position in the whole group and of 47.8% and 71.2% in the group with history of episiotomy. This last difference was statistically significant. The results of this study are in the line of other studies that suggest some advantages and possible disadvantages of the vertical position.</td>
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<td>CONCLUSIONS: Mothers should be given the choice of the posture to be assumed during parturition. The supine position should not be imposed and episiotomy should not be a routine.</td>
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<td>[709] CONTEXTE: Les déchirures périnéales sont une source importante de désagrément pour beaucoup de femmes. Dans cette étude descriptive, nous examinons l'état du périnée dans une population de femmes ayant accouché à domicile, et donnons une description préliminaire des facteurs associés aux déchirures périnéales et à l'épisiotomie.</td>
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<tr>
<td>METHODES: Etude de cohorte prospective de 1404 accouchements à domicile planifiés. Les analyses sont concentrées sur 1098 femmes ayant</td>
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accouché à domicile avec une sage-femme, et 28 cabinet de sages-femmes. Les traumatismes périnéaux incluent l'épisiotomie et les déchirures. Les écorchures mineures et déchirures superficielles qui n'ont pas nécessité de suture sont inclues dans le groupe des périnées intacts. Les liens entre les traumatismes périnéaux et les variables de l'étude ont été examinés globalement, et séparément pour les femmes multipares et primipares.

RESULTATS: Dans cet échantillon, 69.6% des femmes avaient un périné intact, 15 (1.4%) ont eu une épisiotomie, 28.9% avaient une déchirure du premier ou deuxième degré, et 7 femmes (0.7%) des déchirures du troisième ou quatrième degré. Des analyses basées sur des régressions logistiques montrent que les périnées intacts sont associés à la multiparité, à un niveau socio-économique faible, et à une parité élevée, alors que les traumatismes périnéaux sont associés à un âge avancé (> ou = à 40 ans), à une épisiotomie précédente, à un gain de poids de plus de 9 kilos, à un second stade du travail prolongé, et à l’utilisation d’huiles ou de lubrifiants. Parmi les primipares, les périnés intacts sont associés à un niveau socio-économique faible, à une position d’accouchement à genoux ou à quatre pattes, et à un maintien manuel du périnée, alors que les traumatismes du périné sont associés aux massages de celui-ci pendant l’accouchement.

CONCLUSIONS: Ces résultats suggèrent qu’il est possible que les sages-femmes parviennent à obtenir un taux élevé de périnées intacts dans un lieu choisi et avec une population sélectionnée.


Il paraît possible de conseiller largement les positions verticales lors de l’expulsion, tout en étant vigilant sur le risque hémorragique.

<table>
<thead>
<tr>
<th>Positions horizontales</th>
<th>Positions verticales</th>
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<tr>
<td>lithotomie, décubitus</td>
<td>assise, accroupie, debout et agenouillée</td>
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Il paraît possible de conseiller largement les positions verticales lors de l’expulsion, tout en étant vigilant sur le risque hémorragique.


2. Les diverses positions se classent en :
- Positions verticales (assise, accroupie, debout et agenouillée) ;
- Positions horizontales (lithotomie, décubitus
3. Conséquences anatomo-physiologiques des positions

- La position horizontale associe différentes composantes qui expliquent un manque de confort et une progression plus lente du travail ;
- La compression aorto-cave peut également favoriser la souffrance foetale et l’hémorragie per partum ;
- Parmi les positions verticales, la position accroupie favorise au mieux la progression foetale.

4. L’analyse de la littérature récente (méta-analyses de Venditelli) recense 19 essais randomisés comparant position horizontale et autres positions. Elle montre un taux plus faible de souffrances foetales, de dépressions néo-natales, de déchirures du périnée, une tendance à la baisse des extractions instrumentales, mais une tendance à l’augmentation des hémorragies de la délivrance.

Il paraît possible de conseiller largement les positions verticales lors de l’expulsion, tout en étant vigilant sur le risque hémorragique.


Le fait de marcher n’est ni positif ni négatif sur le travail. Il n’est pas dangereux ni pour la mère ni pour leurs enfants.


L’utilisation de positions autre que lithotomique est un moyen non-technologique d’accentuer le processus normal de l’accouchement.

[1126] This, the second of a two-part article, describes the findings of a national survey of practicing certified nurse-midwives (CNMs) regarding factors that affect the use of eight second-stage maternal positions. Lower CNM self-reported autonomy scores were associated with the use of the lithotomy and dorsal supine positions; maternal preference and higher CNM self-reported autonomy scores were associated with the use of the nonlithotomy positions. The use of nonlithotomy positions is one nontechnologic way to enhance the normal process of birth.

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<th>Title</th>
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<td>[1152]</td>
<td>A national survey of 800 certified nurse-midwives (CNMs) in active clinical practice was conducted from April through June 1994. The purpose of the survey was to study the extent to which eight operationally defined positions were used by CNM-attended women during the second stage of labor and factors that affected their use. This, the first of a two-part article, describes the positions used as well as the CNMs' preferences for the eight second-stage positions. The most frequently used second-stage position was sitting; the lithotomy position was rarely used by the CNMs. The survey findings reflect the preferences of birthing women. Hanson L. Second-stage positioning in nurse-midwifery practices. Part 1: Position use and preferences. J Nurse Midwifery. 1998 Sep-Oct;43(5):320-5.</td>
</tr>
<tr>
<td>[1186]</td>
<td>OBJECTIVE: To test the safety and practicability of spontaneous deliveries with the Roma birthing wheel (RBW). METHOD: The results of 1 year's clinical experience (1.12.1995-30.11.1996) with the RBW at the Department of Obstetrics and Gynecology, Wilhelminenspital, Vienna, were compared with the results of a group of head-first deliveries before procuring the RBW. RESULTS: Out of 1,555 births, 1,377 (89%) were spontaneous; 209 (15%) women used the RBW. Compared with the figures before the RBW was available, the total duration of labor was reduced by about one third; the birth canal was intact in 44% and the use of painkillers reduced by a range between 8 and 27%. CONCLUSIONS: In spontaneous births the use of the RBW definitely has advantages, e.g., shortening of the procedure and acceptance on the part of the women; also, safety for both mother and child remains unchanged. Rohrbacher A, Salzer H. [The Roma birthing wheel: 1 year clinical experience in a specialty hospital] [Article in German]. Gynakol Geburtshilfliche Rundsch. 1998;38(3):158-63.</td>
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<tr>
<td>[733]</td>
<td>OBJECTIVE: To learn which factors influencing perineal integrity were modifiable by physicians and pregnant women.</td>
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DATA SOURCES: Medical, nursing, and midwifery literature was searched mainly for randomized controlled trials.

STUDY SELECTION: We chose articles on perineal trauma pattern, sexual dysfunction or satisfaction, urinary incontinence, and pelvic floor function. We identified 80 papers and studied 16 in detail.

SYNTHESIS: Five factors affected perineal integrity: episiotomy, third-trimester perineal massage, mother’s position in second-stage labour, method of pushing, and administration of epidural analgesia. Episiotomy does not improve perineal outcomes when used routinely. Third-trimester perineal massage was discussed only in inadequate studies. Studies comparing position in birth chairs and recumbent versus upright positions were inadequate for making firm recommendations. Studies of methods of pushing and use of epidural analgesia were limited and uncontrolled; no recommendations were possible.

CONCLUSION: Only limiting episiotomy can be strongly recommended. In the absence of strong data to the contrary, women should be encouraged to engage in perineal massage if they wish and to adopt the birth positions of their choice. Caretakers should be aware of the possibility of interfering with placental function when women hold their breath for a long time when pushing.


[1088] An abbreviated version of the Nurse-Midwifery Clinical Data Set was used to gather data on all women (n = 3,049) who began intrapartum care with a nurse-midwife in three sites. Demographic information, intrapartum care, and outcomes were recorded. The association of ambulation in labor with operative delivery was examined in a low-risk sample (n = 1,678) of women who did not receive care measures (epidural anesthesia, oxytocin induction or augmentation) that preclude mobility in labor.

Women who ambulated for a significant amount of time during labor (compared with those who did not ambulate) had half the rate of operative delivery (2.7% vs. 5.5%).
Albers LL, Anderson D, Cragin L, Daniels SM, Hunter C, Sedler KD, Teaf D. The relationship of ambulation in labor to operative delivery
Source: JOURNAL OF NURSE-MIDWIFERY 42 (1): 4-8 JAN-FEB 1997

This study was designed to evaluate the relationship between the parturient’s position and her abdominal and lumbar (continuous and contraction) pain during the first stage of labor. A homogenous group of 100 parturients was randomly assigned to alternately assume the horizontal or the vertical position for 15-min periods. Their pain was measured at 2-3, 4-5, 6-7, and 8-9 centimeters dilatation. To avoid 'carry over' effect, these positions were preceded by a self-elected posture. Thus, the patient adopted (a) a self-elected position, (b) recumbent (or erect), (c) a self-elected position, (d) erect (or recumbent), and so on. Pain intensity was measured by the Argentine Pain Questionnaire’s Present Pain Intensity and the Huskisson’s visual analogue scale. Only the patients with at least one pain evaluation in both positions using both instruments were included in the study. The setting for the study was the obstetric department of a general hospital for people connected with public education (professors, teachers, or members of school administrative staffs).

The analysis revealed that a majority of patients felt less abdominal and lumbar pain, either continuous or due to contractions, during recumbency. The effect was more remarkable when dilation exceeded 5 centimeters and less intense during the first half of the first stage of labor.

Molina FJ, Sola PA, Lopez E, Pires C. Pain in the first stage of labor: Relationship with the patient’s position

The advantages of an upright position during labor are presented, with historic, physiologic, and psychosocial aspects discussed. The influences of modern obstetric practices such as electronic fetal monitoring and anesthesia practices are discussed with findings related to the use of upright positions from the Association of Women’s Health, Obstetric, and Neonatal Nursing National Research Utilization Project on Second Stage Labor Management integrated. Recommendations for
facilitating upright positions on the labor and delivery unit are presented.


http://jognn.ahwhon.org/cgi/content/abstract/26/6/727

Le choix de la posture devrait être encouragé dans les accouchements à faible risque.

OBJECTIVE: To assess the maternal and neonatal effects of upright compared with recumbent positions during delivery, in terms of defined outcome variables.

DESIGN: A randomised controlled trial.

SETTING: St Monica's Nursing Home, a midwife based maternity unit in Cape Town, South Africa.

PARTICIPANTS: Five hundred and seventeen women of low obstetrical risk assigned to deliver at the nursing home.

RESULTS: The trial showed that women who adopted the upright posture for delivery experienced less pain, perineal trauma and fewer episiotomies than those who delivered in the supine position.

CONCLUSION: The data suggest that in women of low obstetrical risk, choice of posture during delivery may be encouraged.


La position maternelle couchée pendant le travail est associée à une saturation foetale en oxygène plus faible que la position latérale gauche.

[1092] Objective: To determine the effects of maternal left lateral, right lateral, and supine positions during labor on fetal oxygen saturation measured by pulse oximetry.

Methods: Fetal oxygen saturation measured by pulse oximetry was obtained in 15 laboring women randomly and successively adopting left lateral, supine, and right lateral positions for 10 minutes each. Repeated measures analysis of variance was used for statistical analysis.

Results: Changes in fetal oxygen saturation were observed in different maternal positions. The supine position was associated with a lower fetal oxygen saturation than the left lateral position. One supine hypotensive syndrome occurred and was...
Moins de déchirures périnéales et d'épisiotomies en utilisant les positions verticales dans cette étude retrospective. Pas d'influence sur la santé du nouveau-né. [1130] The maternal birthing position is not only influenced by physical factors but also culture civilization. Nowadays more women prefer to give birth in an upright position (sit, squat, kneel) which is highly supported by some family practitioners. In this retrospective investigation we compared 3 different groups of maternal birthing positions (upright, lateral, mixed birthing position i.e. mainly on the back) concerning the fetal outcome and maternal perineal injury. There was no difference in the APGAR-values and umbilical cord pH. A higher incidence of intermediate and severe laceration as well as higher rates of episiotomy have been found in the mixed group (i.e. mainly on the back birthing position). Regarding our results and considering the literature we conclude that the upright birthing position brings no discredit upon newborn or the maternal perineum.


Un plaidoyer pour la flexibilité. [1106] The authors trace the use of birthing stools and their decline as the recumbent position became the predominant one for giving birth. The advantages of upright positions are summarised, supporting the idea that women should be allowed more flexibility and movement in labour and recommending that birthing stools be reintroduced as an option for delivery. Adequate antenatal preparation in the use of different positions, and encouragement from midwives and obstetricians, will help make childbirth a safer, more collaborative and satisfying experience as recommended by the Winterton Report.

| Étude de cohorte. L’application de compresses chaudes et la lubrification sont des facteurs de risque de déchirures. Par contre le maintien manuel du périnée diminue ce risque. La position lithotomique augmente la fréquence des épisiotomies. | [1161] Cette étude décrit l’association entre les résultats de l’accouchement, les facteurs de risque sélectionnés, et les approches intrapartum alternatives utilisées par les infirmières-midwives. Cette étude concurrentielle (cohorte) non aléatoire analysa toutes les naissances (N = 1211) spontanées avec un soutien infirmière-midwives à un hôpital universitaire pendant une période de 2 ans. L’analyse univariée a été utilisée pour calculer les risques relatifs pour les associations entre les résultats de l’accouchement et les variables sélectionnées. Les résultats de l’étude ont indiqué que l’âge, l’ethnique, le poids du bébé, et l’utilisation de deux techniques (compresses chaudes et lubrification) étaient associés à des lésions de l’accouchement. Les mêmes facteurs qui augmentent le risque de lésion de l’accouchement ont également augmenté les chances de réalisation d’une épisiotomie; cependant, pour l’épisiotomie, une relation inverse avec les compresses chaudes de l’accouchement a été notée, et la lubrification n’a eu aucun effet. Le manque de soutien de l’accouchement a augmenté le risque d’épisiotomie de 66%. L’utilisation de positions d’accouchement autres que la position lithotomique a significativement réduit la probabilité d’une épisiotomie. Les auteurs ont conclu que des mesures de soins ciblées pour protéger le périnée pourraient réduire la morbidité maternelle et simplifier les soins intrapartum. Les risques et bénéfices des stratégies alternatives couramment utilisées par les infirmières-midwives pendant l’accouchement devraient être évalués de manière plus approfondie dans des populations multi-ethniques. |

required to perform vaginal operative delivery was much shorter for the squatting position than for the normal delivery position (11.6 vs. 28.86 min; p 0.01). Fetal stress was more common among newborns delivered by the normal delivery position than among those delivered by the squatting position (7.73% vs. 3.44%; p 0.05). Women in the squatting group were more likely to have an intact perineum after delivery than those in the control group. None of the women in the control group had postpartum vulval edema, while five in the study group did. The edema was mild, however, and resolved itself within 24 hours of delivery. Most women in the squatting position group were satisfied with this position. These findings suggest that the squatting position using a birth cushion has more benefits than the normal delivery position. It allows better coordination and more effective pushing. Traditional birth attendants and female health workers at subcenter and primary health center levels can be trained to use the birth cushion during labor.


Recommandation d’exercices doux d’assouplissements du bassin et du dos jusqu’au 4-6e mois de grossesse. Les sages-femmes devraient bien connaitre la physiologie des différentes positions d’accouchement.

[1131] Early in pregnancy it is useful to encourage the mother to do some gentle exercise to offset some of the mechanical strain that will arise with postural changes. Manipulation of the lumbar spine and pelvic joints is possible until the sixth month for primigravidae and the fourth or fifth month for multiparae. The joints and soft tissues will respond very readily to gentle stretching techniques because of hormonal changes. It is appropriate for midwives to have a good working knowledge of the mechanical advantages and disadvantages of different maternal positions adopted during labour.


Cette étude suédoise trouve 4 fois plus déchirures du 3edegré dans les positions d’accouchement verticales (à genoux, quatre

[1132] BACKGROUND: During the past years a major change in the use of delivery position has occurred in Sweden. Recumbent delivery positions have been replaced by a variety of positions: squatting, standing, lateral, kneeling and quadruped. The consequences of this shift in obstetrical practice for development of perineal lacerations are largely unknown.

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pattes, debout,...) qu’en position assise. Pas de différence sur la santé du nouveau-né.

METHOD: Retrospective comparison of uncomplicated deliveries in standing (n = 650) and sitting (n = 264) position with respect to third degree lacerations.

RESULTS: The standing and sitting delivery group were similar with respect to maternal, infant and delivery characteristics. The frequency of third degree tears was 2.50% in standing and 0.38% in sitting birth position (p < 0.05). In nulliparous women, third degree tears occurred in 4.2% in standing and 1.0% in sitting position.

CONCLUSION: The present data implies that the risk of third degree lacerations is considerably higher (7 x) in standing than in sitting birth positions.


[1133] OBJECTIVE: To review reports of the supine hypotensive syndrome with reference to clinical presentation, suggestions on the mechanism of onset, and the possibility of advance detection.

DATA SOURCES: We used worldwide obstetric, anesthesia, and general medical journals from 1922 onward, a Medline search from 1966 onward, and manual cross-referencing for prior publications.

METHODS OF STUDY SELECTION: We selected approximately 100 case reports of supine hypotensive syndrome and studies on supine blood pressure responses during late pregnancy.

DATA EXTRACTION AND SYNTHESIS: Publications that recorded novel clinical observations, specific hemodynamic or biochemical measurements, or associated complications were included.

CONCLUSIONS: Supine hypotensive syndrome is characterized by severe supine symptoms and hypotension in late pregnancy, which compel the unconstrained subject to change position. Rarely, it may manifest even from the fifth month of pregnancy or postpartum, as well as in the pelvic tilt or sitting positions. Although inferior vena cava compression, influenced primarily by the size of the uterus and exact maternal and fetal position, is the major determinant in its development, other factors may also be important in modulating the circulatory effects of such compression. Advance recognition of susceptibility...
to the syndrome depends on a history of severe supine symptoms or supine intolerance and an increase in maternal heart rate and decrease in pulse pressure in the supine position. As there seems to be a spectrum of severity from minimal central cardiovascular alterations to severe syncopal shock resulting from supine inferior vena cava compression, it is difficult to define a cutoff point at which the syndrome occurs. Although usually recognizable by maternal symptoms, severe hypotension without symptoms has been reported on three occasions.

Kinsella SM, Lohmann G. Supine hypotensive syndrome.
Obstet Gynecol. 1994 May;83(5 Pt 1):774-88.

During 1992, 140 women out of a total of 1122 used the delivery chair at the department for obstetrics and gynaecology at the LKH Modling. We compared them to a control group in the supine position. In order to evaluate the safety of deliveries on the delivery chair, we studied the duration of the stages of labour, rate and degree of soft tissue injuries, maternal blood loss, fetal outcome and complications in the puerperium. The use of the delivery chair showed no increased risk to either the mother or the fetus and therefore represents an appropriate alternative to the traditional supine position for delivery.

Kafka M, Riss P, von Trottenburg M, Maly Z. [The birthing stool - an obstetrical risk?][Article in German].

Some practices and procedures that are common during the management of childbirth lack proof of efficacy, and some have adverse effects. The practice of withholding food and liquids and using intravenous fluids during labor may pose risks such as fluid overload, and maternal and fetal hyperglycemia. Enemas should be reserved for women with painful constipation. Evidence does not support the value of shaving the perineal area. Nonpharmacologic measures to control pain during labor are safe and moderately effective. Pharmacologic methods of analgesia and anesthesia provide good pain relief but pose significant risks. Continuous electronic fetal monitoring.
should be considered a diagnostic procedure, not a screening procedure. Amniotomy may shorten labor but can result in abnormally high uterine forces, infection, umbilical cord prolapse and fetal laceration. Position changes and alternative birth positions promote greater comfort and efficiency during labor. Finally, episiotomy has not been shown to reduce severe lacerations or prevent pelvic relaxation, and use of this procedure should be limited.


L’accouchement est plus rapide à quatre pattes qu’en position semi-allongée, avec moins de déchirures sévères et moins d’interventions.

[1153] A cohort study was designed to assess the effects of maternal squatting position for the second stage of labor on the evolution and progress of labor, and on maternal and fetal well-being. Outcomes from 200 squatting births, randomly selected from a sample of 1000, were compared with 100 semirecumbent births, randomly selected from a sample of 300. Data collection was by chart review. The two groups were similar with respect to most antepartal, intrapartal, and socioeconomic variables likely to affect labor outcomes. The mean length of the second stage of labor was 23 minutes shorter in squatting primiparas and 13 minutes shorter in squatting multiparas than in semirecumbent women. Squatting women required significantly less labor stimulation by oxytocin during second stage (P = 0.0016), and they showed a trend toward fewer mechanically assisted deliveries. Significantly fewer and less severe perineal lacerations occurred, and fewer episiotomies were performed in the squatting group (P = 0.0001). No statistically significant differences were found between groups for third-stage complications and infant complications.


[1167] This study was conducted at the Lokmanya Tilak Municipal General Hospital, Bombay, India during the year 1990. The aim was to compare the routinely used supine position versus ambulation in the first stage and squatting position during the second stage of labour. Our study was comprised of 200 patients both primigravidas and multigravidas; 100 were kept in the supine position throughout labour and 100 were kept ambulatory in the first
stage and adopted the squatting position during the second stage. The study showed a shortening of both stages of labour in the squatting group but the incidence of complications was less in the control group. It was concluded that without proper birthing chairs which can give excellent perineal support, the usual supine position is preferable in our setup.


Le siège d'accouchement ne présente pas d'avantages sur la position allongée. (Sans péridurale)

[975] OBJECTIVE--To determine whether nulliparae whose second stage of labour is conducted in an obstetric birth chair have a lower incidence of instrumental delivery than those using a conventional delivery bed.

DESIGN--Randomized controlled trial using sealed, opaque envelopes for allocation.

SETTING--Delivery ward in a busy teaching hospital.

PATIENTS--1250 nulliparae with a singleton live fetus with cephalic presentation, without epidural anaesthesia, who had achieved full dilatation.

INTERVENTION--Intention to conduct second and third stages of labour in either the Birth-EZ chair or the conventional delivery bed, as randomly allocated.

MAIN OUTCOME MEASURES--Primary measure: vaginal operative delivery; principal secondary measures: duration of second stage, perineal trauma, blood loss, women's views, and neonatal status.

RESULTS--Delivery in the birth chair did not result in a reduction in operative delivery, overall. However, there was a reduction in vaginal operative delivery for fetal heart rate abnormality. There was no beneficial effect on perineal trauma or puerperal perineal pain. Post-partum haemorrhage was more frequent in the birth chair group.

CONCLUSIONS--Delivery in the birth chair does not offer any obvious advantage to women over delivery on a bed.


Étude limitée au début du travail. La douleur est nettement diminuée dans les positions verticales par rapport à la position allongée, tout particulièrement pour la douleur dans les reins.

[1134] The purpose of this study was to determine whether women in labor report less pain when they are in a vertical (sitting or standing) position than in a horizontal (side-lying or supine) position. Pain scores were obtained from 60 women in early labor (dilation 2-5 cm) who alternated between the two positions. The results show that about 35% of women feel less front pain and 50% feel less back pain when they are in a vertical position than in a horizontal position. The decrease in continuous back pain (83%) was particularly impressive, but the front and back pains associated with contractions were significantly diminished as well. These results, taken together with those of earlier studies, indicate that many women in early labor have less pain and are generally more comfortable in a vertical than in a horizontal position. Since early labor comprises a substantial proportion of the entire process of labor and delivery, any simple procedure which alleviates pain without danger to mother or child, such as shifting from a horizontal to a vertical position, should be promoted and employed.


[1165] Two hundred ninety-four women were randomly allocated to a group in which the use of a birthing stool (experimental group) or a conventional semirecumbent position (control group) was encouraged. The birthing stool was 32 cm high and allowed the parturient to sit upright and to squat. The husband could sit close behind his wife and support her back. No differences were observed between the two groups regarding mode of delivery, length of the second stage of labor, oxytocin augmentation, perineal trauma, labial lacerations, or vulvar edema. Infant outcome measured by Apgar scores at 1 and 5 minutes postpartum and numbers of neonatal intensive care unit transfers was the same in both groups. Mean estimated blood loss and the number of mothers with a postpartum hemorrhage 600 ml or more were greater in the experimental group than in the control group. Women in the experimental group reported less pain during the second stage of labor, and they and their spouses were more satisfied with the birth position than were parents in the control group. Midwives were less satisfied with their working posture in the experimental group.

Waldenstrom U, Gottvall K. A randomized trial of


[1136] This study was undertaken to investigate the outcome of epidural catheter insertion in the sitting or lateral position in mothers during labour. An initial prospective randomised study period (144 patients) suggested that the sitting position offered some superiority over the lateral in terms of technical ease of insertion. It was concluded, by minimising the subjective aspects in a follow-up, prospective nonrandomised study period (152 patients), that the determining factor lies in the skill and experience of the anaesthetist. There was no significant difference in complication rates or maternal discomfort between the two positions in either study period.


Comparaison des positions assises et decubitus latéral pour la pose de la péridurale. Pas de différences notables, l'expérience de l'anesthésiste étant primordiale.

[1137] A study to evaluate the relationship between maternal birthing position and perineal outcome was undertaken on 335 patients in a rural family physician's practice whose babies were delivered vaginally between December 1980 and December 1988. The most common birthing position used by the women was the semi-sitting position in the birthing bed (44%, n = 146). Ninety-four women (28%) gave birth from the conventional lithotomy position, 80 (24%) used the birthing chair, and less than 5% used a side-lying position. Almost 30% of the women gave birth with intact perineum; the incidence of episiotomy was 44%. The use of a particular position for delivery varied with parity, and multiparous women used the semi-sitting position in the birthing bed more frequently than did primiparous women. There was no statistically significant relationship between birthing position and perineal outcome for primiparous women. A statistically significant relationship between delivery position and perineal outcome was found for multiparous women. Multiparous women using the birthing bed were more likely to have less perineal trauma than women giving birth on the delivery table.

Olson R, Olson C, Cox NS. Maternal birthing
The purpose of this study was to determine if women who assumed upright positions during the phase of maximum slope would have a shorter phase of maximum slope in their labor and experience more comfort than women who assumed recumbent positions. Forty laboring women were randomly assigned to either an upright or recumbent position group. Subjects assumed the positions of their assigned group during the phase of maximum slope in their labor (cervical dilatation from 4 cm to 9 cm). Every hour during the phase of maximum slope, each subject was examined vaginally to determine her cervical dilatation and assessed for her level of comfort using the Maternal Comfort Assessment Tool. Women in the upright position group had a significantly shorter phase of maximum slope in labor, but did not significantly differ in comfort level from women in the recumbent group. Newborn Apgar scores were not significantly different between the two groups. Nurses need to be aware that the upright labor positions have the distinct advantages of facilitating efficient uterine contractions and reducing the duration of the phase of maximum slope in labor, with no increase in the discomfort experienced or adverse effect on newborn well-being.


Le groupe étudié était composé de 241 femmes nullipares ayant eu un accouchement spontané, en vertex, non multiple. Le taux d’épisiotomies a été de 46.1%. Des sages-femmes ont accompagné 65.1% des naissances, les autres ayant été confiées à des obstétriciens. Les médecins ont plus souvent fait appel aux étriers (p < 0.01). Parmi les 174 femmes qui ont accouché dans une position différente, les plus nombreuses étaient en position semi-assise (N = 153).

Les taux d’Apgar n’ont eu aucune corrélation avec l’épisiotomie.

Le lacérations “profondes” (du troisième ou quatrième degré) ont été les moins nombreuses (0.9%) chez les femmes qui n’ont pas subi d’épisiotomie et n’Étaient pas en position lithotomique, et les plus nombreuses (27.9%) chez celles qui étaient dans les deux cas de figure. Pour celles qui étaient dans un
seul des deux cas, les résultats étaient
intermédiaires. L’épisiotomie était fortement
corrélée aux déchirures profondes (odd ratio de
22.46, CI 7.81-64.61, p < 0.003) ainsi qu’à la
position lithotomique (odd ratio de 14.01, CI 4.18-
47.28, p < 0.029). Le rôle joué par
l’accompagnant(e) n’a pas été éclairci. Les médecins
ont été associés à un taux plus important de
déchirures, mais ils pratiquaient plus
d’épisiotomies et utilisaient plus souvent les
etriers. Cela reflète peut-être le fait qu’ils
étaient appelés en cas de problème. Après avoir
ajusté les données en fonction des étriers et de
l’épisiotomie, l’association des médecins aux
déchirures profondes n’était plus visible.
[Toutefois, les médecins ont plus tendance à
utiliser la position lithotomique et à faire des
episiotomies, y compris en l’absence de
complications.]

Une explication possible de la relation entre
l’usage des étriers et les déchirures profondes est
que la position lithotomique accentue l’étirement
du périnée.

[Résumé tiré de Goer, H. Obstetric Myths Versus
Research Realities: A Guide to the Medical
Les remarques entre crochets sont d’Henci Goer.]

Borgatta, L.; Piening, SL.; Cohen, WR. Association
of episiotomy and delivery position with deep
perineal laceration during spontaneous delivery in
160(2): 294-297

etrieve&db=PubMed&list_uids=2916609&dopt=Abstract

[1172] A controlled clinical trial involving 151
primigravidae and 18 midwives assessed the
acceptability and outcome of second-stage labour in
upright positions. Women who had no specific
antenatal preparation and preferences regarding
labour positions were managed either conventionally
(semi-recumbent and lateral), or encouraged to
adopt upright positions (squatting, kneeling,
sitting or standing) according to individual
preference. Of the women allocated to the upright
position 74% completed the second stage upright,
with kneeling being the most favoured position, but
squatting was, despite all assistance, too
difficult to maintain. Adoption of upright
positions resulted in a higher rate of intact
perineums. There was a clinically apparent
reduction of forceps deliveries in the upright
group which influenced midwives’ attitudes. Moving
the parturient from recumbent to upright positions
was often perceived to be beneficial when there was
slow progress. Estimated blood loss was similar in the two groups, as was the condition of the newborn (Apgar score and umbilical artery pH). Alternative positions in the second stage of labour, in particular kneeling, are achievable even without specific birth aids and antenatal preparation. They appear safe, acceptable to most parturients and their midwives, and are easily integrated into modern labour ward practice; they may have clinical advantages which need further investigation.


[1174] A new obstetric aid, the 'Birth Cushion' allows the parturient to sink into a supported squatting posture for the second stage of labour and delivery; it fits onto conventional delivery beds. A prospective, controlled trial of 427 primiparae compared the outcome of labour in women randomly allocated to squatting (218) or conventional semirecumbent (209) management. The squatting group had significantly fewer forceps deliveries (9% vs 16%) and significantly shorter second stages (median length of pushing 31 vs 45 min) than the semirecumbent group. There were fewer perineal tears, but more labial tears, in the squatting group. Apgar scores, blood loss, and post-partum vulvar oedema were similar in both groups. 82% of the women in the squatting group maintained upright positions for most of the second stage, and reported great satisfaction with the supported squatting position. The traditional birth posture of squatting can be easily adapted for modern labour management and has advantages for women in their first labour.


[1179] The purpose of this investigation was to replicate an earlier study to clarify and verify its findings. The 68, term primigravidae married women between the ages of 18 and 25 years were assigned to three groups: (a) one group used a 30 degree upright position with no bearing down instructions during the second stage of labor (n = 24); (b) the second group used a 30 degree upright position with bearing down instructions given during the second stage of labor (n = 22); and (c)
a control group used a zero degree recumbent position with bearing down instructions during the second stage of labor (n = 22). The upright position enhanced the descent of the fetal head with a shorter duration of labor in both the first and second stages. When mothers in an upright position were left alone to bear down in response to their own bodies' urges, the second stage of labor was of shorter duration.

Liu YC. The effects of the upright position during childbirth.

[1191] A prospective quasi-experimental study was conducted to determine women's perceptions of their childbirth experiences using a birth chair. The sample consisted of 55 primiparas, from 37 to 41 gestational weeks, with normal pregnancy and labor; 22 women delivered on a traditional delivery table (DT), and 33 women used a birth chair (BC). A questionnaire consisting of 21 items on a five-point scale (the higher the score, the more positive the perception) was self-administered by subjects during postpartum hospitalization. No significant differences were found between groups on overall score. However, women using the birth chair had a significantly higher score on the comfort subscale, as did women who had attended prepared childbirth classes.

Shannahan MK, Cottrell BH. The effects of birth chair delivery on maternal perceptions.
Journal of Obstetric, Gynecologic, and Neonatal Nursing; 1989:18(4)323-326

Etude randomisée contrôlée comparant l'accouchement avec une chaise spéciale à la position lithotomique (incluant le décubitus latéral). Aucun avantage n'est trouvé à l'utilisation de cette chaise avec laquelle on observe plus d'hémorragies post-partum.

[1193] A new obstetric chair has been designed to overcome some of the problems of those currently available commercially. The chair has been used to assess the effects of the sitting position in the second stage of labour on the outcome of delivery in 304 women randomly allocated to be delivered either in the chair or in the conventional dorsal position. Delivery in the chair conferred no benefits to mother or baby and resulted in greater mean blood loss and a higher rate of postpartum haemorrhage.

Stewart P, Spiby H. A randomized study of the sitting position for delivery using a newly designed obstetric chair.

[1215] X-ray pelvimetry was performed on 43 women in the squatting and erect positions within 1 week.
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The act of squatting increased the transverse and antero-posterior pelvic dimensions by 1%. The theoretical mechanisms by which posture may affect dimensions are discussed.

Le foetus est mieux oxygéné lorsque les femmes accouchent en position verticale. [1140]

We performed umbilical blood gas analysis for 130 pregnant women in sitting and for 50 in supine position immediately after their deliveries. To elucidate whether fetal blood gas changes were attributed to the maternal postures, we also carried out the maternal blood gas analysis during delivery (n = 145) and prior to the onset of labor (n = 100) in both positions. Blood gas values of the umbilical vein and artery in the sitting group were significantly higher in pH, PO2, base excess (BE) and oxygen saturation (SO2), and lower in PCO2 than those in the supine group. In contrast, maternal blood gas values (pH, PaCO2, PaO2 and SaO2) did not show significant differences between these two groups in both during delivery and before the onset of labor. Thus, the sitting delivery position can elicit physiologically more beneficial blood gas aspects in fetus compared with the conventional supine delivery position. Umbilical blood gas improvements induced by sitting delivery position do not appear to be a result of the maternal blood gas alteration, but appear to be mediated by other factors.

L’observation de l’accouchement chez les Papous suggèrent des avantages à la position verticale. [1108]

During an ethnomedical field study the author succeeded in participating and photographing 4 traditional birthgivings among the Trobrianders/Papua New Guinea. Their various vertical postures are described with special reference to specific Trobriand practices and discussed by literature review. The results suggest that vertical birthing positions are advantageous to horizontal ones and should be reconsidered by modern Western obstetrics.
[1113] To determine which components of uterine activity are affected by different positions of labor, 116 intrauterine pressure records in the sitting and supine positions were analyzed in order to measure resting, contraction, and bearing down pressures. The resting pressure in the sitting position showed consistent elevation compared to the supine position, while the contraction pressure did not differ strikingly in the two positions. The bearing down pressure in the sitting position for nulliparas during the second stage and for multiparas at the time of the 8- to 10-cm dilation was significantly higher than that in the supine position. Also, the sitting position led to a significantly shorter duration of the second stage in nulliparas and the 5- to 10-cm dilation period in multiparas. These findings suggest that the maternal position does not affect uterine contractility, that the increased resting pressure in the sitting position is of some importance in supplementing the downward delivery force, and that the increased bearing down pressure in the sitting position could help to significantly shorten the duration of labor.


http://www.greenjournal.org/cgi/content/abstract/69/1/67

[1141] This study was conducted to determine the effect of the birth chair on fetal outcome in primigravid subjects with a normal pregnancy and labor. A quasi-experimental design was used to compare 33 birth-chair deliveries with 22 delivery-table deliveries. No difference between groups was found in the mean pH and pO2 of arterial and venous cord blood samples. The mean arterial pCO2 was lower in the chair group (49.25 and 44.50, p = 0.023), but there was no difference in venous pCO2. In the chair group, the mean vein pO2 was higher when the angle of the chair was more than 45 degrees upright (22.3 and 28.4, p = 0.007). Means for chair and table groups were similar for maternal hemoglobin, breathholding while pushing, duration of second stage, time of first cry, time of cord clamping, and Apgar scores. Incidence of cord around the neck was identical. The mean one-minute Apgar scores were significantly higher when chair or table was more than 30 degrees upright (8.0 and 8.59, p = 0.037). Results suggest that the birth chair is a safe alternative to the delivery table in terms of fetal outcome. The findings of lower arterial pCO2 with unchanged pO2 and pH in
<table>
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<th>Les positions et changements de positions spontanés pendant le travail préviennent ou résolvent les dystocies.</th>
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<td>[1142] Women have always used different positions to make labor more comfortable and, when allowed, spontaneously change position numerous times during labor and birth. The positions they choose, while dictated by comfort, frequently prove to be beneficial in promoting labor progress. For 50 years, the value of mobility and position change received little attention, but recent research and advances in the design of birthing equipment indicate that maternal positioning provides a valuable, noninvasive, and acceptable intervention. This paper reviewed six mechanisms by which dystocia may be prevented or corrected through the use of maternal positioning.</td>
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<td>[1160] The effect of position during the second stage on outcome was studied in 58 women, with no exclusions because of pregnancy complications or signs of fetal distress, who were randomly allocated to have the second stage conducted in either the dorsal or 15 degrees lateral tilt position. All the women were of parity 0 or 1 and the two groups were well matched except for gestational age at delivery. There were no differences in clinical outcome between the two groups, but overall the dorsal group had lower cord artery pH values (P less than 0.05), higher PCO2 (P less than 0.01) and a greater base deficit, but not significantly so. pH and base deficit were similar in both groups where the second stage did not last greater than 15 min. Thereafter, there was a trend to decreasing pH and increasing base deficit with increasing length of second stage in the dorsal group, but not in the tilt group though this did not reach statistical significance. Low Apgar scores, complicated pregnancy and first pregnancy were each associated with significantly lower pH levels. Prolonged placement of the patient in the flat dorsal position should be avoided in second stage, though a suitable alternative under the conditions described has not been defined.</td>
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<td>Johnstone FD, Aboelmagd MS, Harouny AK. Maternal</td>
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| Laisser les femmes libres de décider leur position d'accouchement et leur respiration n'est pas risqué. | [1109] An observational study was done on the positions and breathing techniques women will choose for second-stage labor when they are given the freedom and support to choose. In the 50 second stages and births observed, nine different positions were used in conjunction with three variations of expulsive breathing techniques. No adverse outcomes resulted from the nonprescriptive approach to birthing women. All outcome parameters were found to be within the range of normal. These findings support the acceptability of allowing women to respond to their birthing impulses. Further study is recommended to verify the safety of a nondirective approach to birth.  


| Laissées libres de choisir, les femmes choisissent différentes positions pendant le travail. | [1115] While controversy exists as to the relationship between maternal position in labor and such measures as the labor duration, subjective discomfort, and fetal outcome, little appears to be known about the positions women assume in labor when they are permitted to do so without coercion or instruction. To learn more about maternal position in labor, we observed 80 consecutive patients with uncomplicated normal spontaneous vaginal delivery over the course of labor to ascertain the positions volitionally chosen by each. Data were collected on position preferences and phase of labor. All labors were analyzed; a codified lexicon was established to describe the position pattern in each phase and the principal positions the patient assumed over the course of labor. The frequencies and distributions were determined for nulliparas and multiparas separately and rates of position change were assessed. It was found that gravidas chose a number of different principal positions in the early phases of labor, but that they became more narrowly selective in the deceleration phase and second stage; at the same time, they tended to change position more often in late labor.  

Revue. Bien que les données examinées ne prouvent pas que la déambulation accélère le travail ou améliore l’état du bébé, il est néanmoins clair qu’elle n’est en rien dangereuse, et qu’elle améliore le confort de la femme en couches et diminue la demande analgésique.

There has been a relatively recent interest in alternative birthing techniques, including increased maternal mobility during labor. This literature review was pursued to evaluate the effect of upright maternal posture and ambulation on the first stage of labor. Although previous reviews frequently assume that maternal ambulation speeds labor progress, the data presented in this review are not conclusive as to whether the upright maternal posture or ambulation during the first stage of labor shortens labor length or improves fetal outcome. However, it is clear that ambulation in labor is not harmful either to the mother or fetus. In addition, many investigators have reported that mobility in labor results in greater maternal comfort and ability to tolerate labor and decreased use of anesthesia and analgesia. Thus, acceptance of mobility in labor by patients and staff is generally reported. This information can serve as a guide to clinical management. However, there is a need for further analysis of the effect of maternal ambulation during labor, and specific suggestions for research are presented.


Pour 20% des patientes une décelération du rythme cardiaque du foetus a été montrée quand la patiente était en position allongée.

Presented is an investigation of the relationship of fetal heart rate (FHR) deceleration and position of the patient in labor. In a group of 902 laboring patients, 126 (14%) demonstrated late decelerations. Of the 126, 24 (19%) patients demonstrated late decelerations in the supine position only. These occurred during uterine contractions and were associated with reduced femoral arterial blood pressure and amplitude of the capillary pulse of the big toe. A drop in capillary blood pH of the fetal scalp could also be demonstrated. These effects reproducibly appeared and disappeared when supine and lateral positions were alternated. These data would suggest that maternal aortic compression by the pregnant uterus plays a role in the etiology of fetal stress as expressed by changes in fetal heart rate and acid base balance. This effect can be evaluated and monitored simply by recording the pulse pressure of the big toe and femoral arterial pressure. These atraumatic procedures can be applied to any patient.

ABITBOL MM. SUPINE POSITION IN LABOR AND ASSOCIATED FETAL HEART-RATE CHANGES OBSTETRICS AND GYNECOLOGY 65 (4): 481-486 1985

The evidence supporting upright positions in childbirth and concerns about squatting are
reviewed. Squatting techniques and how to adapt them to the traditional birth setting are explained, and the role of attitude on the part of childbirth educators and birth attendants in making the squatting position practically available for women in childbirth is emphasized. Recommendations are made for future research.


Observation d'une baisse de la pression dans l'artère fémorale, associée à une moins bonne irrigation du foetus, chez 20% des femmes en position lithotomique. Effet non observé en décubitus latéral.

[1143] Presented is an investigation of the relationship of fetal heart rate (FHR) deceleration and position of the patient in labor. In a group of 902 laboring patients, 126 (14%) demonstrated late decelerations. Of the 126, 24 (19%) patients demonstrated late decelerations in the supine position only. These occurred during uterine contractions and were associated with reduced femoral arterial blood pressure and amplitude of the capillary pulse of the big toe. A drop in capillary blood pH of the fetal scalp could also be demonstrated. These effects reproducibly appeared and disappeared when supine and lateral positions were alternated. These data would suggest that maternal aortic compression by the pregnant uterus plays a role in the etiology of fetal stress as expressed by changes in fetal heart rate and acid base balance. This effect can be evaluated and monitored simply by recording the pulse pressure of the big toe and femoral arterial pressure. These atraumatic procedures can be applied to any patient.


Remarques :
La conclusion vaut son pesant d'or, ils n'en déduisent qu'il faut éviter la position lithotomique, mais qu'il faut mettre des capteurs de mesure ...

L'accouchement non dirigé, où la femme respire et se positionne spontanément, optimise le déroulement physiologique du...
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<td>Losrque la mère accouche assise le foetus est mieux oxygéné et pousse son premier cri plus tôt.</td>
<td>Physiological evaluation of sitting delivery position has not been well demonstrated. We measured the duration of 'the first cry occurrence time' both in supine (n = 54) and in sitting (n = 128) delivery positions. Umbilical blood gas analysis data were obtained from 130 pregnant women in sitting and 50 in supine delivery positions. To elucidate the mechanism of fetal blood gas differences due to posture, we also analyzed the maternal arterial blood gas during delivery (n = 145) and prior to labor (n = 100) in both positions. The first cry occurrence time was significantly shorter (p less than 0.01) in the sitting group. A weak negative correlation (r = -0.355, p less than 0.01) was found between the umbilical pH and the first cry occurrence time. Blood gas values for the umbilical vein and artery in the sitting group were significantly higher in pH, Po2, BE and Sao2, and lower in Pco2. Maternal blood gas values not only at delivery but also before labor did not elicit any significant differences between the two groups. It is suggested that the infants who have a high pH in their umbilical vessels cry sooner than those with a low pH. The cause of umbilical blood gas improvements induced by sitting delivery position is not directly due to the maternal blood gas difference, but may be mediated through other factors.</td>
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<td>[1145] Koga S. Effects of delivery positions on the onset of first cry and umbilical blood gas parameters. Nippon Sanka Fujinka Gakkai Zasshi. 1985 Jan;37(1):107-14.</td>
<td>A prospective study of 56 primigravidas was performed to assess the advantages, disadvantages and acceptability of the upright posture during the second stage of labour. Twenty-seven patients laboured in the second stage in a birthing chair, in an upright position. Twenty-one patients laboured in bed in the recumbent position and acted</td>
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as controls. No difference could be found in the length of second stage, ease or type of delivery between the 2 groups. No differences were detected in the condition of the neonates between the 2 groups. This birthing chair was found to be an acceptable mode of delivery to most of those patients using it.


La pression extradurale est plus élevée en décubitus dorsal qu’en décubitus latéral, enceinte ou non.

[1111] Extradural pressure was measured in the lateral and the supine positions in three groups of patients using the extradural catheter as a manometer. The groups consisted of 20 pregnant patients at or near term, 10 patients in the period after childbirth and 10 male surgical patients. In every patient, the extradural pressure in the supine position was greater than that in the lateral position. The mean extradural pressures in the lateral and the supine positions were similar in the three groups. It is suggested that the difference between the extradural pressures in the lateral and the supine positions is physiological and occurs irrespective of vena caval compression. Extradural pressure changes are probably the result of postural changes in the cerebrospinal fluid (CSF) pressure. The influence of CSF pressure on extradural pressure was confirmed further by measuring the extradural pressure in the prone position in five pregnant patients.


Une étude randomisée de l’influence de la position maternelle sur celle du foetus pendant l’accouchement.

[1146] The objectives of this study were to (a) determine if a safe, simple, and economic nursing procedure—maternal posturing—would result in the rotation of a fetus in the posterior or transverse position to the optimal anterior position and (b) evaluate the relative effectiveness of a series of maternal postures for facilitating anterior fetal rotation. One hundred healthy women at term pregnancy were randomly assigned to four treatment and one control posture for a 10-minute period. At two nurse-midwifery clinics, one certified nurse-midwife postured the subjects and one midwife measured the dependent variable (fetal position) with Leopold’s maneuvers. Hypotheses I-IV, which predicted that the four rotation postures would have a greater proportion of anterior fetal rotations than the control posture, were supported (p less than .000). Essentially all four postures
were effective and there was little difference between the treatment postures. A second posturing was performed to determine if an additional 10 minutes in a treatment posture would result in an anterior fetal position. There was a greater proportion of anterior fetal rotations with the four rotation postures than the control posture. The Sims posture was used as a maintenance posture for anterior positions, and was successful when done on the opposite side of the fetal back. The theoretical explication of how maternal postures effect fetal rotation remains sound.


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<td>[1158] A randomised study of 189 deliveries was conducted to compare performance in the conventional dorsal position with that in a birth chair. There was no significant difference in the length of the second stage of labour, the time spent bearing down, or the need for operative delivery. Overall blood-loss was greater among patients delivered in the chair but more of this group had either an intact perineum or only superficial damage. The condition of the neonates in the two delivery groups was similar.</td>
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<td>[1162] The maternal half-sitting and supine position during the second stage of fullterm labor was compared in 100 women who, after identical opening phases in supine position, randomly delivered in half-sitting (50 degrees, n = 50) or supine position (n = 50). The whole duration of the second stage of labor or the time spent in active pushing did not differ between the groups. Vacuum extraction was needed twice (4%) in the group delivering in half-sitting and six times (12%) in the group delivering in supine position. Vaginal tear occurred in one mother in both groups. Early decelerations in fetal cardiotocography were seen 22 times in half-sitting and 14 times in supine group (p less than 0.05). However, late decelerations were seen in only one mother with half-sitting, as compared to five mothers with supine position. Four infants of mothers giving birth in supine position had 1 minute APGAR scores 7 or less, whereas all infants of mothers delivering in half-sitting position had APGAR scores 7 or more.</td>
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scores higher than 7. Subjectively the mothers liked more the half-sitting position. We conclude that a women can deliver in half-sitting position without maternal or fetal risks.


[1205] Our purpose was to study the feasibility and results of encouraging ambulation during the first stage of labor in routine obstetric practice. Six-hundred and thirty low risk mothers with intact membranes were randomized into an ambulant and a control group. The results in the ambulant group were not better than in the control group. Our study suggests that, in principle ambulation may be beneficial, but that the concomitant changes in practice should be different from those in our study.


Une baisse du rythme cardiaque et une moins bonne oxygénation du foetus sont observés dans 9% des cas juste après la pose d’une péridurale, en association avec une baisse de la tension maternelle et une hypertonie utérine.

[1147] Forty-six of 64 high risk labours were managed with continuous lumbar extradural analgesia. Fetal heart rate (FHR) and continuous transcutaneous PO2 (tcPO2) measurements were made in the 64 patients. Abnormal fetal heart rate patterns and low tcPO2 values associated with the onset of the extradural block were noted in 9% of these cases. A decrease in maternal arterial pressure and uterine hypertonus appeared to be responsible, singly or in combination, for the changes. These effects and the changes in FHR were not seen in the 18 mothers not receiving extradural analgesia. The supine position was associated with slightly smaller fetal tcPO2 values than the preferred lateral positions, with a significant worsening of the fetal tcPO2 values after induction of the extradural block although, overall, extradural analgesia neither improved nor impaired the fetal tcPO2.


[1227] Conventional and telemetric monitoring of
labour were compared in a randomized study of 200 patients to assess the effect on the pattern of labour, outcome and attitude of the patients. All the telemetry patients had the option of mobility, but only 45% elected to get out of bed, and then often only for short periods. No clear physical benefits accrued from voluntary mobility. Ambulant patients who had spontaneous deliveries had a longer second stage and more of their babies were slow to establish regular respiration. Quantitative subjective assessments of pain, anxiety and comfort were made. Primigravidae with telemetric monitoring who chose to get out of bed had higher pain scores than primigravidae monitored conventionally, but anxiety scores were highest among primigravidae with telemetry who elected to stay in bed. There was a significant bias towards increased anxiety in the lower social classes. Primigravidae gained more reassurance from monitoring than did multigravidae, but there were no differences resulting from whether or not the recording apparatus was within the patients' view. Multigravidae who had experienced both forms of monitoring preferred telemetry because they felt less restricted and less anxious.


Roberts J, Malasanos L, Mendez-Bauer C. Maternal...
positions in labor: analysis in relation to comfort and efficiency.  


[1204] Published reports imply that intrapartum ambulation may improve labor. This suggests the possible efficacy of ambulation in labors requiring augmentation, provided that adequate monitoring surveillance is maintained. Fourteen patients who failed to progress in active-phase labor, and who required augmentation for "inadequate" contractions were randomized into ambulation (eight) and oxytocin (six) groups. Internal fetal monitoring was used in all patients for 30 minute baseline and 2 hour study periods, with two-channel telemetry used in ambulating patients. Oxytocin was administered by infusion pump. Study parameters included changes in cervical dilation and station, contraction frequency, intensity and baseline tonus, and uterine activity. Labor progress was slightly but not significantly better in the ambulatory group. A mean increase in uterine activity units (UAU) in the ambulatory group was immediate to ranges not reached in the oxytocin group for 2 hours. Increase in Montevideo units was slightly greater in the ambulatory group during the first hour, but was exceeded by the oxytocin group during the second hour. These initial observations seem to indicate that, in terms of labor progress and initial effects on uterine activity, ambulation is as effective as oxytocin for the enhancement of labor and warrants further investigation.

*Read JA, Miller FC, Paul RH. Randomized trial of ambulation versus oxytocin for labor enhancement: a preliminary report.*  


Les positions latérales et verticales sont positives pour le travail. Les femmes doivent être encouragées à choisir leur position.

[1117] La position traditionnelle sur le dos pendant le travail et la naissance est une innovation relativement récente and des désavantages distincts ont été cités. Les positions latérales et debout améliorent la qualité des contractions utérines. De plus, la position debout entraîne un travail plus cours et plus confortable que les autres positions. Les femmes doivent être éduquées aux bénéfices des positions alternatives et à la mobilité et doivent être assistées dans leur choix de la position la plus physiologique pendant l’accouchement.

*McKay SR. Maternal position during labor and birth: a reassessment.*  
This study included 369 normal term labors. In 145 cases the women were sitting, standing or walking at will during the first stage, whereas 224 remained lying in bed during the whole labor. When the mother remains in the 'vertical position during the first stage of labor (1) the physiological timing of the spontaneous rupture of membranes is not altered, (2) duration of the first stage is shortened in 25%--this shortening may reach 34% in the nulliparas, (3) cephalic molding is not increased, (4) the incidence of forceps delivery diminishes and (5) perinatal morbimortality is not increased.


A prospective study of 300 consecutive deliveries has been made to assess the benefits and acceptability of ambulation during spontaneous labour. Ambulation during the first stage occurred in 48 patients with 55 non-ambulant patients acting as controls. No difference in the length of first or second stage, incidence of fetal distress or mode of delivery was observed. In spite of the lack of apparent advantage to the fetal condition, ambulation was acceptable to both patients and nursing staff and should not be discouraged.

rationale, the need for research related to features of physical care and a more assertive professional role for nurses is emphasized.


Pendant les contractions, l'apport sanguin à la moitié inférieure du corps tend à diminuer. En outre l'oxygénation est meilleure en décubitus latéral qu'en position lithotomique.

[1149] The authors investigated changes in blood flow to the lower half of the body of pregnant women in supine and lateral positions toward the end of pregnancy and during uterine contractions. Electroplethysmographic recordings taken to that end from the legs of probands revealed significant decline in blood supply during uterine contractions. The changes recorded were statistically significant. In some cases, no change at all was caused by uterine contraction or positioning. Uterine activity was recorded by intra-uterine pressure registration. With the parturient in lateral position blood flows under review proved to be better than in supine position.


Etude randomisée contrôlée comparant l'accouchement en position verticale et en décubitus latéral. Les conclusions sont de bien peu de valeur eu égard a leur très faible statistique et au fait que les accouchements étaient déclenchés (donc conditions physiologiques non respectées).

[1181] The claim that an upright maternal posture during labour improves the efficiency of the uterus to the benefit of both mother and fetus has been investigated in a randomised prospective study. 40 patients undergoing induction of labour were allocated to a recumbent group or an upright group. No differences were found between the groups in the length of labour, mode of delivery, requirements of oxytocic and analgesic drugs, or fetal and neonatal condition. Our data do not support calls to change conventional intrapartum nursing attitudes.


[1203] n a randomised prospective study of 68 women in spontaneous labour half were allocated to an ambulant group and half to a recumbent group. The duration of labour was significantly shorter, the need for analgesia significantly less, and the incidence of fetal heart abnormalities significantly smaller in the ambulant group than in the recumbent group. Apgar scores at one and five minutes were also significantly greater in the
| La position debout pendant le travail devrait être utilisée plus fréquemment en obstétrique. | [1114] The aim of this paper has been to compare the uterine contractility, pain produced by contractions and comfort of the patients between standing and supine position. The study has been performed in twenty normal nulliparae who were changed from supine to standing position and vice versa at intervals of approximately thirty minutes. Intrauterine pressure and fetal heart rate were continuously monitored. Cervical dilatation was evaluated every thirty minutes. No medication was given to the patients. They were asked to assess the pain produced by uterine contractions in each one of both positions and which was the more comfortable. It has been found: 1. That the intensity of contractions was significantly higher in fifteen out of the twenty patients in standing position. 2. Frequency of contractions diminished significantly in one third of the patients. 3. Uterine activity increased significantly in half of them. 4. Consistently, less pain accompanied uterine contractions in standing position. 5. Patients reported more comfort in this position. The average duration of labor was 3 hrs 55 min. This duration is short, compared with standard clinical experience and with published data. No complications occurred, by the use of standing position during labor, on the mother or fetus. The physiological mechanisms responsible for the above mentioned effects of standing position are unknown. It is concluded that there are no clear arguments against the use of standing position during labor and that this position should be used more frequently in clinical obstetrics, provided obstetrical conditions are similar to those reported in this paper.


http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=1185484&dopt=Citation | ambulant group. More patients in the recumbent group required augmentations with oxytocic drugs. There was no statistically significant difference in the third stage loss in the two groups. Ambulation in labour should be encouraged: it may bring human benefits while allowing the advantages of hospital supervision.

Upper and lower limb blood flow was measured in 4 full-term pregnant women in the left lateral and supine positions before and after epidural block. Radial artery mean blood pressure was recorded in 6 full term pregnant women under the same conditions. Before epidural block there was a much greater reduction in lower limb blood flow (39-1%) than in upper limb blood flow (13-5%) when women moved from the lateral to the supine position; this was probably the result of aortic compression. Mean radial artery pressure increased slightly by 4-6% due to maternal overcompensation in the upper part of the body. After epidural block, patients in the lateral position had a mean rise in lower limb blood flow of 25% and a reduction in upper limb blood flow of 37-2%. The mean arterial pressure remained unchanged. In the supine position there was no further reduction of upper limb blood flow; this was accompanied on average by a 9% fall in mean radial arterial pressure indicating decompensation in the mother. The leg blood flow fell less, 26-9% than before epidural block. In the supine position, a greater flow to the legs, associated with a decreased mean arterial pressure, would be expected to lead to a diminution in placental perfusion, which is the probable mechanism for foetal decompensation. Therefore the supine position should be avoided with an epidural block. In other patients it would be wise not to rely upon maternal compensatory mechanisms.
